

Title: Bringing Back the Bukit Batok Spirit

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Problem Statement:

The rise of digitalisation and prevalence of urban design has created an atmosphere of isolation, and a decrease in social interaction within society. By utilising and enhancing spaces like rooftops we hope to stimulate more community interaction, especially between different age groups.

Target groups:

We have chosen to target HDB residents in general with an extra focus on connecting the younger and older generations to allow for greater interaction between the generations and allow for greater social cohesion among members of the HDB community. This is important since a community is a familiar thread used to bring people together to advocate and support each other in the fight to overcome those threats. As human beings, we need a sense of belonging, and that sense of belonging is what connects us to the many relationships we develop. (<https://www.ikedacenter.org/resources/what-community-and-why-it-important>) We are specifically targeting the residents of the Bukit Batok Area, these include those living in estates such as West Crest @ Bukit Batok, West Terra @ Bukit Batok etc. There is a need for greater interaction between residents as neighbours are not exchanging greetings or striking up casual conversations as much as before, amid a trend of residents in public housing flats turning to social media or chat groups to interact with people in their community, with fewer residents also engaging in “higher-intensity interactions” with their neighbours, by visiting or exchanging food or gifts or helping to look after children, for instance. (<https://www.todayonline.com/singapore/neighbours-arent-greeting-each-other-talking-much-interactions-shift-online-hdb-survey>) Some also find that they are unable or have difficulty interacting with other residents of different age groups as they have “different interests, there are language barriers and lack of time” that prevents them or makes it harder for them to do so.

It is important to have this intergenerational interaction and bonding between the young and old as intergenerational relationships have been linked to improved health and well-being for both younger and older individuals. For older adults, engaging with younger generations can promote a sense of purpose and motivation, reduce feelings of depression and anxiety, and enhance cognitive function. Furthermore with the prevalence of the ageing population in Singapore, it has become even more important for such interactions to occur as there are more and more elderly that require such improved well-being.

Characteristics of current rooftops:

Most HDB rooftops have about 900-1000 square metres of space, with varying shapes and usable space depending on the design and architecture of the HDB flat. Some HDB rooftops may have larger spaces as they cover several HDB flats that have connected together and are linked to one another. Rooftops can also be easily accessed by residents instead of a place like a community centre.

The underutilization/limited utilisation of rooftop spaces:

How is the rooftop being utilised now:

PEG Roof Tray (<https://www.hdb.gov.sg/about-us/our-role/smart-and-sustainable-living/innovations/urban-greenery-page>)

- The Prefabricated Extensive Green (PEG) Roof Tray System introduces greenery to the urban landscape by greening building rooftops and is designed to address the environmental concerns of many urbanised cities with limited green spaces. By providing thermal insulation to the roof, the PEG system reduces surface/ ambient temperatures while serving as an added protective layer for the roof membrane. In addition, the added greenery reduces glare to surrounding blocks while promoting biodiversity in the rooftop living ecosystem.



Block 93A



Block 756A Bedok



Block 410
Fernvale
Residences



United World
College
University



Hong Kong Kwai
Chung Estate



Hong Kong Yuen
Long Government
Office



City Vue @ Henderson – Sky bridges and vibrant MSCP garden

The rooftop features a hard court, playground, and pretty manicured gardens



588 Ang Mo Kio – Family-friendly rooftop garden
With its brightly-coloured playground for tots and a seniors' fitness corner, the garden is great for family time for residents.

- <https://thesmartlocal.com/read/rooftop-gardens-singapore/>

Limitation of current rooftop designs:

- Dirty lifts, overflowing dustbins, littering, illegal smoking and loud partying as a result of inconsiderate people visiting the rooftop gardens there
- Visitors go to these gardens late at night and their noise also disturbs residents trying to sleep (<https://www.straitstimes.com/singapore/politics/mp-joan-pereira-calls-for-limited-access-to-hdb-rooftop-gardens-to-prevent-nuisance-littering>)
- While a great deal more empirical work has been done on roof gardens in western countries, there is limited study of this landscape typology in Singapore. (<https://www.sciencedirect.com/science/article/abs/pii/S0169204604000969>)
- A roof garden and to an extent any rooftop project, places a heavier strain on a building's water supply. If no water outlet is available on the roof, you will have to either install water in the roof garden or carry water from inside the building. (<https://www.weekand.com/home-garden/article/disadvantages-roof-garden-18028840.php>)
- Weather exposure: rooftops may experience extremely high temperatures as well as strong winds. Not every plant can live in these circumstances.
- Lack of storage facilities: gardens also need storage space, a space for gardening equipment, additional soil and fertiliser, and other maintenance tools. Having a small storage section or a room on the rooftop ensures easy accessibility of essential tools whenever you need them.
- (<https://www.princelandscape.com/common-problems-in-rooftop-gardening-here-are-the-solutions/>)
- Accessibility: only authorised personnel approved by the town council are allowed to access the rooftops. All authorised personnel working on rooftops must wear security vests issued by the town councils. An auxiliary police officer or town council staff will

be present to escort them for each and every assignment.

(<https://www.asiaone.com/tight-security-measures-roof-access-hdb-estates>)

- Safety: rooftops are generally not as safe as places on the ground floor of HDBs as it is on elevated ground and hence can lead to risk of falling.

(<https://www.straitstimes.com/singapore/worker-dies-after-falling-from-rooftop-of-bedok-hdb-flat>)

- There might be water accumulating in the pots, enabling mosquitoes to breed.

(<https://mustsharenews.com/bukit-batok-rooftop-garden.>)

Key Takeaways:

- The design of the rooftop space needs to be safe for all ages such that any activities carried out will not endanger anyone or allow anyone to endanger themselves.
- The project should be done with partnership with the government/town council (top-down approach) since it will be difficult to get approval from the government to allow residents to do it themselves.
- Implement storage spaces or design spaces to store necessary things
- Ensure rules and regulations that are put in place in these rooftops are enforced and that people follow them
- Design needs to be adaptable to Singapore's weather and temperature such that constant maintenance is not needed for the spaces.
- Inspiration can be taken from current designs of rooftop spaces such as those 588 Ang Mo Kio rooftop space which is family friendly, we can design our space such that the fitness area is accessible to all ages such that young and old can interact whilst exercising, however our design will improve on what currently exists by providing a space that is tailor made and designed to be unique to that community and something that is both aesthetically pleasing and functional, allowing for a space that can be comparatively more attractive and intriguing for residents of all ages to gather and interact in as it is unique to their community and home.
- Many also desire such spaces and protest when the government wishes for such places to be disrupted or removed.
(<https://tnp.straitstimes.com/news/singapore/bukit-batok-rooftop-community-garden-allowed-stay>)

Importance Of Utilising Rooftop Spaces:

1. Scenic Views: Rooftop spaces often offer panoramic views of the surrounding area, which can create a unique and pleasant atmosphere for social interaction. The allure of a beautiful view can draw people to these spaces, providing a serene and visually appealing environment for various activities.
2. Escape from Urban Crowds: Rooftop spaces can serve as an oasis away from the hustle and bustle of the city streets. They provide a peaceful and elevated retreat where people can escape from the noise and congestion below, fostering a more relaxed atmosphere for socialising.
3. Natural Light: Rooftops receive ample natural light, which can be invigorating and mood-enhancing. This can be particularly appealing for activities that promote well-being, such as yoga, gardening, or simply enjoying a sunny day with others.

4. **Privacy and Exclusivity:** Rooftops can offer a sense of privacy and exclusivity, making them ideal for smaller, more intimate gatherings or events. This can encourage deeper and more meaningful social connections between generations.
5. **Versatility:** Rooftop spaces can be adapted for a wide range of activities, from gardening and outdoor exercise to art installations and communal dining. Their versatility allows for creative programming that caters to various age groups and interests.
6. **Environmental Benefits:** Rooftop gardens or green spaces can contribute to sustainability efforts by reducing heat island effects, improving air quality, and providing opportunities for urban farming. These eco-friendly features can add to the appeal of rooftop spaces.
7. **Unique Atmosphere:** Rooftop spaces offer a different atmosphere compared to void deck spaces or community centres. The elevation and open air can create a refreshing and distinct ambiance that encourages a sense of novelty and adventure, which can be attractive to all generations.
8. **Community Building:** While community centres serve as essential hubs for community activities, rooftop spaces can complement them by offering a more informal and spontaneous gathering place. They can encourage neighbours to interact casually on a day-to-day basis, strengthening community bonds.
9. **Optimal Use of Space:** In densely populated urban areas, rooftop spaces represent an efficient utilisation of available real estate. They maximise the use of existing infrastructure and can contribute to making urban environments more vibrant and socially connected.

How It Differs From Community Centres:

1. **Informality:** Rooftop spaces tend to be more informal and spontaneous in nature. People may use them for impromptu gatherings, relaxation, or casual interactions. In contrast, community centres often have scheduled programs and activities with defined spaces and purposes.
2. **Location:** Rooftop spaces are elevated and, in many cases, provide scenic views and an escape from the urban environment. Community centres are typically ground-level buildings within neighbourhoods.
3. **Size and Scale:** Rooftop spaces are generally smaller in scale compared to community centres. They are often designed to cater to a specific building or residential complex, making them more intimate and neighbourhood-centric.
4. **Atmosphere:** Rooftop spaces offer a distinct atmosphere with outdoor elements like fresh air, natural light, and exposure to the elements. Community centres are usually enclosed, providing a controlled indoor environment.

5. Spontaneity: Rooftop spaces encourage spontaneous interactions among residents and neighbours, whereas community centres often require more deliberate planning and participation in structured activities.
6. Privacy: Rooftop spaces can offer a sense of privacy and exclusivity, making them suitable for smaller gatherings or personal reflection. Community centres are public spaces where anyone can access the facilities.
7. Versatility: Rooftop spaces are versatile and can be adapted for various purposes, from gardening and yoga to picnics and art installations. Community centres have predefined spaces for specific activities.
8. Complementary Role: Rooftop spaces can complement community centres by providing additional spaces for socialising and community building. They can serve as extensions of the community centres, offering residents more options for interaction.
9. Urban Integration: Rooftop spaces make efficient use of urban space by utilising underutilised areas while also contributing to the aesthetic and environmental aspects of the city. Community centres are separate structures that may require dedicated land.
10. Local Focus: Rooftop spaces often serve a specific building or complex, fostering a strong sense of community among residents of that particular area. Community centres, on the other hand, serve broader neighbourhoods or communities.

Common spaces:

Community” derives from the Latin “communis,” meaning common. A community was understood to be a group of people who knew one another, and shared common cultural assumptions, interests, concerns, and goals, largely because they lived together and always had. Now, in order to create community, whether in a rural area, a small town, or a large city, it’s often necessary to bring people together so that they can get to know one another, learn about one another’s cultures, and develop common interests, concerns, and goals. Yet, especially in large cities, people often live either in isolation, or surrounded only by others who are similar to themselves in language, culture, and assumptions. How do we build communities that are trusting and supportive, and that can reflect and embrace the diversity of backgrounds, ethnicity, race, and culture that make up much of today’s society?

What draws people to common spaces.

- There has to be a reason for people to go there
- There has to be a reason for people to want to stay once they’ve arrived
- People in the space have to feel safe and comfortable
- The space has to be welcoming and accessible to everyone

- When the neighbourhood or community is engaged in a planning process. Raising the issue of interactive space in public meetings, with property owners interested in developing their lots, abutters to public parks, planners, etc. can lead to its inclusion in a final plan.
- When there's an economic development initiative. Such an initiative can include mixed-use development that produces tree-lined streets with attractive and varied storefronts, pocket parks with benches that invite office workers and others to eat lunch or simply relax in good weather, or – in places where the weather isn't so nice for most of the year – underground or enclosed spaces that perform the same function.

Who should be involved:

- Local officials. Good spaces for interaction improve the quality of life in the community, a goal that most local officials share, and one that is likely to improve the economic climate as well.
- Planners, architects, and designers. People whose profession involves the design of spaces are trained to think about how people use those spaces. Interaction is a goal in most current thinking about communities, much of which seeks to combine the natural interactive characteristics of the small towns and villages of long ago with a modern understanding of how people use space and how psychological, as well as physical, barriers can be eliminated, and places made welcoming. For professionals, creating good places for interaction is both an interesting challenge and a way to do their jobs well.
- Developers. A developer can increase the attractiveness of his property by incorporating spaces that people want to use. In addition, he may be able to take advantage of incentives in return for providing such spaces.
- Community leaders and opinion makers. These folks – respected community members, clergy, officers of community organisations, etc. – are generally concerned with building community, and understand, or can come to understand, the community-building potential of spaces that draw people together.
- The business community. Good places for interaction often include businesses, and those that do are almost always good places to do business. The more such spaces exist in a community, the better business is likely to be.
- The police and the court system. Good, well-used and well-populated gathering places make the community safer and reduce the overall crime rate by cutting down on the opportunity for crime, particularly violent crime. They thus make the job of the police easier and less dangerous, and ease the burden on the courts.
- Community activists and community-based organisations. By and large, community building is the aim of these individuals and groups, and supporting interactive places is a natural step toward strengthening community bonds.

What are some considerations:

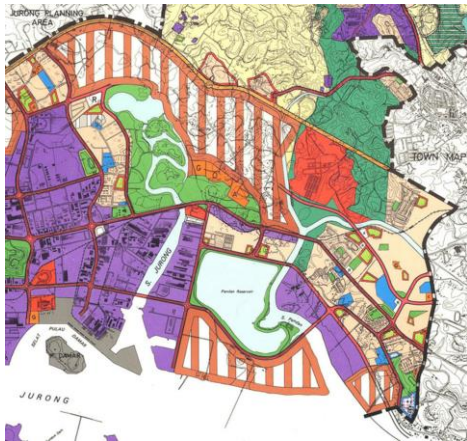
- Design: What should a space look like, feel like, and contain in order to be a good place for interaction?
- Incentives and regulations: How do you convince developers, builders, and businesses to include good spaces for interaction in their projects?

- Community action: How can community members themselves plan and create a good space for interaction?
- Advocacy: How do you convince local and other governments to pay attention to and foster the development of good places for interaction, to include them in their own projects, and to require – or at least support – the inclusion of such spaces in private projects?
- Publicity: How to make sure the targeted residents really utilise the common space?

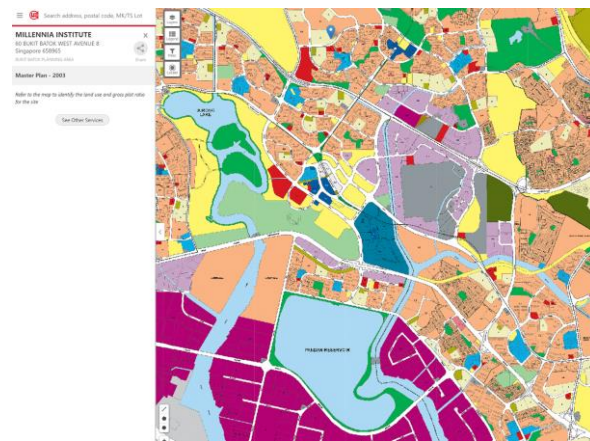
Revitalising Bukit Batok’s Flora through Biophilic Design:

Importance:

We intend to revitalise the flora of Bukit Batok and pay homage to its history as a forested area by utilising flora that is native to Bukit Batok’s forested areas and incorporating it into Bukit Batok’s current urban landscape and design. Bukit Batok was initially a mostly forested area in the 80s, but in recent years has had much of its flora and greenery removed to build housing estates or other important infrastructure, as shown by the land use maps.



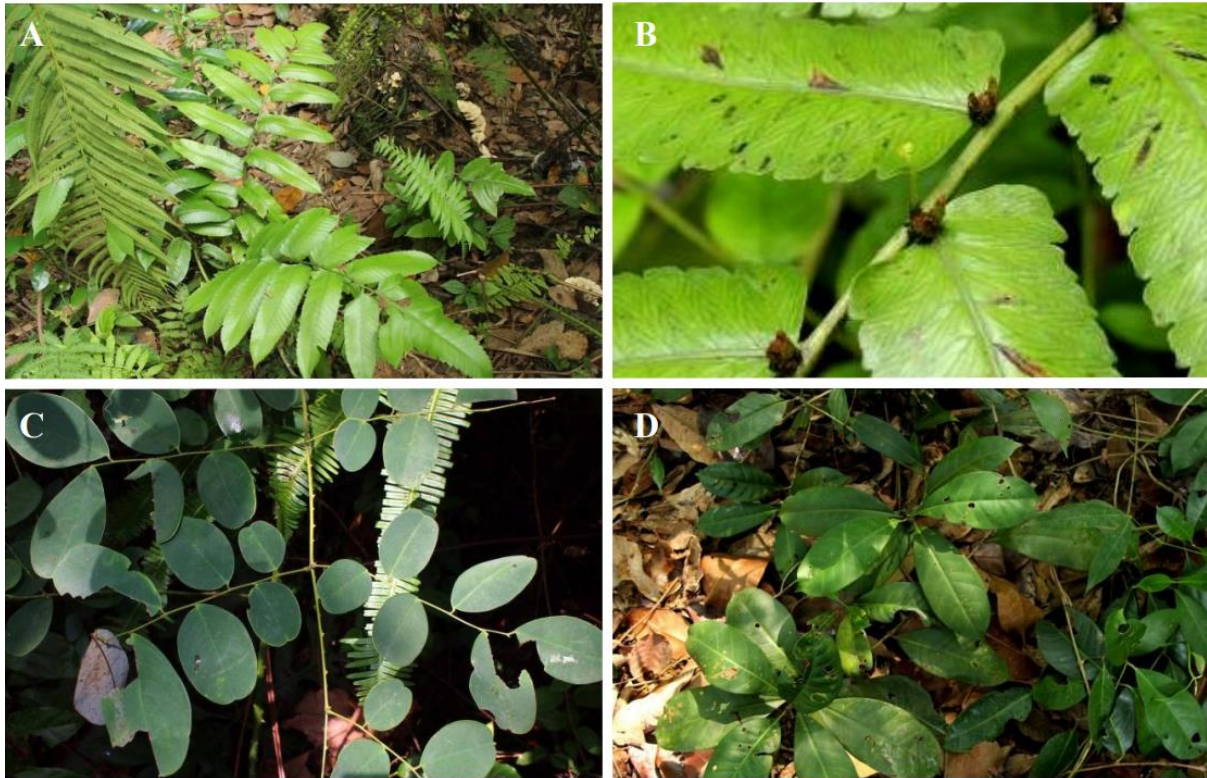
Bukit Batok
Land Use
Map 1980



Bukit Batok
Land Use Map
2003

Some plants we intend to incorporate include some which are nationally threatened plant species found in Bukit Batok. A, *Athyrium accedens* (habit); B, *Athyrium accedens* (close up

of a plantlet growing out from an adventitious bud at the base of a pinna); C, *Caesalpinia sumatrana*; D, *Morinda rigida*



(Photographs by: Louise Neo).

Biophilic design champions the concept of a city amalgamating urbanism, evolution, technology, and the natural surroundings, allowing us to engage with and become an integral part of nature, even within the most densely populated urban centres. Undoubtedly, due to our interconnected relationship with the natural world, biophilic design is poised to become a standard in the realm of design. However, additional factors substantiate this proposition.

Presently, the forces of climate change, pandemics, innovation, and an emphasis on mental well-being are serving as accelerants propelling the adoption of biophilic design, revealing that its impact extends beyond mere aesthetic attributes. The implementation of green infrastructure has the potential to curtail CO₂ emissions, enhance plant and wildlife diversity, and even regulate building temperatures. A prime illustration of this is the innovative urban structure conceived by Stefano Boeri Architetti for the Chinese city of Liuzhou, which functions as a substantial sustainable apparatus. This structure is capable of absorbing approximately 10,000 tons of CO₂ and 57 tons of microscopic particles annually, while concurrently generating around 900 tons of oxygen, thereby effectively addressing the pressing issue of air pollution.

In the aftermath of the pandemic, a considerable number of individuals continue to engage in remote work. This is precisely where biophilic design can play a pivotal role in crafting a harmonious, more productive, and inspirational home-work environment.

To encapsulate, biophilic design commences with the appropriate mindset and a willingness to enhance our rapport with the natural world. Its integration into our residential and

occupational spaces is relatively uncomplicated. Whether embarking on incremental modifications or conceptualising designs from the ground up, biophilic design is within reach for every individual and enterprise, irrespective of financial constraints or spatial limitations.

Key Principles:

1. **The Natural environment:** The natural environment focuses on features of the natural world incorporated into an office setting. Basic things like earthy colours, sunlight, plants, and images of animals and nature.
2. **Natural shapes:** Natural shapes are lines and forms that occur in nature. Notable examples include arches and vaults, recreating rock shelves, water paths, and other things that naturally occur.
3. **Natural patterns:** Similar to natural shapes, natural patterns deal with patterns and processes that occur in nature. This could be shown through the erosion of rock over time, the growth of plants, and the use of rhythm and scale.
4. **Natural light:** Sunlight is healthy, and biophilic design emphasises light and space. Light helps merge the inside and outside using elements of warmth and different shapes.
5. **Plants:** Focus on natural plants, imagery, or plant colours. The idea here is to create a relationship between the office and the natural elements it is incorporating.
6. **The human-nature relationship:** The final element involves recreating the relationship between humans and nature. Biophilic design ties all of the previous elements together. By doing this, a place will focus on specific themes like order, safety, complexity, curiosity, mastery, control, affection, exploration, discovery, and awe.

<https://www.spacerefinery.com/blog/biophilic-design-101>

How We Intend to Incorporate:

- We plan to take inspiration from already present biophilic designs in different spaces worldwide and incorporate it into the design of our project. We intend for the spaces and gaps between each of our main components such that the communal space that we design will not be overwhelmed by greenery and change the focus of the space towards being a green space or typical rooftop garden, rather we want to create a space focused around rekindling the Kampong Spirit and being a place for greater intergenerational social bonds to be formed, while still having aspects of Biophilic design that can allow for a design that is both aesthetically pleasing, environmentally friendly and meaningful.
- Furthermore aspects of Bukit Batok's past and present flora and greenery will be incorporated into the design of the space as well, for example we will take aspects of Bukit Batok's Little Guilin and Bukit Batok's public parks and incorporate the greenery found there to be included in our design, as an interview with a Bukit Batok resident allowed us to conclude that aspects of these places were found to be unique to Bukit Batok.

Motivations of the young and the old:

1. Generative motivation
 - According to research, young people between the ages of 14 and 29 show levels of generative motivation that are as high or even higher than adults. Generativity refers to the desire to contribute to the well-being of future generations and the world at large. Therefore, young people may be motivated to go to common spaces where they can participate in activities or initiatives that benefit their community or the environment.

<https://teachheart.org/2021/07/13/young-people-are-inherently-motivated-to-create-a-better-world-for-future-generations-according-to-research/>

2. Leisure and entertainment
 - Young people may go to common spaces to have fun, relax, or explore new experiences.

How to encourage intergenerational social interactions:

1. Intergenerational contact zones
 2. Encouraging multi-racial events to be hosted in the community areas.
 3. The utilisation of symbolic objects
- These ideas are for activating the environment in order to stimulate cross-age dialogue. Remember to use objects/artefacts that reflect cultural norms, traditions, values, and a sense of being at a place where multiple life and time trajectories get intertwined.

Website:

https://digitalcommons.lesley.edu/cgi/viewcontent.cgi?article=1362&context=expressive_the_ses

<http://www.sharingourspace.org/designing/>

The Designs of the Space

The core principle of our design is to establish a vibrant communal space that encourages intergenerational interaction, fostering a sense of unity reminiscent of Singapore's Kampong Spirit. To bring this vision to life, we have chosen to leverage the existing infrastructure within Singapore's housing landscape, specifically the HDB rooftops, which have long been overlooked and underutilised. By transforming these previously dormant spaces into thriving community hubs, we aim to reignite the spirit of togetherness and camaraderie that once defined Singapore's traditional kampongs. Our design will incorporate many different design aspects and features with there being both minor and major designs incorporated into the space for different purposes with the minor designs mainly focusing on improving the overall look and atmosphere of the space while the major designs focus on rekindling and reviving the Kampong Spirit lost in modern day Singapore.

The Minor Designs include:

1. Green Design:

An aspect of the space is its vibrant green design that encompasses various elements. A thoughtfully designed garden showcases local flora, echoing Bukit Batok's history as a forested region. Vertical farming units harness modern agriculture techniques to engage residents in sustainable practices, and captivating green domes create a comfortable microclimate for gatherings and relaxation. When designing this we have kept the idea of biophilic design in mind so as to create something similar yet useful

2. Personalized Community Design:

Residents are given the power to shape their community space. They can actively participate in deciding the types of plants to be cultivated, the colour schemes to be used, and even the creation of murals that depict the area's history and identity. This participatory design approach enhances social interactions and cultivates a sense of ownership.

The Major Designs will be encompassed by 3 main areas:

1. Enhancing Social Interaction

- Community Event Area:

The space will be introducing regular intergenerational community events. These events, ranging from cultural festivals to workshops, will offer opportunities for people of all ages to connect, share stories, and learn from each other. The aim is to recreate the close-knit relationships that once thrived in traditional kampongs. Furthermore by holding events at the rooftop space, more and more individuals will be exposed to the location and therefore be more aware of its presence and purpose to the HDB. Events such as "Block parties and celebration of festivals" can be held as according to an interview with a resident such events can help with getting to know residents of different age groups better.

- Multipurpose Seating Area with Chess Tables:

A versatile seating area encourages conversations and relaxation. Integrated chess tables provide a platform for both casual discussions and enjoyable game sessions between members of all age groups. This dynamic environment supports intergenerational bonding while fostering mental agility. Moreover the areas themselves will be designed with the overall aesthetic of the rooftop space in mind with shelters that look like mushrooms being implemented into the seating areas to both provide safe shelter from Singapore's unpredictable weather and to match the overall green design of space.

2. Community Sharing

- Community Pantry:

To cultivate a spirit of sharing and caring, a community pantry is established. Residents can contribute non-perishable food items, promoting a culture of mutual support and addressing potential food insecurity within the community.

- Community Bookshelf:

A community bookshelf serves as a hub for knowledge exchange. Residents are encouraged to contribute their own books, complete with labelled categories. This initiative not only promotes reading but also sparks conversations around shared interests.

3. Healthy Living

- Exercise Corner:

For the health-conscious, an exercise corner offers fitness equipment. This addition caters to diverse wellness preferences, encouraging active lifestyles and providing space for exercise enthusiasts to connect.

It also serves as an ideal spot for people of all generations to come together and prioritise their health and well-being.

Older residents can share their fitness experiences and knowledge with younger individuals, fostering a sense of mentorship and mutual support.

Families can engage in group workouts, setting a positive example for younger members and strengthening family bonds through shared physical activities.

Scheduled group fitness classes and events can encourage participants of varying ages to exercise together, promoting social interactions while staying active.

- Sports Facilities:

Incorporating a tennis court and open spaces for sports, the project recognizes the importance of physical activity and friendly competition in community building.

It also offers opportunities for intergenerational sports activities and friendly competitions.

Organising intergenerational sports tournaments can bring residents of all ages together, allowing them to bond over their shared love for sports.

Parent-child tennis matches or other sports games can provide quality bonding time, reinforcing the importance of teamwork and communication.

Community sports events and gatherings can be organised regularly to bring together individuals from different age groups, fostering a sense of unity and camaraderie among the residents.

Furthermore, the open spaces can be used for other purposes like exercise lessons that are accessible to all ages.

Other Considerations:

- Promotion and Prototyping:

Advertisements preceding the rooftop space's opening generate excitement and anticipation among residents. To demonstrate the concept's feasibility, a prototype based on the history of Bukit Batok was created. This prototype could take the form of a diorama, showcasing the evolution of the area from forested land to a thriving community hub.

- Bottom-Up Community Cooperation:

The project's success hinges on the bottom-up cooperation of its residents. Through town hall meetings, surveys, and workshops, the community's input is actively sought, ensuring that the space truly reflects their desires and aspirations.

Extension:

Although our design of the space is made with the infrastructural, historical and cultural aspects of Bukit Batok in mind, many of the aspects of the design itself can be incorporated into many other spaces nation wide and does not necessarily need to be limited to Bukit Batok itself, rather in this case Bukit Batok is being used as an example of the potential that this project has to enhance the rooftop spaces all across Singapore, with each new rooftop space being created and designed to suit the needs and preferences of the residents of that area, while still retaining the main idea and purpose of having the space.

Design Considerations:

Favourable Features of Common Spaces

- Seating. As mentioned above, a place to sit is an invitation to stay a while. Movable chairs and tables are by far the best option, since they give people the chance to sit where they like, in whatever groups they choose to, and to face one another or not. The more comfortable people are, the more likely they are to linger. And the more they can face one another, the more likely they are to enter into conversation.
- A mix of sun and shade, if the space is outdoors. Sun beckons in the late fall, winter, and early spring, but is too strong for many people in the warmer months, although umbrellas or canopies can help here.
- A mix of large and more intimate spaces. People need both places to be alone or to have private conversations with one or two other people, and places where many people can gather. The intimate spaces, at least in some cultures, may be the most important.
- Food and drink. Offering food and drink and a place to consume them is an obvious method of inducing people to spend time in a place.
- Pleasant or spectacular views. A quiet meadow with cows lying in the shade; blooming gardens backed by beautiful or unusual buildings; waves crashing on a rocky shore; the glass and steel towers of a modern city – people will happily spend

their time gazing at pleasing or dramatic vistas.



- Green space. We're more apt to want to stay in a place where there are plants, whether it's a large park full of old trees, or a small garden. From our evolutionary beginnings, we've been conditioned to respond to green: greenery means water nearby, which means survival – animals to hunt, fruit and nuts to gather, water to drink. Although most of us no longer hunt down our main course, or climb trees for fruit, we still prefer to spend time in a place where there's green visible.
- Quiet amid the noise and hurry of a city. Paley and GreenAcre Parks, a few blocks apart in midtown New York City, offer not only oases of green and comfortable movable seating, but man-made waterfalls that drown out the noise of the surrounding streets.
- Interesting or pleasant places to walk. Sitting in one place is hardly the only way to use a space. Paths that seem to promise a new sight around each curve can draw visitors through a park. An interesting street scene pulls people along.
- A mix of different kinds of things to see and do. Some spaces are meant for one specific purpose – quiet contemplation, viewing cultural events, or providing play possibilities for children, for instance. Other spaces retain people and promote interaction by offering a wide variety of activities – shopping, events, a lively street scene, food vendors, places to sit and people-watch, etc.



- Lots of light, particularly natural sunlight (whether indoors or out). Like green space and water, light makes us feel good. Studies show that we respond positively to light in a number of ways, and spaces with lots of natural light are comfortable for us.
- Protection or screening from street traffic. A screen of trees or bushes, or a stone wall, even if they're low, set a space off from traffic and make it feel more like a room. Greenery can also screen noise, as can setting a space back from the street.
- Comfortable furniture. Contoured chairs or benches are far more inviting than stone slabs to sit on. Indoors, upholstered couches or chairs encourage lounging more than straight-backed wooden chairs do. Tables imply that food and drink are welcome, providing another element of comfort.
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Website: <https://ctb.ku.edu/en/table-of-contents/implement/physical-social-environment/places-for-interaction/main>

The Psychology of Space to Enhance Social Interactions

Environmental Psychology

- It is study of human relations and behaviours within the context of the built and natural environments
- For example, some principles of design comprising **balance**, **proportion**, **symmetry**, and rhythm can introduce a sense of harmony. Colours, on the other hand, have a very simple logic behind them, the warmer the colour is, the more compact space becomes. They can also evoke feelings of comfort or stimulate communication. Light depends greatly on the function. A dim light suggests a gloomy space while a bright light defines a bigger animated appearance. Natural light stimulates production and recovery.

- **Red:** brings heat to a space – can be powerful, aggressive, high energy, passionate, angry, unsettling and may lead to anxiety
- **Yellow:** only warm colour that can be associated with happiness, creativity, energy, fun and innocence, that can recreate the colours of sunlight
- **Green:** gives a soothing, calming feel if not overdone because it relates back to nature and harmony, may also connote positivity and luck
- **Blue:** relates back to nature and blue spaces like the ocean and sky, evoking feelings of serenity, calm and freshness; but may also lead to sadness
- **Brown:** close to nature (like wood) that depicts strength, stability, comfort and warmth but can sometimes be dull and unimaginative

These colours will be used in the design to stimulate certain emotions, feelings and improve well-being overall.

Website: <https://www.archdaily.com/936027/psychology-of-space-how-interiors-impact-our-behavior>

Website: <https://cubicoon.com/2021/09/01/psychology-of-space-how-interior-design-impacts-our-mood-and-behavior/>

Website: <https://media.haworth.com/asset/28568/Physical-Space-and-Social-Interaction.pdf>

Kampong Spirit:

Meaning:

An important part of Singapore's treasured heritage, the kampong (village) spirit refers to a sense of community and solidarity. Life in a kampong was mostly harmonious and it was not uncommon for people to readily offer their neighbours food, help and support.

Importance:

1. **Urbanisation:** Singapore has undergone rapid urbanisation over the years, leading to a shift from rural villages to a highly developed city-state. The kampong spirit serves as a nostalgic reminder of a simpler, more communal way of life that existed before the rapid urban transformation.
2. **Cultural Identity:** The kampong spirit promotes a shared cultural identity and fosters a sense of unity among different communities. It helps preserve a sense of cultural heritage and connection, even in a rapidly changing environment.
3. **Social Cohesion:** The kampong spirit encourages social cohesion and the building of strong bonds among neighbours. In a densely populated urban environment, maintaining positive neighbourly relationships can contribute to a more harmonious and pleasant living experience.
4. **Support Networks:** In a kampong, people relied on each other for various forms of support, such as childcare, elderly care, and emotional assistance. This spirit of

mutual aid and support continues to be relevant in modern Singapore, as it reinforces the importance of helping one another during times of need.

5. **Community Resilience:** The kampung spirit promotes a sense of resilience within the community. When people work together, they are better equipped to tackle challenges, whether they are social, economic, or environmental in nature. This unity helps the community navigate difficulties more effectively.
6. **Enhanced Well-being:** Strong community bonds and a sense of belonging have been linked to improved mental and emotional well-being. The kampung spirit contributes to a sense of inclusion and reduces feelings of isolation, which can be especially important in an urban setting where people may feel disconnected from one another.
7. **National Identity:** The kampung spirit is often invoked as part of Singapore's national narrative. It highlights the nation's humble beginnings and emphasises values such as care, respect, and solidarity. By promoting the kampung spirit, Singaporeans are reminded of the importance of these values in building a strong and cohesive nation.

What Aspects We Intend to Incorporate:

1. **Mutual Support and Care:** In a kampung, neighbours looked out for one another and provided support during times of need. This aspect involves helping each other with tasks, offering assistance to the elderly or those facing difficulties, and generally showing empathy and care for fellow community members.
2. **Strong Social Bonds:** The kampung spirit is built on strong social connections. Neighbours know each other well, and there is a sense of belonging and familiarity. These relationships extend beyond casual interactions to a deeper understanding and concern for each other's well-being.
3. **Sharing and Generosity:** Sharing resources was a common practice in traditional kampungs. Whether it was sharing a meal, lending tools, or pooling resources for events, this aspect emphasises generosity and a willingness to help others without expecting anything in return.
4. **Community Events:** Kampungs often held communal events, festivals, and celebrations that brought people together. These events foster a sense of belonging and create opportunities for interaction and bonding among neighbours.
5. **Respect for Elders:** In kampungs, there was a deep respect for elders and their wisdom. This aspect extends beyond mere reverence and includes actively seeking guidance from older community members and caring for the elderly in various ways.

Annex:

Interviews:

- Do you interact often with residents outside your age group in your neighbourhood?

Why or why not?

I chat with most of my neighbours who are older than me on my way to school or in the evenings but do not hang around with them as I work long hours and neither have the time or energy for prolonged interactions.

- Do you feel connected to the residents living in your neighbourhood? Why or why not?

I feel connected as we share common life experiences.

- What do you think are some barriers to interaction between you and the residents (including those of different age group) living in your neighbourhood?

Different interests, Language barriers and time

- Are there any social spaces within your neighbourhood that allow for intergenerational bonding?

There is a shelter in the market; the coffeeshops as well as the park serve well

- What kind of activities do you think can help you get to know the residents living in your neighbourhood, especially those of different age groups, better?

Block parties, celebration of festivals

- Being a long-time resident of Bukit Batok, what are some aspects of the town that you think is unique to this area? (E.g. its people, environment, natural/ manmade features)

It's well-maintained, peaceful and very clean. The Park is a huge asset as is the Little Guilin

1. Do you interact often with residents outside your age group in your neighbourhood? Why or why not?

No. Hardly any opportunities or time.

2. Do you feel connected to the residents living in your neighbourhood? Why or why not?

In a very small way. The frequency of our paths crossing, in the lift, on the way to the carpark, chance meeting at the coffee shops bring some connectivity in our daily/ weekly routine.

The closest, next-door neighbours are more connected as the regularity of meeting are higher and more often. There are some common issues, growing kids, weddings etc...that bind the relationship to a greater extent.

3. What do you think are some barriers to interaction between you and the residents (including those of different age group) living in your neighbourhood?

The lack of purpose, common topics and the individual lifestyle of each and everyone.

4. Are there any social spaces within your neighbourhood that allow for intergenerational bonding?

Coffee shop/ hawker centre? Supermarket? Children playground/ Exercise park?

5. What kind of activities do you think can help you get to know the residents living in your neighbourhood, especially those of different age groups, better?

Exhibitions in the blocks/ Celebrations in void decks

6. Being a long-time resident of Bukit Batok, what are some aspects of the town that you think is unique to this area? (E.g. its people, environment, natural/ manmade features)

The existence of a Pre-U centre, Sec sch and Primary sch and an International sch within 1 km from each other. Hence shared resources in the education landscape is unique.