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Cover design by Hans Lim with Floating House in Thu Duc (see page 68)
photo by Hiroyuki Oki and images by ng v n phuong; Sandra Chia; ANNA
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Dear *FuturArc* readers,

Let's talk about this issue's cover design for a bit.

For this theme, we wanted to express the concept of health/wellness as an intimate reality in one's everyday life. And what's more everyday than one's home?

So, we took the bold Floating House in Thu Duc, Vietnam, as the 'exemplar' home, as we were told by the architect: "I believe that living a life surrounded by natural wind, light and greenery, with as few air-conditioners as possible, has a positive effect on one's mental health."

The colours pervading every nook and cranny of this cover—symbolising being in the pink of health—were based on Pantone's colour of the year 2024: Peach Fuzz.¹

Architecture and Health/Wellness

Where before, architecture was conceived primarily to shelter and protect humans physically from the elements, today, architecture is tasked with elevating our overall health and well-being, with physical and mental aspects now viewed as a comprehensive whole.

In this modern age, health in architecture intersects typologies and programmes, private and public domains, as well as local and global impacts.

This issue explores how health and wellness of occupants are directly connected to—and the reasons for—the way different projects presented here are conceived, designed and built.

Of particular interest is a sanitary facility by Milinda Pathiraja, PhD, and his partners at Robust Architecture Workshop (RAW)—a meticulously crafted endeavour with implications extending beyond its primary functions. It encapsulates how good architecture means well-being of not only the immediate community/users, but also the local industry and economy.

The symbiotic relationship between health and housing was expounded by Kester Ray de Vera, a construction quality specialist for Habitat for Humanity. He urges us not to forget the crucial role that architects and designers play in improving the health outcomes of homeowners—where something as basic as building materials can drastically affect the mortality rate of occupants, especially among the disadvantaged, low-income and vulnerable populations.

Apart from the building scale, an anecdotal commentary by Hoa Nguyen makes a case for urban agriculture to uplift the quality of health/wellness of city dwellers. She advocates for a more integrative approach to farming in the city—allowing for more green spaces and designing them in a holistic way to enable urban farming activities to flourish for the benefit of Nature and for people's well-being.

¹ <https://www.pantone.com/articles/color-of-the-year/what-is-peach-fuzz>

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Visiting Professor, FAR, École Polytechnique Fédérale de Lausanne, Switzerland

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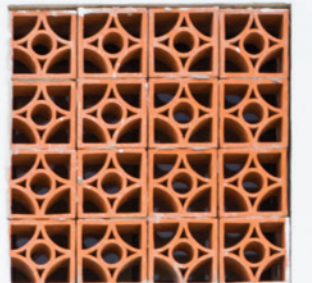




Photo courtesy of Habitat for Humanity Nepal

Climate change was famously called a monster of our own making. Then came the COVID-19 pandemic in late 2019, which swiftly evolved into the most significant health problem of this century. The health and economic fallouts are well documented, particularly on already vulnerable families and communities. Through these global crises, housing continues to play a pivotal role in ensuring people's health and well-being.

When the pandemic struck, governments around the world including Asia ordered people to stay at home to prevent the spread of COVID-19. For some people, however, staying at home posed threats to their health and well-being,¹ including infestations, mold, and structural housing problems. Leilani Farha, former U.N. special rapporteur on the right to housing, summed it up. "Housing has become the front-line defence against the coronavirus.² Home has rarely been more of a life-or-death situation."

- 1 The use of cement-bamboo frame (CBF) technology in Habitat for Humanity projects in Nepal
- 2 CBF housing community in the Philippines' Negros Occidental province



2

Photo courtesy of Habitat for Humanity Philippines

The FuturArc Interview

MILINDA PATHIRAJA, PHD

Co-Founder, Robust Architecture Workshop (RAW)

Visiting Professor, FAR, École Polytechnique Fédérale de
Lausanne (EPFL), Switzerland

by Candice Lim & Dinda Mundakir



Although we're creating public toilets, we didn't want to limit ourselves to just that. We aimed to establish a civic territory, a public space.

Speaking with **Milinda Pathiraja** feels a lot like being in the presence of a bright light—in terms of an architectural analogy, perhaps a lighthouse. Personally speaking, it would be a familiar lighthouse: Milinda was not only a former FuturArc Prize 2017 juror, but his highly acclaimed projects were also profiled frequently in this magazine over the years. His work and approach are measured, methodical and meticulous. Milinda's projects are strongly rooted in the local socioeconomic and cultural contexts where the methodology, materials and manpower come together in the construction and architectural design processes to form a foundation, as it were, upon which each project is created organically. The elements are not separate from one another—and every component is there for a reason.

After being informed of this issue's focus on architecture and health/well-being, he told us about a sanitary facility he recently completed for his alma mater, which, aside from being an apt project both in theme and tone for this issue, has further implications beyond its primary functions.

CL: How did you and your team come about to doing the sanitary facility for the school?

MP: They approached us about improving the existing sanitary facilities at the secondary school in Kandy, where I had studied. The old boys, whom I knew, spoke to us about the project, and it became an opportunity for us to experiment with the ideas that have always interested us in our practice. Our practice is research-based, and designing a toilet as a building type intrigued us because it involves social infrastructure and responding to a spatial need that is inevitably connected to our everyday life. In this part of the world, toilets are often seen as places to be avoided and repelled than those to be 'in' and 'experienced', and something that is often overlooked within the celebrated practice of architecture. We saw it as a chance to explore the design potential embedded in a building of that calibre.

We went to the school, spoke to the teachers and kids, and discovered a real problem within the public school system. We realised that some students don't even drink water in the mornings to avoid using the toilets. They sometimes wait until the end of the day to use better public facilities in the city. This problem extends beyond this particular school and is a challenge across the public school system. So, we believe it was essential to get involved.

CL: Yes, we thought it's a brilliant project. The architecture reminded us of the reading room (Library at Boralukanda Primary previously published in FuturArc Q1 2019) you designed earlier, which brought back nostalgic memories for me. Could you share some insights into the design?

MP: Certainly, yes, I'd be happy to discuss the design. It's interesting that you mentioned the reading room project. When we conceptualised it, our aim was to develop a modular building system that can be used for various spatial programmes. The modular units could serve as a reading room, a classroom, a play space, a gallery, or even a washroom. We envisioned a module that could transform into different types of social infrastructure for the public school system.

Now, with this current project, we are designing toilets for an urban school, a different context compared to the rural setting of the reading room project. The challenges, therefore, lie in adapting the same module to a different programme, context and usage. In the case of the reading rooms, we relied on

1 The Lanterns are a sanitary facility for the middle section of Dharmaraja College in Kandy, Sri Lanka **2** Sectional perspective of the sanitary facility **3** The new facility replaces these enclosed toilet units that stood in the middle of an underused open space



All project photos courtesy of Sajith Sivayogara



All diagrams and drawings courtesy of Robust Architecture Workshop (RAW)

JSW SANJEEVANI MULTISPECIALITY HOSPITAL

According to a study in 2019, around 86 per cent of medical visits in India are from individuals living in rural areas, with a majority needing to travel over 100 kilometres to reach available healthcare facilities.¹ The same study states that although 73 per cent of the nation's populace live in rural areas, they have access to only 25 per cent of all healthcare facilities, which means that the remaining majority of medical resources are located in cities.

The lack of facilities outside of large cities has led to gaps in important health indicators; on average, people living in India's rural regions have a life expectancy of five years less than those of urban dwellers. This is symptomatic of the larger issue of healthcare disparity faced by India's rural communities.

One such example can be found in the Raigad district in the state of Maharashtra. The district is known for its nascent industrial areas, being strategically located near the megacity of Mumbai, India's commercial centre. Raigad is considered to have good road infrastructure with state-owned bus services.²

However, the same cannot yet be said for its healthcare—the district government's website only lists two public hospitals,³ and private facilities often take the form of clinics with limited bed capacity and basic equipment.⁴ When the level of care needed cannot be provided by local facilities, patients are referred to hospitals in Mumbai,⁵ approximately two hours away. The long distance and travel time make it far from ideal for urgent cases or people who need recurrent specialist care.

1 Aerial shot of the project in Dolvi, an infrastructure-starved region in rural Maharashtra, India **2** The architectural vocabulary for the hospital adapts vernacular features such as balconies and pitched roofs in a contemporary manner **3** North-south site section

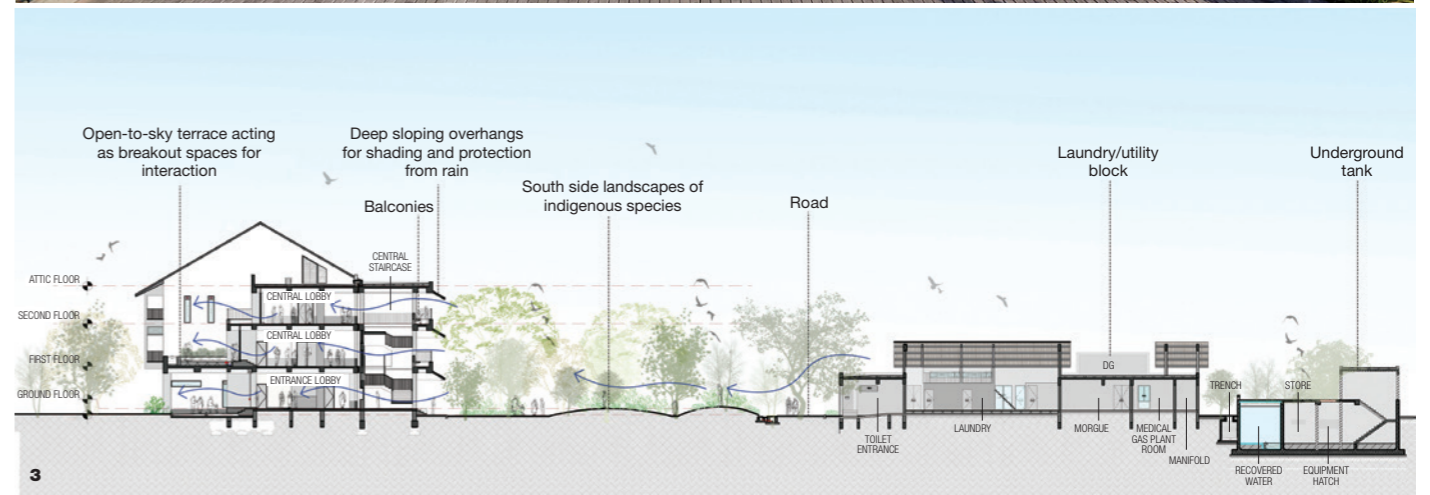


Photo by Nivedita Gupta

1



Photo by Rajesh Vora



HEALTHY HOMES: THE IMPORTANCE OF 'BLANK SPACES'

When it comes to the impact of architecture on health, it is clear that badly designed spaces—such as structures prone to weather damage; spaces with stagnant air circulation; poorly lit corners; or hot and stuffy rooms—have a negative impact on well-being.

However, the topic of health in architecture is no simple matter. While it is the ethical responsibility of architects to design for public health and safety, there is a limit to what architecture as the overarching 'container' can control when it comes to ensuring the health of occupants. It has long been observed that building-related illnesses (BRIs), most often occurring in workplaces and industrial buildings, can be directly attributed to a building's management—for instance, airborne contaminants¹ such as those from toxic materials as well as poorly maintained hygiene for the air-conditioning systems.

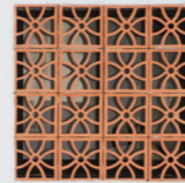
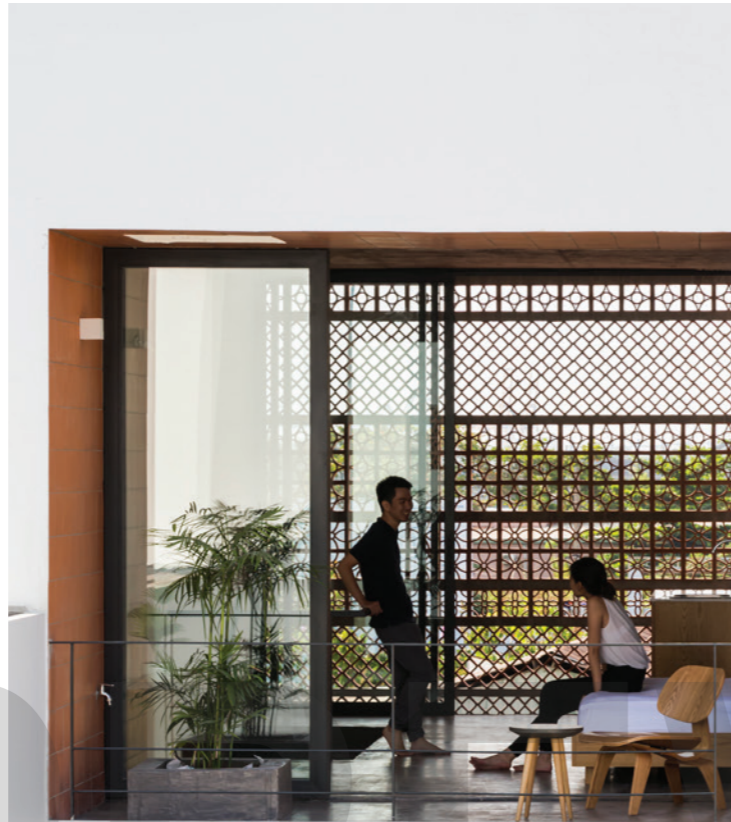
Even so, the global pandemic has reemphasised the relationship between architecture and health to a high degree. The general public has found out through the mandatory lockdowns and stay-at-home restrictions that there is a fine line between homes as a safe refuge and as centres of contamination—and that line is often determined by whether a building is well designed or not.

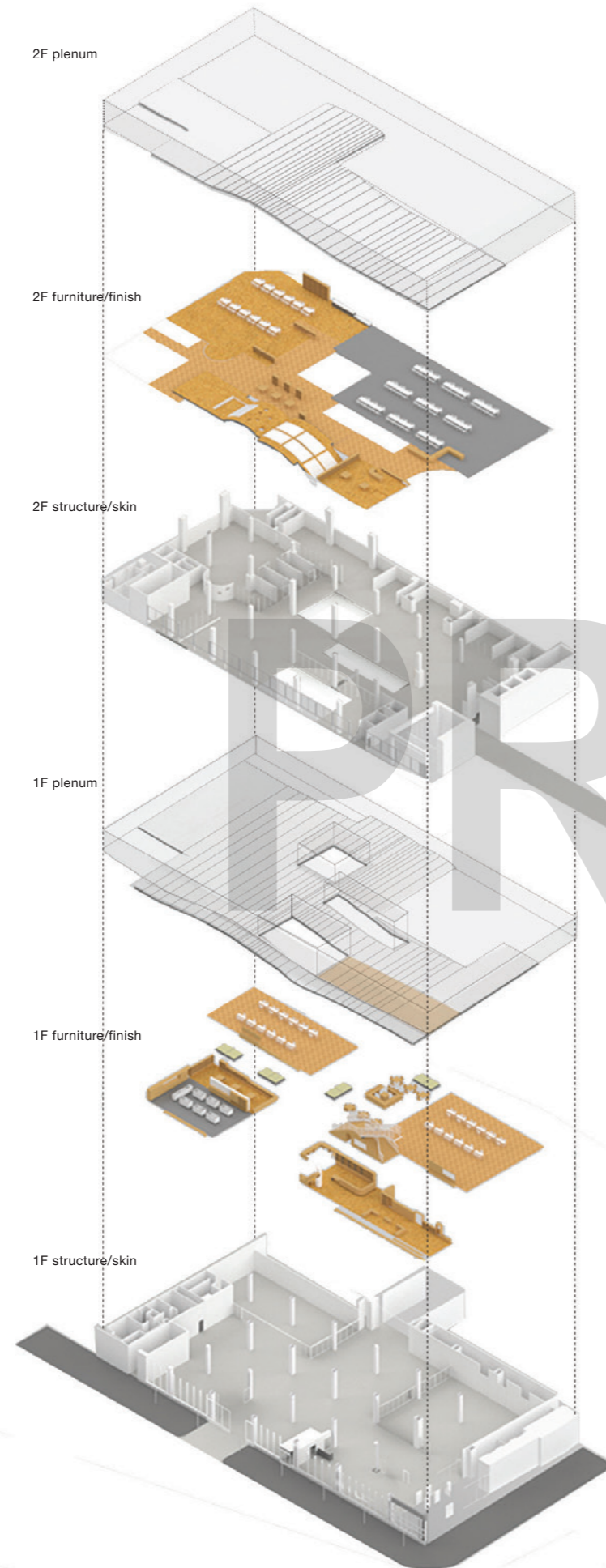
Good architecture by its very nature should already promote wellness. A field of study called Building Biology² identifies five main aspects of a healthy built environment, namely: healthy indoor air; thermal and acoustic comfort; human-based (harmonious and ergonomic) design; sustainable environmental performance; socially connected and ecologically sound communities.

Over the past three years, especially, we have seen how the above principles have played out and made a marked difference in people's health, resilience and recovery. As the housing typology continues to evolve to encompass more living and working functions, there is greater responsibility for architects to design and foster healthy spaces where people are spending a significant amount of their time.

In this article, we present two examples of residences designed by SANUKI DAISUKE architects in Ho Chi Minh City, Vietnam's most populous urban area. These two projects showcase different contexts of living spaces—a landed house and a walk-up apartment—while demonstrating how well-being can be improved with less, not more, built-up spaces.

¹ Terracotta breeze blocks adorn the façade of this apartment in Binh Thanh
² Open-air living: almost 70 per cent of spaces in this suburban house in Thu Duc are outdoors





MEETING SOCIETAL NEEDS: KITAKAMI HEALTH & CHILDCARE SUPPORT COMPLEX

It has been reported that the birth rate in Japan is the lowest it has ever recorded, continuing a steadily decreasing trend over at least two decades. This is a confluence of many factors—decreasing marriages, increasing social security costs and delayed post-pandemic economic recovery are amongst them. Data from 2021 indicates that there are under seven births per 1,000 people annually in Japan;¹ moreover, in 2022 the number of deaths nationwide was recorded as twice the number of births.² This indicates a critically aging society where fewer productive-age people will be able to support welfare systems for dependents in the years to come.

In response to the population challenges, the Japanese government has long been introducing measures that are pro-natalist in nature: tax breaks, parental leaves and increased budgets for childcare agencies. At the infrastructural level, this translates to the improvement of facilities for child-rearing like maternity hospitals/clinics, schools and daycare.

Kitakami City is one such place where the government has been providing childcare support for the municipality. According to a 2020 census, the city population has remained relatively unchanged over a five-year period.³ In line with supporting more young/growing families, the city converted two floors of a commercial building in the city centre into a health and childcare support complex. This is strategically located near an elementary school and municipal office, so that the target users could access it easily.

“The challenge was not only to develop a building for people involved in health and childcare, but also to create an open space that would be equally accessible to other residents of the city and to provide a meeting place,” said the architects. The design was a result of numerous workshops with Kitakami residents, hence reflecting their aspirations.



1 Axonometric diagram 2 The material and colour palettes employed for the interiors stray away from the typical institutional feel of clinics 3 Indoor playground

SEEKING WELLNESS FROM THE EARTH

by Hoa Nguyen



W

For the past year in 2023, I have been a regular at City Sprouts, a community farm in the heart of Singapore. Every Thursday at 9am, I along with five other volunteers am guided by our dedicated volunteer coordinator on a three-hour journey through the farm. The tasks vary each week, depending on the farm's needs. Sometimes, we trim basil plants; other times, we dig holes for repotting papayas. Almost always, we engage in a love-hate relationship with cutting up dead leaves for the compost bin.

After half a day of hard work under the sun and in the soil, we are rewarded with a tea session, featuring herbs freshly picked from the garden. Our blend includes lemongrass, mint, the much-loved passionfruit marigold, and Mexican tarragon—a herb believed to enhance sleep quality.

During these sessions, we would reflect on how to attract more volunteers and grow the programme. These discussions would inevitably lead back to why each of us joined. Our group is diverse: I am a mid-career professional passionate about community activities and sustainable urban practices; Madam Ping, 73, prefers the farm over mahjong, believing in the health benefits of

1 A typical volunteering session at City Sprouts, clearing up the trellis **2 & 3** Herbs and rice grown at City Sprouts **4** A post-volunteer tea session with herbs from the garden **5** Recording the amount of compost we contributed

vitamin D from sunshine and physical activity; and Mary, 50, an experienced gardener, who finds new learning opportunities with each visit.

We may have come for different reasons, but it is clear why we stay—the 1-hectare urban farm, together with its gardening routines, rejuvenates us physically and mentally, while creating a community out of these perfect strangers.

A NEW ROLE FOR URBAN AGRICULTURE

In the bustling cities of the world, from Singapore and Bangkok to New York City, land is a premium commodity that is rarely allocated for agriculture. These urban landscapes progressively phase out agricultural functions, creating a dependence on surrounding areas and suburban buffers. Residents dwell in box-like apartments, high above the ground, far removed from the earth beneath them, and purchase their daily essentials from sources unknown to most.

In recent years, spaces like City Sprouts have been experiencing a resurgence. This trend, accelerated by the pandemic, has seen the increasing importance of health and well-being