

FLASH

17

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News+FLASH is the digital offspring of INTERSECTION. It is published digitally each fortnight for the foreseeable future, until we run out of ideas, articles or money.

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**THE EXPANSION OF THE
BAGAN SPECIALIST CENTRE**
BUTTERWORTH, PENANG

by MinWee Architect

The sky above the courtyard is framed by the new Ward Block, the Clinical Block and the existing hospital.



The hospital complex from the main road; the Clinical block is in the foreground with the Ward block in the background.

ARCHITECT'S STATEMENT

Built in the 1980s, the Bagan Specialist Centre along Jalan Bagan 8 in Butterworth, Penang, is ready to grow and better serve its clients. The original hospital building was built at the widest perpendicular corner of a triangular site, overlooking a large field. Its recent expansion, completed in 2020, more than doubles its bed capacity from 150 to 350 beds and includes a new Cancer Care Centre with a radiotherapy bunker, and a Chemotherapy department.

The existing hospital is still the cornerstone of the site. Opposite it, directly facing the Perai River, is the ward block, an 8-storey building with eggcrate sun-shading to protect against glare. Service spaces are plugged into leftover spaces: a carpark block occupies the narrowest corner of the site, while an M&E block fills the gap between the new and old wards.

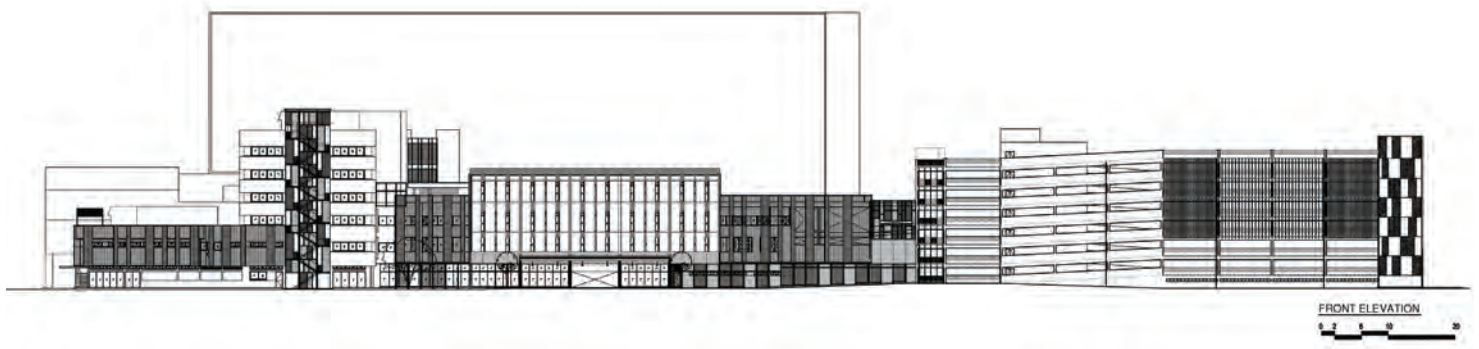
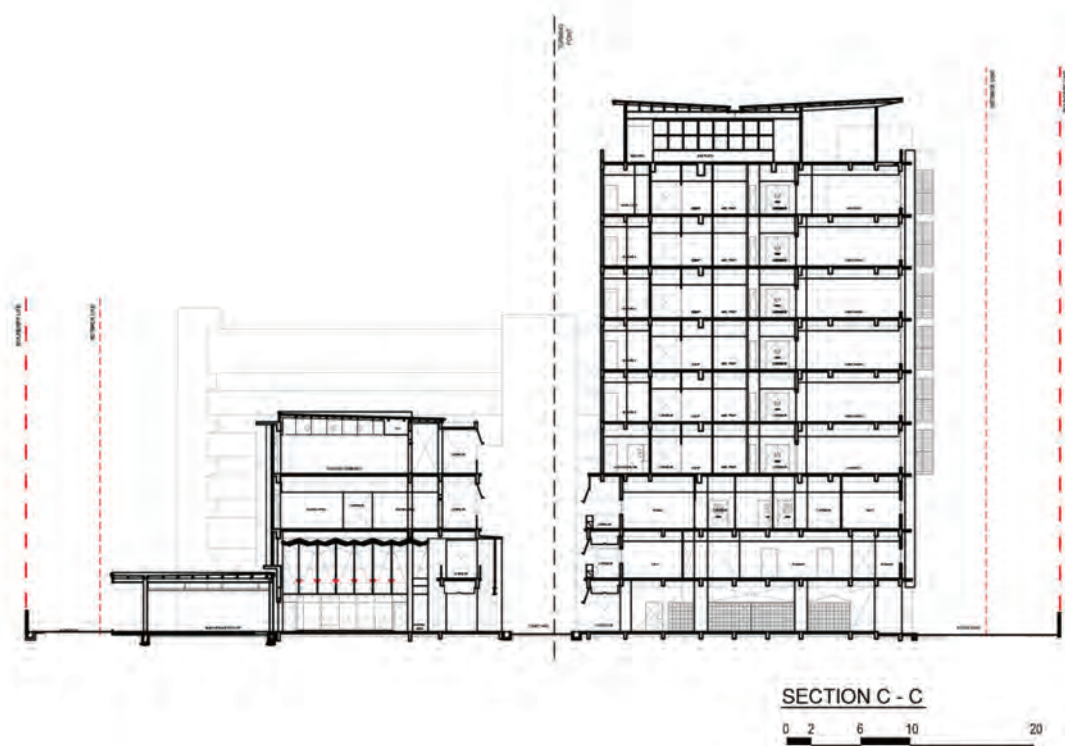
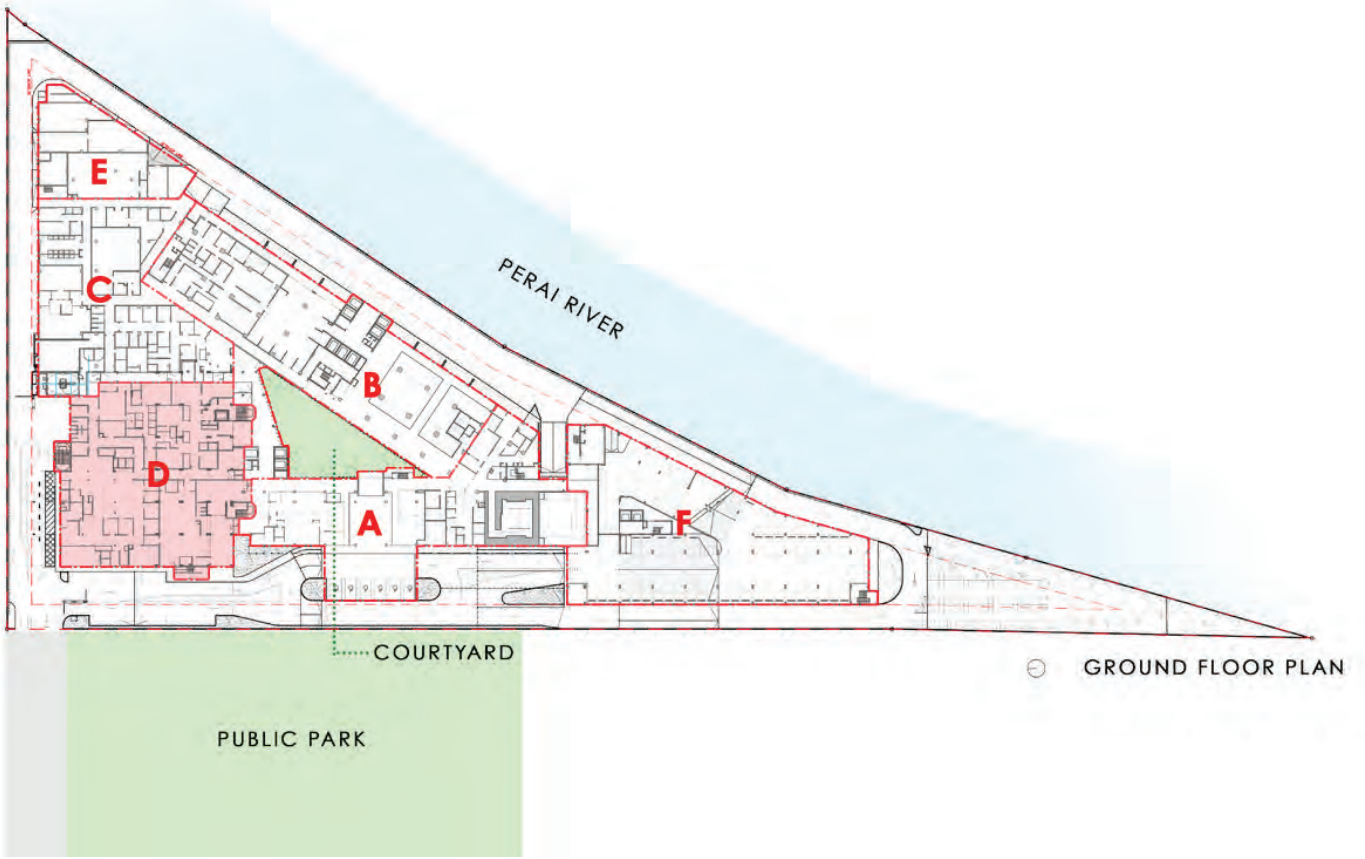
The arrangement of the building programmes also coincides with the phases of the new expansion, given that the existing hospital continued operating throughout the construction process. The M&E block was completed first in order to take over support services from the existing M&E plant. After building the carpark came the clinics, operating theatres, and then the ward block, allowing existing facilities to be transferred over from the original building, which was finally upgraded into a wing for new A&E, Dialysis and Imaging Departments.

With all the blocks ringing the site, a central courtyard is formed in the negative space between them, offering the wards, clinics and training rooms direct views of softscape and the Perai River. Much of the ground floor is naturally ventilated.



6 Jan 1986

Project Name	: The Expansion of Bagan Specialist Centre
Project Scope	: Expansion of an existing hospital built in 1986 - to include a cancer care unit and radiotherapy bunker, chemotherapy department and the increase from 150 to 350 beds.
Project Location	: Butterworth, Penang
Area	: 205,534 sqft
Completion Year	: 2019
Architecture Firm	: MinWee Architect
Client	: Bagan Specialist Centre
Design & Project Team	: Wee Hii Min, Leong Gian Wen, Lee Peng Hui, Fiona Law, Claudia Law, George Lee
Medical Planner	: THChiam Architect & Health Facility
Contractor	: Shiangly Builder Sdn. Bhd.
Civil Engineer	: GTP Consultants Sdn. Bhd.
M & E Engineer	: TES Avenue Sdn. Bhd.
Quantity Surveyor	: Kuantibina Sdn. Bhd.
Landscaping	: Perunding Hijaureka Sdn. Bhd., MinWee Architect
Photographer	: Sean Wee, Lionel Kueh, CK Tan





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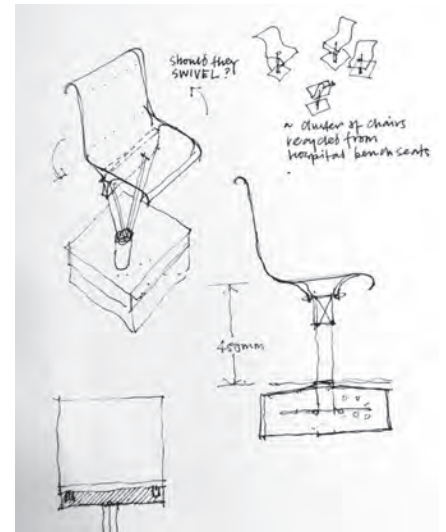
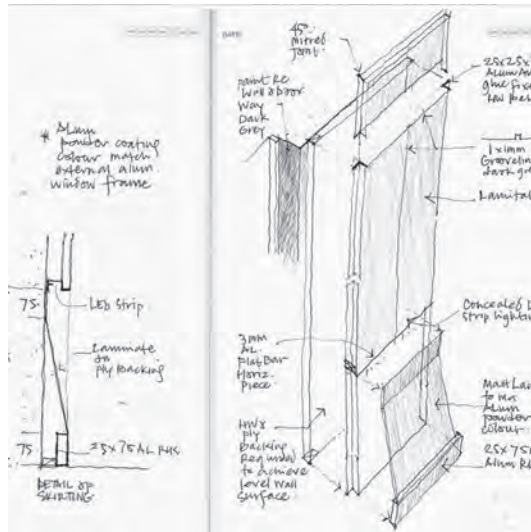
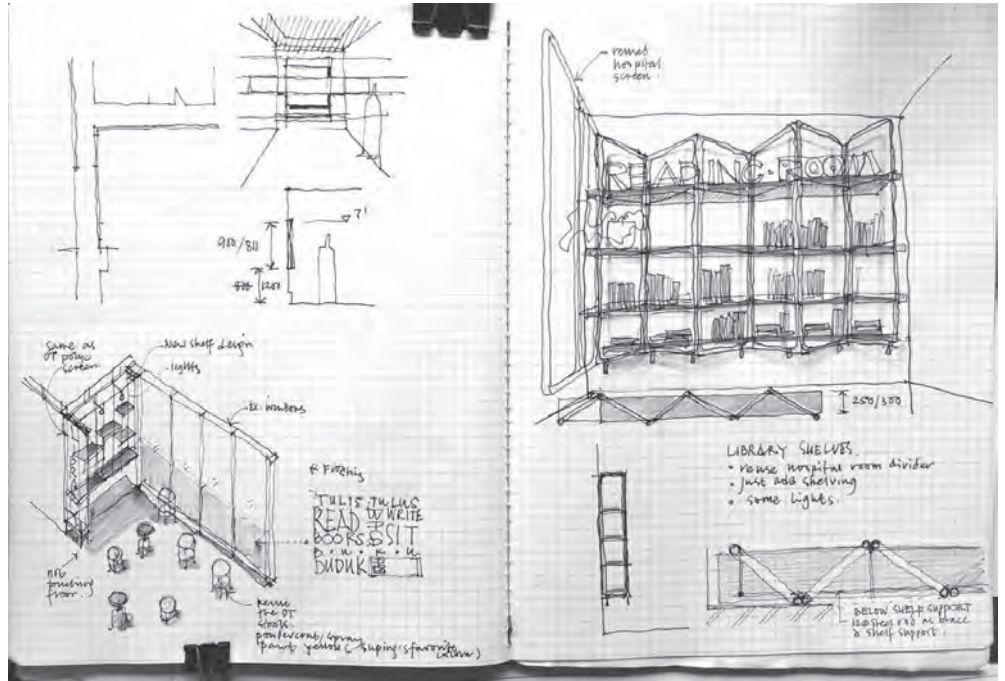
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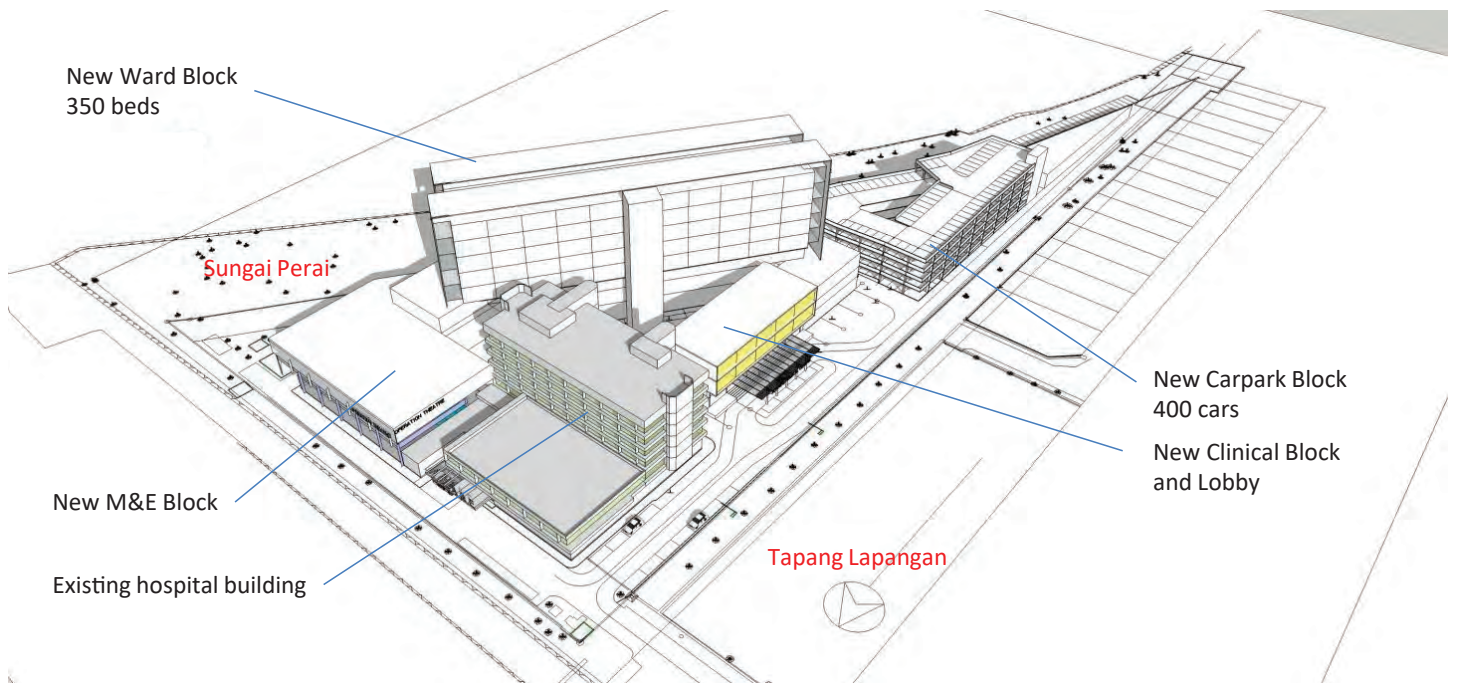
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CAPTIONS

1. The west walls of the Front block are slanted to avoid direct sun.
2. Bay-windows in external facade serve as a day-beds.
3. Patient and staff circulation are supported by outdoor corridor and stairs.
4. Construction of the main lobby ceiling.
5. Casting of Radiotherapy bunker.
6. Upcycling damaged link chairs into garden seats.



The landscaped courtyard may be the crown jewel of the complex, but greenery is a constant presence in and on the new hospital building. There are trees in the courtyard; leafy plants in planter boxes along the corridors; and creepers on the carpark block facade. The client also has plans to enhance the neighbouring field as a green forecourt and exercise area for the neighbourhood.

The emphasis on landscaping is a welcoming change to the often no-frills and efficient architecture of hospitals, helping the Bagan Specialist Centre to present a friendlier front to the community.

Architecture

The architectural scheme is a balance between compliance to medical flow and requirements, and tectonic expression and climatic response. Connection between the Ward, Clinical and OT blocks is by shaded corridors along the central courtyard; they are shaded with awnings and garnished with planters and views of the trees.

Ward blocks typically have 'thick' floor plans, resulting in squat proportions - this we mitigated by breaking down the facade into sun-shading fins and ledges, while service areas are represented in vertical strip windows to elongate the overall massing. This architectural treatment resulted in bay-windows in some of the ward rooms which serves as a day-bed for the patients' carer. The roof of the Ward block is capped with a light steel roof to harvest rain-water for the ward toilets, and provide heat and weather protection.



CAPTIONS

7. Waiting area outside OT department - it uses steel and polycarbonate for lightness and transparency, borrowing its form from hospital bed-screens.
8. Central Courtyard looking towards the main lobby.
9. Mini-library built from bed screens.





The Front Clinical block is the 'face' of the hospital with its naturally ventilated main lobby and seminar rooms on the upper floors. It has views of the tapak lapangan but unfortunately faces west, which we took care of by slanting the west walls and inserting the windows in between them. This results in natural light diffusing into the clinics and waiting areas, enhanced by flowering creepers on the building's facade.

The Operating Theatre block is tucked in between the M&E block and the existing hospital building from which the former departments were decanted from. The connections are crafted to introduce public spaces such as the Physiotherapy terrace (between OT and Existing blocks), the Mini-library (between the Ward and Front blocks) and the Breastfeeding room (between the Front and existing blocks). Many of these public spaces takes the opportunity to explore design possibilities such as up-cycling hospital equipment into library shelves and seating.



CAPTIONS

- 10. Public lift lobbies are natural ventilated.
- 11. Lift lobbies are naturally ventilated with views of Sungei Perai.
- 12. Seminar Room using simple materials for its interior design.
- 13. All patient rooms are designed to have natural daylight.
- 14. Passive design is evident in the naturally ventilated public spaces.



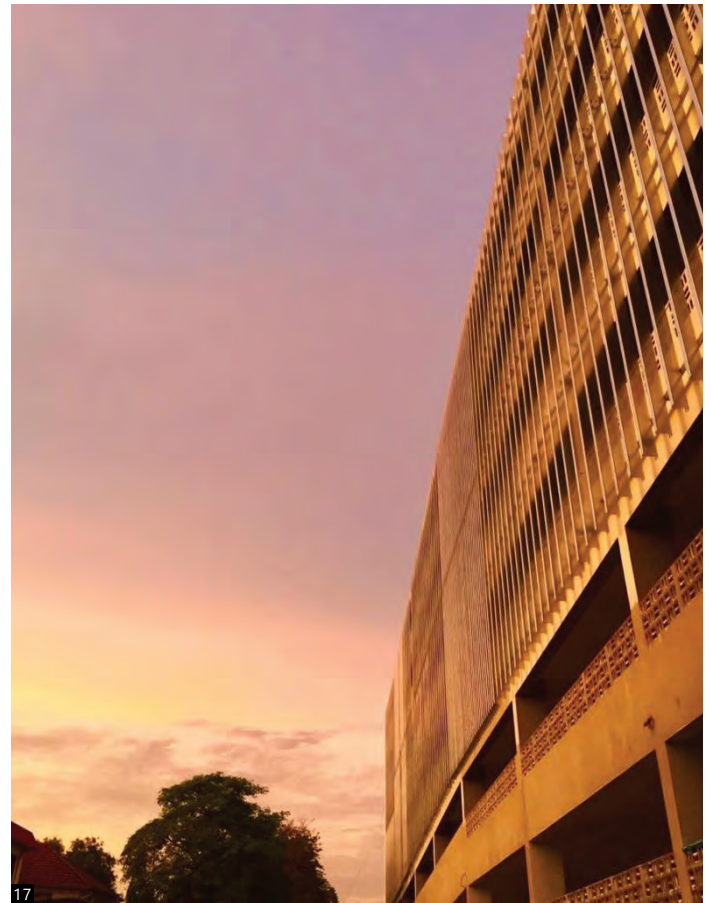
Sufficiency

As a whole, the hospital complex utilises very few building materials; concrete, steel, aluminium and glass most of which are sourced locally. It also practices passive design whenever it is possible - lift lobbies are naturally ventilated and lit, patient and staff circulation are supported by outdoor corridor and stairs, ceiling heights are kept high (3.2m) to promote air circulation and landscaping is introduced into the common areas to cool and filter air. There are also plans to enhance the existing "tapak lapangan" as a green forecourt for the hospital and exercise area for neighbourhood.

The new Bagan Specialist Centre has been operational since early 2020, however the upgrading is on-going as the existing block is being upgraded to house Dialysis, Rehab, Endoscopy and A&E departments.

The journey continues.

END



CAPTIONS

15. In the ward block, the facade is shielded by sun-shading fins and ledges.
16. The corridors linking the OT, Ward and Clinical blocks are protected with polycarbonate awning and trees.
17. The Car Park block is screened with galvanised steel purlins; part of the design approach of using standard building components in unorthodox ways.



THE 2 "GIANTS" AT TTHIS
(Tunku-Putra Help International School)

by Urbanscape Consultants Sdn Bhd

Site : TUNKU-PUTRA HELP INTERNATIONAL SCHOOL (TPHIS)
Location : A playing courtyard of approximate area of 900m² located within U-shaped blocks.
Item : The client wanted two full-sized of *Samanea saman* (Rain tree) in the courtyard, which included subsoil drainage, earthworks, root barrier, and re-planting to two trees. We called this transplanting operation moving the "Giants".
Duration of the operation : 4 days



PROJECT IMPLEMENTATION

Moving the "Giants"



(A.) Site Analysis

Several inspections were conducted to prepare the site and the trees for relocation, this included client's selection of the trees.

The selection criteria of the 'giants' are as follows:

- General health, form and structure of the tree (with roots all in-ground)
- Size of root ball diameter : Tree trunk diameter ratio - acceptable range is 8:1 to 10:1.
- Size of trees.
- Availability and suitability of a receptor site.
- Time for preparation
- Assess to the existing and receptor locations and transportation/ site constraints.



(B.) Rootball Trenching/ Pruning

Excavation of trench according to the ratio to give a working space to dig the root-ball.

The four (4) stages of digging and root pruning are:

1. Dig a trench on the outside of the marked circumference in only two opposing segments;
2. After a period of no less than 1 month after the 1st root pruning, dig a trench on the outside of the marked circumference in the adjacent two opposing segments;
3. After another period of no less than 1 month after the 2nd root pruning, dig a trench on the outside of the marked circumference, in the remaining two opposing segments; and
4. After a further period of not less than 1 month after the 3rd root pruning, prepare the root ball and cut the underside of the root ball, followed by lifting and transplanting.



(C.) Crown Pruning (Left)

Crown cleaning is carried out to remove unhealthy, damaged, diseased, dead and crossed branches so as to minimize susceptibility to pests and diseases.

(D.) Pre-lifting operations (Right)

Before lifting, the outer edge of the previously dug trenches is loosened from the surrounding soil, and the root ball can be shaped with taper on the sides, slanting inward toward the base. The first cut around the perimeter of the root ball to be made with a sharp tool. Cuts should be clean to avoid tearing or breaking the roots. The shaping and final cuts is done by hand.

Damp hessian is placed on the sides and across the tip of the ball and pinned. The hessian covers the full circumference of the root ball with bottom skirt hanging out. This skirt is pinned to the root ball later after the tree is taken out of the hole. The base of the root ball is properly wrapped.



(E.) Lifting And Handling Of Root-balled Trees

The root ball is properly wrapped before lifting. Lifting is by direct lift, with padded protection for the tree, using 25 tonne hoisting crane.



(F.) Protection during transportation

The 'giants' are tipped to a horizontal position on trailer bed. Cushioning using tons of coco peat to balance the trunk branching and rootballs. Further trimming of crown of the tree to minimise the risk of drying, branch damage due to excessive movements, and wind damage.



(G.) Preparation Of Receptor Site

During pit preparation, the existing topsoil ploughed from digging to be stripped and put aside for reuse as much as possible and to avoid a distinct interface between the planting pit and the surrounding soil. The width and the final depth of a planting hole are determined by the depth and firmness of the root ball and other characteristics of the site. The soil directly beneath the root ball should be undistributed or prepared to prevent settling.

The depth of the planting hole shall not exceed the depth of the root ball and the sides of the planting hole should be scarified.





(H.) Planting

All root ball supporting materials is being removed from the planting hole prior to final back filling. Crown wrappings and fastenings used to tie in the branches for transport should be removed. When finally set, the top surface of the root ball is slightly above the surrounding soil. The bottom of the trunk flare is at or above the finished grade. The back-fill soil reinstated and settled in layered sections to limit future settling and prevent air pockets. It shall not be compacted to a density that inhibits root growth.

The backfill soil tamped firmly around the base to stabilize a tree, but the rest of the soil is tamped only lightly, or left to settle on its own. Water is added to the root ball and the backfill to bring the root ball to field capacity. Soaking will assist in settling the soil naturally.

The "Giants" is secured in position by guys and stakes.

Immediately following planting, a soil saucer is formed on the soil surface around the edge of the root ball circumference to permit rain or irrigation water to be retained and slowly infiltrate into the root ball perimeter.

END





PAM+SDP CONCEPT HOME 2030 COMPETITION

2ND PRIZE : 084_PROJECT ECO-PRENEUR

by *Akitek Seni Kenyalang*

The contemporary paradigm of terrace housing is being challenged over the years with fluctuating economies and most recently the global outbreak, which has transformed the operations of various businesses and most significantly altered the routines of daily life. Current housing standards have been called into question towards the changing necessities of the digitally-inclined lifestyles and the constitutional expression of the home as place of comfort. As a measure of transforming problems into restorative opportunities, **Project Eco-Preneur** represents an optimized strategy that addresses the expectations of the Malaysian house fit for the future; where the synthesis of architecture and technological advancement becomes part & parcel of future living. The strategy explores to not only seeing a house as a holistic unit, but part of the common ecosystem that could provide community interactions and negate isolation cases experienced from the pandemic-driven age.

The scheme is designed to offer the freedom of **choice** to buyers through **generative design**, depending on current & future individual needs. Variations of space modules can be composed over a database platform, presenting multiple choices down to material usage and carbon calculation. These configurations are done using Houdini algorithms, creating dynamic environments which can be set with formative requirements to maintain spatial quality & sufficiency. The method is not only confined to individual units but extends towards master planning over differing land profiles, where streetscapes, green areas and amenities can be distributed evenly and sufficiently. Former spaces such as back-lanes are optimized as biophilic and community spaces. This digital scheme can be set, brought upon & marketed during the early stage of commission.



Current construction methods may not be feasible, due to the nature of requiring numerous physical responses between developers, consultants & laborers. As an alternative method, **3D printing** offers an automated and efficient approach compared to conventional construction. Technical requirements such as mechanical & electrical components can be incorporated simultaneously with minimal error while reducing excessive material usage. Production of organic forms with higher complexity is achievable as structural components are printed simultaneously with precision compared to traditional on-site construction, overall controlling carbon footprint & reducing errors. IBS components are merged as part of the framework due to its modular properties, as well as for future expansions when required.



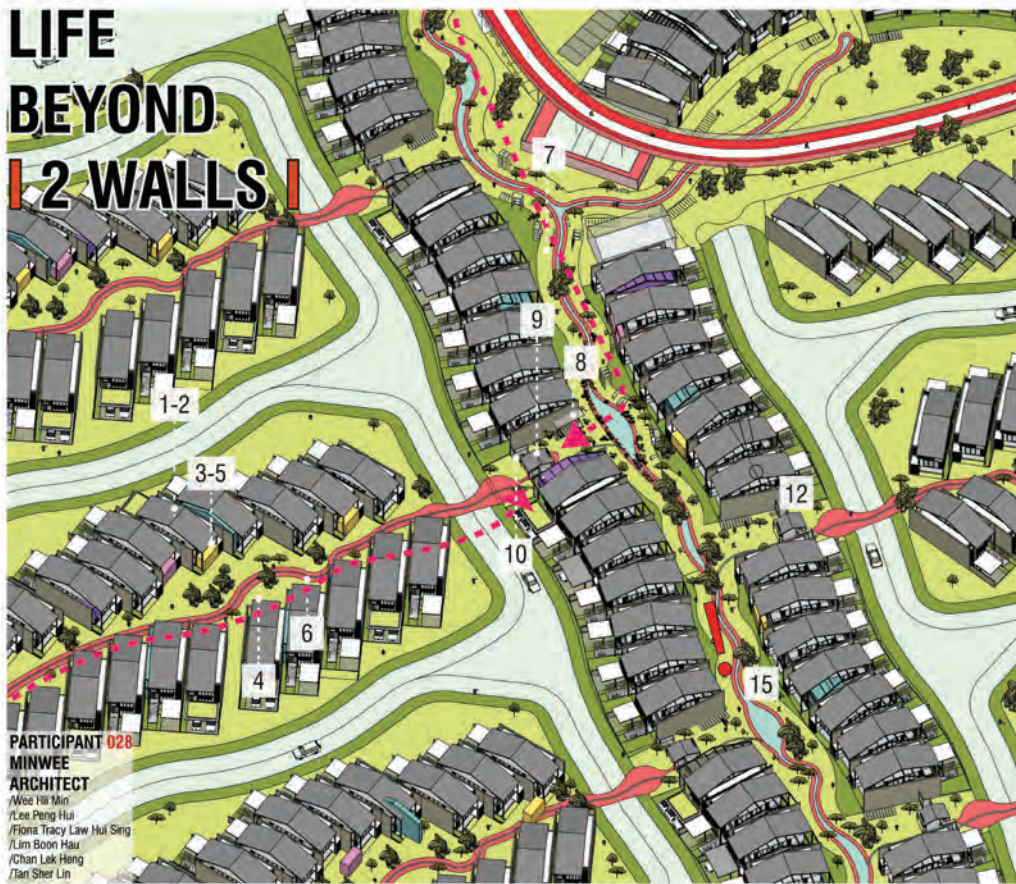
All in all, the sustainable strategy is focused as a collective action from building procurement to its life-cycle. Fusing digital systems to the human habitat improves the quality & function of spaces, with the ability to suit user preferences and improving day-to-day experience; creating flexible environments without the differing perceptions of work and play. On a macro level, zones that are formed and optimized through generative design for centralized greens, facilities & multifunctional street allows opportunities for **micro-economical** ventures e.g. aquaponics, seasonal marketplaces, remote medical facilities & possibly petting zoos. Apart from being accessible, it is a conscious approach to promote **financial sustainability** through micro-ventures as part of living in the future.



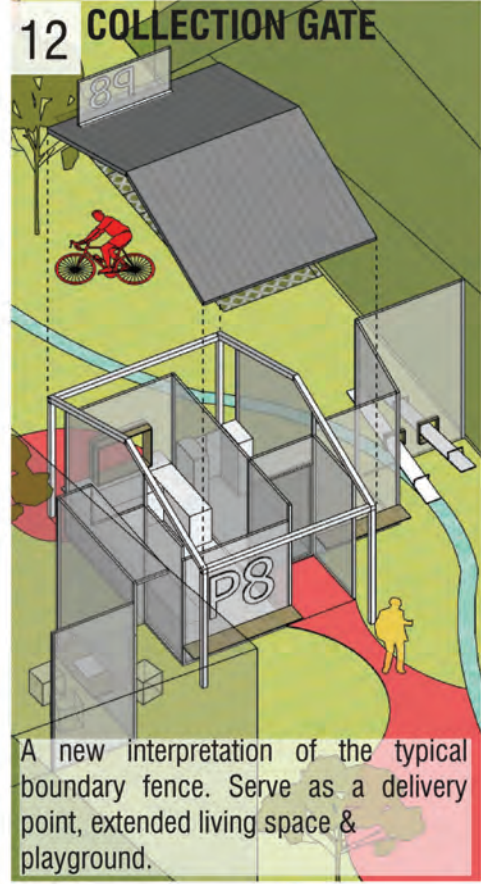
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LIFE BEYOND 2 WALLS



PARTICIPANT 028
MINWEE ARCHITECT
 /Wee Hui Min
 /Lee Peng Hui
 /Flora Tracy Law Hui Sing
 /Lim Boon Hau
 /Chan Lek Heng
 /Tan Sher Lin



12 COLLECTION GATE

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A DAY IN MIN'S LIFE



1 Min: 6am, time to wake up.

2 Min: Mun, give me the plate to put the kueh.

3 Min: Time to open the backdoor and work!

4 Mun: Ah! Good morning! Ah Peng!

5 Mun: Order coming! Yes!

6 Min: Boy! Let's go out together.

7 Ubar: Searching for P8 Collection Gate.

8 Ubar: Ah! Found it! Someone there.

9 Min: Hi Ubar, here is the order.

10 Min: Boy, I am done but take your time.

PAM+SDP CONCEPT HOME 2030 COMPETITION

SHORTLISTED : 028_LIFE BEYOND 2 WALLS

by MinWee Architect

THE FUTURE OF TERRACE NEIGHBORHOODS

We yearn for a simpler life; a home, family, good friends and neighbours - and security for our kids to walk to school, to the shops. People knew their neighbours and kept an eye out for each other; keeping everyone safe. As we prospered, housing estates were built far from work, making us dependent on the car. The result: centralized & disconnected infrastructure planning that leads to a more fragmented socioeconomic scenario, a common scene in any modernized nation.

Our neighborhood aims to bridge the gap between humanistic lifestyle and ever-evolving smart technologies. In 2030, we foresee Malaysians to grow with this timeless and circular neighborhood,

where residents self-produced energies and amenities from home and share with the neighborhood. This will inculcate values of shared responsibilities, sufficiency, respect and mindful consumption among the communities, forming networks of resilient neighborhoods.

In the past two years of lock downs and working from home, many of us started to appreciate the simplicity and freedom of working from home. Many found time to exercise again while others found the courage to leave their jobs and start their own businesses. All these factors point to the evolution of the typical house into a hybrid of home, office, shop and recreational space. Our scheme draws inspiration from this new mindset of blurring the boundaries between the home and work.

“Great design is about better homes, in better neighbourhoods, built for how we live now, and ready for the future.”
 - Live Well By Design, House by Urban Splash



Daily life of residence in a terrace cluster, view from the green alley.



WALKABLE NEIGHBORHOODS
 One can walk to different amenities in every 100m (approximately 1 minute walking), by locating terrace shophouses along the green spine.

In our scheme, we introduce a terrace-shophouse hybrid typology along the green spine and neighbourhood parks, serving as shopping streets where shop keepers can 'borrow' the immediate spaces, much like how the 'kaki-lima' can serve a multitude of functions. Just imagine photocopy shop, eateries, pharmacy, bicycle workshop, tuition classes, laundromat... any amenities that you need is accessible via a safe pedestrian path that leads to communal facilities, parks and retails.

Instead of selling layouts that are predefined, we introduced an affordable "Breezeway Core House", which owner can customise to suit their needs and budget, and one where boundaries between the home and the community are dissolved by part of the house design. Owners are able to grow their home using prefabricated modules; a balcony, a window nook, another toilet or bedroom as the family expands.

'A house will only turn into a home/office/shop/class through the process of change made by the occupants'

END



The team



NEW PAMSC CENTRE- Construction Update

The construction of our new Centre is well on the way, under the watchful eye of our architect, **IDC Architects** and Building Committee members, **Ar. Annie Narodden**, **Ar. Kong Kean Wei** and **Lau Chee Kiong**. The completion date is the 5th of May 2022, construction progress updates every fortnight !



Photo credit: Annie, Azai & Chee Kiong

OUR TEAM IS GROWING!

In preparation for the new term, and as part of our succession plan - we are officially growing our team. It's been the four of us for so long that we're getting tired of each other's company at our fortnightly 'working' lunch*.

The dynamic duo of **Tay** and **Suan** have been actively contributing in the past decade, especially in the past year when they provided 17 articles in our past 20 issues. Their contributions are an insight into work - life balance, architecture education, and family life infused with art and design. They have successfully organised several WAD (World Architecture Day) events and we hope that they will continue to do so.

'Freddie' **Lo Horng Rong** is a young practitioner with an interest in vernacular architecture, often traveling far to seek out examples of these buildings and communities. We expect to see an alternative viewpoint from him.

Roving reporters **Yasmin** and **Sean** will aim their photographic eye on life in the city - and write urban poetry and essays about the good, the bad, the improvised and clever, the planned and not so smart. They're part of my plan to promote inclusiveness (and nepotism) in the hope that our newsletter will attract younger readers and contributors.

We're always looking for projects, articles, thoughts and opinions - so, 来来来 just submit and we'll try to fit you in. Email to intersection.editorial@gmail.com



Lam Choi Suan and Tay Tze Yong



Freddie Lo Horng Rong



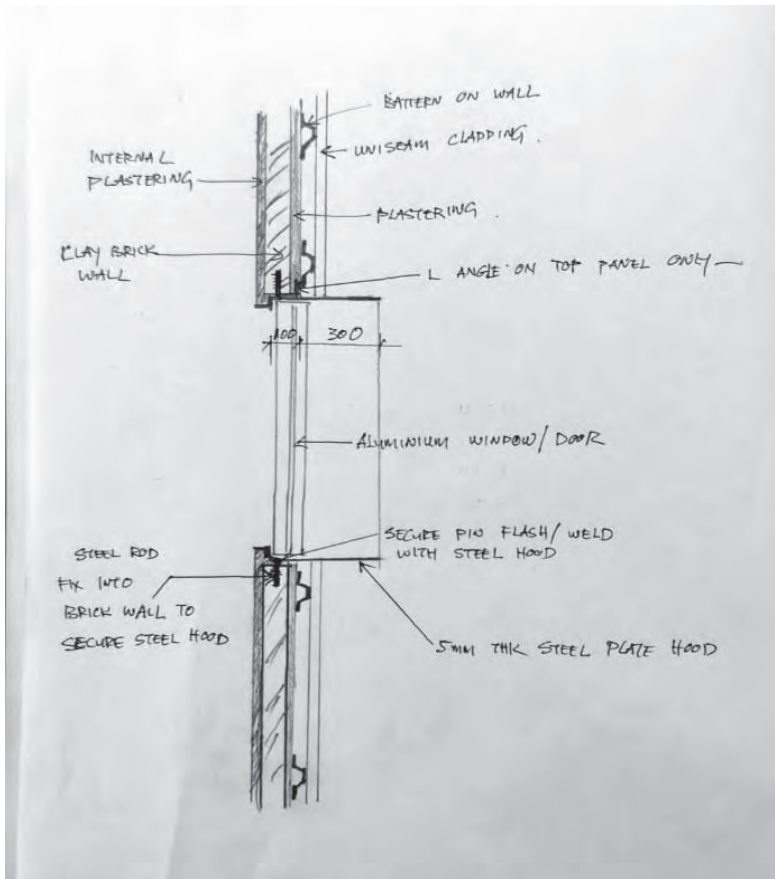
Yasmin



Sean Wee

#talkingdrawings

Architects and designers sketches drawn on scraps of paper, cardboard and back of envelopes with the primary intention of conveying an idea to a colleague or a builder.



The PAM Contract has a provision for the contractor to formally confirm the architect's verbal instruction, here it is done in a form of a sketch by the builder; showing the location and fixing method of the steel window hood.

Liew Kuet Chen, builder

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