

# Agescapes for a new ageing demographic

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Kah Mun Tham was awarded the Byera Hadley Travelling Scholarship in 2017

**Cover image:**  
*Interactions at Intersections*  
Photo by Kah Mun Tham

**Facing image:**  
*Pigeons*  
Photo by Kah Mun Tham

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Spaces for ageing need to be designed for encounter and conversation, not merely movement, transaction and investment. Public places need areas to sit without the obligation to consume.

**Edwin Heathcote**  
*Building a City for All Ages*

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Primarily, this tour aims to  
examine alternative urban  
interventions in the pursuit of  
an *Intergenerational City*:  
the making of new aagescapes  
that foster a shared capacity  
for cultural and social diversity  
and the integration of all *ages*

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## 1

## Introduction

*“Cities have the capability of providing something for everyone, only because and only when they are created by everybody”*

**Jane Jacobs**

*The Death and Life of Great American Cities*

The advent of ageing is hardly new, yet we find ourselves at a time where there is capital interest, debate and discourse on the subject. Understanding what it means to age is now more pertinent than ever, seeing as a quarter of the world’s population will be aged 65 years and above by 2057<sup>1</sup> - hardly an isolated minority.

The exigencies of an ageing population have seen exuberant extolling of the subject matter within contemporary culture. Tales of enduring social relevance prevailing over ageist stereotypes (Butler, 1969) have featured broadly across genres in the last few years. These include the 2014 film “Iris”<sup>2</sup> which profiles Iris Apfel, a then-octogenarian now-nonagenarian fashion maven; “The September Issue” (2009) which features Grace Coddington<sup>3</sup>, a 70 year old stylist at Vogue Magazine in New York; “The Hundred Year Show” which showcases the life and practice of modern artist Carmen Herrera<sup>4</sup>; “Sky Ladder: The Art of Cai Guo-qiang”, a story chronicling the sixty-one year old artist’s trials and tribulations in making his most significant work to date - ‘Sky Ladder’. This is in addition to the flurry of authors and writers that have taken to illuminating the exploits of elderly protagonists within their prose, albeit with most penned around escapes from aged care institutions.<sup>5</sup> The featured narratives all allude to a renewed awareness and wilful reintegration of older individuals in mainstream society. However, this newfound focus also calls into question our incumbent perceptions of age and illustrate how aged based machinations have become deeply entrenched within our society.

Age segregation has not always been commonplace. It was only at the turn of the last century<sup>6</sup> that age became a divisive mechanism: a means of standardisation in the hopes of achieving social efficiency.<sup>7</sup> The resulting division permeated society with dimensions of age segregation set out within cultural, institutional and spatial spheres.<sup>8</sup> These dimensions contributed to the creation of “islands of activity”<sup>9</sup> along a chronology of ages; age homogenous settings that catered to a specific demographic - children to school, adults to workplaces etc. As a result, cities today are characterised by the

compartmentalisation of people and places into “cultural and social subgroups”.<sup>10</sup> Buildings, institutions and public spaces are structured to echo this ethos with debilitating effects on cross-generational relationships.<sup>11</sup> Among these effects are the establishment of different age agencies<sup>12</sup> and increased competition for public resources between them.<sup>13</sup> The prevalence of age-based public spaces (playgrounds, exercise stations, skate parks and the like) and architectural typologies today that cater to a target demographic (retirement villages, child care centres etc.) is indicative of how deeply entrenched segregation is.

In light of the ageing population and an increasingly segregated urban setting, it is important to analyse and re-think the social patterns and routines we leave in our stead. While our prescribed day-to-day activities have now become largely age-homogenous, the interactions that arise from the intersections of these individual “spheres of activity” are anything but. The way the built environment is shaped is contingent to the daily rituals of its inhabitants and vice versa. The very social interactions that are extended in the street inform the quality of the interstitial spaces made for those very same exchanges. The way we live and interact imbues meaning to the built forms we inhabit. These spaces thus become significant and add to the intensity of our built environment.<sup>14</sup> This interaction between place and people is the underlying premise for an integrated Intergenerational setting.

**“Central to the notion of the Intergenerational City<sup>15</sup> is the capacity for its public and shared space to accommodate and integrate difference...for today’s public spaces still play a significant role in helping people to understand and live positively with the variety of cultural and political positions that characterises today’s globalised society...”**

**-Tom Nielsen**

The places we make then, should not only be able to sustain these qualities of interaction, but also the evolution of society and an environment that accommodates culturally and socially diverse groups. All the while simultaneously fostering social integration and improving life for all segments of the population.<sup>16</sup> (Stren & Polese, 2000)

How we sustain our built environments as architects and planners relate very much to our response to the social interactions which occur in spontaneous and purposefully-designed interstitial spaces within our cities. It is the life between buildings<sup>17</sup> that continue to shape and scale the myriad of edge conditions and interstitial spaces that we find in the built environment. The resulting ability of our cities' varied spaces to enable intersections of different demographic groups helps sustains social inclusion<sup>18</sup> and integration. The challenge then is to draw from the inherent social routines and meaning in places to create more inclusive socialisation settings that are genuine, spaces that reflect a high-degree of "place-specificness" with an attention to co-creation, community participation and a focus on process design.<sup>19</sup> This ensures that our built environments continue to be lively and meaningful places: enduring living cities that sustain the "vita activa" (Arendt, 1998) and maintain the intensity of our daily rituals and routines as we age.

**"Instead of thinking of social identities as bounded regions, one can consider them as interdependent and communicating areas. In an effort to describe urban space as a process rather than a series of physical entities, we can discover practices that oppose a dominant will to fix spatial meanings and uses. These practices mould space and create new spatial articulations since they tend to produce threshold spaces, those in-between areas that relate rather than separate. Urban porosity may be the result of such practices that perforate a secluding perimeter, providing us with an alternative model to the modern city of urban enclaves. A city of thresholds could thus represent the spatiality of a public culture of mutually aware, interdependent and involved identities"**

**- Stavros Stavrides**

*“Today’s place making represents a comeback for community. The iterative actions and collaborations inherent in the making of places that nourish communities and empower people”*

**Susan Silberg**  
*Places in the Making*

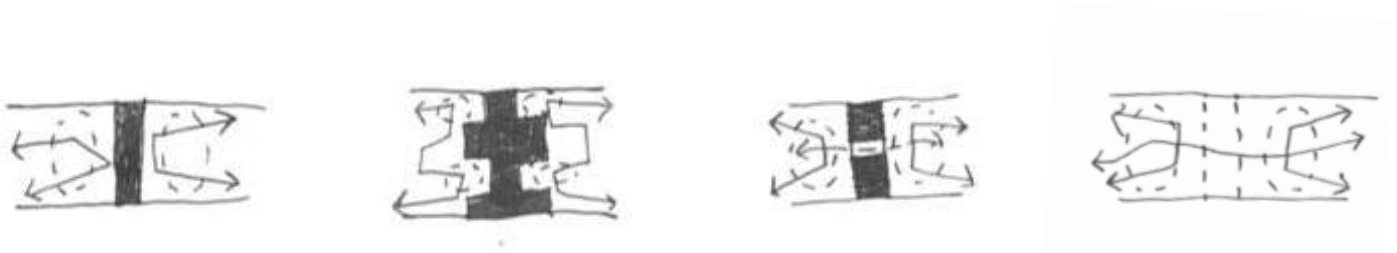


Figure 1: Illustrations exploring different edge conditions and porosity of in-between spaces and the corresponding ability to generate nodes of socialisation and interaction. From left to right: i) solid mass as liminal space - interaction only on either side of mass; ii) articulated edge condition on each side of mass - opportunities for interaction zones within the pockets created along length; iii) break in solid mass - select visual or physical connection between interaction zones on either side; iv) Liminal zone is not guided by mass with only change in material demarcating the transition from each zone.

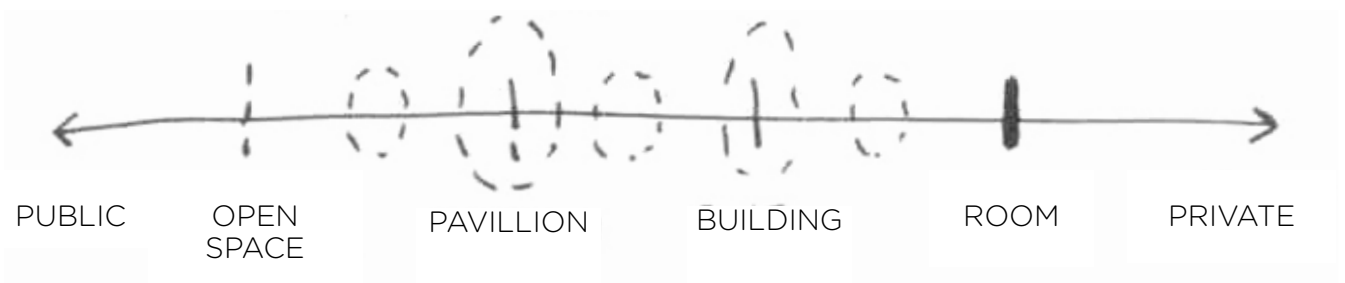


Figure 2: Spatial hierarchy showing transition from public to private spaces. Thresholds are demarcated in dotted lines and are not limited to in-between spaces but also extend to the built forms within the built environment.

“When the subject of population explosion came up over coffee, Mrs Brom allowed that it was ‘getting very crowded’. ‘I hadn’t really noticed,’ Evert scoffed, ‘judging by the number of visitors we see here’ ”

**Hendrik Groen,**  
*The Secret Diary of Hendrik Groen, 83¼ years old*

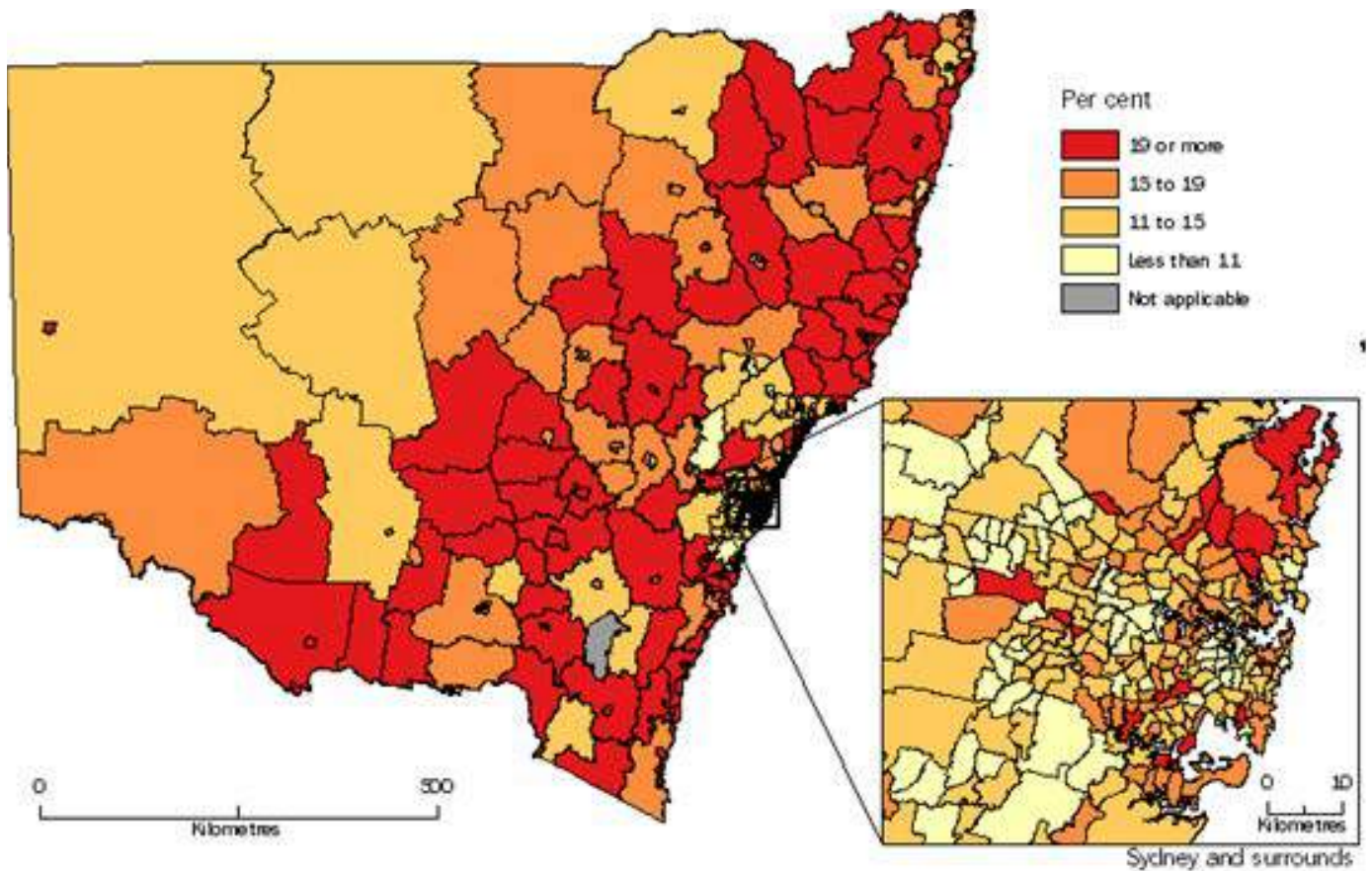


Figure 3: Population aged 65 years and over - Statistical Areas Level 2, New South Wales - 30 June 2014), large numbers of areas in Greater NSW that are located more than 50km away from the city centre are registering populations comprised of at least 15 percent of people aged 65 and over.



## 2

## Ageing in Oz: In + around the Emerald City

Within Australia, our biggest five cities currently have more than a million people each with the number set to grow. Over the course of the next 20 years, the state of New South Wales alone will see an expected growth of one million households, with lone person households projected to increase from 2.1 million (2011) to approximately 3.4 million in 2036.<sup>20</sup>

In addition, the number of people aged 65 and above will reach 8.8 million by the year 2057 with a large majority of older Australians projected to maintain independent lives within their communities.<sup>21</sup> In less than two decades, a third of those aged 75 to 84 years old will be living on their own and over half will be living as a couple without children. 15 percent will be living with children or other relatives and only a small proportion will live in aged care facilities. Two thirds of those aged 60 to 75 year old will be living as a couple without children and between 16 percent and 19 percent of 60 to 64 year olds will be living alone.<sup>22</sup> This is indicative of the number of age homogenous single households in Australia to be expected in the near future.

Increasingly, there has been a shift in the way Australians are now perceiving ageing. The City of Sydney will see a dramatic rise in its population of older residents in the next 20 years – outstripping many other areas around Sydney. At present, approximately 95 percent of older people aged 65 and above currently live within cities and neighbouring suburbs and will continue to do so. 90 percent of Australians surveyed<sup>23</sup> have indicated that they would like to remain within their communities as they age. According to the Eastern City District Plan in the Greater Sydney Commission (2019)<sup>24</sup>, the city of Sydney will see numbers of people aged between 65 and 84 years of age rising by 108 percent; a 203 percent rise is expected for those aged 85 and above by the year 2036. Gentrification of the city's suburbs has seen the need for increased proximity and walkability to public services. Areas such as Ultimo, Pyrmont, Potts Point and Darlinghurst have seen a substantial increase in the areas median age; Ultimo and Pyrmont for instance have seen almost a doubling of the number of people aged 65 and above in the last decade or so.<sup>25</sup>

**“With grandchildren living in San Francisco and Montreal we were rattling around a four bedroom house with all the attendant issues of gardening, maintenance, et cetera...plus we thought the house was better suited to a young family.”**

**- Mr David Gordon<sup>26</sup>**

Providing for a growing aged population amidst a general population boom and increasing urban density means rethinking the way Australian cities and suburbs are designed for all ages. Rather than building more age homogenous facilities and communities on fringes and peripheries of core cities, the emphasis should really be on improving the ability of places to sustain evolving social patterns in society and become favourable environments for social integration across ages.<sup>27</sup>

**“Sustainable communities are places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all.”<sup>28</sup>**

What Australia is set to face in the next few decades is already a reality in several key Asian cities. Not only are countries like Japan, Singapore and China facing a “demographic time bomb”<sup>29</sup> (the number of above sixty fives in 2015 were recorded at 26.3%<sup>30</sup>, 12.3%<sup>31</sup> and 10%<sup>32</sup> respectively), there is also pressure to maintain connectivity and integration with established urban areas and city centres. And so through a series of photographs and analytical drawings, select cities in China, Japan and China will be looked at more closely for opportunities to accommodate integration and intergenerational living within a sustainable urban setting.

# 3

## Pop-ups and Urban Insertions in Suburbia: Case Studies in urban interventions

### Fang Jia Hu Tong, Beijing, China



Figure 4: Street life in a Hu Tong in the 1970s, Beijing. Credit: Beijing Youth Paper



Figure 5: Residents occupying the spaces left between stairs and at intersections of alleyways with their own furniture. Image was taken pre-refurbishment. Credit: Yicai News.

The “Hu Tong”<sup>33</sup> in Beijing is one such instance where the intrinsic link between the interstitial spaces and social life on the streets is evident. Traditionally found in the northern cities of China, Hu Tongs are traditional arterial thoroughfares that delineate neighbourhoods of interconnecting courtyard houses, most commonly known as “Si He Yuan”. The proportion of the courtyard houses against the narrow width of the alleys result in an intimate setting that distinguishes the atmosphere within the Hu Tong from the experience of a main street. This proximal scale is further accentuated by the perimeter wall around the houses and the many thresholds, ‘Jin,’ a person has to traverse before arriving in the heart of the home. Most houses lead off the alleyway via a main recessed entrance elevated off the street by a short flight of stairs. The articulation of multiple sets of stairs between house and street results in an undulating teeth-like interface that creates multiple nodes of socialisation and inhabitation at various scales.

The spaces between the stairs become informal outdoor living rooms that residents use to conduct neighbourly meetups – this alludes to the cultural tradition of “Chuan Men Zi”; going from door-to-door for a series of neighbourly visits. And because the stairs and recessed doorways are part of a series of articulated thresholds that inform the progression from the public street interface to the private setting they become zones for activity along circulation paths: places to linger, to pause, to meet and to greet. The undulating edge condition of the streetscape at corners of intersecting Hu Tongs become gathering points for inter-Hu Tong interactions - games of cards, Chinese checkers, Mah Jong, Chinese chess or bring their make-shift stools for a chat.

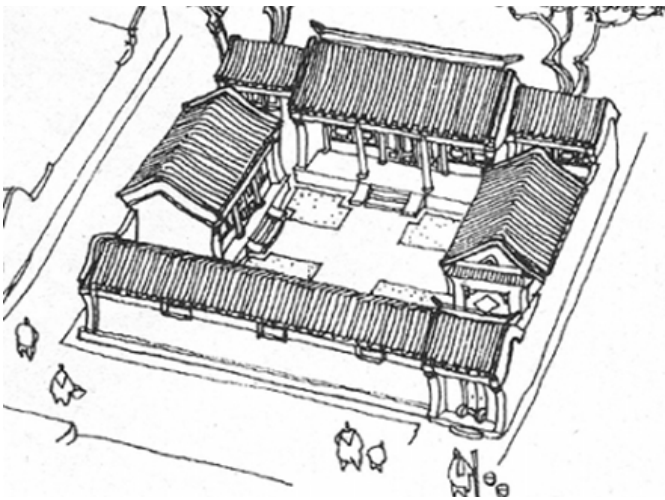


Figure 6: Axonometric illustration of a courtyard house with four buildings around the courtyard showing its relationship to the street within the Hu Tong. A 'Hu Tong' (胡同) is a traditional thoroughfare found in northern cities of China made up of interconnecting courtyard houses called 'Si He Yuan' (四合院). Within these houses, separate living quarters are linked by walkways and courtyards. These homes formed the predominant housing typology in Beijing city and were planned concentrically around the Forbidden City. As most courtyard houses have their main entrances orientated facing south, the resulting Hu Tongs run in an east-west orientation. The houses are bound by a high enclosing wall that separates the home from street, a main elevated entrance fronts the street boundary wall and is connected to the street by a set of stairs. Left of the main entrance are a series of rooms that run parallel to the street known as 'Dao Zuo Fang' (倒座房) which have traditionally been used as separate rooms to live in, entertain guests or as study rooms separate to the main house.

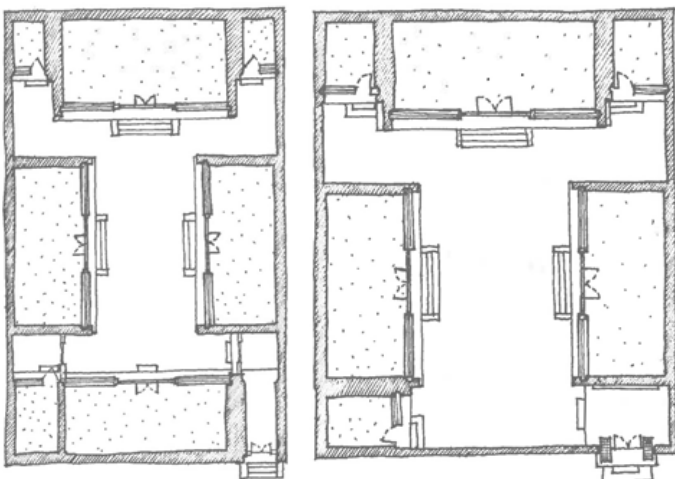


Figure 7: Plan of two traditional or Courtyard Houses, the image on the left shows a courtyard home with four separate buildings ('Si He Yuan') and the one on the right has three, ('San He Yuan'). Note the stairs leading up to the elevated main entrance from the alley in the 'Hu Tong'.

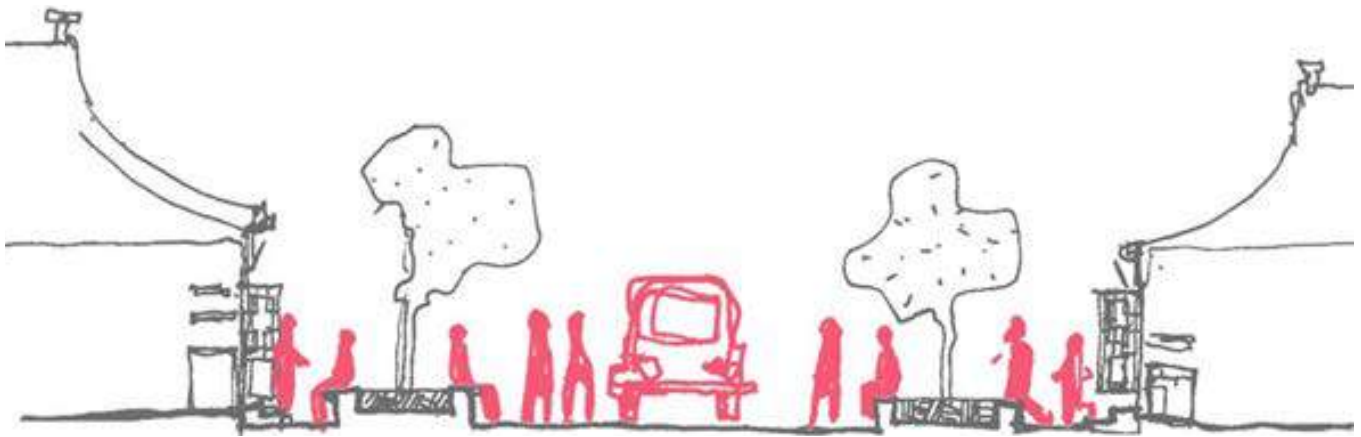


Figure 8: Diagrammatic cross section of alley in Beijing showing the hierarchy of public to private spaces in a residential and commercial setting- main road used by both vehicles and pedestrians with a buffer transition zone in between the street and the entrance to the residences. This transition zone can be used for planters, public seating zones, gathering spaces etc.

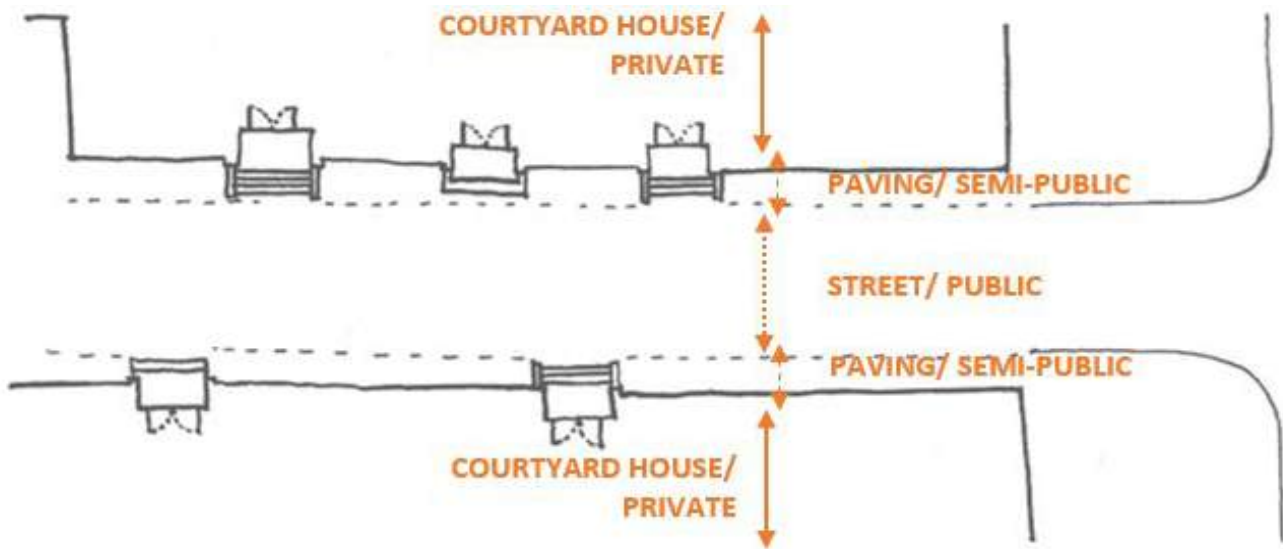


Figure 9: Diagrammatic plan showing the spatial hierarchy and transitions from public to private spaces at the intersection of Fang Jia Hu Tong and Yong He Palace Road - Yong He Palace, a tourist attraction is situated here.



*“Life between buildings is not merely pedestrian traffic or recreational or social activities. Life between buildings comprises the entire spectrum of activities, which combine to make communal spaces in cities and residential spaces meaningful and attractive.”*

**Jan Gehl**  
*Life Between Buildings*



Figure 10: Sign located at western entrance of Fang Jia Hu Tong.



Figure 11: Yong He Palace, a tourist attraction adjacent to Fang Jia Hu Tong in the old Beijing precinct.

In the period 1910 to 1940, the city saw a population increase. As a result, there were rapid subdivisions of the single-household *Hu Tongs* into individual lots for multiple families. A number of new entrance frontages along the streetscape appeared, thereby increasing the instances of nodes of interactions and further intensifying the opportunities for socialisation in these *Hu Tongs*. The importance of these interstitial spaces to the vibrancy of the neighbourhood are evidenced following the loss of these frontages during a restorative “clean-up” of the *Hu Tongs* that began in early 2017.

As part of the restoration and refurbishment of the *Hu Tongs*, the additional frontages were removed and features like ramps, railings and an elderly day centre were added. The clean-up would see the reversion of the street frontage to its “original” heritage setting. ‘Fang Jia Hu Tong’ (方家胡同) in ‘Dong Cheng’ District (东城区) was one of the first areas in Beijing to experience an overhaul, this *Hu Tong* stretches 676m and has around 75 formal addresses. There are currently 281 households living within the area with about 15% of the population aged above 60 (170 between the ages of 60 to 79; 40 aged 80 years and above).<sup>34</sup> Prior to the building works, the predominantly residential area had seen a large increase in the number of commercial entities in the area. Rent was cheaper in Fang Jia Hu Tong as compared to the neighbouring *Hu Tongs* and restaurants, retail shops, design offices, cafes and bars made use of the subdivided frontages within the *Hu Tong*.<sup>35</sup>

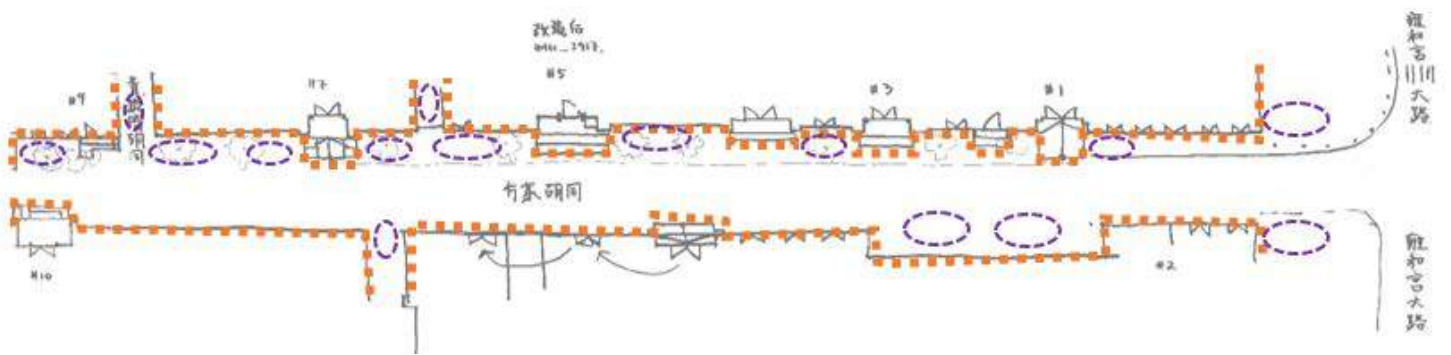


Figure 13: Plan showing the undulating street edge condition and alcoves (in purple) that are created as a result of the alignment of boundary walls and entry steps in Fang Jia Hu Tong.

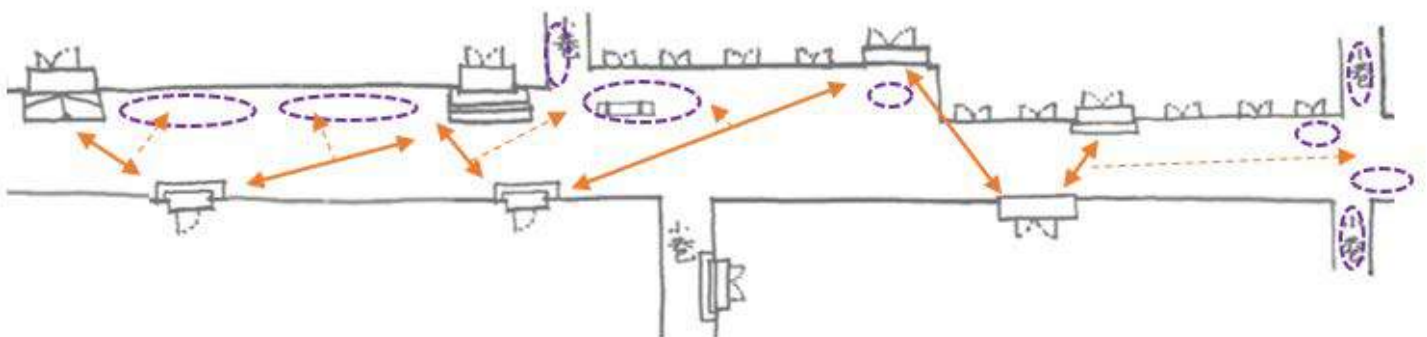


Figure 14: Plan of alley in Hu Tong indicating the path taken from door to door (solid orange line) and the intersections with naturally occurring meeting points (purple-dashed).

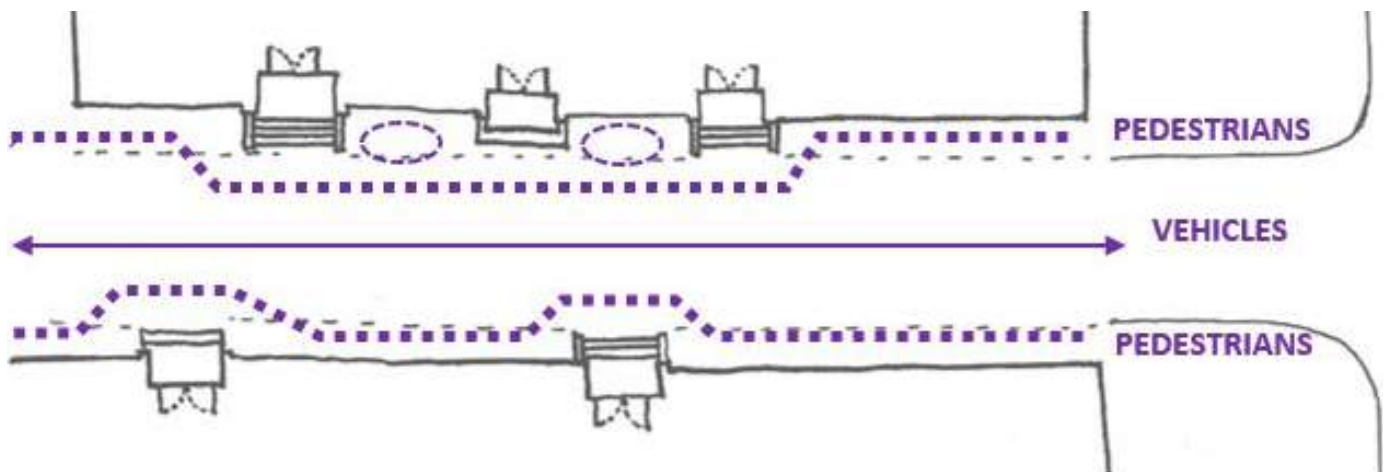


Figure 15: Plan of alley in Hu Tong showing the vehicular and pedestrian movement patterns on the street. Also shown are the spaces created between the sets of stairs.

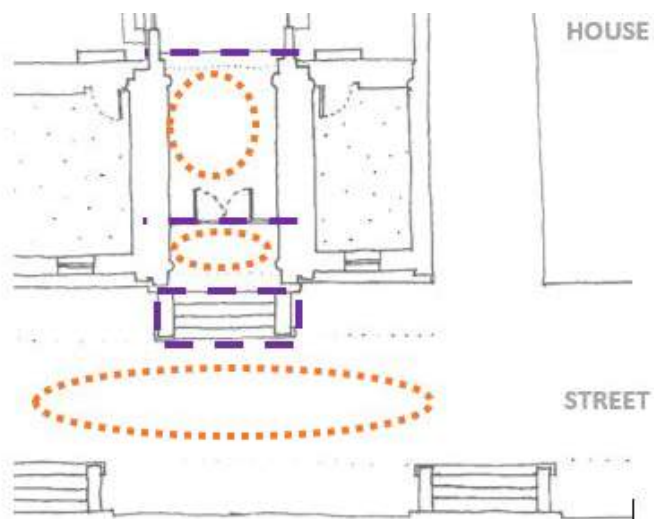


Figure 16: Multiple transition zones (in orange) and thresholds (in purple) from the street to the home.

During the refurbishment works, a total of 135 commercial frontages in Fang Jia Hu Tong were removed and “public living spaces” for community and resident interaction reinstated the within the Hu Tong. Street side exercise pavilions and seating alcoves were added along the street. A bar at No.51 was converted to an elderly day resident activity centre, ‘Yi Zhan’ (驿站). Run by a charitable organisation, the centre houses an exercise gym, organises various social activities and arranges for a meal delivery service. The community centre occupies only an area of 185m<sup>2</sup> but it services residents in Fang Jia Hu Tong and about 5000 other seniors in the neighbouring three residential districts.<sup>36</sup>





Figure 17: Restaurants near number 53 Fang Jia Hu Tong before the refurbishment. The same area after the refurbishment showing the loss of the articulations along the street edge and with it the interactions and socialisations that occurred in these spaces. Credit: Yicai News, Beijing



Figure 18: Pubs and restaurants have turned public outdoor space into a private seating area. Residents could only use it outside of the restaurants' hours of operation before the refurbishment. The same area on the right after refurbishment showing the "return of community public space back to the residents" and alludes to the spontaneous gathering that occurs in these recessed zones at intersections between neighbouring Hu Tongs (Refer to Figure 5). Credit: QQ Maps Street View (left), Yicai News Beijing (right)



Figure 19: A clothing shop next to No. 12 Fang Jia Hu Tong before the refurbishment and the subsequent reinstatement of the historical façade after the refurbishment. Credit: Yicai News Beijing





Figure 20: Cross section showing condition of street before refurbishment, showing socialisation between residents on one side of the street and cross generational socialisation on other side of the street where a restaurant or café would be.

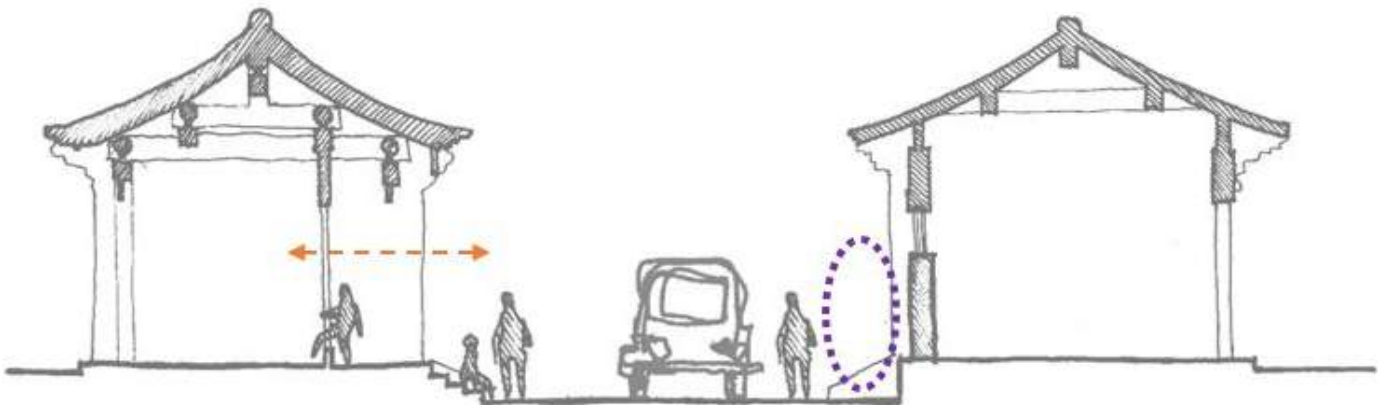


Figure 21: Cross section showing condition of street after refurbishment, showing the loss of cross generational socialisation zones with the removal of the commercial frontage in the Hu Tong.

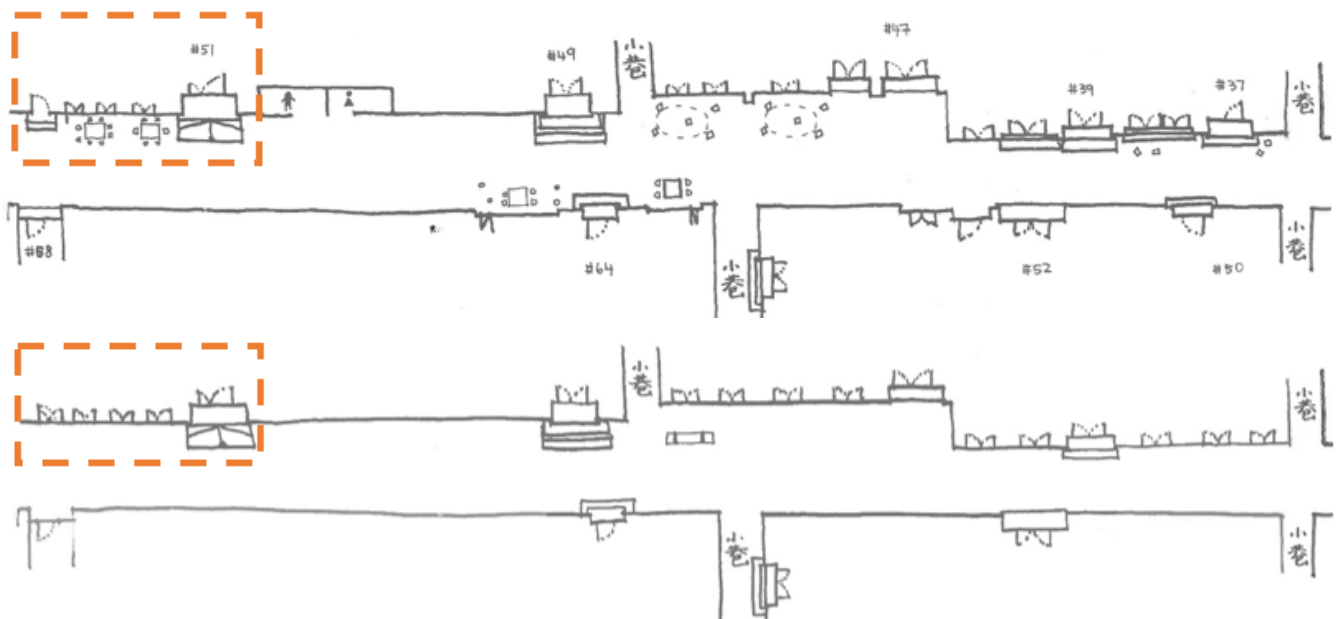


Figure 22: Comparison of the street edge articulation along No. 51-71 Fang Jia Hu Tong pre and post refurbishment. As a result of the refurbishment and subsequent loss of commercial frontages, the street has become less bustling and lively. No.51 which was converted from a bar to the elderly rest stop is marked out in orange.

While it is acknowledged that the addition of the day centre has been essential to the care and well-being of the elderly in the area, the refurbishment has resulted in the loss of demographic diversity and social interactions zones and the dearth of vibrancy and intensity of the area. The cafes, shops and restaurants diversified the largely age-homogeneous residential demographic by attracting a variety of people from different age-groups and cultural backgrounds. The creation of openings through swathes of otherwise blank walls contributed to the activation of the thresholds and interfaces, enlivened the street edges and gave rise to interaction zones **across ages**. The considerations that inform the design or redesign of any area in anticipation for an ageing population has to be inclusive of the pre-refurbishment urban condition in the existing area. In the case of **Fang Jia Hu Tong**, the attributes that contributed to the area were not carefully analysed. Rather there was a wholesale removal of everything that was not part of the “original” building fabric and in doing so eliminated the incumbent social routines and rituals that made the **Hu Tong** what it was. Public spaces for intergenerational contact can only be activated if there is a diverse and varied demographic to sustain it and vice versa, otherwise it becomes yet another age-homogenous zone of activity isolated from its wider urban setting.



*Figure 24: No. 51 Fang Jia Hu Tong, which has been converted from a bar to an activity day centre for older people. The rest stop occupies an area of 185m<sup>2</sup> and services three other neighbouring residential precincts. The addition of the centre within an existing, predominantly aged area has allowed residents to remain in their neighbourhoods and still access services that they require as they get older - “ageing in place”.*



*Figure 23 (above): Name plate of Fang Jia Hu Tong at the western entrance of the street in Old Beijing Precinct.  
Figure 25: Stationery exercise furniture installed along the main street as part of refurbishment works.*



Figure 26: (Left) The street has been reverted to a predominantly residential area post refurbishment and has seen the loss of diverse demographic with the removal of most of its commercial frontages.



Figure 27: Senior resident reading newspapers in the dining room of the resident day centre after the daily breakfast service

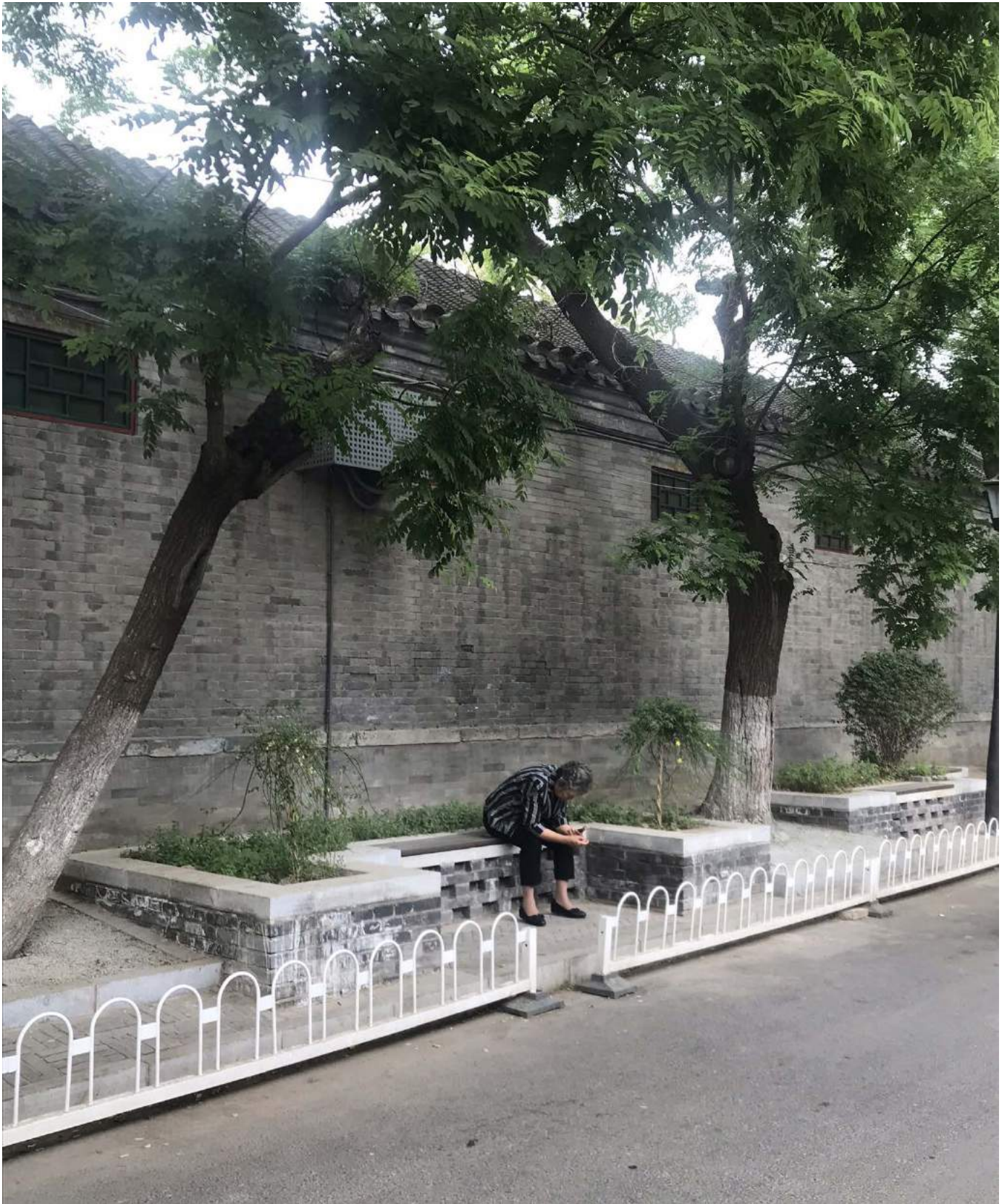


Figure 28: Part of the refurbishments along the length of Fang Jia Hu Tong included installing handrails and ramps where possible, reducing tread heights, and reinstating the original number of residential frontages to the street.



Figure 29: Bustle of social activities along the neighbouring street, Yong He Palace Road, as contrasted with Fang Jia Hu Tong which has become quieter post refurbishment (see Figure 26).





*Figure 30: Elderly resident sitting in a refurbished area that saw additional seating added along the street frontage. Note the blank façade in the background and the barrier in front that was reinstated during the works.*





Figure 31: The ageing residential area in Qinhuai district has seen upgrades in the last two years. Recessed corners are more often than not occupied by activities.

### Qin Huai District, Nanjing, China

A refurbishment scheme to cope with the growing ageing population in older districts was also initiated in the city of Nanjing. While the scope of works may seem similar to the works that were carried out in Beijing (addition of lifts, resident service stations and elderly care centres) the refurbishments in Nanjing were more considered: subtle additions were made to the social and building fabric as opposed to a complete upheaval of existing buildings and public spaces. Coined the “Small Happiness Movement” (微幸福工程)<sup>37</sup> in the Qin Huai district, the program drew from the existing qualities of the interstitial spaces on the street and looked at reinventing the same places in which local residents live their lives in.



Figure 32: The resident service centre is located on a main street along a residential and commercial strip with restaurants, local eateries, shops etc.



Figure 33: Scenes from the streets in Qin Huai District, in the neighbouring areas surrounding the Citizen Service Centre. Makeshift stalls along the street sell food and produce. Tradespeople also used to ply their trade from streets.





Figure 34: The Resident Service Station(A) on Dasifu street in the context of its setting. The Confucius Temple precinct(B) has allowed for the influx of a diverse demographic in the area - tourists and visitors to the area in need of a quick repair sometimes seek out the Resident Service Centre. Other tourist attractions in this area are the Qinhuai River(C) and the Nanjing Imperial Examination Museum(D).





B

C

D



*Figure 35: Tourist attractions in the old Nanjing precinct which is in the vicinity of the Resident Service Centre. These tourist attractions are situated close to old residential estates that house an ageing demographic. (Left to right) The Qinhuai River lined with a boardwalk, restaurants and pavilions; pedestrian street; the Confucius Temple.*



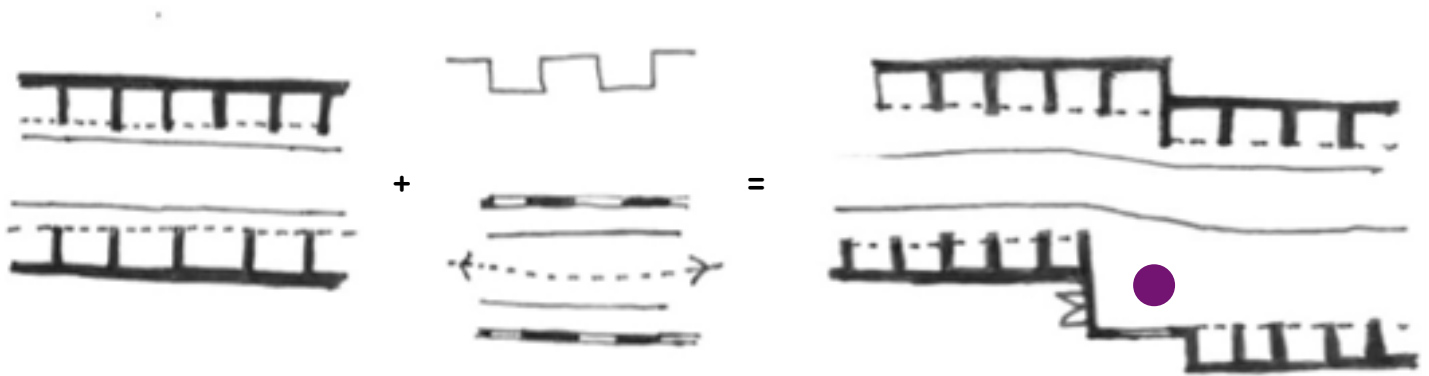


Figure 36: Diagrammatic analysis of Dasifu alley, a road running through the residential precinct where the Resident Service Centre is situated. Stalls are located along the stretch of the road with apartments situated behind (Refer Figure 37). The stalls are the transition zones between the street and the apartment complexes. Stretches of shops are often broken by entries into the apartments. These recessed zones off the street give rise to an undulating edge condition where clusters of interactions occur.

One of the initiatives was a citizen service centre.<sup>38</sup> Primarily set up to relocate craftsmen and tradespeople that plied their trade from makeshift carts at the corners of buildings and alleys (hairdressing, key cutting, clothing alteration services, knife sharpening, metal work, cobblers etc.), the centre is situated not far from the Confucius Temple in the middle of Old Nanjing. It occupies a 130m<sup>2</sup> foot print in the middle of a bustling main street and is within the same neighbourhood as where many of the craftsmen used to be. Due to their declining numbers, in part due to the lack of interest from the younger generation, the centre was a move to consolidate and refocus the spotlight on these trades. Because of its proximity to the main street and several major tourist attractions in the area, it has given the trades a second lease of life and an opportunity for intergenerational interaction and socialisation. By creating a service station in their neighbourhoods it ensures that their ways of life, livelihood, and to a larger extent, their relevance and worth in society continue to be sustained by the same places they have lived and worked in.



Figure 37: Streetscape along Dasifu Alley, apartment buildings are situated above or behind the shopfronts. These shopfronts become thresholds and interfaces for interaction between the public and private realm.



Figure 38: (Left) A seamstress in the Resident Service Centre on her tea break; (right) entry into apartments between stalls.

**“It is not that action is contained in space. Rather, a rich network of practices transforms every available space into a potential theatre of expressive acts of encounter.”<sup>39</sup>**

**-Stavros Stavrides**

The second initiative is a new seniors and family community centre<sup>40</sup> within the same district but in a different neighbourhood. A 10 minute drive away from the Confucius Temple, the community centre is located on Qin Hong Street and services the residential zone along this 3km long strip. 25% of the residents who live in the area are above the age of 60.<sup>41</sup> The centre itself has a host of daily activities, medical staff and meal services. It has also established a “time bank” system<sup>42</sup> where an early retiree (60s-70s) volunteers to care for a much older person (80s-90s) in the same apartment block. Early retirees will, in turn, benefit from the same system in the future. This creates opportunities for engagement of the different households within the same precinct. The buddy system enables the elderly to age independently within their homes and also remain active by caring for others; maintaining autonomy and inclusivity within the community. The addition of the centre and the time bank system has created opportunities for social interaction within the existing estate.





Figure 40: Art and craft studio on the first level of the resident community centre.



Figure 39: (Facing page) Street Scape in Qinhuai District;  
 Figure 41: (left) The initiation of a resident community centre in the estate has become a central gathering point for elderly residents in the area. This act of gathering and socialisation has resulted in the activation of the street and made it a public place for families and older residents alike.  
 Figure 42: (right) Residents having a singing lesson during the day, one of the many activities carried out at the centre.

Therein lies the success of the refurbishment works in Nanjing: the understanding that it is the existing urban identities and social practices of the place that shape the interfaces for interactions as opposed to thresholds that are a series of mere physical articulations<sup>43</sup> with no true meaning. Through the analysis of the works, it becomes clear that the process of interrogating rich networks of social practices to create architectural insertions helps to maintain the urban porosity of the setting – thus creating places that have genuine meaning and significance.





Figure 43: Kampung Admiralty(A) in the suburb of Admiralty in Singapore. It is serviced by Admiralty train station(B) and is set in a dense residential area located north of the Central Business District in Singapore.





A

B



*Figure 44: (Left) View down into the gardens of the medical centre in the foreground and towards the residential blocks in the background.  
Figure 45: (Right) View of the private community gardens leading off the residential block and overlooking the street*



*Figure 46: Aerial view of the community gardens on the left, this is also where most of the primary public functions are located. The two residential blocks are located on the right and are connected on two levels to the public/ semi-public areas. The Mass Rapid Transit line station is located far left of the image  
Credit: K. Kopter*



## 4

## Building as Threshold: Liminal spaces for Intergenerational Living

Due to ageist segregation, thresholds within our cities have become spatial delineators and separators. We forget that they also serve as occasions for connection-liminal spaces<sup>44</sup> that interface a multitude of users and typologies and serve not just as nodes of social interactions but also passages from one state to another. When we transpose these concepts at a larger scale, then buildings, when designed well, are thresholds too: meeting points that bring multiple stakeholders together, be it space, people and behaviours.<sup>45</sup>

### Kampung Admiralty, Singapore

**Kampung** Admiralty in northern Singapore is one instance where the notion of building as threshold is explored – spaces that demarcate either a break from everyday life to accommodate a “parallel reality”<sup>46</sup> or the facilitation of meeting points that bring together a variety of people, cultures and spaces.<sup>47</sup>

The development is a new Housing Development Block (HDB) housing model located in the suburb of Admiralty. The area has a growing aged demographic (census data from the Singapore Department of Statistics indicate that 14% of the local population is aged 60 and above, 35% of the population aged 30-49 years old). Situated adjacent to a major stop along the North-South Mass Rapid Transit (MRT) train line, the building has been lauded locally as the first of its kind in Singapore and labelled as a high density, high amenity one-stop integrated complex.<sup>48</sup> A high-rise interpretation of an ethnic Malay or Indonesian indigenous village known as a ‘**Kampung**’, the word also refers to a compound or community. During the colonial era, the term ‘**campong**’ (an alternative spelling of the word **kampung**) was used instead of ‘town’ in the official town plan for Singapore.<sup>49</sup> These low-rise housing wards were replaced during the period of rapid development and urbanisation in the wake of the island state’s post-colonial independence. Nonetheless the spirit of community, kinship and tribe is still encapsulated in the colloquial usage of the word – ‘home’. As the name suggests, the new development alludes to the traditional vernacular by combining a plethora of different amenities and usages to form a self-sufficient community.



*Figure 47: View from community gardens on top level to the senior living apartments across and to neighbouring flats beyond.*

The new development is the first public housing development to move away from traditional land use zoning where individual government agencies are allocated separate land parcels and thus usage for development. This resulted in buildings that housed separate organisations as opposed to one integrated building with developments planned in conjunction by multiple governmental stakeholders (i.e., the Housing Development Board, the Ministry of Family Affairs, Ministry of Health each have agency within the one building).<sup>50</sup> **Kampung Admiralty** is comprised of two 11-storey blocks of senior's apartments that sit atop a podium-like complex that houses a medical centre, a kindergarten, an elderly day care facility, an "open-air" food court known as a hawker centre, a supermarket, restaurants and shops and a roof community garden. The apartments in **Kampung Admiralty** are a departure from the typical HDB developments found in Singapore. Instead of a standard variety, they are studio apartments and two room "flexi-flats". Available only to those aged fifty-five and above, they are sold on a 30-year lease<sup>51</sup> – all 104 apartments are barrier free, with handrails in corridors and lifts that are called to every floor. About 60% of the residents who bought an apartment flat were residents of neighbouring towns such as Sembawang and Yishun before moving into **Kampung Admiralty**. More than 40% of these flats were bought under the "Studio Apartment Priority" and "Senior Priority Schemes".<sup>52</sup> These schemes give priority to elderly residents who wish to remain either in a familiar environment or near their children (or both) as they age.

Like the typical mixed use residential typologies of post-independence Singapore, **Kampung Admiralty** employs vertical and horizontal spatial hierarchies to organise the delineation of public and private spaces as well as the transitions between. This is evident in both plan and the cross section.

On plan, the public wing is connected to the private wing at two levels, the first is at ground through a double height public atrium. The second link is on the fifth level which houses the senior centre and child care and has a slightly less public scale. The apartments are linked to the childcare centre and the seniors' day centre to the apartment units by a playground and an exercise station respectively. These two connecting planes on plan were opportunities to generate thresholds for intergenerational interaction. However as opposed to the latter, **Kampung Admiralty** has been designed as a co-located, multi-generational setting at podium level – that is, different spaces made deliberately for different ages that are situated side-by-side and do not necessarily facilitate interaction between the different groups. This is prevalent throughout the clear delineation and segregation of spaces that have been designed for different stakeholders. The childcare centre and the seniors' centre are separated by the lift core and lobby, a void cuts between the playground and the exercise area and the community garden is located one level above this connecting plane. On the ground connecting plane, the lack of connection between the complex itself and its surrounding urban setting is regrettable especially since the plaza and the small retail and restaurant outlets were designed as a meeting place of sorts. Considering **Kampung Admiralty's** prime location and primary function as a central hub in the housing estate, it makes it even more regrettable that connections and thresholds between the building and its immediate neighbourhood to facilitate intensity and vibrancy through the double height plaza were not considered and developed further.



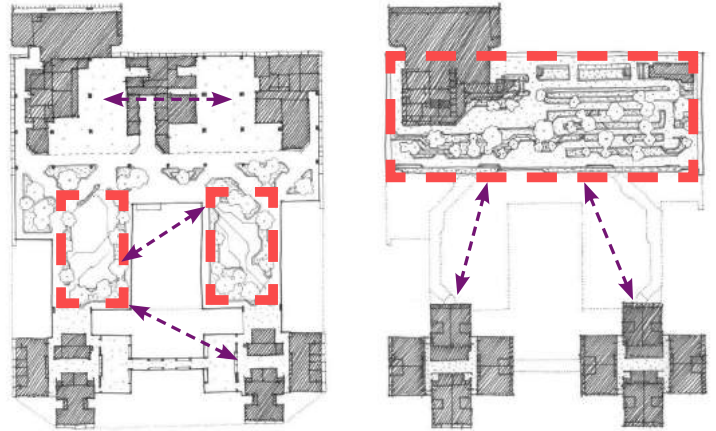
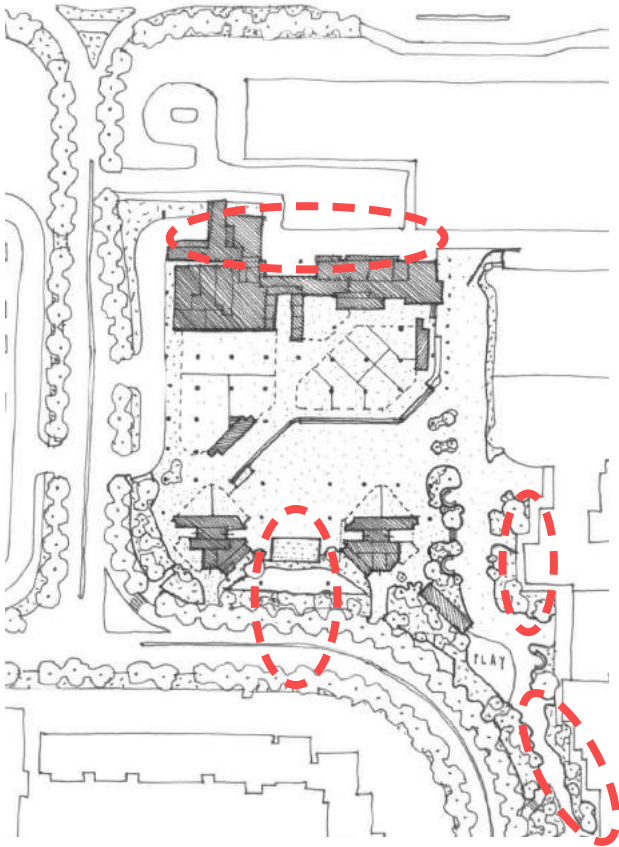


Figure 48: (left) Ground plan showing a lack of interaction zones on the fringes between the building and neighbouring context; (middle) Fifth floor plan indicating where multi-generational interaction zones were created (in orange) and where there is a lack of integration and connection between the functional areas (in purple). A lift lobby separates the child care and the active ageing hub-senior day centre and a void separates the fitness area and the playground; (right) Sixth floor plan showing only visual connection and diagonal sightlines created between the community garden and the senior living apartments - no physical link between the two.

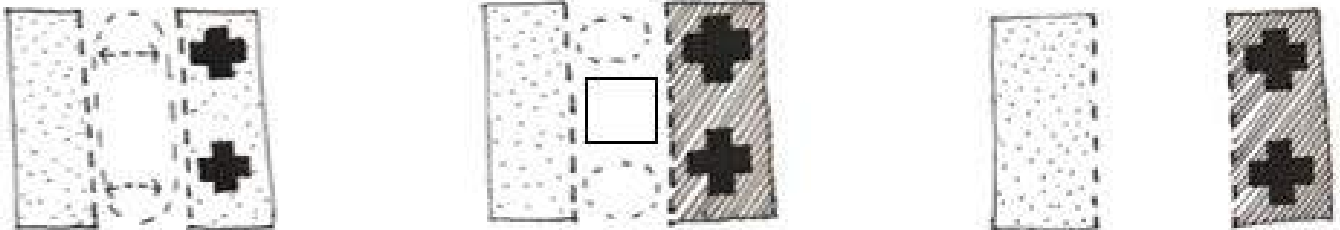


Figure 49: (Left) connection of both wings through plaza on ground floor which houses public functions and entrances to apartments; (middle) bridge connection with exercise park and playground on either side of the void on level four separating childcare and elderly day care centres from communal areas under apartment units; (right) visual connection between apartments and community garden.

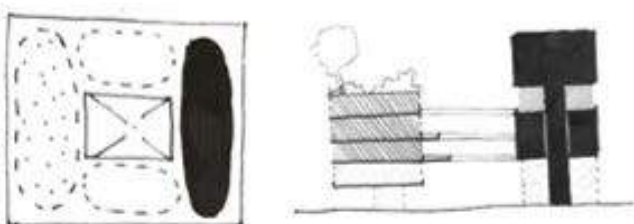


Figure 50: (left) public and private wings in Kampung Admiralty are separated by a large void on the upper levels and a "plaza" on the ground; (right) section showing the vertical spatial hierarchy at Kampung Admiralty - public areas on ground, semi-private/semi-public on levels above with connections to the residential towers indicated in black.



In section, the building consists of multiple tiers that are ascribed a different use at each level.<sup>53</sup> A hawker centre is located on the first floor via escalators leading off the main plaza. A different set of escalators lead down to the supermarket and carpark in the basement levels. Above the hawker centre, the medical centre occupies the third and fourth levels. The childcare centre and senior day activity centre is situated on the fifth floor and the community garden occupies the last storey of the podium. Aside from the establishment of diagonal views within the building, the compact organisation of the primary programmatic functions has resulted in a lack of vertical thresholds and interstitial spaces between these main spaces. As a result, the lack of these interstitial interfaces in between the main functional areas has led to some of the very same primary spaces, which have imbued extant social significance, being established as thresholds and meeting spaces within the building.

The hawker centre is one instance precisely because it is an important cultural and architectural archetype that is very much entrenched within the Singaporean way of life.



*Figure 51: (Top left) Cross Section through the Golden Mile Complex in Singapore, typical post-independence mixed-use typology with residential apartments above the four-storey commercial space below. Design Partnership, 1973. Credit: Wang Chun Yii*

*Figure 52: (Bottom left) Cross Section through Kampung Admiralty that shows car parking and a supermarket on the lower two levels, a community plaza on ground level with food outlets and surrounding the double height space. A hawker centre overlooks the community plaza. The medical centre, a child care centre, senior's activity centre and the community gardens occupy the rest of the tiers. Credit: WOHA Architects*

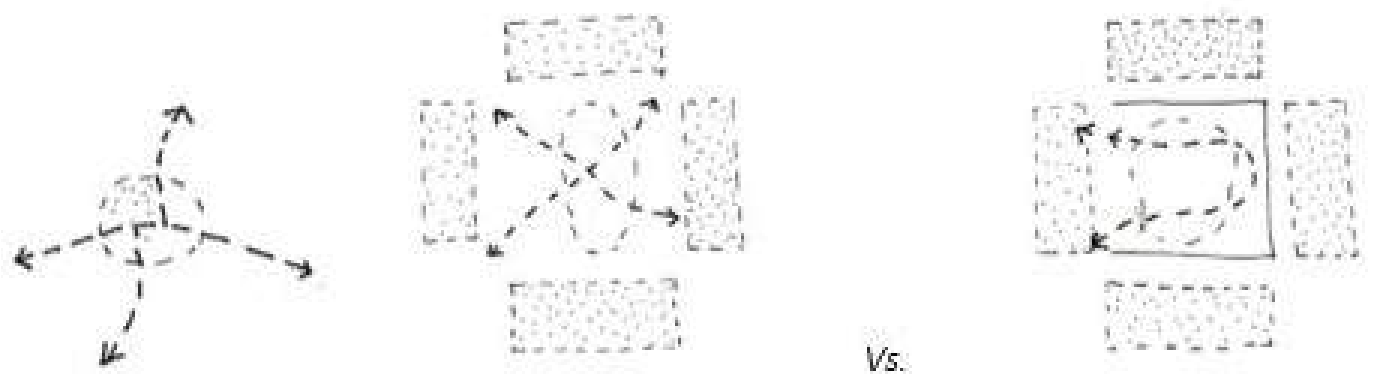


Figure 53: Diagrammatic illustration of interconnectedness through a plaza; connection to the surrounding context and neighbourhood vs. (right) Kampung Admiralty which has provided limited access and is bound by the site boundaries

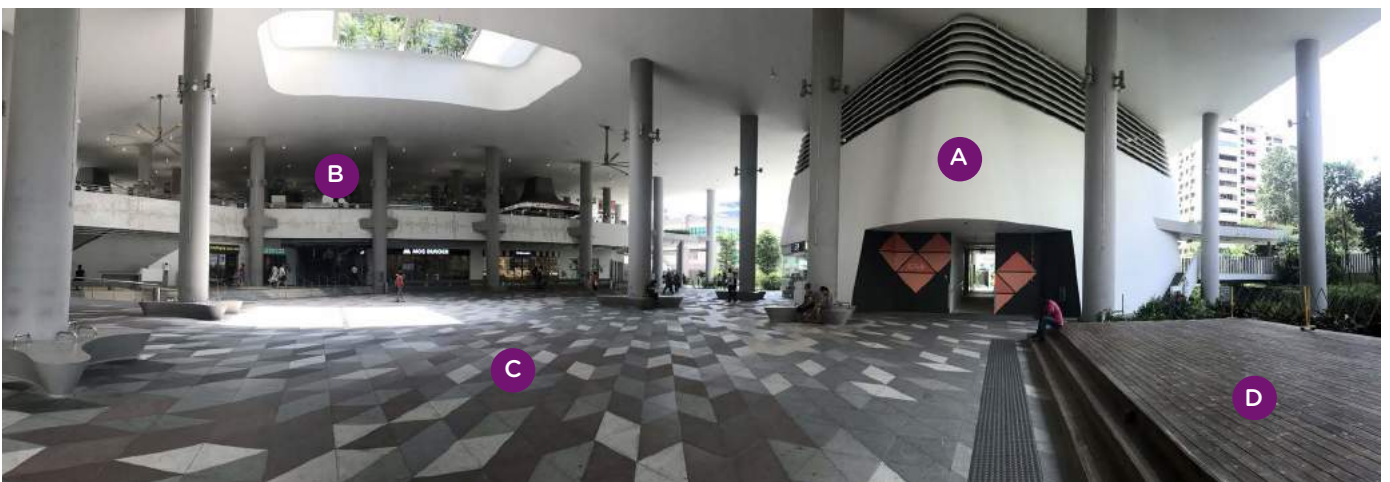


Figure 54: The double height community space is reminiscent of a plaza(C) like setting that attempts to connect the senior living apartments (A) to the public areas like the hawker centre(B), the eateries and the other public and semi-public spaces within the building. A stage for community performances can be seen on the bottom right corner of the photo(D).



Underpinning that cultural significance (in 2018 the hawker centre was nominated for inscription into UNESCO's Representative list of the Intangible Cultural Heritage of Humanity<sup>54</sup>) are the social practices and routines that have been imbued within the hawker centre, making it the **place** it has become. Jacobs and Whyte, in their definitions of **place-making** maintain that this includes sustaining cultural and local identities within existing urban environments to create the feeling of home. Most, if not all, Singaporeans would be familiar with the hawker centre setting. More than a place where good food is found, it is a place where families and friends share meals and reminisce about their days – one that allows for interaction between generations.<sup>55</sup> A place where stall owners know their regulars by name and where colloquial speech thrives. It is additions such as these typologies, ones which are informed by incumbent social practices and are specific to the locale, that strengthen the qualities of the communal spaces and continue to connect “people to each other... producer to consumers, people to buildings”<sup>56</sup>, people to place.

While such archetypical settings are opportunities to increase the vibrancy of public buildings, the locating of said typologies without considering intergenerational living or scale within a multi-agency setting can still result in segregated age-homogenous islands. In order for spaces to become truly integrated places for inter-generational living, the interfaces for socialisation have to extend beyond co-locating multi-generations. Equally importantly, the scale at which our social interactions occur also has to be considered. This is incredibly important to note, especially in larger cities where the scale of interstitial spaces and thresholds increase dramatically but the human scale remains the same. Therefore in designing a place for intergenerational interaction, we are really creating “cities of thresholds”<sup>57</sup>: ones that “represent the spatiality of a public culture of mutually aware, interdependent and involved identities”<sup>58</sup> at a myriad of scales that are representative of the lives lived between buildings.



Figure 55: Hawker centre on the second level above the community plaza where social gatherings over cups of coffee and tea occur.

“I go around, and walk around the floors to see if there are any other residents.

I like to make friends. We usually sit in the lobby and chit-chat with neighbours.

-Mr Ahmad Mohammad Said, Kampung Admiralty resident, 66 years old, grandfather of eight and a Grab (Uber) driver<sup>59</sup>

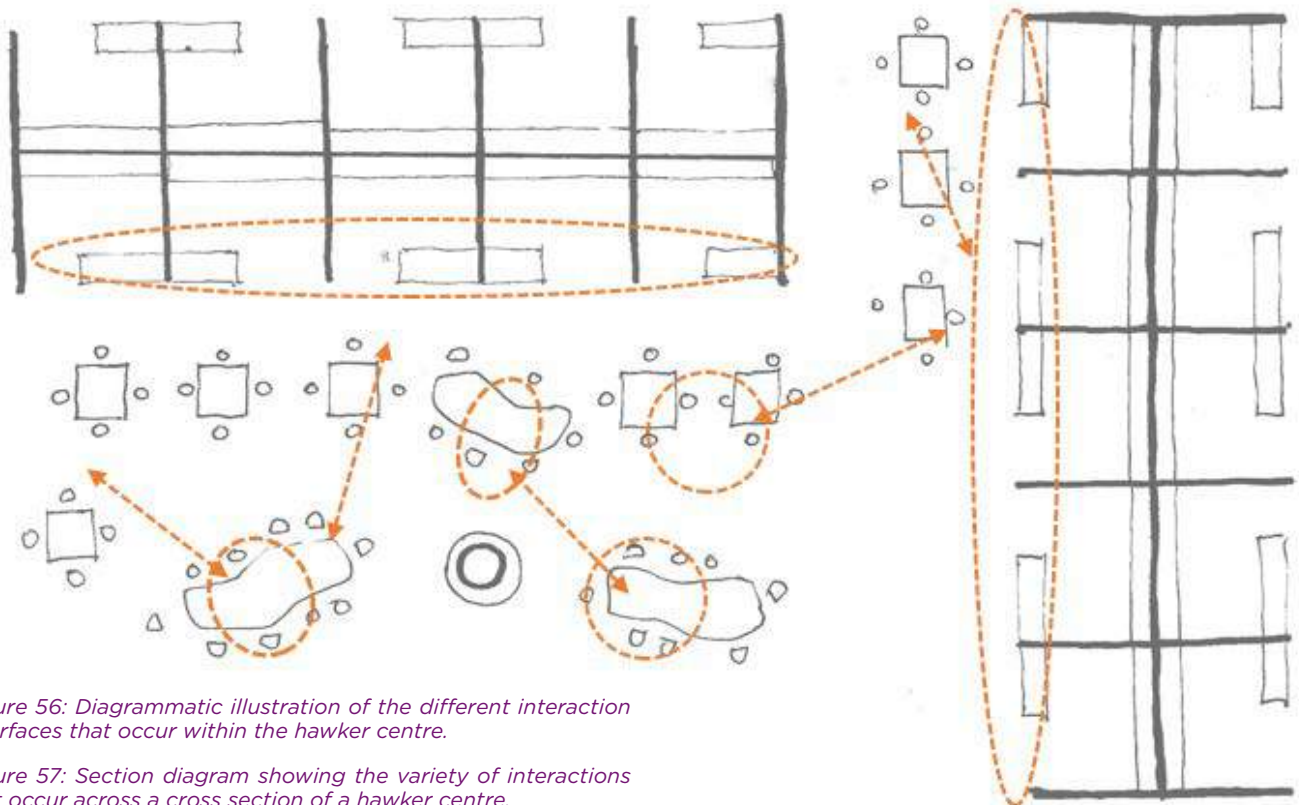


Figure 56: Diagrammatic illustration of the different interaction interfaces that occur within the hawker centre.

Figure 57: Section diagram showing the variety of interactions that occur across a cross section of a hawker centre.

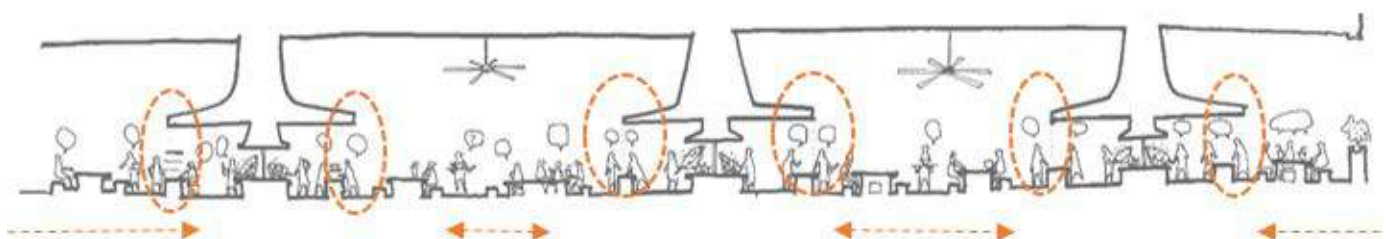






Figure 58: Ground level (Level 1 in Singapore), (left) entrance from Admiralty Mass Rapid Transit (MRT) station; (middle) pharmacy and medical supply store; (right) double height plaza .



Figure 59: Panorama of hawker centre on first level (L2).



Figure 60: Medical centre occupies two floors on the second and third storey of the building (L3 and L4), lift access only into these areas; (middle) public consultation kiosks with outlook into garden; (right) self-service stations on L3.





Figure 61: Fourth storey (L5), Senior day centre run by an insurance company - "Active Ageing Hub"; (middle) Outdoor exercise station and seating bench located in the fitness area between the apartment units and the day centre; (left) void looking down into the courtyard garden of the medical centre, the playground on the same level is located across the void.



Figure 62: Fourth storey (L5), across the void looking down into the medical centre garden is (middle) the playground between the apartment units and the child care centre (right).



Figure 63: Fourth storey (L5) - Built in seating located outside each apartment unit, handrail installed along corridors off the lift lobbies; (middle) Inside one of the senior housing apartments in Kampung Admiralty, credit: Patrick Bingham Hall; (left) Community gardens one level above with views to the units.



Figure 64: An illustrative master plan by Civitas showing the organisation of Liangzhu New Town. Bound by mountains and nature catchment areas to the north-west and the Liangzhu River in the east, the town consists of a series of precincts arranged along the perimeter of the nature reserve. A main arterial road connects all precincts: Golden shores, Chunmanli, Flower Rain Meadows, Seven Sages Town Centre, College Mews, Heronshire Residential District, Festival Place, Sunridge Vista and Bamboo Forest Valley. Credit: Civitas



## 5

## From the Ground Up: Sustainable Cities

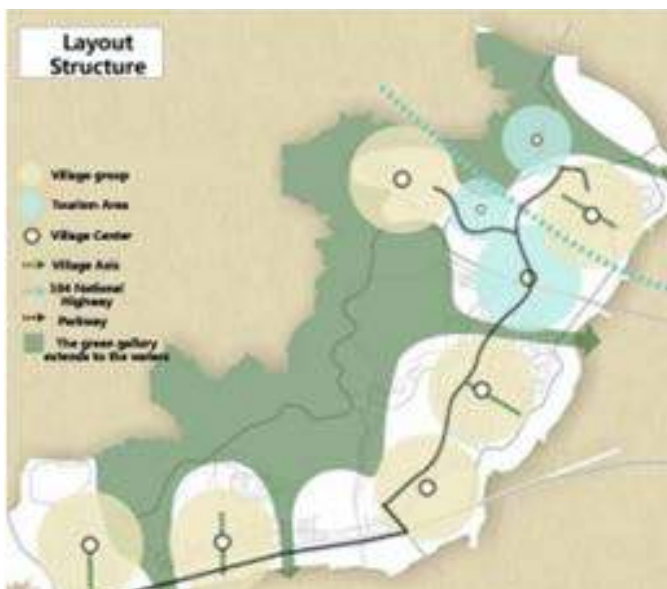


Figure 65: Diagrammatic illustration showing the planning organisation of LNT. A main arterial road links the precincts. Each precinct has a village centre, connections to green and the river are maintained between some precincts. The periphery of the precincts are the upper limits of walkability (Perry, 1920; Forsyth 2018) in the individual villages.  
Credit: Civitas

The following cities in this section are completely new developments that were planned from scratch by either governmental building agencies or developers. Some were in response to catastrophic events, others to meet certain demands for housing and urbanisation. Some of the older cities highlight issues such as a decline in the age-heterogeneity and population of the area with some extreme instances resulting in whole suburbs and housing estates becoming towns for the elderly.<sup>60</sup> Conversely, they also illustrate solutions that could be used to alleviate or even reverse the issues of age-homogeneity to create integrated zones for intergenerational interaction.

### Dignified Life Retirement Village, Liangzhu New Town,

Located 20 kilometres from Hangzhou city in Yuhang district is Liangzhu New Town (LNT), a 12 000 mu (833 hectares, 6.8km<sup>2</sup>) development designed as a multi-village town for up to 50 000 residents comprising of a series of cultural, civic, retirement, commercial and residential precincts. Originally a suburban pastoral area, the new town is located close to parks, hiking trails and a UNESCO World Heritage Site for Liangzhu culture<sup>61</sup> (5000 year old jade culture dating back to the Neolithic period). The heritage site has been marked for tourism development in the Hangzhou urban strategic plan.<sup>62</sup> The site where LNT was to be built was sold to Narada Real Estate Development (NRED) in the 1990s under a “cultural promotion”<sup>63</sup> joint development agreement with the Yuhang municipal government. This agreement was meant to promote urban expansion in Hangzhou and marked a transition from traditional housing models to socially responsible real estate development<sup>64</sup> in China. With the site’s lush green setting and proximity to nature, the planners contracted by NRED drew upon Ebenezer Howard’s reformist ideas to create a garden city<sup>65</sup> that would be self-contained and allowed a mix of social, cultural, commercial and educational amenities that satisfied the needs of families and individuals alike; it was to be a multi-functional and self-sustaining new town that accommodated a diverse demographic.<sup>66</sup>



The first phase from 2000-2006 saw the installation of basic infrastructure such as a roads and sewage systems in the new area.<sup>67</sup> In 2005, Narada sold the project to Vanke Group. The new developers chose to keep the emphasis on social design and amenity that the previous developers had worked on. A lower Floor Area Ratio (FAR) of 0.67<sup>68</sup> was intentionally maintained at LNT (surrounding land parcels earmarked for private development usually have an FAR of 3.0 - high density development). From 2006 to 2016, the precincts of Bamboo Forest Valley, Sunridge Vista, Chunmanli, Rain Forest Meadow and Heronshire Residential District, which is divided into North, South, East and West counties, were completed. Rain Forest Meadow was primarily developed to house relocated tenants from pastoral areas that were redeveloped for the new town. The last phase will see the Golden Shores precinct and Seven Sages Town Centre completed.

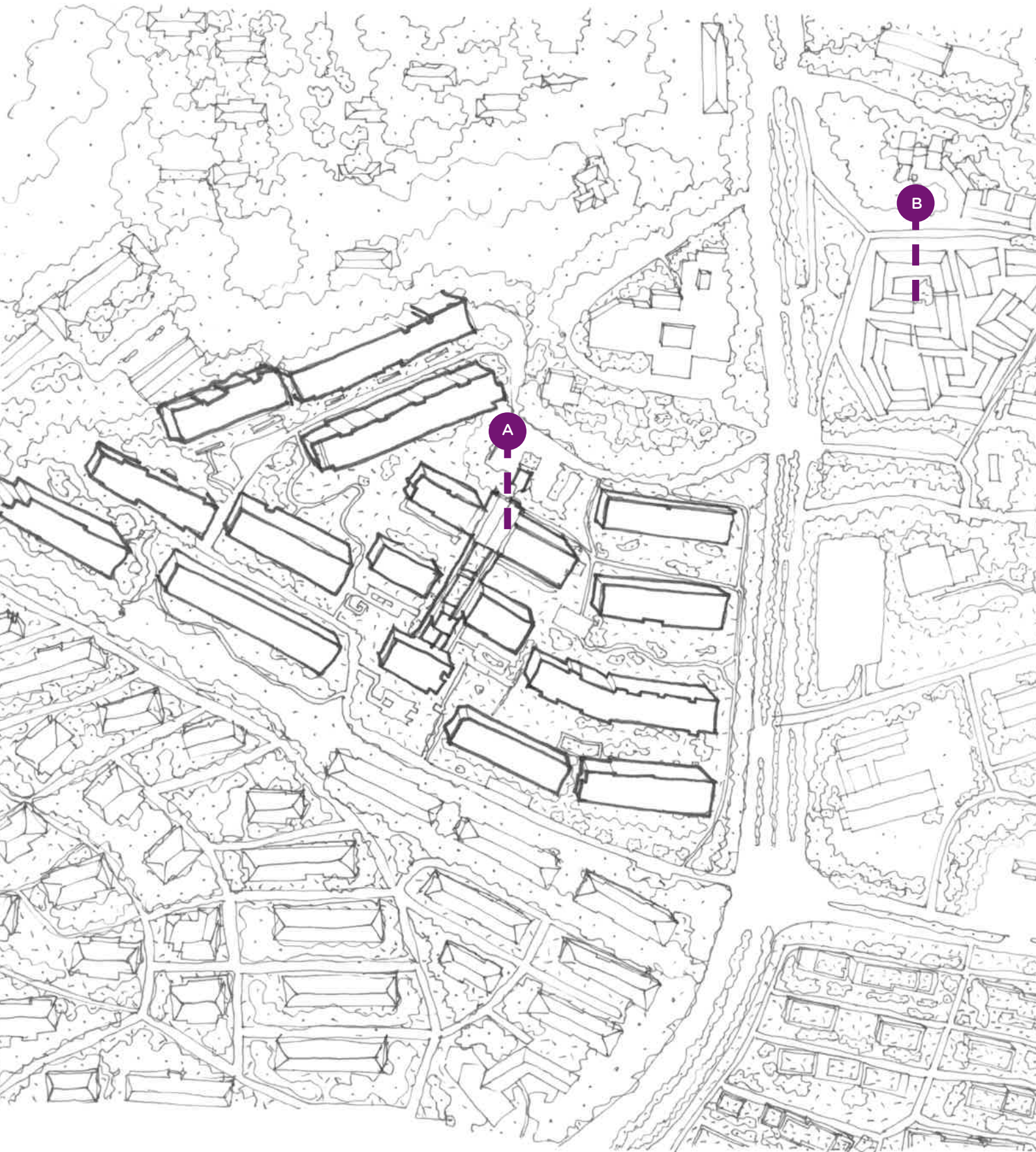
**“Suppose people lived in little communities among gardens and green fields so that you could be in the country in five minutes’ walk...”**

**- William Morris<sup>69</sup>**

Each of the precincts or counties has either a residential, educational, tourist, cultural or civic function and is individually planned around a small village centre. Built up areas in each precinct are denser around village centres and decrease towards the peripheral edges. The morphology of the apartment buildings within the residential precincts has been designed to increase the amount of interstitial green landscaped areas between building blocks. The village centres contain some public facilities but these vary across the different precincts across the new town. Zones with connecting links between the nature reserve and the Liangzhu River have been designed between precincts. A park is located between Heronshire North County and Festival Place.

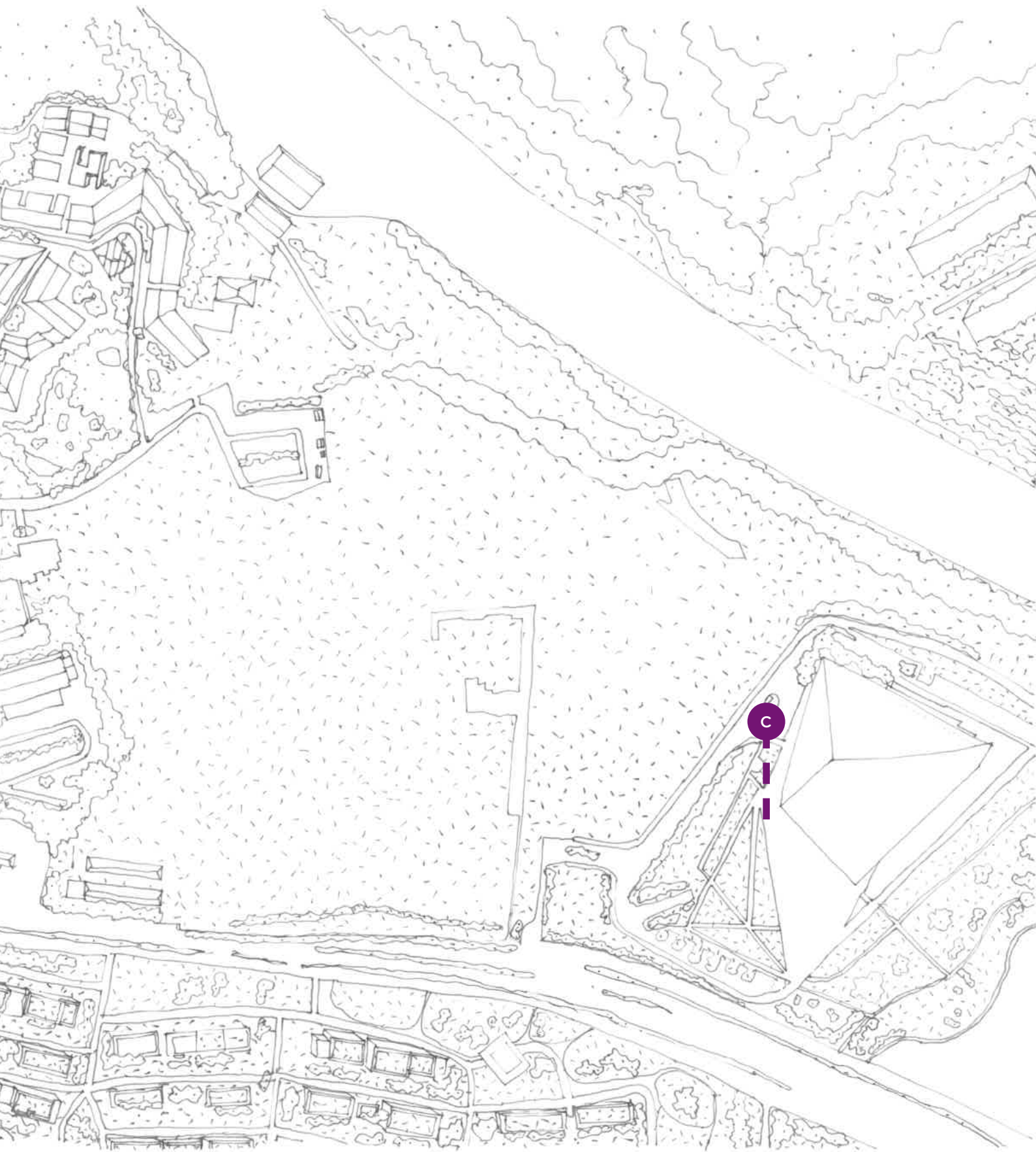


Figure 66: Diagram illustrating the morphology of one of the apartment complexes within Heronshire, a residential county. The individual blocks have been rotated and offset to increase the amount of interstitial landscaped zones between building blocks. Credit: Civitas



*Figure 67: Illustrated map showing Sui Yuan Garden Home(A) and its setting within Heronshire South County. The retirement home is located within walking distance to "Festival Place"(B) which comprises of a village food street, village cafeteria, a child care centre, shops, offices and a community centre. A small hospital and other residential apartments are located in the same vicinity. The intersection of the retirement zone with the tourist and civic areas means increased intersections between different groups of various demographic. Note the location of the cultural and arts centre(C) in the bottom right corner of the image. This centre which houses a library and a café sits just outside the Heronshire residential precinct with a large expanse of field between the centre and the home.*







*Figure 68: (Above left to right) Garden courtyard in the ILU block of Sui Yuan Garden Home; main walkway; lounge area in the main lobby of the home; resident garden visible from main walkway; lounge room in the dependent wing of the home; seniors' dance practice.*

*Figure 70: (Bottom left to right) Hospital and clinic; Child care centre; Children's playground; Markets at Festival place; Farmer's produce market; Liangzhu food alley and village foodcourt.*

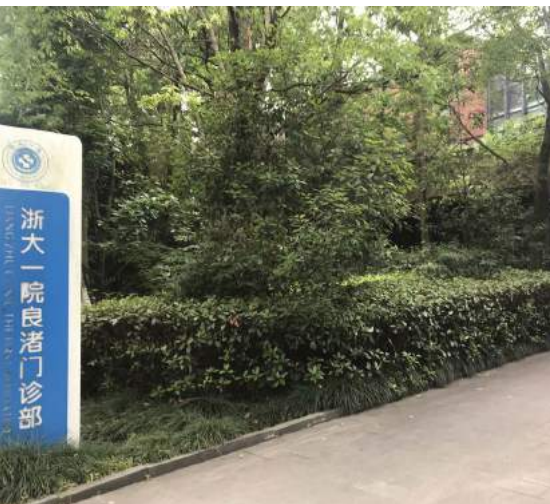






Figure 69: (right) Resident library at Sui Yuan Garden Home

Located in Heronshire South County, sits a combined retirement, tourist and civic zone. Named the 'Dignified Life Cultural Village', the area sees the integration of an aged care facility within a wider civic and residential setting. The Sui Yuan Garden Retirement Home is located across the road from the village vegetable market, shops, "Food Alley", village cafeteria, restaurants, a child care centre and the village bus interchange. A small hospital is accessible by foot in the same vicinity. The village vegetable market is not only used for farmers to sell their produce, it is also a venue for annual festivals in LNT. Festival Place County which has a community centre, shops, small offices and a non-denominational church is also within walking distance. This intersection of tourist, civic, commercial and cultural amenities within walking distance of the home means residents living in any of the 12 blocks of independent living units (ILUs) are able to go about their daily routines independently in the "village square" with minimal help and remain part of the community.







*Figure 71: (Left to right) Offices at Festival Place; Alfresco dining at the village cafeteria and Liangzhu Food Alley.*

In addition, residential areas located in the adjacent precinct of Heronshire have become popular with multi-generations of families wanting to remain near a parent or grandparent living in the retirement home in a co-located setting. The intersection of different groups with varied demographics creates a vibrant intergenerational setting and presents an opportunity for even more socialisation interfaces.

**“Walkability is a quality of the Built Environment that invites people to get around on foot, not because they have to but because they will feel like they are missing out if they don’t... a walkable community is far more than just a neighbourhood that makes walking possible. It needs to offer the experience to the walker that makes them want to walk. To do this, the physical infrastructure needs to have characteristics that make people not just realise walking is possible but that it is the preferable to other modes of transport...”<sup>70</sup>**

Outside of Heronshire North County however, there have been a number of missed opportunities for integrated intergenerational living despite the different functional areas that have been introduced for that very purpose. The urban sprawl that has resulted from the successive alignment of the consecutive precincts within the town has resulted in the co-location of distinct

functional areas. But because walkability<sup>71</sup> (Forsyth, 2018) is only accommodated within the precincts and not between precincts town-wide, it is contrary to the developer’s ethos of a walkable self-sustaining city. As a consequence of not having considered the social outcomes of a traversable and compact<sup>72</sup> city site-wide, there is a lack of carefully considered thresholds and liminal spaces for social interactions, ‘destinations’, along pedestrian paths of travel. Take for instance, the proximity between the Dignified Life Retirement Village and Liangzhu Village Cultural Centre. An arts and cultural venue for external events in Hangzhou, the centre is located just outside the periphery of the Heronshire South County. With its community library, galleries and a café set in a building designed by Tadao Ando, it attracts a diverse demographic. However because it is considered too far to walk from the retirement home and village centre, there is only swathes of undeveloped field or “leftover space” between the two venues. The consequences are two pronged; the diverse demographic in the cultural sphere does not intersect with the Heronshire South community and there is a missed opportunity to develop more interstitial interaction interfaces along the path between the two locations.

Secondly the most varied functional areas have only been allocated at the northern most end of the town. Staging of the project has resulted in the Seven Sages town centre being built later than the residential areas, despite



Figure 72: Diagrammatic analysis of different functional villages within Liangzhu New Town. Areas are co-located (left) instead of having an overlapping or intersecting edge conditions that results in integrated thresholds (middle/right).



Figure 73: Arts and cultural centre at LNT holds arts and cultural events across Hangzhou and attracts not just residents living within Liangzhu New Town but also a diverse demographic from out of town, image credit: Songkai Liu; (left) book launch; (middle) a family of four visit the library and cafe in the arts and cultural centre; (right) a blogger visits the building by Ando for architectural photography.



Figure 74: Many public buildings within Liangzhu Cultural Village are by famous architects, (left) Arts and cultural museum by Tadao Andao; (middle) Meili Zhou Church by Tsushima Design Studio and (right) the Liangzhu Cultural Museum by David Chipperfield.

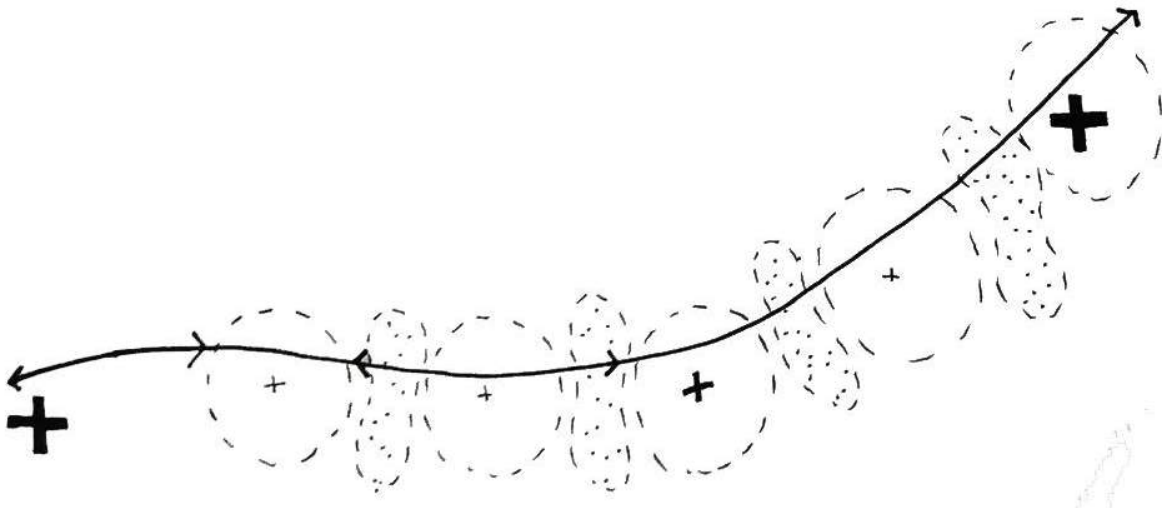


Figure 75: Illustrative diagram showing the large distances between villages and the lack of i) established individual village squares (indicated as crosses in thin line weight) that can support the needs fully in the individual villages; ii) lack of proximity to the established town centres in the town, some villages are closer to established areas (indicated far left) outside of town than to the main town centres in LNT itself.

As part of my stay at Heronshire Residential District in Liangzhu New Town, this is a record of the time it took for me to walk from my apartment in Heronshire to the following places: 5 minutes from my apartment to the main arterial road. Another ten minute walk to the small supermarket located in the village centre. The village complex that the supermarket was in comprised of an early learning centre and a number of small offices. 30 minutes to walk to the retirement home passed through a park which made the walk slightly more interesting. Another 35 minutes to walk from the retirement home to the arts and cultural centre.

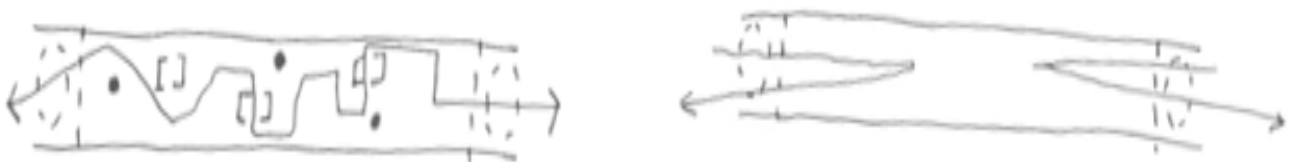


Figure 76: illustrative diagrams illustrating the difference between areas of large urban sprawl with (left) and without thresholds and interstitial spaces in between.



that the centre only comprises of a community centre and a commercial street and lacks the multi-functional diversity and intersections found in the northern end of LNT. This lack of major public facilities in the town and inadequate amenities within individual precincts has seen village residents (and visitors alike) driving or commuting out to neighbouring towns and cities to support their needs (lifestyles, routines, choice). This commute away from town not only defeats the purpose of having town and village centres, it is also segregative and results in a loss of socialisation opportunities between different age groups of various mobility. This potentially gives rise to age-homogenous islands of activity despite Liangzhu Cultural Village's much touted multi-functional setting.

What needs to be realised is that in order to contribute to the vibrancy and intensity of LNT, the intersections of multi-functional areas within walking proximity have to be strengthened. This is so as to create a layered, self-sustaining place to live that is different to the new cultural, commercial and residential areas that are being developed extremely quickly in areas surrounding LNT. In order for the new town to maintain its current population and attract more residents and visitors, the notion of an integrated multi-functional intergenerational setting has never been more important.



*Figure 77: Visitors at the Arts and Cultural Centre in Liangzhu New Town*

# A Tale of Two Cities: Bedroom communities in decline

## Tama New Town, Chiba Prefecture Toyoshikidai Danchi, Kashiwa City, Prefecture

An hour outside of Tokyo, some older bedroom communities have seen a significant proportional increase in the number of elderly within their populations. This is in part due to the ageing of the incumbent communities and also because there are fewer younger families and individuals moving into the area. Tama New Town to the east and Kashiwa City in the west are two such examples. Both cities were developed as a result of the rapid economic development and urban growth Japan was experiencing in the post-war economic boom of the 1960s and 70s. Tama New Town received a lot of media attention<sup>73</sup> and was touted as the large scale development that would ease the bulk of the housing strain on metropolitan areas. Such suburban new towns on the outskirts were regarded as solutions then to the over centralization of the population within Tokyo.

In the case of Tama New Town (a development spread across the four municipalities of Hachioji, Tama, Inagi, and Machida), the planned area was the largest suburban development of the period, spanning 14km east-west, 3km north-south and measuring 3000 hectares. The development was to be built over a period of 30 years to accommodate a total of 340,000 people and become an area for integrated working and living communities outside Tokyo to be built in stages over a period of 30 years. Composed of 21 residential districts, each district had an area of 100 hectares and was to accommodate 5000 dwellings or roughly 12,000 to 20,000 people. Each district was considered a discrete self-sufficient neighbourhood and was planned around a junior high school. In addition, every district had two elementary schools, a neighbourhood centre, a post office, shops, a police station, medical facilities, public and commercial facilities. The planning of the area drew upon the theory of a "neighbourhood unit" (Perry, 1920).

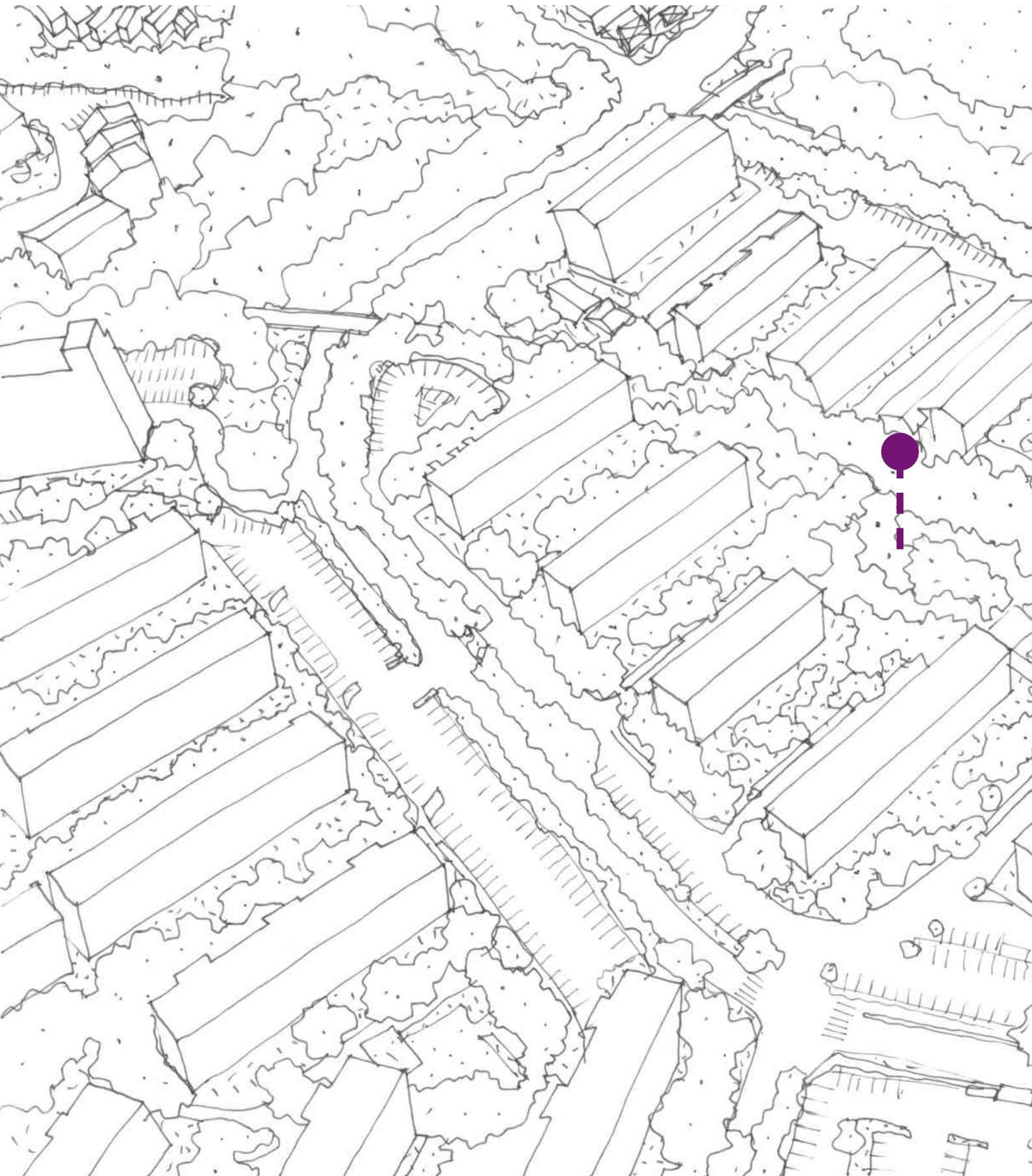
While Perry's theory outlines a 400m radius as an ideal maximum walking distance in a square plan layout, each district in Tama New Town was nearly twice the size in population and plan - half a kilometre east-west and some 2km north-south. In addition, because the town was built over 30 years, by the time the last stage was completed, the first wards that were occupied in the early 1970s (by young families) were starting to experience depopularisation and ageing concerns. The anticipated integration of working and living communities never eventuated either as companies failed to move into the satellite towns as expected<sup>74</sup> and when the property bubble burst in the 1990s the production of apartments far outstripped the demand.<sup>75</sup> In addition, despite being planned as being self-sufficient, the districts faced a scarcity of public facilities, shops and community spaces. The majority of mixed use areas were concentrated around Tama Centre and Tama train station. What this meant was, aside from schools, that the districts were largely homogenous residential areas across a large urban sprawl. Also prevalent in the area was a lack of social cohesion and interaction amongst the residents. A common issue in bedroom communities, this is largely to do with the structure of the young nuclear families that moved in during the 1950s to 1960s:

**"In a suburban family of the period, the father would usually be a salary-man, spending long hours commuting to and from his workplace, while his wife would either be a housewife or would work (part-time) close to their house. Such a family-life pattern would often cause the weakening of relationships with neighbours and among family members."<sup>76</sup>**



**Figure 79:** (Clockwise from top left) Hilly terrain at Tama New Town with estates situated often at the top of hills;  
 Pedestrian crossing and steep climb up to the estate;  
 An elderly person walks long stretches of roads leading to housing estates with very little public amenity along the way. Only a handful of shops were located along the 15 minute walk from the station;  
 One of bicycle and nature links to the station, this link is also shown overhead the pedestrian crossing in the middle photograph;  
 Resident cycling past the entrances to one of the residential estate.





*Figure 80: One of the residential estates within Tama New Town visited with the typical housing estate layout - regular blocks laid out in linear fashion with little variation in interstitial spaces. - alternating aisles for car parking and green space*

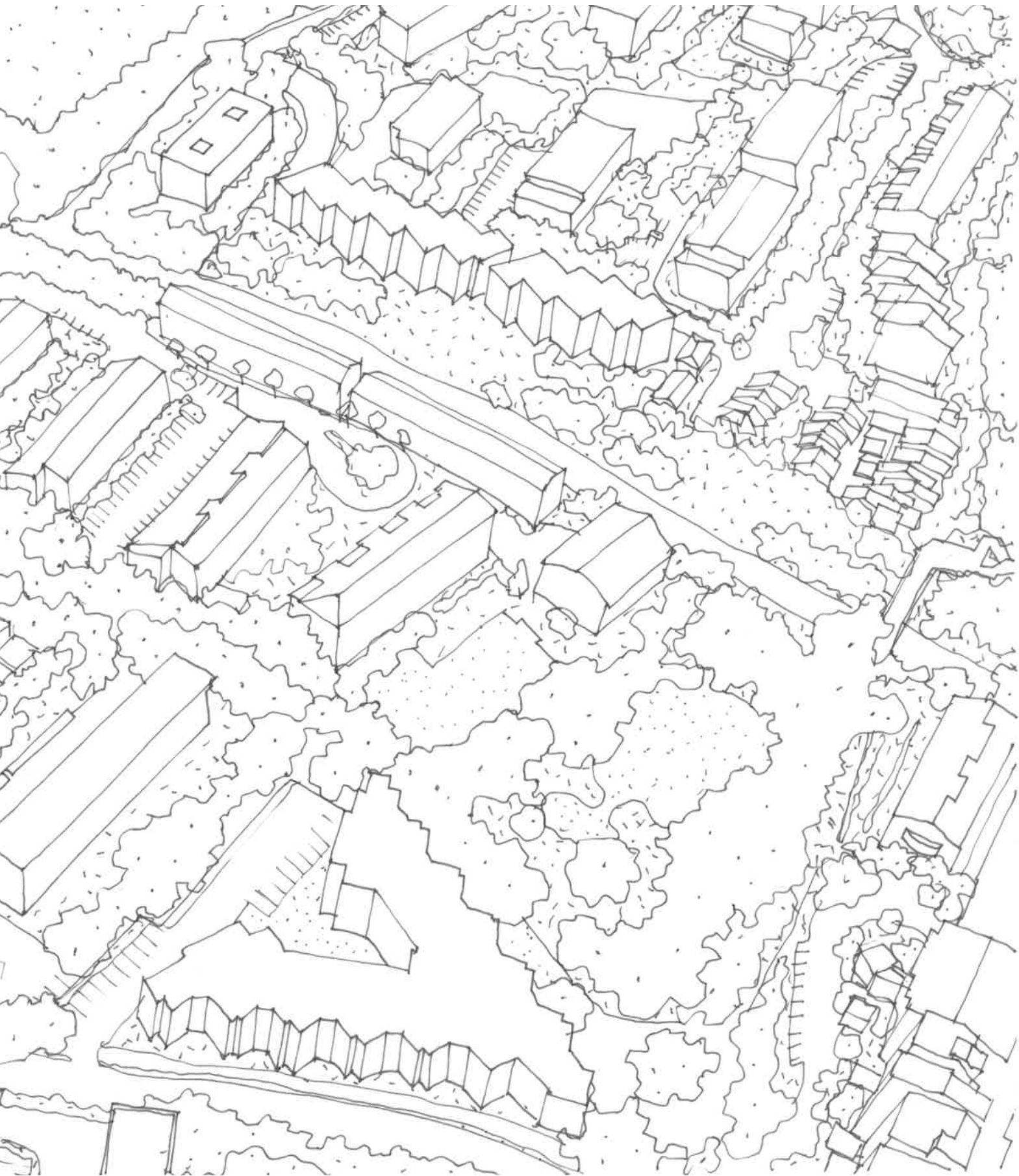










Figure 81: (Facing page) Alternating green space and car parking between buildings at Tama New Town with little variation in interstitial spaces; bicycle and nature park connects the housing estates to the train station.

Figure 82: (Left) Newly refurbished apartment units overlooking the main green oval.



Figure 83: Panorama of interstitial spaces between buildings: a park, a playground and bicycle parking. The refurbished housing estate provides both amenity and open spaces with different qualities for diverse interactions.

As a result, these once young families now form the ageing population in the area, and with the younger people moving to central wards, some of the concerns are now with urban shrinkage and a ghettoization of the elderly living in the area<sup>77,78</sup> with 29.6% of the population aged 60 and above, suburban housing estates are fast becoming “de-facto retirement villages”.<sup>79</sup>

While spatial syntax studies (Capitano, 2018) have been conducted to identify the physical constraints of Tama New Town (‘Inbetweenness’, ‘Gravity’, ‘Green/ water space’, ‘Bottom-up resident activities’), the issues of ageing and desocialisation still prevail in Tama New Town. The size of the town and scale of urban sprawl coupled with a severe lack of socialisation opportunities (both within the physical and social realms) have led to a de-intensification of the area. And so, when looking at existing cities that have become devoid of intensity, thresholds and interfaces by way of architectural insertions need to be examined for ways which can help invigorate the existing social and urban setting to become unique and vibrant places for intergenerational living.

This is where Toyoshikidai **danchi** in Kashiwa City comes in.

Like Tama New Town, the city of Kashiwa has seen resident depopulation and an increased proportion of elderly in its bedroom communities.<sup>80, 81</sup> However the recent rejuvenation of one of the housing estates in Kashiwa’s wards (**danchi**) might offer a solution for these problems. Developed by the former Japan Housing Corporation, now known as the Urban Renaissance Agency (UR), Toyoshikidai **danchi** consists of 5000 units and is roughly the size of one district in Tama New Town. One of many bedroom communities built during Kashiwa’s growth as a key transport interchange for the Tokyo metropolitan area.

A recent census revealed that over 48% of the residents living in Toyoshikidai **danchi** in 2010 were aged 65 and older.<sup>82</sup> Only 3.5% were aged 20 or younger and 30% were between the ages of 30 to 40. A plan was initially established to rehabilitate deteriorating housing stock within the complex. This project soon evolved to become an opportunity to combat the bigger issue that was the multi-faceted ageing conundrum in Japan. Toyoshikidai has since then received a series of redevelopments as part of pilot urban rejuvenation efforts. As part of the “Urban Development for Longevity Society”<sup>83</sup>, existing buildings will be demolished and rebuilt to include more amenity for an ageing population. The Toyoshikidai refurbishment project is set to take place over a few stages and will see the decanting of residents from old apartments into other UR apartments. Once construction is complete, they will then be moved back into a new apartment within the same vicinity of their previous one.

A combination of social and architectural principles were implemented in tandem to enable successful ageing-in-place within the estate. Buildings that were originally five to six storey walk-ups were redesigned and rebuilt as eight to 14 storey high barrier free apartments with a greater mix of apartment types to attract a more varied resident demographic. A subsidised rental scheme by UR was also meted out to encourage young families to move into the area. New care facilities and social support amenities were implemented in the **danchi** within close proximity of residents’ homes. With the introduction of a clinic, child care centre, shops, a dementia activity centre and the adoption of a comprehensive regional care system model, this move to integrated services contributes to continuous care within the home and **danchi**. The advantage of this system of care is that a whole suite of inter-specialty healthcare services is now available within proximity to those who require it<sup>84</sup>, thereby shifting the focus from moving to “home-like” environments in age restricted institutions, to having care made available within their actual homes and communities - a village of sorts with the necessary amenities and facilities needed to sustain life.



*Figure 84: Refurbished apartments completed in stage 1 shown on the left and centre of the photo, un-refurbished apartments located across the road on the far right in a distance.*

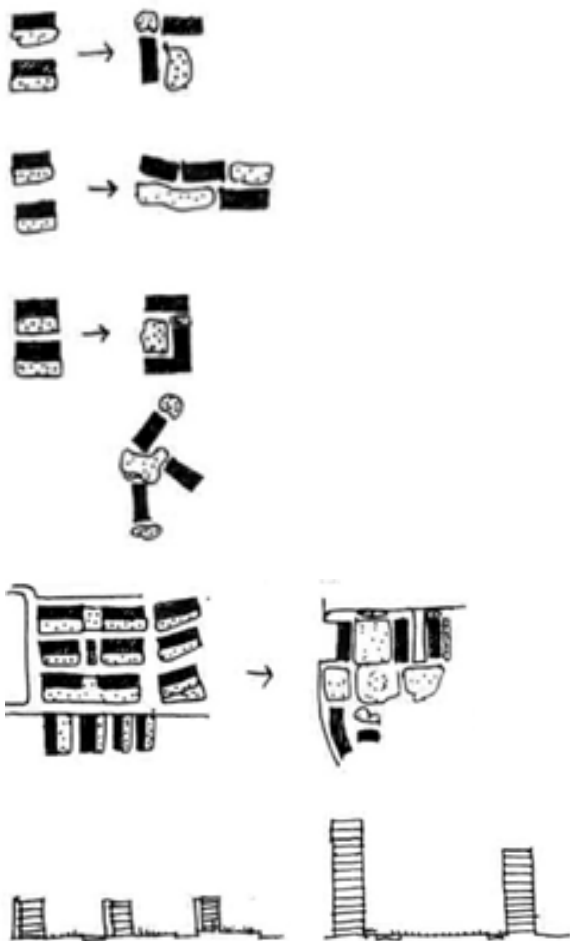


Figure 85: Diagrammatic images showing the changes made to the spatial morphology at Toyoshikidai danchi in both plan and section. In plan buildings are rotated to create different types of spaces and edge conditions, in section the ground plane is freed up by increasing the building density.

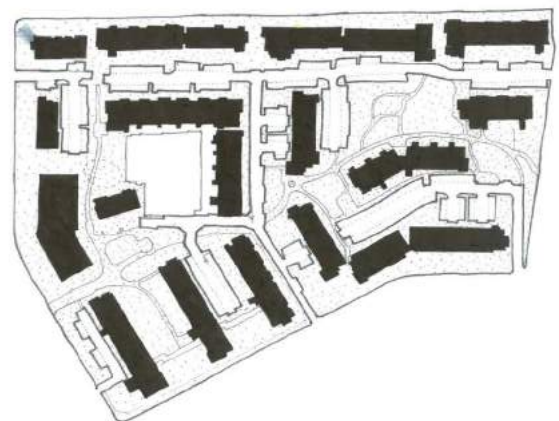
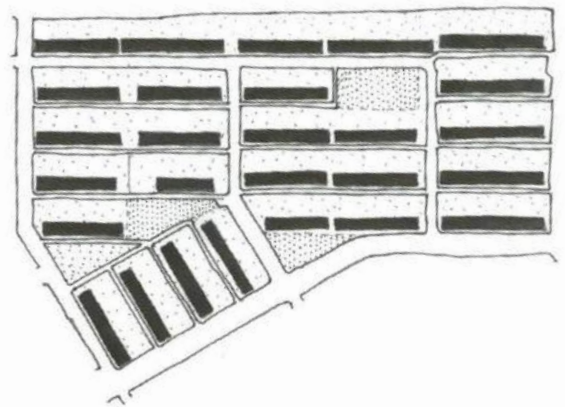
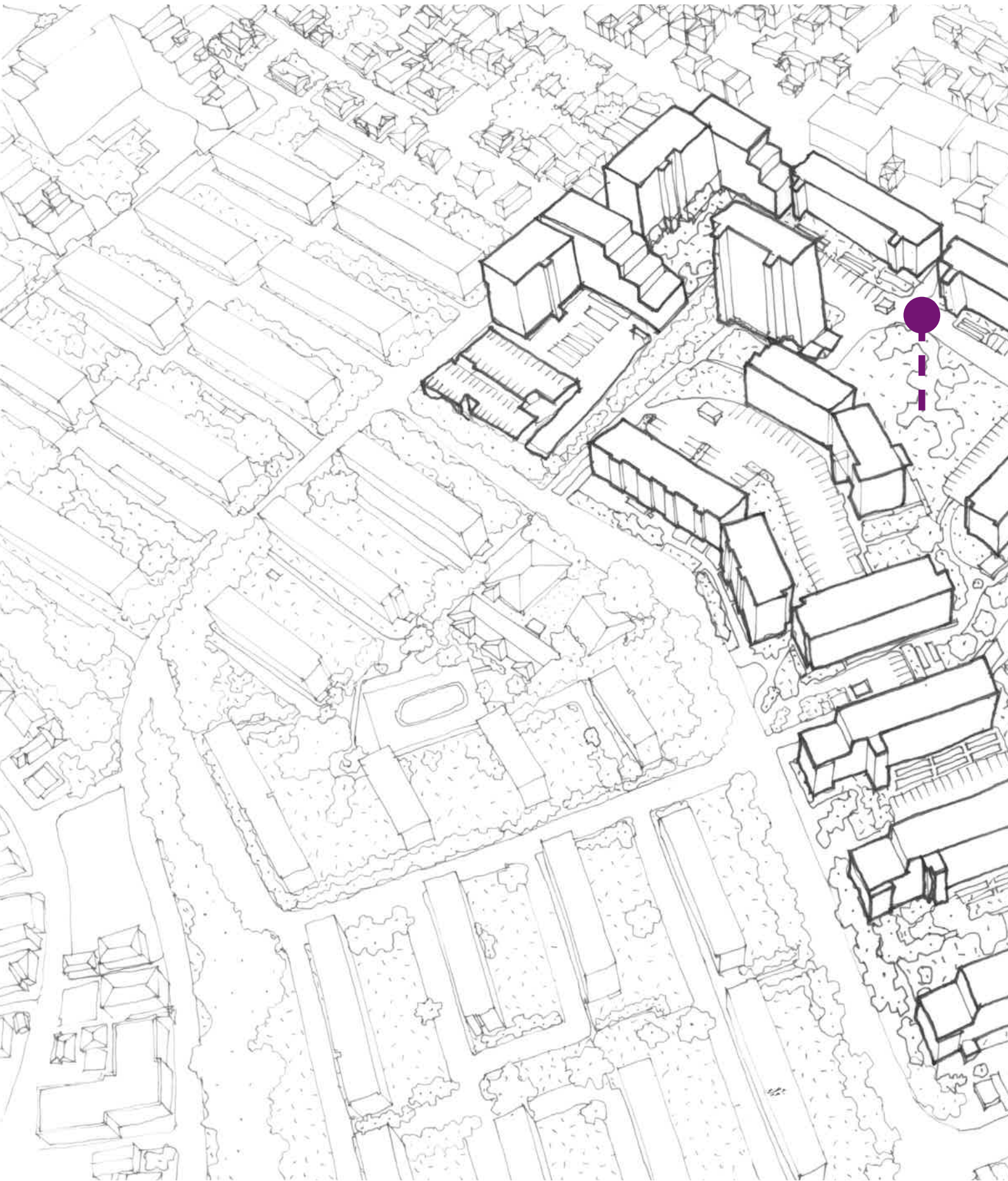


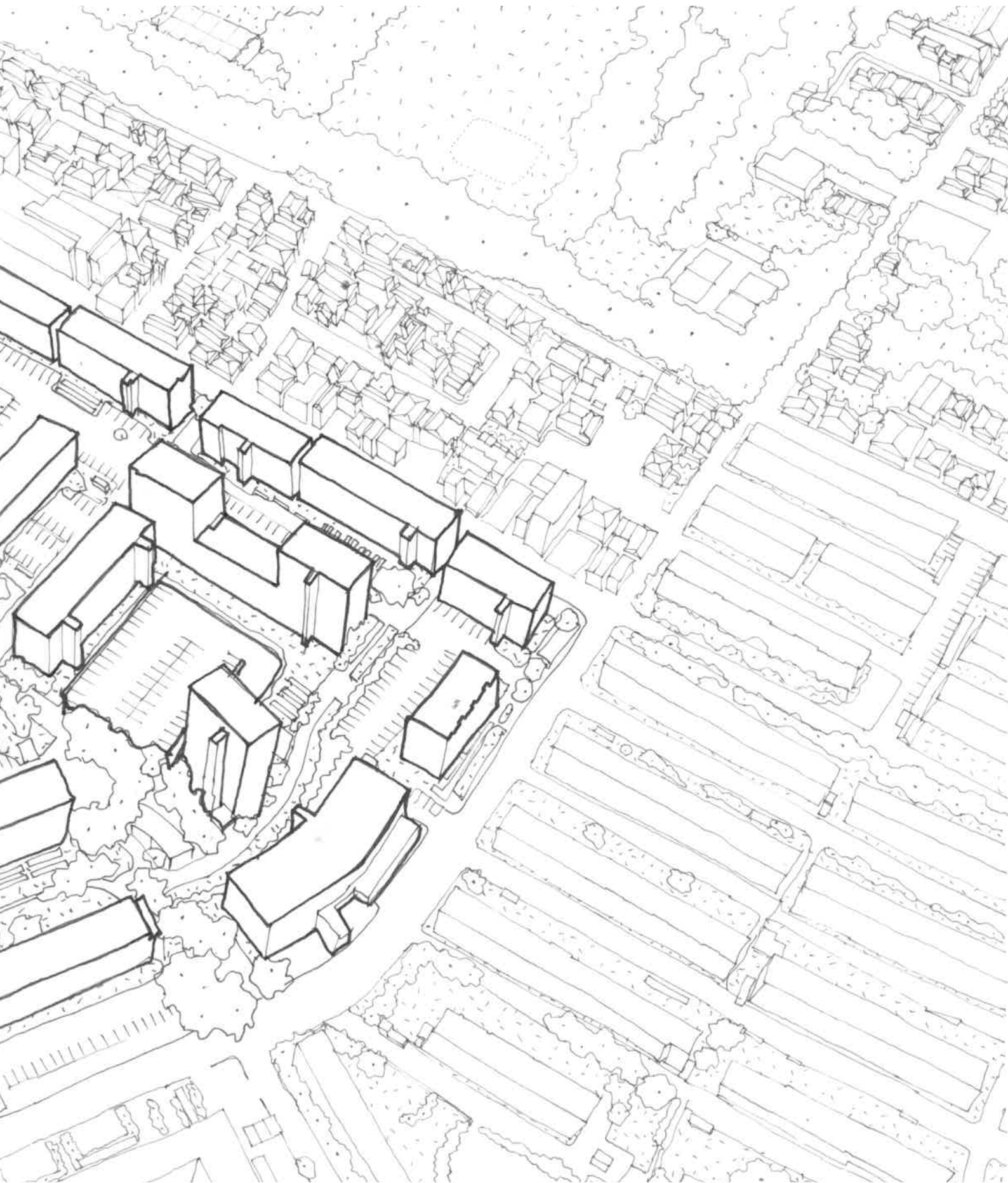
Figure 86: Illustrative diagram indicating the difference in the estate before (top) and after (below) the refurbishment in Toyoshikidai danchi. Increase in space on the ground plane and variations in the edge conditions and qualities of open space.





*Figure 87: Illustrated aerial perspective of Toyoshikidai danchi illustrating the juxtaposition of the rejuvenated zone and the older building blocks in the surrounding areas.*





However, it doesn't stop there, the spaces and thresholds between apartments at Toyoshikidai **danchi** have been set out in order to bring about the intensity within the community and to enable intergenerational interaction. The higher apartment blocks reduce the footprint of the built up areas as compared to the older, shorter blocks within the same plot allotment. Thus creating opportunity for increased communal space at ground level. This has led to the creation of communal gardens, 'active resident collaboration zones' and 'socialisation areas' – areas for community interaction within the proximity of homes. These spaces were also introduced in conjunction with the theme of Sustainability. As part of refurbishments to the estate, sustainability was introduced as a way to foster community spirit and increase neighbourly camaraderie. This plays very much into the cultural notion of "Ikigai" (Matthews 2003; Hashimoto 2000),<sup>85</sup> a sense of purpose and worth that largely relates to aspects that constitute one's social identity or "what makes life worth living" in Japan (Matthews, 1996) or the notion of the everyday agency<sup>86</sup>: to retain a sense of autonomy, identity, and connectivity to one's immediate community. This is indicative of Japanese attitudes towards work and social relevance. When surveyed, 80 percent of Kashiwa City's elderly residents indicated that they were willing to work in some capacity.<sup>87</sup> For the residents of Toyoshikidai, the establishment of workplaces within the **danchi** itself like the community eatery, community gardens and child care centre ensures the continued active participation of older residents within society.

The success of the program extends beyond the boundaries of the complex, the collaborative effort at Toyoshikidai **danchi** has resulted in Kashiwa city creating more job opportunities within the city that specifically cater to older residents within the city, these include vertical farming, community dining, child care and community support.<sup>88</sup> The increased presence of an active older demographic within the local community and city, results in more opportunity for intergenerational interaction, intersections between residents and a reduction in the number of age-homogenous "islands" and segregation. Once again underscoring the importance of a "city of thresholds" in place-making for an intergenerational society.



Figure 88: Diagrammatic representation of the distribution of amenity and facilities within Toyoshikidai Danchi. Credit: University of Tokyo

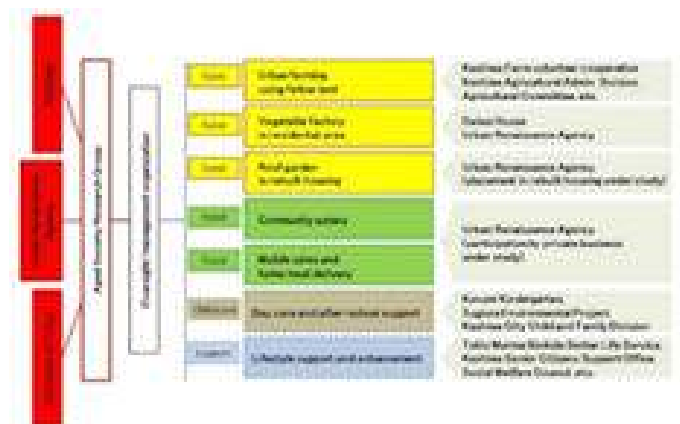


Figure 89: A breakdown of the available avenues of work opportunities available for older people and the participating agencies within Toyoshikidai Danchi and Kashiwa City. Credit: University of Tokyo, Institute of Gerontology.





Figure 90: Kindergarten opposite the danchi.

Figure 91: A school going child walks past an older person seated in one of the interstitial zones located on the periphery of the estate. Un-refurbished existing apartments can be seen in the background behind the row of trees

Figure 92: "Four season" pedestrian path, gathering spot for community events



Figure 93: A signboard illustrating how Stage 1 perpetuates and encourages sustainability within the complex and the wider community through interventions inserted within the 1) green spaces and gardens, 2) resident commute and 3) within the home. This is also part of a larger effort to encourage social cohesion amongst the residents by creating spaces there was cause for interaction. Translation: Megumi Sakaguchi.

Figure 94: Community garden plot;

Figure 95: Communal seating around letter boxes - gathering points for socialisation opportunities

Figure 96: Juxtaposition of older shop houses against the new high-rise buildings at Toyoshikidai danchi

# Whose Utopia?

## Urban Ideals vs. Community

### Nadanohama Housing Complex 2 Chome Mayakaigandori Happy Active Town (HAT), Kobe, Hyogo

Located at the eastern waterfront area of Kobe City in Chuo and Nada ward, Happy Active Town (HAT) occupies a 120-hectare site that was redeveloped after the Hanshin-Awaji earthquake in 1995. Prior to the earthquake, the waterfront area was planned as a new eastern city centre, an addition to the existing western city centres of Sannomiya and HaborLand in Chuo ward. Most of the planned areas for HAT were intended for arts and culture, education, homes, businesses, health and research – a civic and cultural precinct that actively combined areas of work and play. In the aftermath of the earthquake, the planning of the new city centre changed to meet the imminent housing needs of the disaster-stricken city. The earthquake affected highly urban areas and disrupted civic, transport and residential functions – areas hardest hit by the quake were older central neighbourhoods<sup>89</sup> that had a higher population of older people. As a result more than half of those killed were aged 60 and above, with twice as many women than men in that category<sup>90</sup>, 23% of the casualties in the earthquake were aged 30-59<sup>91</sup> which led to an increase in the number of single family households. Pre-existing plans that had been mapped out previously for the housing and development of the new town were incorporated into short term 3-year emergency plans<sup>92</sup> that aimed to build a resilient city through recovery planning, housing improvement, community development and support.<sup>93</sup>



*Figure 97: Playground outside housing block at Nadanohama complex in 2 Chome Mayakaigandori, Kobe.*

*Facing page: (Left to right)*

*Figure 98: Elderly persons use the overhead bridge which has been fitted with a “ramp” on the edges to ease carrying heavy items up and down at HAT.*

*Figure 100: A parent and child in the garden mall of the Nadanohama development.*



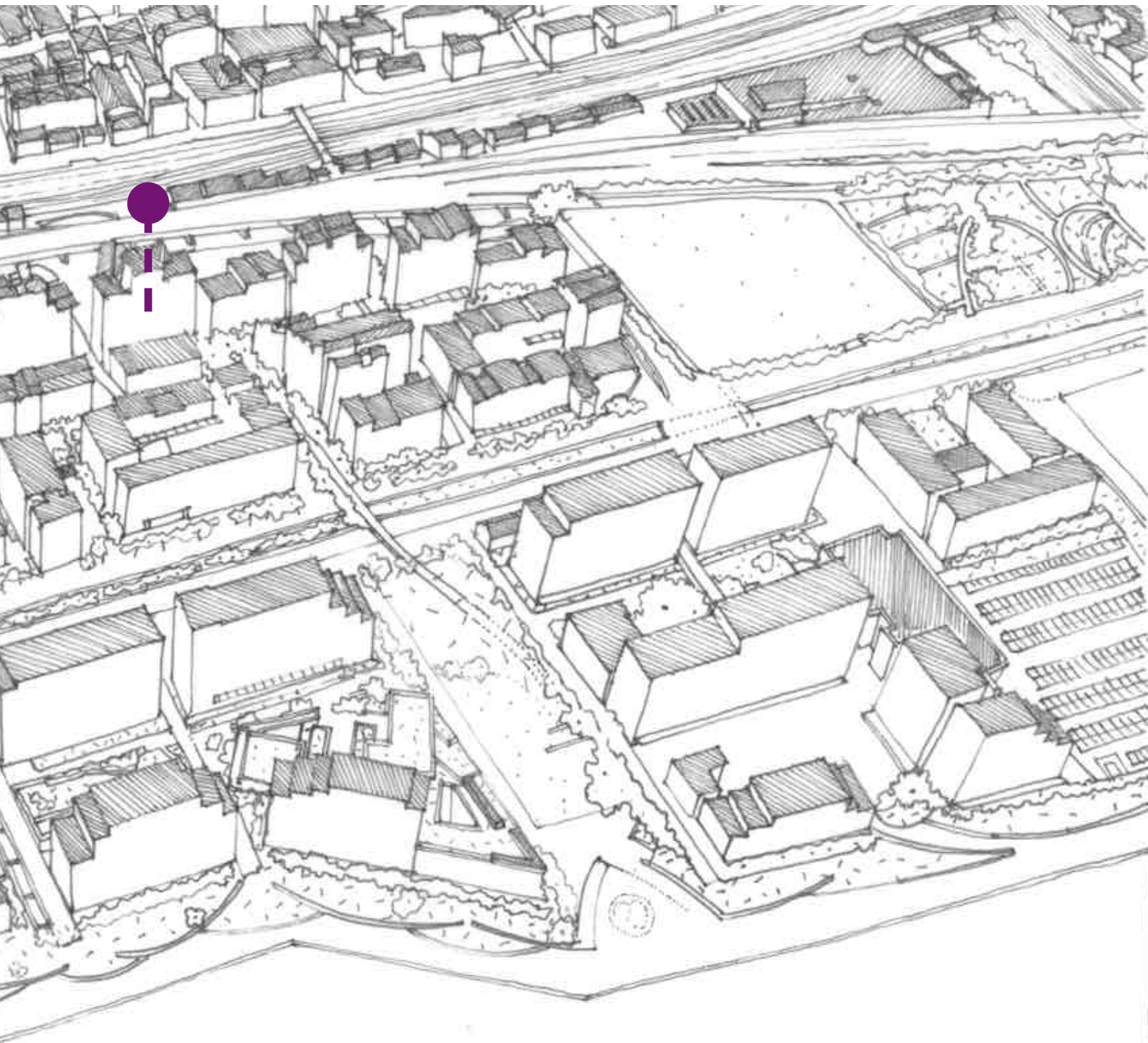
Figure XX:

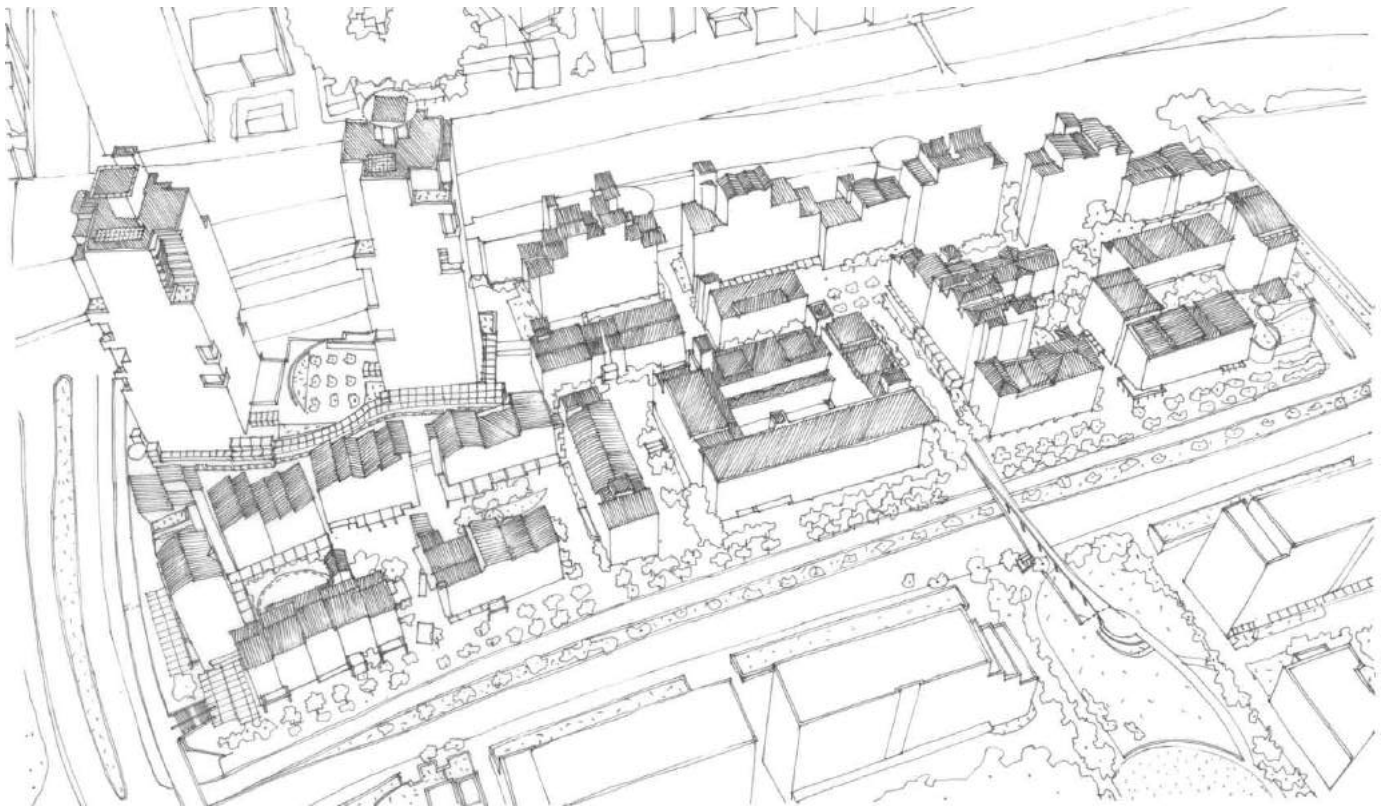




*Figure 101: : illustration of aerial perspective of Happy Active Town in Kobe, Hyogo Prefecture.*







*Figure 102: Perspective of Nadanohama Towers at 2 Chome Maya Kaigan Dori, housing complex was part of relief housing efforts undertaken in the wake of the earthquake and one of seventeen “symbolic” residential housing projects Happy Active Town, Kobe.*



*Figure 103: A 360 degree panorama showing the main “garden mall” (far left and far right) between the buildings and the Interstitial spaces that lead off the mall (centre) in Nadanohama estate, Happy Active Town.*





“Reconstruction policies emphasised construction rather than repair, buildings rather than social networks, and housing units rather than accessible communities.”<sup>94</sup>

During the reconstruction process, displaced evacuees were initially housed in one storey temporary shelter apartments consisting of 5-10 units<sup>95</sup> (TSH). Those who were able to reconstruct their homes with their own resources returned to their lives and old neighbourhoods first, leaving the most vulnerable members of society such as the elderly, the disabled and low income families in disaster relief sites.<sup>96,97</sup> In the intervening three years that new housing was being built, the TSH sites evolved into communities for these occupants.<sup>98</sup> Despite being located on the outskirts of the city, their temporary homes became inclusive places that fostered interaction with their neighbours in a setting not too dissimilar in scale from the homes they had lost prior. However, this sense of social integration and the primacy of their needs were not translated<sup>99</sup> to the new permanent housing settlements. The scale of displacement in the earthquake’s aftermath and an urgency for permanent housing relief marked a shift from earlier plans to provide low-rise single and multi-family homes on small lots to super high-rise and high-rise towers clustered in the centre of the new city. These housing areas were known as “symbolic developments”<sup>100,101</sup> and were planned and designed as utopian models of ideal cities that would demonstrate Kobe’s resilience and ability to recover from catastrophe.

The Nadanohama complex was one of the seventeen symbolic developments constructed in the emergency rebuilding initiatives. Designed as a self-sustaining, multi-functional city and staged over three phases, the complex is situated at the site of a former seaside factory and comprises of 13 high-rise apartment blocks ranging from 14 to 40 storeys. Nine of these blocks were built as public housing by the Urban Renaissance Agency (UR) to house displaced evacuees and were completed from 1998 to 1999.<sup>102</sup> One block was designated a “retirement” rehabilitation facility and would

(Top to bottom)

Figure 103: Artwork installation at the entrance of Nadanohama estate.

Figure 104: Dedicated apartment block for the elderly set within the complex and is part of a community-based integrative care initiative

Figure 105: Exercise area in between public housing apartments at Nadanohama.

later become part of a community-based integrative care model in 2012.<sup>103</sup> The other three housing towers were privately developed and were completed as part of the third phase in 2000. The 13 housing blocks frame both sides of a central pedestrian “garden mall”. Entrances to residences, a supermarket, seating alcoves and squares, a pharmacy, an elderly day care centre, a hairdresser, shops and a café are all located off this street-like “mall”. Interstitial spaces between amenities and buildings are filled with art installations, pocket parks, gardens, playgrounds and verandas.

The multi-functional aspects of the development and tree lined open spaces were seen as ways to create a lively and bustling setting for social interactions within the complex. Yet, feelings of isolation and incidences of “kodokushi” or solitary deaths<sup>104</sup> continued to persist. In addition to dealing with post traumatic disorders and the loss of lifelong communities, the newly settled residents were becoming increasingly segregated and had difficulties building new social relationships in their new living environments.<sup>105</sup> Connection to the resident community remained fragmented and important social relationships were impacted negatively. It was only until a resident community was formed and social activities were organised through the HAT community centre that a sense of neighbourly camaraderie was established. Members living within the same estate were also paired up with another as part of collective housing initiatives to counteract “Hitorigurashi” or solo living. By bringing residents together and fostering a mutual dependence, loneliness is transformed into a sense of belonging and community integration.<sup>106</sup> The act of caring for one another also gives the residents a sense of purpose and worth (Ikigai). In a setting where so much of their time is spent, the roles they play in their everyday communities become all the more vital.<sup>107</sup>



*(Left to right)*

*Figure 106:*

*When the Hanshin earthquake occurred, scores were displaced from areas that were predominantly low-rise - traditional timber row houses set in the narrow streets of Kobe*  
*Credit: Reuters, International Business Times.*

*Figure 107:*

*While the temporary housing shelters were constructed really quickly, they bore the same sense of scale as their previous homes.*

*Credit: Noritoshi Tanida*

*Figure 108: Unsurprisingly then, residents who had lived a majority of their lives in these areas found it isolating and had a hard time adapting when they moved into high-rise living environments at HAT Kobe.*







*Figure 109: Analysis of interstitial spaces and edges in Nadanohama*



*Figure 110: Building forms in Nadanohama complex and connection to green interstitial green spaces between buildings; (right) public spaces created off a main axis to form a pedestrian "mall" and intersection points*

**“We thought it was a wonderful place and moved in with high hopes and dreams. But though the housing was nice, personal relationships didn’t go so well. The biggest problem we had was solitary deaths.”**

**- Mr Kazuo Sakamoto, HAT Kobe Community leader, on the move to HAT<sup>108</sup>**

Perhaps all Kobe’s residents needed was a collaborative effort to reconstruct the city in a way that prioritised their needs and social well-being.<sup>109</sup> A social design process that looks at collaborative people-centred place making to create occasions that facilitate the coming together of people to exchange ideas for their own communities - an integrated setting connecting diverse residents to strengthen community resilience, create social capital and self-sufficiency.<sup>110</sup>

**“...the creation of physical structures alone is no longer sufficient for creating healthy environments and that participation and co-creation are crucial in activating and empowering citizens. Also on a practical level, the partnerships frequently formed across these creative domains area all marked by contextual, participatory processes involving interactive workshops and collaborations with the affected communities. They make a considerable contrast to the government-driven top down reconstruction and planning processes, in which citizens are mainly notified of decisions that experts have already been made.”<sup>111</sup>**



*Figure 111: Situated along the pedestrian mall is an elderly community centre (left), a neighbourhood café hosting a community event for residents in the precinct.*



*Figure 112: Aerial illustration showing Okawabata River City 21 on Tsukishima in Chuo Ward, Tokyo. The development is located on both sides of a two lane road lined with civic, educational and commercial frontages. The wide pedestrian pathways and generous building setbacks have resulted in the entire development having a more intimate "neighbourhood-like" feel at ground level, reminiscent of other traditional low rise residential areas within Tsukishima.*





**Okawabata River City 21**  
Chuo Ward, Tsukishima, Tokyo, Japan



*Figure 113: Sumiwa River in the foreground and River City 21 in the background at Tsukishima. Originally a fishing town, the area was rapidly developed in the wake of depopulation in the metropolitan areas in Tokyo.  
Credit: Stock Images*



### Okawabata River City 21 Chuo Ward, Tsukishima, Tokyo, Japan



Figure 114: Low rise scale of the surrounding buildings in Tsukishima.

Okawabata River City 21 is a 28.7 hectare housing development located on the northern tip of Tsukishima (a man-made island reclaimed in 1893)<sup>112</sup> Situated about two kilometres east of Ginza, the island is separated from the main metropolitan area by the Sumiwa River. The River City 21 project was initially established to help address the worsening depopulation that was occurring in Tokyo as a result of high land prices, rents and rapid commercialisation of the area.<sup>113</sup> City officials had hoped to re-establish the land-use diversity reminiscent of the Edo period (1603-1867) where residential neighbourhoods were self-contained but still integrated within the context of their cities. It was this idea of “*furasato*” or “*our native place*”<sup>114</sup>, the notion of residents living close to the places they worked and shopped that was emphasised in the Tokyo Metropolitan Long-Range Plan.<sup>115</sup> The aims of the plan were threefold: “1) to enhance Chuo ward’s central location as an amenity; 2) to retain and attract population to the area; and 3) to bring prosperity and activity back to the ward.”<sup>116</sup>

In 1979, the site which was formerly owned and operated by Ishikawajima-Harima Heavy Industries, was jointly acquired by the Mitsui Real Estate Development Company (MREDC) and the Japanese Housing and Urban Development Corporation (HUDC). Due to a lack of public infrastructure and the complexities associated with the site, the project became a joint venture between public agencies, semi-public agencies and private developers.<sup>117</sup> The development of the site by multiple stakeholders meant that the project could safeguard public interests instead of prioritising the rights of landowners or building owners; traditionally seen in Japan as being of paramount interest.<sup>118</sup> The addition of the Tokyo Metropolitan Government Bureau of Housing and the Tokyo Metropolitan Housing Supply Corporation also meant that both public housing agencies could apply their expertise in creating public housing for socioeconomically diverse resident populations.<sup>119</sup>





*Figure 115: residents in River City 21 waiting for the sports and aquatic centre to open in the morning,*



*Figure 116: A supermarket with two entries, one at street level and at building podium level as seen in this image.*

*Figure 117: Landscaping and planter beds dot the interstitial spaces at River City 21 and softens the high-rise environment here at Tsukishima island.*



Figure 118: 'Egg of the winds' by Toyo Ito, an installation overlooking the main pedestrian walkway and Road No. 463. Reflective object by day, the egg-like structure becomes a projection screen by night.  
Credit (top image): Tomio Ohashi

Work on the project began in the late 1980s and was carried out over several stages, only 17.2ha of the 28.7ha waterfront site is dedicated to housing and the rest for roads, civic, cultural, educational and recreational functions. Despite residential zones covering less than half the site area, there are about 4000 apartment units contained in several super high-rise towers, high-rise and mid-rise apartment blocks. Floor plans in the housing blocks range from one bedroom to four bedroom units and apartments operated by the public housing authority, Urban Renaissance Agency (UR), have subsidised rents to accommodate low to middle income families<sup>120</sup> and individuals.<sup>121</sup> This allows the development to accommodate various groups across a socioeconomic spectrum and increase resident diversity.

River City 21 sits between the Chuo-Ohashi Bridge and the intersection of Kiyosumi-dori Avenue and Aoi Bridge. A 550 metre long two way road (Road no. 463) with separate lanes for cars and bicycles runs through the middle of the site. Two main street frontages line each side of the road from one end of the precinct to the other and consist of commercial, educational, health, civic and cultural amenities. Along the western frontage sit Ishikawajima Memorial Hospital, the Tsukada Junior High School, Tsukudajima elementary school, a children's community centre, a pre-school and the Ishikawajima Museum. And on the east, an art installation by Toyo Ito<sup>122</sup>, the River City 21 post office, a book shop, a supermarket, pharmacy, River City substation, Tsukishima Police Station and a nursery situated adjacent to a pocket park and playground, all within walking distance.





Figure 119: Wide pedestrian walkways along the main street frontage.

Figure 120: Cosatal frontage with Ishikawajima Park between the Sumiwa River and the development - landscaped terraced embankment with areas for fishing, running, cycling and various festivals and events.

Figure 121: (facing page) Seating alcoves tucked in pocket parks around supermarkets and aquatic centres on the podium level of the development



Figure 122: Buildings haven't been built up to the boundary at street level. Instead the building is pushed back and seating and planting areas softens the transition from the two lane street to the high-rise development. Buildings that are six to eight storeys high are positioned along the main street frontage. High rise and super high-rise towers are located in the middle of the site or closer to the coastal frontage.

Figure 123: (Facing page) seating alcove with planting along the street in building setback zone - interstitial zones to observe the comings and goings on the street.



Figure 124: Less than half of the site area has been built up for residential apartments, the majority of the land area has been dedicated to open space or planting, civic and public amenity. This podium level is one storey higher than the main street level.





On the coastal side, two parks made up of a series of terraced embankments sit between the river and the apartment complex. Ishikawajima Park to the east and Tsukada Park on the west were both designed as waterfront venues for a variety of activities such as running, cycling, fishing, festivals and other civic events.<sup>123</sup> Open space and abundant landscaping were important features in the project's design.<sup>124</sup> The width of pedestrian walkways, roads and building setbacks have been observed to be almost the same at River City 21.

Building setbacks have also been treated differently along the length of the street. Some buildings have not been built right up to the boundary at street level and instead have created alcoves for seating, plazas for gathering, pockets of green and some parking for bicycles. The buildings that have been built right up to the boundaries have commercial and civic amenities ascribed at the street level, with some also having commercial frontages up on the next level. Other buildings have walkways that extend off the street. These treatments have effectively increased the area of civic spaces for residents living in the development. The availability of open space and emphasis on creating interstitial interfaces for the public realm at street level lends a more intimate scale to the setting and is in line with the local government's initial idea of "our native place" or "furasato". The importance of designing for this notion cannot be overstated for it is within the multi-faceted spheres of our living environments that we establish cognisant perceptions of our social well-being and sense of interconnectedness to our setting<sup>125</sup>, this is even more critical in places with buildings of various rises. Because of the super high-rise aspect of River City 21, there is an added dimensionality to be considered when it comes to integration within the already multi-layered precinct. The perceptions of the extents of "our neighbourhoods", "our towns", "sense of green"<sup>126</sup> and connection with familiar places of "urban activities" and "bustle"<sup>127</sup> differ depending on the levels residents in River City 21 live on. In post occupancies studies<sup>128</sup> conducted at River City 21, the extents of integration on lower levels was largely influenced by the



Figure 125: Plan showing the inland and coastal divisions of the residential towers that were considered in the study on cognitive perceptions of elements within River City 21.

Credit: Zong et. Al

residents' daily activities<sup>129</sup>, whereas residents on higher floors were connected to the areas they could see from up high<sup>130</sup> - being able to look down upon a busy street or across the bay to a bustling metropolis. The important thing to note from these studies was that regardless of where the residents were located within the precinct, they could still perceive being integrated and connected to their urban setting. These results are specific to the locale in Tsukishima and differ to studies<sup>131</sup> that have been carried out on other high-rise environments (Makuhari Bay Town) elsewhere.

River City 21 was not explicitly designed for ageing-in-place or to combat an ageing population. The basis for the development was about sustaining a bustling and enduring living environment that could reverse the depopulation that was happening at the time, and so it became more than just a multi-functional city with co-located public facilities that was age-specific or geared towards alleviating issues for a target demographic. The emphasis was on creating a "local place", close to areas of work and play, where social integration, interaction and connectedness took centre stage. And because the focus was on building for people, spaces at River City 21 have been treated sensitively to create well considered planar and cross sectional living environments that remain integrated and lively in a multi-faceted urban setting for a diverse demographic.





Figure 126: Morning commute at River City 21



Figure 127: Pocket parks found all throughout the development on both frontages - inland and coastal.

# 6

## 507,798 Steps Later:

### The Social Sustainability of an Intergenerational City of Thresholds

This tour started out looking at possible high-density solutions for intergenerational living but has since evolved into the pursuit of social sustainability for an intergenerational setting.

The idea of Social Design is not a novel one, but the research and analysis of these cities have become timely reminders that designing for an ageing demographic means drawing from existing social patterns to build an enduring environment that fosters the active participation of all ages and demographics. The ability of our built forms to sustain our everyday agency<sup>132</sup> and our continual sense of relevance, identity and purpose is rooted in the way we live and continue to inhabit the spaces carved out across time. To think about ageing as a concise, limited range of ages or a product of formulaic architectonic “kit of parts” contrives the act of place making for an integrated and diverse society for all ages.

In the movie *Robot and Frank* (2012), Frank the titular character is a retired diamond thief who plots a new heist in a fit of boredom. He spends the majority of the movie aided by his new accomplice, Robot (originally intended to be Frank’s technologically advanced carer). As Frank navigates his neighbourhood with plundering ease, he falls for the librarian at his local library and narrowly escapes from local police who know of his notoriety. At the end of the movie, Frank’s dementia, along with the librarian’s identity, is revealed. The only comfort was in knowing that Frank was able to wander indiscriminately within a community he knew and with people whom he could seek solace in. In that sense, wouldn’t it be nice if our cities could sustain our changing needs and wandering minds regardless of our positions in life?

In consideration of agescapes for a new ageing demographic, a complete upheaval of the way we think about ageing, and how it continues to shape our cities, might be required before the lives of the ageing incumbent has the ability to imitate art.



*“Imagine taking everything  
we associate with ageing...and  
throwing it out of the window.”*

**Matthias Hollwich**  
*New Aging*



Figure 128: Stakeout scene from 'Robot and Frank'  
Credit: Universal Pictures



# 7

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I look forward to putting the lessons learnt, in practice.

# 8

## About the author

Raised on a tropical island not quite removed, Kah Mun is a Sydney based Architect working in Art, Illustration and Architecture.

When not caught at work between trace and ink twin, she can be found making illustrated tales.

## 9

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## 10

## Appendix

### Intergenerational Contact Zones (ICZ) Kaplan and Thang et. al

Developed as part of an international study program by the University of Cambridge, it sets out a compendium of applications that lists different social and community settings that welcome a variety of ages and activities. These settings could therefore potentially provide opportunity for inter-generational engagement and interaction –as opposed to mono-generational or even multi-generational spaces that make up most of spaces designed today.

Before delving deeper, it is perhaps worth noting that there is a marked difference between intergenerational living and multi-generational living – the main difference is while inter-generational living refers to a transfer of knowledge between generations, multi-generational living simply encourages “the simultaneous presence of people from more than one generation”.

Professor Leng Leng Thang from the National University of Singapore, one of the co-authors in the paper on Intergenerational Contact Zones speaks about how the idea for an Inter-generational Contact Zone (ICZ) came to her while observing different generations co-using a park in Singapore. She noticed that while they were physically inhabiting the same space, there was hardly any interaction between the different age groups. The playground had been set up with apparatus that targeted different age groups and as a result created a clear delineation of ages – it was interesting for her to note the segregation that could still exist, albeit subtly, in a space that was meant for many generations to enjoy.<sup>133</sup>

In the compendium, the following spaces are set up for consideration as ICZs:

- 1) Community Centres
- 2) Urban Parks
- 3) Restoration and Adaptive Reuse
- 4) Culture as animator
- 5) Schools as Intergenerational Reading Rooms
- 6) University spaces
- 7) Urban streets and places
- 8) Bus stop
- 9) Co-housing
- 10) Supermarkets

The list is neither prescriptive nor is it exhaustive, but meant to generate ideas and discussions about how we can enliven our cities by catering to an intergenerational demographic.





Figure 129: Verandah around lawn at Taikang Yan Gardeb Retirement Community living.

### Taikang Yan Garden Retirement Community Beijing, China

Based on the independent Living model prevalent throughout America, Australia and Japan, insurance companies have begun building integrated cities for older people on the outskirts of Beijing. The term 'Yang Lao', literally 'to age' has become a marketing catchphrase in China in recent years. Mega cities dedicated to servicing retirees on insurance plans are being built in new fringe districts. Situated in Chang Ping new district, with Bai Fu Quan Wetlands Park to the west, Mang Mountain National Forest Park to the north and new built high-rise apartments to the south, Yan Garden Homes by Taikang Group has a projected capacity of 3000 independent living units. During the visit in mid-2018, eight towers comprising of 500 units had recently been completed as part of Stage 1 after one and a half years in construction. The remaining 2500 apartment units are to be completed within the next two years. The precinct does not have its own hospital and relies on the Beijing University International Hospital in neighbouring Haidian district for medical services and care.

The residential apartments offer eight different plan configurations, all with a minimum three metre high ceiling throughout. Within the main clubhouse area, an eight metre high double atrium is flanked by activity rooms, gyms, music rooms, computer labs and activity centres. Outside, a looped walking track weaves in and out of the eight buildings bypassing an oval and a surrounding pavilion, street exercise furniture dot parts of the track.

This project in Chang Ping city was included only in the appendix due to the fact that it is reminiscent of the age-homogenous typologies in Australia but on a much larger scale. Entry to the facility is also only available only to a target socio-economic demographic and contributes to age-segregated islands that this journal advocates against. Additionally, the new town in which the facility is situated in has not been fully completed. The only sense of an urban setting or any amenity can only be seen from the neighbouring newly built high-rise apartment blocks.



Figure 130: Running loop and stationery exercise machine.

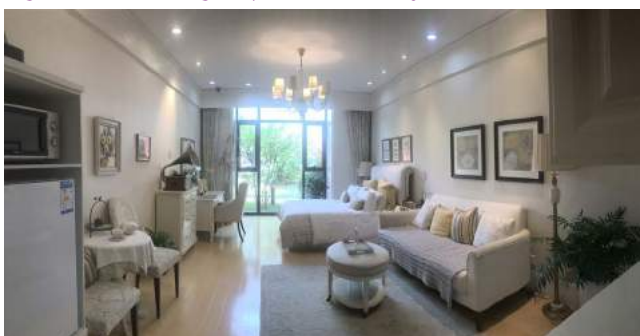


Figure 131: Independent Living Unit at Taikang, 3m high ceilings



*Figure 132:*

### **Punggol Saracca Breeze Punggol Singapore**

Part of a government initiative to promote inter-generational living, 3 Gen apartments, as its name suggest are housing board flats or apartments planned to mimic a living arrangement not unlike duplexes. This allows for seniors to live with their families but still maintain that sense of autonomy and independence without feeling like they are inconveniencing or imposing on them. These apartment clusters are part of a larger and more established housing board development estate zone that already has existing infrastructure and amenity attributed to it. The hope was that by plugging into existing urban infrastructure, it accelerates the ready availability of such liveable cities.

While the co-located apartments ensure proximity to ageing next of kin, there are two primary issues. One it does unfortunately exclude a certain demographic in the arrangement - one that Australia and the rest of world will see a rising trend in - single households. The second, the co-location of amenities for multi-generations, as explored in this journal, does not guarantee socialisation or exchanges between different age demographics.



*Figure 133: Stationery exercise machine and pavilion*



*Figure 134: Playground co-located at the base of the apartment units in Singapore.*



Figure 135: Care community services conducting classes for the elderly in the building.

### Touch Community Care Services Ang Mo Kio, Singapore



Figure 136: Residents joining in with the volunteers.

Touch Community Services is responsible for community care services within several Housing development board estates. The newest community centre in the suburb of Ang Mo Kio is located in close proximity of the different housing blocks in the estate/ suburb. The community conducts a range of services and activities for residents within the local suburb and also for two other neighbouring suburbs. This is imperative to the idea of the elderly being able to age within their own homes and communities independently.

This was an interesting plug-in care initiative and there were good social observations to be made, The volunteer system made it easy for different generations to interact with one another. These principles could be translated in Social Design but how that will be put forth has to still be teased out.





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