



# Playscapes: Pure Ludens

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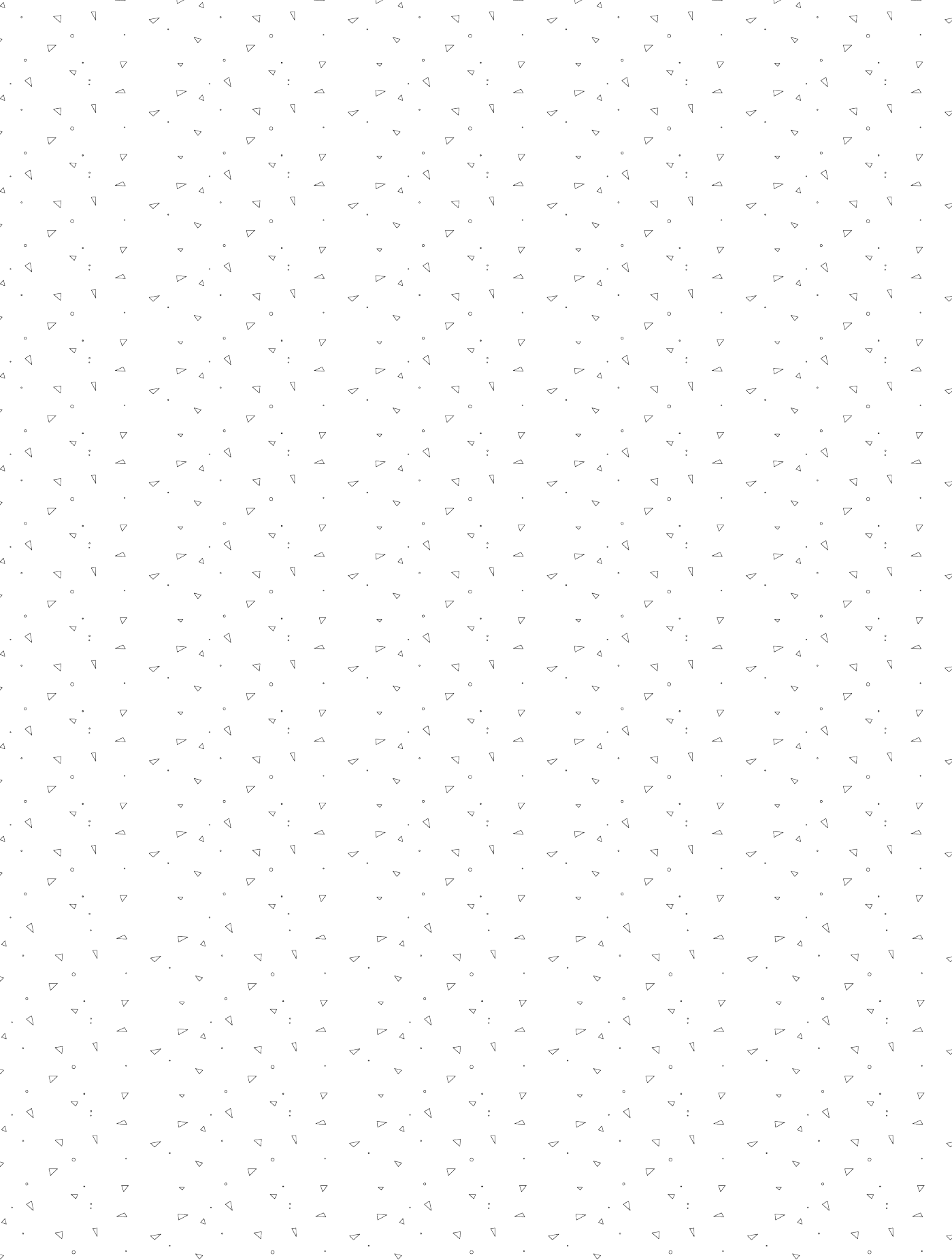




# Playscapes: Pure Ludens

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Technology in partial fulfilment of the requirements  
for the degree of Master in Art & Design (Spatial).

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Jewel Yan



More than just a frivolous activity, play can be a means of expression, escape, and familiarity. But how does play fit within a hospital context; a context where treatment, care, efficiency, and function supersede the comfort and experience of patients and visitors? Based at Starship Children's Health in Auckland, New Zealand, this research supports the output of a design proposal for central public spaces within the hospital (atrium, mezzanine, and the Koromiko Garden).

An investigation into hospital design saw a shift towards more patient-centred design. With play being inherently linked to how children see the world, a notion of play drives this project and asks; how can an enquiry into play activate therapeutic hospital environments through empathy, imagination, and re-enchantment? User-engagement through staff interviews and a children's design charrette helped frame the brief and ensured their voices were central to the project. Material studies of colour, drawings, and mappings created connections between ideas from users and the site. Iterative developments of the design proposal layered these imaginative interrelationships between people and their environment, with the aim of improving the experiences for Starship patients, families, and staff.

# abstract.

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# attestation of authorship.

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of a university or other institution of higher learning, except where due acknowledgement is made in the acknowledgements.



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# ethics approval.

Ethics approval has been sought for expert interviews, focus group, and children's design charrette. Approval number 17/76 Playscapes/Pure Ludens dated 27 March 2017. EA2 Amendment dated 28 June 2017.



# introduction.

Intuitively, we play. Play is more than just a frivolous activity or playgrounds and theme parks; it is how we - and especially children - discover and engage with our environment. Cultural theorist Johan Huizinga discusses the ambiguous nature of play and its relation to space. One of his conditions for play is that it must be a free choice (Huizinga, 1955). Thus spaces cannot force play to occur, only encourage or inspire someone to want to play. But what happens when play is situated in the ordered structure of a hospital? This practice-led research asks, how can an enquiry into play activate therapeutic hospital environments through empathy, imagination, and re-enchantment? The output attempts to bridge the systematic confines of a hospital space with play to inform a design proposal for a public spaces refurbishment at Starship Children's Health.

This research was constructed by opposites and contradictions; compared to free unregulated play, hospitals by their nature are systematised and ordered. Efficient treatment and care are sometimes prioritised at the expense of patient experience. In *The Incorporation of the Hospital into Modern Technology* (2007), philosopher Michel Foucault discusses the discipline imbued into hospitals. During Modernism, hospitals became recognised as an "instrument of cure" and therapy (p.149).<sup>1</sup> The text examines the relationship between the hospital, the doctor, and the pathogen. To an extent, the disease becomes the focus rather than the patient

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<sup>1</sup> Historically, hospitals were "instrument of exclusion, assistance, and spiritual transformation from which the medical function is absent" - it was there to manage and contain disease and also where the poor and ill were sent to die (Foucault, 2007: 144).

as a whole, and "the individual thus appears as an object of medical knowledge and practice" (Foucault, 2007: 151). "There, beneath the eye of the hospital doctor, diseases would be grouped into orders, genera, and species" (Foucault, 2007: 42), and consequently categorising patients by their condition. The main task for doctors was to observe, classify, treat, and document patient progress in notes, tags, and organised index cards (Foucault, 2007: 150-151).

But, hospitals facilitate more than just clinical spaces such as operating theatres, and patients have needs beyond medical care for their ailments. Hospitals are vast and complex environments with users at different stages of treatment and caregiving. So, what is the role of public spaces in the hospital- in particular, a children's hospital in New Zealand today? And although not a clinical space, how can these areas support patients' care and their hospital experience? The public areas reside outside of the doctor's critical gaze, and a notion of play is employed as a means to address patients' needs beyond physical treatment.

Chapter One considers how systematic hierarchies have progressively made way for more patient-centred design. Notions of holistic care acknowledge how environmental factors impact wellbeing and improve patient experiences. This is contrasted and discussed in terms of play and its role in children's spaces.

Chapter Two presents the methodology used for a user-centric site analysis, to frame the brief, and address project constraints. User-engagement included interviewing staff and conducting a children's design charrette to hear what was important to a range of users.



Their participation brings their voices into the design process to make it inclusive and sensitive to their needs.

These notions are then explored in Chapter Three as potential materials and forms through colour experimentation, pattern making, iterative drawing and modelling. They trial ways to advocate for a user's voice in the project and playfully work around constraints. Design iterations are documented and show how narratives and ideas from the users are integrated.

Chapter Four shows how the research has been folded into a proposal and offers a designed response to the role of play in a hospital environment.

Finally, Chapter Five discusses the significance of the research methodology and design output, and how it might potentially feed into future research at Starship or other hospitals.

*This research has been a collaboration between Starship Children's Health and the Design for Health and Wellbeing (DHW) Lab. The DHW Lab is a partnership between Auckland University of Technology and Auckland District Health Board. It is located in Auckland City Hospital and aims to 'design to improve healthcare experiences with patients, their families and staff' (Reay et al., 2016).*

*Part of this research was presented at the Design4Health Conference, Melbourne, 4-7 December 2017.*



## research question.

How can an enquiry into play activate therapeutic hospital environments through empathy, imagination, enchantment and discovery?

- What does it mean to make a hospital “child-centric” or “child-friendly”?
- How might spatial design affect patient experience in a hospital?
- What is the role of public spaces in hospitals for patients, families, staff?





## chapter 1

# contextual review.

Play has associations with fun, youth and friendliness. On the contrary, hospitals can be related to order and procedure. It may be a place of new life or cure for some, but may also be viewed as a place we try to avoid due to its connotations with disease, illness, and often grief. A systematic hierarchy currently favours doctors over patients, who are in a vulnerable state, required to wait and depend on the time and actions of a doctor. Spatially, hospitals are complex, from available activities, to layout and material choices, poor design can make these spaces feel impersonal and disempowering. This chapter discusses how play is framed in this research and how it might be situated within a hospital to bring children comfort in an often unfamiliar environment.



LET'S PLAY

WORD PLAY  
PLAY ON WORDS

A THEATRICAL PLAY  
PLAY COMPUTER GAMES

RUGBY PLAYER  
PLAY SUDOKU

DON'T PLAY WITH YOUR FOOD  
PLAY WITH LEGOS

A PROFESSIONAL PLAYER  
PLAYING FOR FUN

THAT'S CHILD'S PLAY  
PLAY THERAPY

PLAY WITH YOUR HAIR  
PLAY ON YOUR PHONE

PLAY CATCH WITH THE DOG  
DON'T WORRY, HE'LL PLAY BALL

YOU'RE SUCH A PLAYER  
PLAY IT COOL, BRO

PLAY MATE  
PLAY DATE

THE NFL PLAY OFFS  
PLAY EQUIPMENT

PRESS PLAY  
PLAY NICE

A VIDEO IS PLAYING  
PLAY WITH LIGHTS

WATCHING A PLAY  
PLAY GROUNDS

ACTING PLAY FULLY  
PLAY WITH THE LAYOUT

PAY TO PLAY  
PLAY LOTTO

THERIMIN PLAYER  
PLAY CARDS

FAIR PLAY  
PLAY TACTICS

OTHER FORCES ARE AT PLAY  
PLAY MIND GAMES

GO OUTSIDE AND PLAY  
PLAY MAKE BELIEVE

MULTI- PLAYER  
PLAYING SOLITAIRE

# value of play.

## *Defining play + Play in Starship*

Play can be seen as both serious and purposeful, or frivolous and free. This is in part due to the plethora of activities that we can call ‘play’- ranging from computer games and playgrounds to theatrical plays and playing sports (fig. 1.1). Some forms of play like spelling games have an educational function, games like chess may be competitive, and others can be purely for fun and social interaction. Within hospitals, the constraints of institutionalised medicine become a significant limitation for play. Using the word ‘play’ is almost contradictory in this setting as it can suggest an insensitivity to patients that are too unwell to ‘play’, or children running and injuring themselves.<sup>1</sup>

The version of play and space used for this research stems from cultural theorist Johan Huizinga and play theorists Katie Salen and Eric Zimmerman. In *Homo Ludens* (1955), Huizinga describes three main requirements for play: it must be free, it must be out of ordinary life, and it must have limits (p. 8-9). Thus the role of space can be thought of as a prompt to encourage curiosity and imagination, inspiring someone to want to play. Salen and Zimmerman’s *Rules of Play* (2004) analyses a range of psychological and anthropological studies by theorists such as Huizinga and Brian Sutton-Smith, summarising play as “... free movement within a more rigid structure” (p. 304). Thus both these texts have described play as free but with limitations. Salen and Zimmerman’s “three categories of ‘play’” illustrates some of these parameters. “Game play” describes play within the realms of a systemised game founded on rules, “Ludic activities” interacts with physical toys and playgrounds, and “Being playful”, refers to a state of mind that adds interest and

whimsy to everyday actions, such as dressing up, or making nicknames (Salen and Zimmerman, 2004: 303).

Combining Huizinga, Salen and Zimmerman’s descriptions, play inhabits both imagined and real space and is limited by rules, physical space, equipment/props, or a storyline. It is unique to each person and open to their own interpretation. In this light, designed space acts as a stage to cast one’s imagination onto and inspire play to eventuate.

Windowless corridors, odd smells, and the impression of a ‘hospital’ can be stressful for young patients (Adams et al., 2010: 658). In hospitals, children have many things decided for them or procedures done to them. In contrast, play is something they can control and use as a form of escape or distraction from the clinical aspects of a hospital. Play is familiar to children, it is their norm and how they see the world. It is also how they express and manage emotions, and release energy. At Starship Children’s Health, resources for play include play specialists, the atrium, and nine playrooms available to patients. Therapeutic play is used to help prepare and support young patients before procedures using tools such as prep books, dolls, miniature models of a CT scanner, and stories. ‘Recreational play’ is a means of distraction from clinical aspects in a hospital, this includes playing with toys, games, and books. Hence the value of play lies in its familiarity and creating positive experiences to ease the daunting aspects of a hospital stay.<sup>2</sup>

1 Refer to Appendix C.1 (Play).

2 Refer to Appendix C.1 (Play).

# hospital dynamics.

## *Historical shifts*

Architectural historian Cor Wagenaar analyses public health and cultural history to describe an evolution of the hospital and how historical shifts in medical culture could shape the future of hospitals. In *Five Revolutions: a Short History of Hospital Architecture* (2006), he describes how healthcare has progressed from Asclepian ‘healers’ to a system where science, technology, management and efficiency have a more significant influence:

- The prehistory of hospital architecture
- The first revolution: a victory of science, philosophy, and technology
- The second revolution: medical science and technology take over
- The third revolution: hospitals for the masses
- The fourth revolution: empowering the patient
- The fifth revolution: returning the hospital to the people

Geographer Wilbert Gesler described a case study of an Asclepian sanctuary in Epidauros, (Ancient) Greece as a ‘therapeutic landscape’ (Gesler, 1993).<sup>3</sup> Here, nature’s therapeutic properties were emphasized and the qualities of a setting or place affected physical, mental and spiritual healing (Gesler, 1993; Gesler et al. 2004).<sup>4</sup> In the Middle Ages, hospitals were civic buildings run

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3 If “limiting the definition of a hospital to a building especially designed for healthcare, we can state that the first examples probably appeared in ancient Greece.” (Wagenaar, 2006: 26)

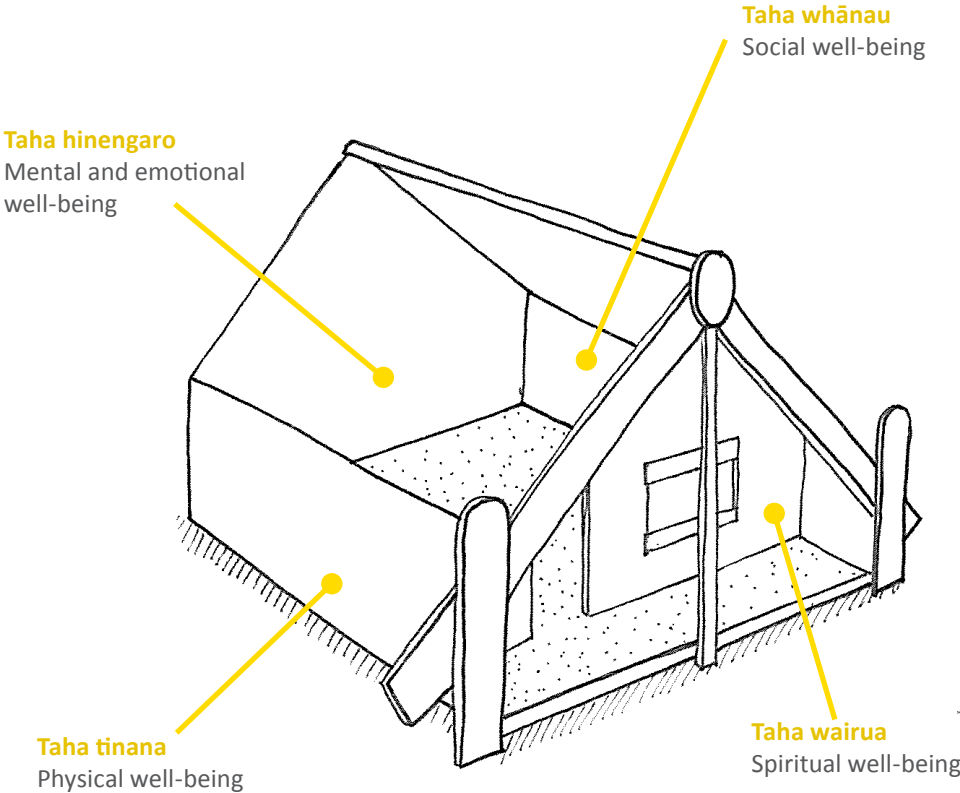
4 The sacred Asclepian sanctuary was surrounded by beautiful scenery, gymnasiums and buildings that guests spent time in to heal. Dream-healing was considered important for spiritual healing- one is asked to lie down and while dreaming, wait to be greeted by Asclepus, the healing God in Greek mythology.

by religious groups, and as science advanced, hospitals became separated from religion and became regarded as important civic structures (Wagenaar, 2006: 26-31). From the beginning of the Second World War, efficiency and caring for large groups was a priority. Hospitals became boxes with corridors lined with beds and large windows for ventilation; gridded and impersonal. From the late 1970s, there was a shift to design for patient experience. Natural elements, such as maintained landscaping outside windows, were implemented to help improve patient recovery (Biley, 1996: 112). Hospitals were no longer isolated and detached from everyday life, but built in the city blending with the civic fabric.

*Holistic wellbeing*

The Maori philosophy “Hauora” was modelled by Māori health advocate and researcher Dr Mason Durie’s “Te Whare Tapa Whā” (Durie, 1994: 69-75) (fig. 1.2). Instead of seeing illnesses in isolation, a combination of the whare’s four walls - Taha tinana (physical), Taha hinengaro (mental and emotional), Taha whānau (social), and Taha wairua (spiritual) wellbeing - affects the health of the whole person. Like the earlier example of an Asclepian Sanctuary in Ancient Greece, a patient’s recovery is beyond physical treatment, and includes caring for their mental and spiritual health and connectedness to their community.

Socio-cultural geographer Robin Kearns discusses identity, security and how having a sense of place or situatedness while receiving treatment is important. Using a New Zealand Special Medical Area (SMA) clinic in the Hokianga Hospital as a case study, Kearns suggests that most spaces are focused on the “the spatial relationships between individuals, places and institutions rather than the health-related characteristics of places themselves” (Kearns, 1991: 519). As an alternative to conventional hospitals, the Hokianga SMA clinic was built by and has the support of its community. The waiting rooms sprawl into the social space of the street and allows patients to wait with other members of the community, some of whom have no intention of seeing a doctor but go there simply to socialise. Even blood pressure tests are taken in waiting areas. Thus healthcare delivery becomes a common part of their lifestyle and its inclusivity of the wider community affecting the “health of place”.



**Fig. 1.2** Te Whare Tapa Whā- redrawn from, Ministry of Education (1999). Dr Mason Durie’s whare tapawha model.

Children’s Hospitals

The first children’s hospitals were converted residences and paediatrics was not recognised as a specialised medical field until the 1800’s (Sloane, 2008: 42-44). Women’s groups championed the movement for specialised children’s care and advocated that children require different treatments compared to adults. (Sloane, 2008). Initially the treatment of children in early hospitals was quite isolated from their families. In fact, a leading health administer advised parents not to visit more than once a week (Sloane, 2008: 51).

Since then, children’s hospitals have become more child-centric. Design elements such as colour, icons, scale, and activities are emphasised to appeal to children in an attempt to bring familiarity into the hospital. Youth and environments researcher, Dr Kate Bishop, has described children as “active participants” who need choices, social support, stimulation, and comfort (Bishop, 2010: 21). “They value an interactive, engaging and aesthetically pleasing environment and a friendly, caring welcome from the hospital community” (Bishop, 2010: 18). The needs and activity types will be unique to different patients and designers need to “recognise the fluidity of children’s needs at different times.” (Dickinson et al., 2014: 28).

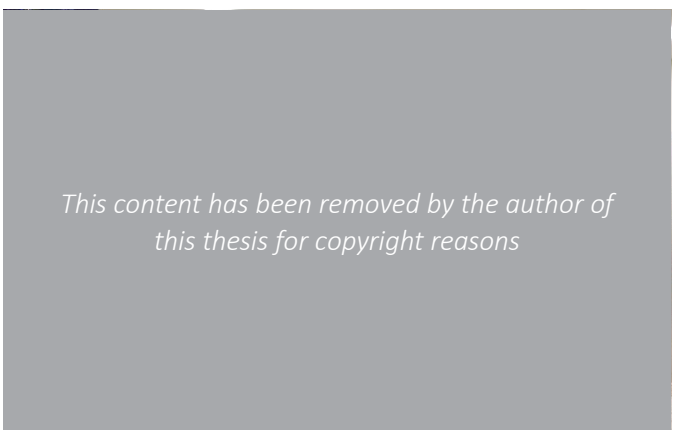
Examples of other hospitals demonstrate how community groups and science/technology companies can partner with hospitals to bring in interactive play activities. The Royal Children’s Hospital (Melbourne, Australia) can be compared to an art gallery and zoo with its colourful sculpture “Creature”, large aquarium and meerkat enclosure (fig. 1.3-1.4).<sup>5</sup> Baltimore’s Herman & Walter Samuelson Children’s Hospital at Sinai (USA) partnered with the National Aquarium in

5 The Royal Children’s Hospital Melbourne. 2013. “Not just a children’s hospital”. Video 2:23 mins. Accessed <https://www.youtube.com/watch?v=GH6lSLKjn5w>.

The Royal Children’s Hospital, Melbourne, Australia

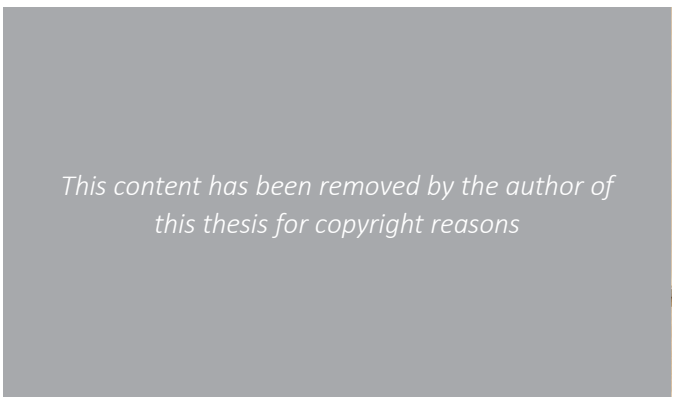
Fig. 1.3 John Gollings (2017). Photograph of the aquarium and waiting area.

Fig. 1.4 John Gollings (2017). Photograph of the atrium and Creature.



LUMES Interactive Wall

Fig. 1.5 Eness (n.d.). LUMES LED Panels at Cabrini Hospital Malvern.

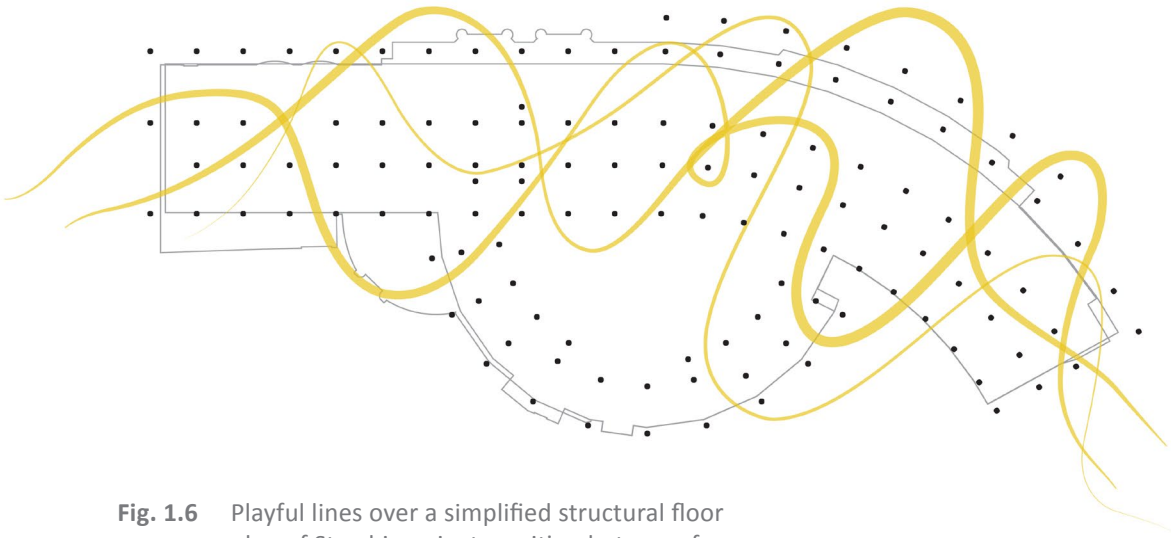


Baltimore to have programmes available to view in the lobby and patient rooms. The fish and activities such as feeding sessions are broadcasted live.<sup>6</sup> LUMES (Cabrini Hospital's Paediatrics Ward, Malvern, VIC, Australia) is a touch responsive interactive wall, which resembles a wooden wall that lights up with colourful animated sequences such as landscapes and animals (fig. 1.5).<sup>7</sup> Alder Hey in the Park (Liverpool, UK) has an interactive digital fish tank created with Sony. Participants can create their own fish and 'release' them into the digital tank.<sup>8</sup> In John Hunter Children's Hospital (New Lambton Heights, NSW, Australia), the Fairy Garden immerses you in a hyperreal environment with nature sounds of trickling and water and birds.<sup>9</sup> It also has textured pebbled floors, wooden board-walk, and a climbable mosaic dinosaur sculpture. By referencing spaces children often occupy outside the hospital, their world of play, discovery, and curiosity continues.

*The future of healthcare*

Hospital design is moving in a direction that mediates hierarchies between doctors, the medical machine and patients. Wagenaar suggests that we are at the beginning of a 'fifth revolution', where the whole framework of hospital design is once again being challenged and

6 Refer: LifeBridge Health, 2012. "Live National Aquarium Feed at Herman & Walter Samuelson Children's Hospital". YouTube video, 2:41 mins. Posted October 2012. Accessed May 15, 2017 from, <https://www.youtube.com/watch?v=g8z0i0xUc0Y>  
7 Refer: ENNESS and DesignInc. (n.d.). *LUMES LED Panels at Cabrini Hospital Malvern*. Accessed May 15, 2017 from, <http://eness.com/cabrini/>  
8 Refer: (N/A). 2016. "Digital aquarium has the power to calm young patients at Alder Hey" *Operating Theatre Journal*, Sep 2016; (312): 25.  
9 Refer: HNEkidshealth. 2013. "Virtual Tour: Fairy Garden". YouTube video, 1:44mins. Posted May 2013. Accessed May 8, 2017 from, <https://www.youtube.com/watch?v=9AmjDmGknGo&t=3s&list=PLM8CSh-B0cIwIb8JRPbezXuLl81S6p-kS&index=6>



**Fig. 1.6** Playful lines over a simplified structural floor plan of Starship- a juxtaposition between free squiggles and an ordered grid system.

questioned (Wagenaar, 2006: 41). How can we improve patient experience while maintaining efficient delivery of care? What will the role of a hospital play in 50 years from now? With increased connectivity through digital technology, there could be more flexible ways to receive care, possibly reducing the need for centralised hospital services. When a patient's wellbeing is seen holistically, hospital spaces are an extension of their treatment in hospital. So the role of its design affects their freedom to move, how they can be in control of their space, and choice of activity (Biley, 1996; Dalke, 2006: 361).

The next chapter discusses how a contextualised underpinning of play is introduced in further attempts to de-institutionalise hospitals and meet the needs of children while they are in a care environment. Ideas of play and holistic environments are tested through user-engagement in the existing site to see what is most relevant to Starship.



## chapter 2

# site analysis.

This research project is sited in the main public areas of Starship Children's Health: the atrium, Koromiko garden and the mezzanine (with a cafe) (figs. 2.2, 2.3). For architects, Stephenson & Turner, patient experience was central to the design. They wanted to create "a bright and vibrant building to reflect the demeanour of the younger patients" (Willis, 2006: 143). This chapter explores how this has been carried through the architecture, how it fares today, and how user-engagement has framed the project brief.

# the “starship”.

## *Original intentions*

For children and caregivers, the word “Starship” has become a symbol for paediatric healthcare.<sup>1</sup> Designed in 1984 and opened in 1991, Starship Children’s Health remains the largest children’s (patients aged 0-18) hospital in New Zealand.

Punctuated with regular columns, the building’s structural frame “provid[es] an expression of rhythm and overall unity” (Balasoglou, 2006: 95). Cylindrical columns topped with spherical capitals carry a children’s-building-block quality. Its exterior is “rather like an enormous harbour-side mansion, providing a post-modern edge to the hospital precinct” (Willis, 2006: 143). The views of the city are brought in from a sweeping façade that reaches out towards the harbour. The floor plan of Starship bends around a line, reducing the “long, straight institutional corridors.” (Balasoglou, 2006: 95). In doing so, it alleviates the linear and rigid nature of common hospital designs while retaining the efficiency of conventional Modernist buildings.

A criteria for the original design brief was that “The detailing should be domestic in scale and the hospital should be for children, not staff” (Teague, 2014: 27). A ‘child’s-eye view’ informed much of the detailing, such as interior walls scaled down to appear as streets and “gabled roofs, multi-paned windows – indicative of children’s representations of buildings” (Willis, 2006: 143). The hospital’s colour palette represented aspects of nature.<sup>2</sup> Colour was used to create variety, composing

soft pale tones with brighter highlights on features such as doors, architraves and pediments (Balasoglou, 2006: 95).

Views and imagery of nature and the outdoors can have therapeutic effects (Biley, 1996: 112). This is brought into the design through the theming of the atrium, plentiful natural light via the glass ceiling, and access to Koromiko Garden. The open public nature of the atrium and access to a food outlet show a connection to the social or urban environment.



**Fig. 2.1** Exterior of Starship.

<sup>1</sup> The branding was created with children in mind- the word “hospital” is purposely omitted from the name to appear more approachable. And “Starship” was inspired by a patient’s comment about the look of the glass elevators (Teague, 2014: 32).

<sup>2</sup> Refer to Starship Colour Palette on page 57.

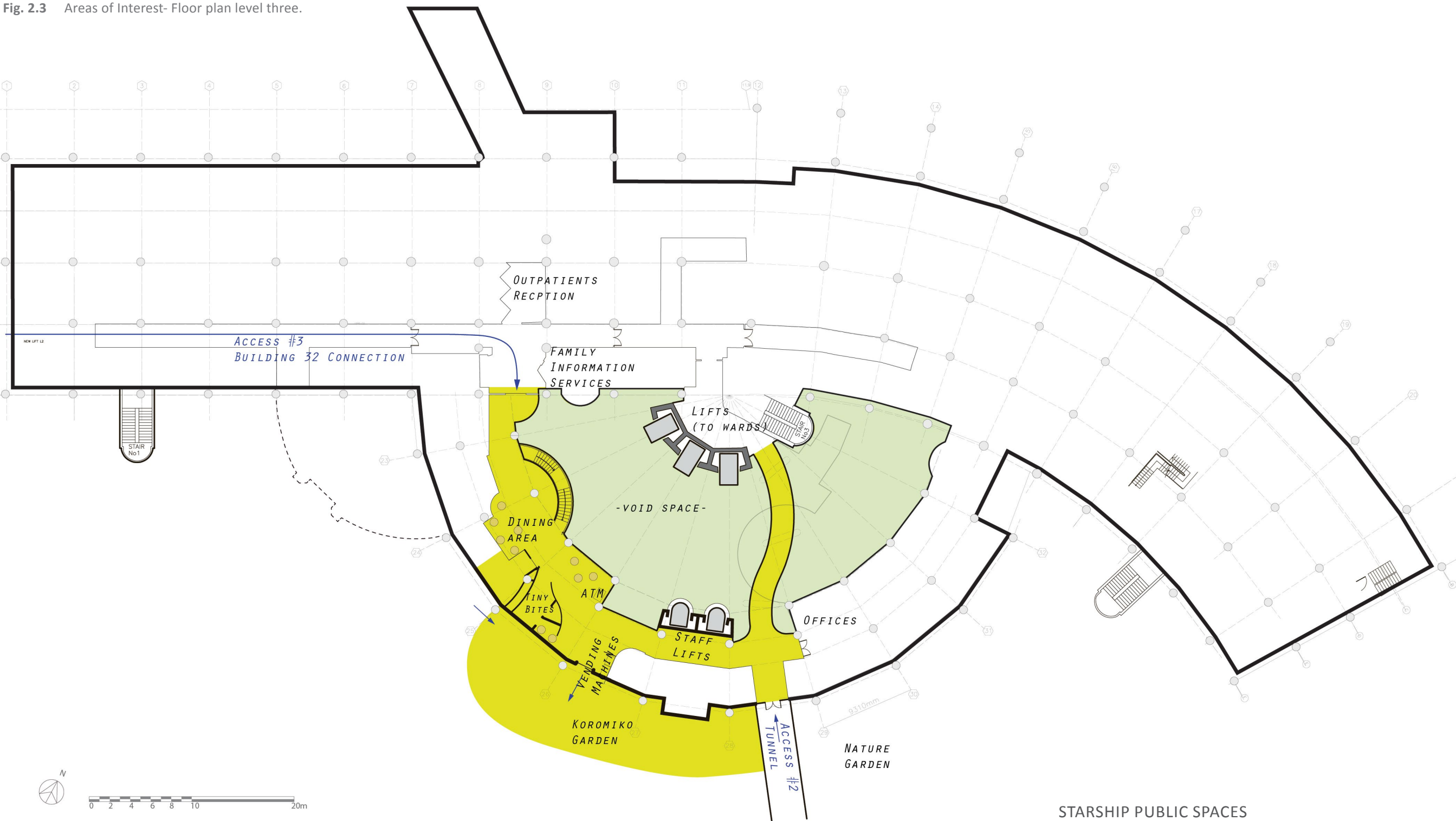


Fig. 2.2 Areas of Interest- Floor plan level two.



STARSHIP PUBLIC SPACES  
AREAS OF INTEREST  
(EXISTING ATRIUM)  
LEVEL 2 FLOOR PLAN SCALE 1:400

Fig. 2.3 Areas of Interest- Floor plan level three.



STARSHIP PUBLIC SPACES  
AREAS OF INTEREST  
(EXISTING MEZZANINE AND GARDEN)  
LEVEL 3 FLOOR PLAN SCALE 1:400



Fig. 2.4 Atrium interior.

## methodology.

Situated within the disciplines of spatial design and healthcare design, this practise-led research adopts two key styles of methodologies: traditional drawing and material explorations, and methods advocating for patient-centred care. This chapter discusses the latter through user-engagement methods: expert interviews with Starship staff as stakeholders and a design charrette with children as the target audience. The data from both informed a site analysis to create a user-centric brief that critically questioned what needs to be provided in a space and how play can meet these needs.

## site diagnostics.

### *Methodology: Staff Interviews*

To understand the space's current state, interviews were conducted with staff focusing on how these spaces currently function, their potential, play at Starship, and project constraints. Participants included management, project managers, information services staff, and play specialists; this diverse group offered perspectives from different users of the space- namely staff, families and patients. This site analysis aimed to identify key issues and design opportunities.<sup>3</sup> The following section, *Site Diagnostics Findings*, describes research of the original design and interview findings.

<sup>3</sup> Refer to Appendix C.1 for a full analysis.

# site diagnostics findings.

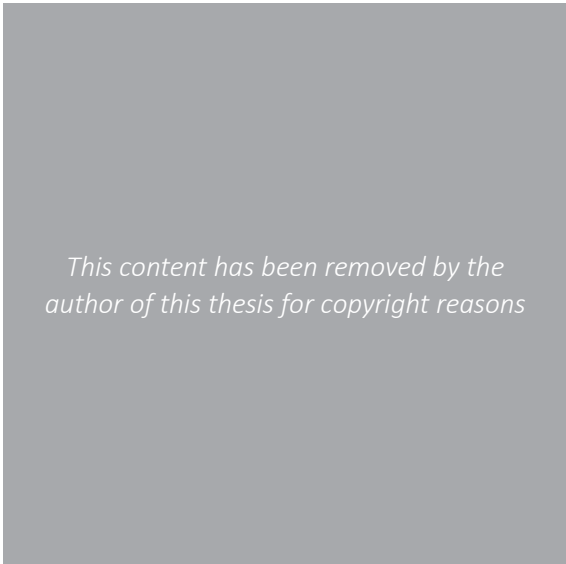
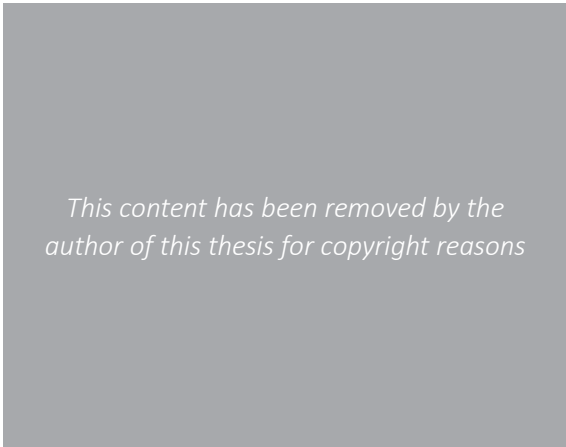
## The Atrium

The atrium is a centralised space connecting both wings of the hospital, which extend out to connect with the main Auckland City Hospital. Architect Geoff Land from Stephenson & Turner described the atrium space as “the visual and emotional heart of the building, with that sense of enclosure you get, but it also follows the shape of a hand connecting to the wards” (Teague, 2014: 27). American children’s hospitals, especially The Children’s Hospital of Philadelphia, inspired the atrium at Starship to be a core design feature and point of orientation (Willis, 2006: 143).

Since the opening in 1991, the space has changed dramatically. Once a lively play space for patients and children visiting families, it now lacks purpose and identity. Unlike the supervised playrooms, the atrium has no time restrictions and also acts as a breakout space. It also functions as a public space to host celebrations and events such as staff recognition events or milestone birthdays.

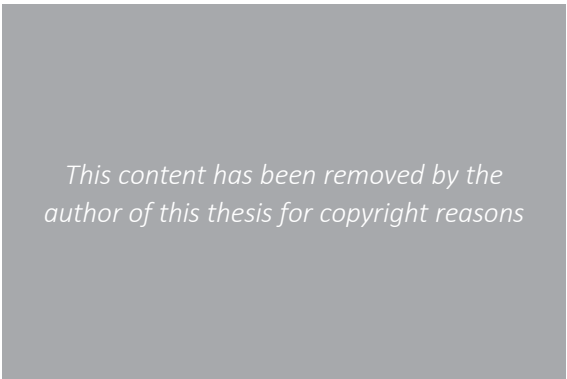
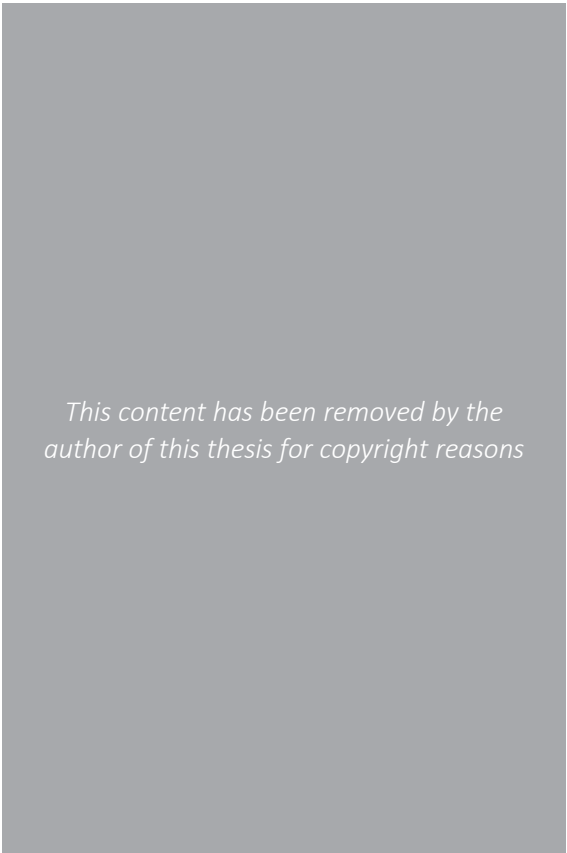
When it opened, the atrium was thematically conceived as an urban park featuring green astroturf, wooden park benches, and a parachuting teddy bear suspended in the tall vertical space. From the elevators, the atrium appeared as a space filled with toys, “airy, bright and colourful, intentionally more like a playground than a traditional austere hospital.” (Balasoglou 2006, 95) (Figs. 2.5-2.6).

In 2004, a refurbishment by the architectural firm, Jasmax, saw the atrium transform into a “New Zealand rainforest” (Jasmax, n.d.). The space had tensile canopies, log benches, natural light and tree-like poles. Digitally printed vinyl floors depict water, stones, and bark, and murals of native bush (Figs. 2.7-2.8).



Opening Park Theme - 1999

- Fig. 2.5** Stephenson & Turner (n.d.). *Level two.*
- Fig. 2.6** Stephenson & Turner (n.d.). *View from upper level.*



New Zealand Rainforest Theme - 2004

- Fig. 2.7** *Playground area* (n.d.).
- Fig. 2.8** *Atrium.* (n.d.).



Now only patches of this refurbishment remain, and much-needed clinical spaces have replaced the playground, as treatment is always the priority. Inward-facing ward rooms, which had a view of the active public space, have been subsequently converted into offices. Other environmental issues include noise travelling throughout the levels and into rooms. Poor heating was previously acknowledged as a problem, and a cost-effective solution is yet to be found. The area also lacks activities for teenage children.<sup>4</sup>

<sup>4</sup> This problem is also identified in a recent study conducted for the Outpatients reception (next to the Tiny Bites dining area) that asked parents about their experience at Starship. (Water et al., 2015).

DIAGNOSTICS: ATRIUM



Current feel of the space

- Cold, dull, uninviting/unwelcoming, nothing to do, underused, not engaging
- Not clearly defined and lacks purpose
- Seems to be more of a place to pass through

Purpose

- Needs to be inviting, welcoming and a nice place to be in
- Safe, playful, enjoyable, and occupied
- It is an escape from the hospital routine and wards
- Relieve stress
- Mix of vibrant and soothing spaces
- Socialise with people
- Connect to other spaces
- Target audience is patients and families

Fig. 2.9 Atrium site diagnostics part 1.



Coin-operated rides  
+ Wayfinding stripes on the floor

### Activities

- Multipurpose- used for functions and events
- An open space- free to move around
- Existing programmes: Radio Lollipop, Ella's cuddle corner- weekly (Wednesdays) pet therapy programme
- Existing structures: carousel, bench-like seating, coin-operated rides, playroom exclusively for day stay and paediatric intensive care patients, O.R. waiting room



### Sound

- Sound travels from the atrium to the wards and surrounding offices
- Noisy and echoey
- How can the noise be managed?
- Main sounds: loud voices, sirens outside, crying, carousel music, hum of machinery

### Temperature

- The space is very cold especially in winter
- It is a reason why some people avoid the atrium altogether
- How can the space be visually warmer?



Tall poles and the height of the space



### Lighting + Colour

- Natural light from the large glass ceiling is not reflected well in the space.
- The space looks grey and dull even when the weather outside is fine and sunny.
- How can colours and colour theory make the space more inviting?
- What about the lighting at night?
- Fluorescent lights in level 2 corridors

### Smell

- Strange unfamiliar smells in a hospital



Operating room (OR) waiting room

### Waiting

- Standardised, uniform seating feels sterile
- Activities are needed to distract and alleviate the banality of waiting in a hospital.





Pastel colours



East side of atrium- New clinical spaces, day stay play room, and (not pictured) Radio Lollipop



Entrance journey from Carpark B



Paint peeling from handrail

### Wayfinding/Entry

- 3 entry points but the atrium itself is currently not an "entrance"
- The atrium should help welcome and direct visitors
- Wayfinding is an issue
- Most popular destinations: lifts to visit wards, and Outpatients on level 3.

Entrance journey from Tunnel



Fig. 2.11 Atrium site diagnostics part 3.



Mezzanine

Overlooking the vertical void space of the atrium is the level three mezzanine, offering a small cafe, vending machines and ATMs. The café Tiny Bites offers canteen-like food options and its proximity to wards makes it the most convenient food outlet in Starship. A dark seating area is in front of the cafe and two more tables look out into the garden.

Tiny Bites, originally a controversial McDonald’s fast food restaurant, can be seen as providing a sense of familiarity reducing isolation (Kearns and Barnett, 2000).<sup>5</sup> Similarly, the atrium at Toronto’s Hospital for Sick Children (SickKids) was modelled after a shopping mall to change how a hospital felt and normalise the experience (Adams et al., 2010: 664). Shops, restaurants and other breakout areas help provide variety (Bishop, 2010: 21).

5 A trip to McDonalds was a common and relished treat for children, so within the unusual space of hospitals, this commercial icon could be seen as a comfort or familiarity. “The (Starship) metaphor is a distraction for kids who are the real target. We’re keen to normalise the hospital experience. That’s one reason we got McDonalds in here (Grant Close, General Manager, personal communication, 1997)” (Kearns and Barnett, 2000: 86).

DIAGNOSTICS: MEZZANINE



Tiny Bites

- Does not feel like a nice café
- It is the most accessible food outlet
- Child-friendly
- Expensive, small range of food
- Small and dark dining area
- Used by staff and families



Other

- What other activities can be on the mezzanine?

Vending machine area

- Wasted space
- Chips and lollies and not consistent with health messages



Fig. 2.12 Mezzanine site diagnostics.



*Koromiko Garden*

Next to Tiny Bites café is a doorway to the Koromiko Garden. A locking door restricts access, and the constant shade and unkempt landscaping are uninviting. It is occupied by adults more often than children- usually staff, smokers, and occasionally a patient with a support person. It appears unclear as to who can use it and during interviews it raised the following questions: should it become a therapy garden for nursing/play staff to take patients? Or should it be an inviting space for all staff and visitors?

Outdoor spaces are beneficial because of “their peaceful quality and capacity for privacy and personal restoration” (Bishop, 2010: 21).<sup>6</sup> One interviewee described a parent’s wish to have an outdoor space to bring her child. Koromiko Garden is the closest and most feasible space for them to go to yet participants expressed that it could be much better.

<sup>6</sup> See also journalist and author Richard Louv’s *Last Child in the Woods* (2005), where he discusses the benefits of children playing outdoors and learning through discovery.

DIAGNOSTICS: GARDEN

- Limited access, unkempt, not inviting, unclear as to who can use it
- Accessible connection to an outdoor/nature space from the hospital
- Potential purpose: Patients therapeutic garden, or an outdoor escape for everyone?
- Potential to link with other green space (between tunnel and library)
- Cigarettes butts and empty packets lying around despite being a smoke free area
- Current users: Random assortment of people, mostly adults and smokers, not often children
- Shaded and south-facing



Fig. 2.13 Garden site diagnostics.

# children's voice.

## Methodology: Children's Design Charrette

Starship aims to be child-centred and family-focused, and children are considered the primary user or client for the design. However, when it comes to user-engagement or feedback, children's perspectives are often retold from an adult, parental experience (Dickinson et al., 2014). Thus the value of children's direct opinions and comments is diminished.<sup>7</sup>

To include the children's voices in the design and gain insight into what children might like, I hosted a design charrette with the play specialists at the hospital.<sup>8</sup> The format was a roaming workshop, bringing the activity to participants between four different playrooms and their corresponding wards. The toolkit included a custom-made craft trolley with a friendly animal-like shape and coloured with a bright, warm variation of the Starship colour palette (fig. 2.16).<sup>9</sup> It was packed with a range of art materials, stickers, felt pens, coloured paper, and pompoms that participants

might find engaging.<sup>10</sup>

Participants were first introduced to my project and the atrium through printed images. They were then offered a choice of three worksheets (fig. 2.15) and the art materials to draw or make an ideal play space sited at the hospital or elsewhere. Discussing their imaginative work helped me understand what kinds of play they enjoy, what's important to them in a hospital's public space, and affirmed data from staff interviews.

Within the participating age groups, there were key differences in how they approached the task. The younger age group (≤6 years old) drew with little hesitation and the markings were more indicative rather than true to form. In contrast, the 7-11 year old age group often used pencils and were more careful about getting the look or shape right.

7 "The use of proxy data is based on an assumption that children are dependent, incompetent, lack rationality, and that somehow their view are less valid than those of adults" (Dickinson et al., 2014: 25)

8 Refer to Appendix C.1 for full analysis.

9 Refer to Starship Colour Palette, page 57.

10 These materials were recommended by play specialists and are often used in their playrooms.



Fig. 2.14 Worksheets.



## charrette findings.

All artworks drawn by children had an outdoor theme which strengthened the argument to bring nature into the space. A few participants embraced having the hospital as a setting and they designed spaces that have soft, safe, healing and comfortable features. As they spoke of these features, they projected vulnerability and were concerned about how other people could play in the space. Adventurous play spaces were popular despite being in a hospital, which was not perceived as a barrier to 'normal' play. One participant drew her favourite monkey bars even though she had a broken arm. There were also attributes that were not necessarily drawn but observed during the workshops. For instance, none of the images felt hospital-like. And for children to be relaxed and comfortable with the activity, they needed to have a caregiver or trusted adult nearby.<sup>11</sup>



Fig. 2.15 Trolley with art materials.

<sup>11</sup> Refer to Appendix C.2 for full analysis of the charrette artwork.

Fig. 2.16 Common themes from the children's art during the charrette.

Nature & Outdoor spaces

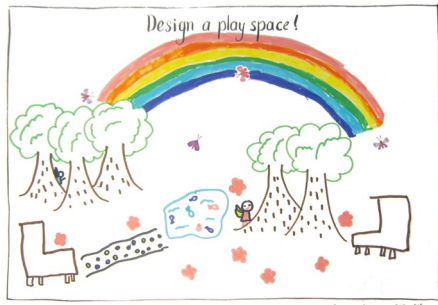


Outdoor Movie Theatre  
- Boy, 9, Patient



Park & Beach themes  
- Boy, 10, Patient

Fantastical Stories



Fairy Garden  
- Girl, 9, Patient



"Storyland"  
- Girl, 6, Patient

Healing + Safety

"A **flower** that gives oxygen to protect the children" - Girl, 10, Patient

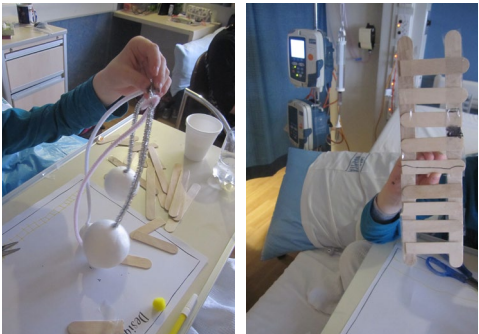
**Sun** "because it gives **vitamins**" - Boy, 10, Patient

**Soft** surfaces "because some of the kids here might fall and get hurt" - Girl, 6, Patient

Seating to **rest** on - Girl, 9, Patient

The top of the slide needs to be **open** because "some kids are afraid of the dark" - Boy, 10, Patient

Interaction / Tactile



Experimenting with pipe cleaners and polystyrene balls  
- Boy, 5, Patient

Adventure



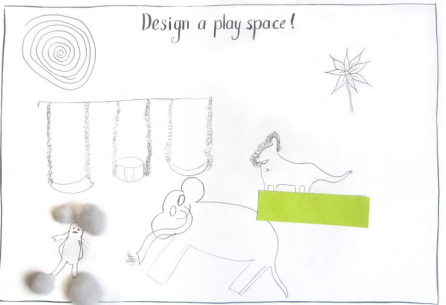
Playground + starry night  
- Girl, 6, Sibling



Animal's play-land  
- Boy, 4, Patient



Cave of light + monkey bars + bubbles  
- Girl, 8, Patient



Playground and animals  
- Girl, 10, Patient

# defining the brief.

## *Aim:*

To create an inviting environment that encourages and supports play for children and acknowledges their differing needs.

## *Design considerations and objectives:*

- Target audiences: children (aged 0-18), their families, staff.
- Wellbeing: a notion of holistic wellbeing can be considered through Hauora, which is unique to the context of New Zealand (Durie, 1994).
- Mobility: freedom of movement for patients in wheelchairs, beds or with IV poles.
- Feel: welcoming, modern, cosy, and like an escape from clinical spaces and wards for patients and families to relax together.
- Outdoors: bring in aspects of nature and improve access to Koromiko Garden.
- Colour & aesthetics: improve lighting conditions and use of colours for brighter, comfortable spaces.
- Programme for children as “active participants” (Bishop 2010, 21): the multifunctional space could see more activation with a programme of events and playful interventions, such as Radio Lollipop and Ella’s Cuddle Corner. It also needs to be able to host fundraising events and celebrations. There should also be consideration of what happens throughout the day and night, and seasonally.
- Play: these public spaces should supplement other spaces of escape such as the nine playrooms and Ronald McDonald family rooms. Abstract forms can encourage imagination and curiosity. A story or narrative with playful design motifs can help engage children.
- Variation: provide different zones for diverse personalities and requirements-quiet/loud, social/solo, age groups (especially teenagers)
- Constraints: the existing site, colour, infection control, budget, health and safety, acknowledging a Maori world view.
- Wayfinding: As a main entrance, it should direct visitors to the rest of the hospital and reduce stress in finding wards or appointments.
- Future thinking: The architects used icons that children are familiar with, what ‘symbols’ and activities would resonate with children today? How can new digital technology be incorporated to increase engagement?
- Community: How can external groups collaborate with Starship to create activities or interventions?

Overall, the unanimous response from staff was that the atrium, garden, and mezzanine areas are uninviting, cold, poorly defined and inactive. These spaces should instead feel welcoming, modern, cosy; an escape from hospital wards for patients and families.

Participatory methods engaged staff and children with the design process, and allowed them to lend their voices to shape the brief. Interviews helped establish the space’s purpose and needs, project constraints, and opened up the conversation to re-envision the area. The design charrette included direct interaction with children so they could share their ideas around play spaces. During expert interviews, “family-centred care” was stressed so that patients and their support persons could all be comfortable in the space together. Observations from the children’s design charrette also emphasise this point. The spaces need to be child-friendly and appeal to the hospital’s 0-18-year-old patients and their siblings.

My proposal aims to reinvigorate Starship and use the insight gained from interviews and the charrette to help improve the non-clinical moments of a hospital experience. The public spaces will be developed into an interactive and enchanting zone for patients, their families, and staff. Improved access to an outdoor space (the garden), commercial space (café on the mezzanine) and play activities can help make the hospital feel less isolated from civic activities and the wider urban area. A sense of play offers familiarity and is important to make children feel comfortable, which in turn can help parents relax as well.

In the next chapter, this research explores the context of the site and ideas generated from user-engagement methods are applied to creative experimentations with colour and drawing.



## chapter 3

# explorations of a material palette.

This chapter documents an iterative process used to address project constraints (such as the Starship colour palette) and bring together ideas from staff, children, and site analyses. Firstly, colour and its effects in hospital environments are explored. In addition, a wider site analysis is presented, mapping the surrounding site's colours, terrains and materiality. These are folded with ideas from interviews and children's artworks to test notions of play through a series of micro-narratives embedded in material explorations. Elements of the site offered narratives as a means to construct form and occupation, connecting the geological context and history of the surrounding land. Drawings, site contours, colour, and a study of the hospital's existing floor plan, are re-imagined to become potential play surfaces.



# starship colour analysis.



Fig. 3.1 Photograph of the atrium



Fig. 3.2 Photograph of New Zealand rainforest features in the atrium

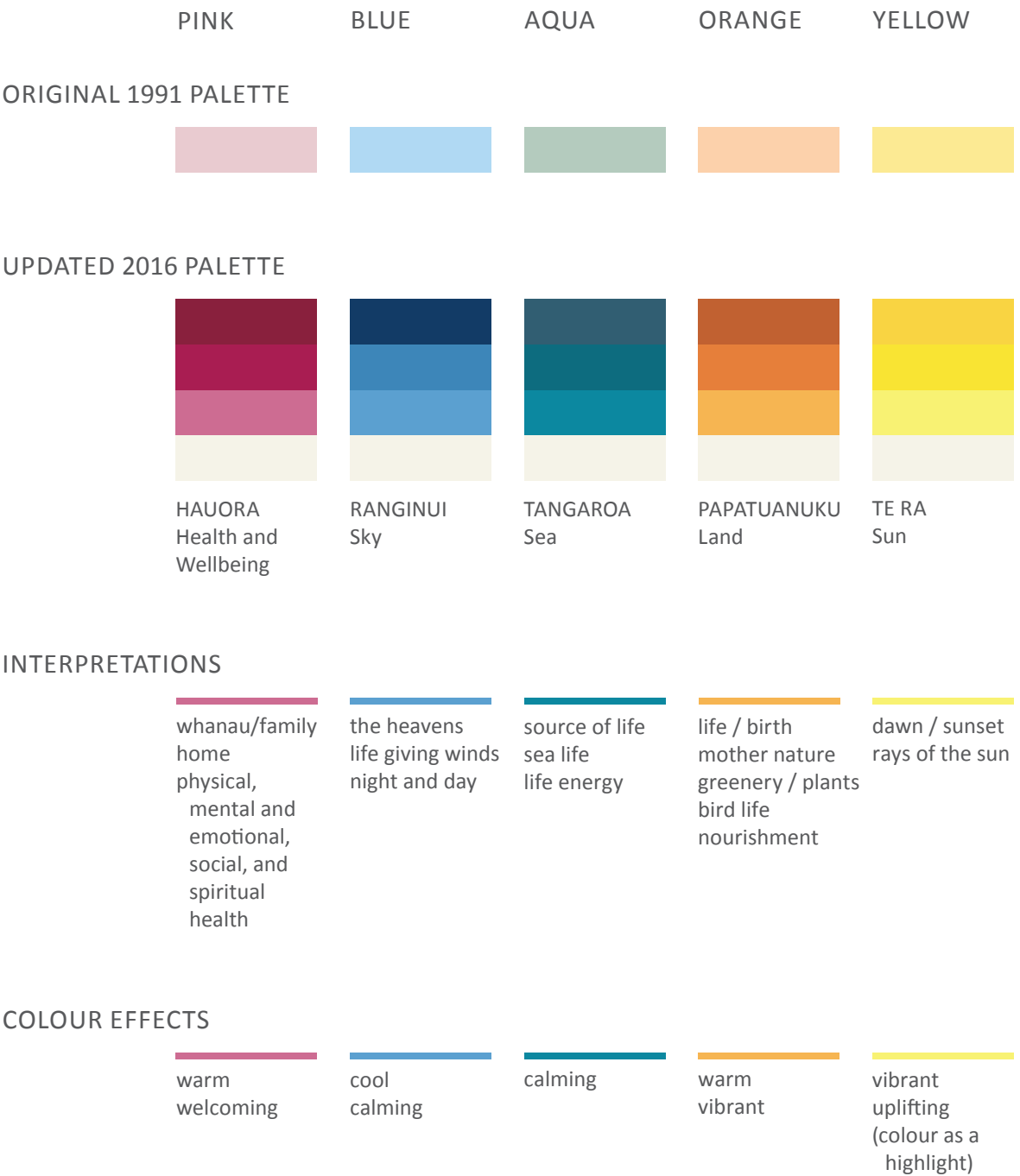
The Starship atrium (fig. 3.1) features the original pastel colour palette gifted to the hospital by local iwi<sup>1</sup> (Ngāti Whātua).<sup>2</sup> Each colour carries a particular meaning: pink = health and wellbeing, blue = sky, aqua = sea, orange = land, and yellow = sun. Every floor level was themed to one of these colours and the ground floor would be an amalgamation of them all. An update in 2016 made the colours more vibrant (fig. 3.3).

In 2004, an atrium renovation added imagery of New Zealand bush, water, and a forest floor, which may have contributed to the space feeling colder and therefore less inviting (fig. 3.2).<sup>3</sup> Prior design research at Starship’s Outpatients Department found that colour plays an important role when designing for patient experience (Water et al., 2015: 5).

The following explorations ask: how can colour respond to the brief? How can it be used to appeal to children in a hospital, evoke playfulness, and make the atrium feel more inviting? The effects and value of colour in a healthcare environment are studied, and precedents by artists and other colour theorists suggest how colour can evoke play and how the Starship palette, a project constraint, can be extended.

1 Iwi= Māori tribes.  
2 Source: Starship management  
3 See Appendix C.1

Fig. 3.3 Starship colour palette, edited and reformatted from, Jasmax (2016). 2016 Starship Colour Guide, May 2016, Revision B, page 5.



# colour.

Colour is a complicated area of research because of its subjective nature and its many approaches for study in various disciplines. Physicist Isaac Newton, chemist Wilhelm Ostwald, and artist Albert Henry Munsell have attempted to quantify and organise colour by their qualities (such as hue, saturation, value) through colour wheels, numbering systems and names (Birren, 1969). But, colour can also be considered unquantifiable, fluid, personal, emotive, and unpredictable. Symbols, brand associations, and warnings can be conveyed through colour and its subconscious messaging can influence how we read spaces.

A basic understanding of vision physics suggests that colour is how we interpret visible wavelengths of light (the electromagnetic spectrum) when they are reflected onto our retinas. (Nassau, 1998: 3). Yet, even if different people look at the same physical properties of a colour, they can be interpreted differently. Biological factors such as eye's pigmentation and diet can affect a preference in colour (Birren, 1961: 180-81). And even more so, what we associate with different colours and their effects on us will vary.

Colour theorist Faber Birren writes about how we react to and interpret what we see in *Color Psychology and Color Therapy* (1961). Our affinity with colour can be associated with energy and vibrancy. Colour therapy examines a correlation between wavelengths of light and therapeutic effects, for example, growth in plants is enhanced under red light-waves (Birren, 1895: 83). Blue can have soothing effects, and yellow and red can be stimulating (Birren, 1961: 159; Dalke et al., 2006: 346). Greyish colours seen in winter can greatly affect people with Seasonal Affective Disorder (Gagné et al., 2011: 1). Colour psychology examines how colours can conjure certain associations or symbolisms (fig. 3.4).

Some are more behavioural or biological- ripe or fresh foods often have orange or fresh green tints so these colours appear more appetising and “edible” compared to blue tints in foods (Birren, 1961: 167). Colours can be experienced as temperature and generally the feel of reds and oranges are warm, and greens-blues-violet hues are cool (Birren, 1961: 168-169). They can also describe emotions such as “feeling sad and blue” and being “red with rage”. Cultural traditions, religion, superstitions can also contribute to the reading of colour.<sup>4</sup> Historically, the availability of pigments meant certain colours were reserved for the wealthy and thus colours like purple are more associated with nobility (Alexander, 2012: 264). Cross-sensory associations occur for people with synaesthesia. They experience colours in other senses like sounds, tastes, or smells, or even numbers, letters, and shapes (Birren, 2013: 163, 170-171, 192-194). Variables like genetics, culture, psychology, and personal biases all affect how each of us feel about certain colours, which is why we can have such passionate and polarising discussions when choosing them.

Current colour research suggests that colours chosen for children's spaces should generally be more vibrant than adults and “should include the stronger contrasts characteristic of the more intense and more quickly changing moods and activities of children” (Knighton, 1955: 9). As equally there should also not be too many bright contrasting colours as it can trigger hyperactivity and sensory overload. Reflective surfaces can cause glare and confuse people with visual impairment (Dalke et al., 2006: 351). Textiles, such as curtains and bedspreads, can provide visual interest and give slight reflections into the room. (Dalke et al., 2006: 354).

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<sup>4</sup> For example, brides in the West wear white to symbolise purity, and in China red is worn to symbolise luck.



**Fig. 3.4** Colour symbolism and effects

This compilation of colour associations looks how colours can convey moods or activity levels. It also merges associations across different cultures.

Sources:  
 Dalke et al., 2006: 343-65  
 Alexander, 2012  
 Birren, 1961 (143, 172-173, 256))



*Case study:*  
*“The Master Healer” - green in different contexts*

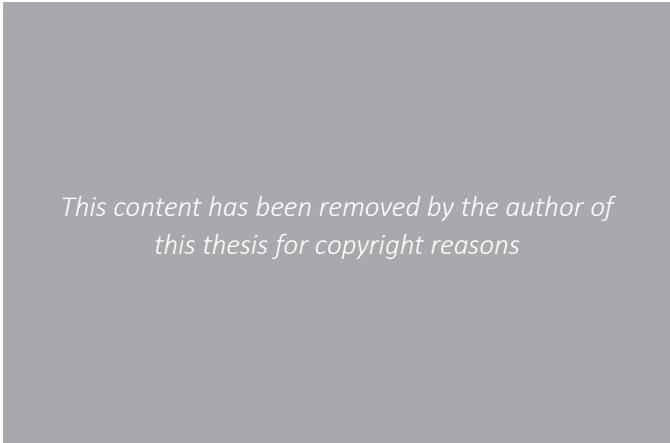
Colour, or more accurately, combinations of colours in a particular context, can evoke moods or connotations. Green is used in this case study as it is often associated with a medical experience. The colour of ‘nature’ (lush meadows, calming bush walks and nature trails) is often recommended for hospital spaces and is even referred to as “the master healer” (Biley, 1996: 114).

*“A mixture of spiritual blue and wise yellow, green represents balance, harmony, growth, healing and love.” (Biley, 1996: 114).*

Depending on the context, colour can have different readings. As artist Josef Albers writes, “the reading of colour...what counts is not the what but the how” (Albers, 2013: 5). Peripheral colours can affect the appearance of a colour. In figure 3.7, the green central squares are identical. But the one on a grey background appears yellower compared to the other, which is bluer by comparison.

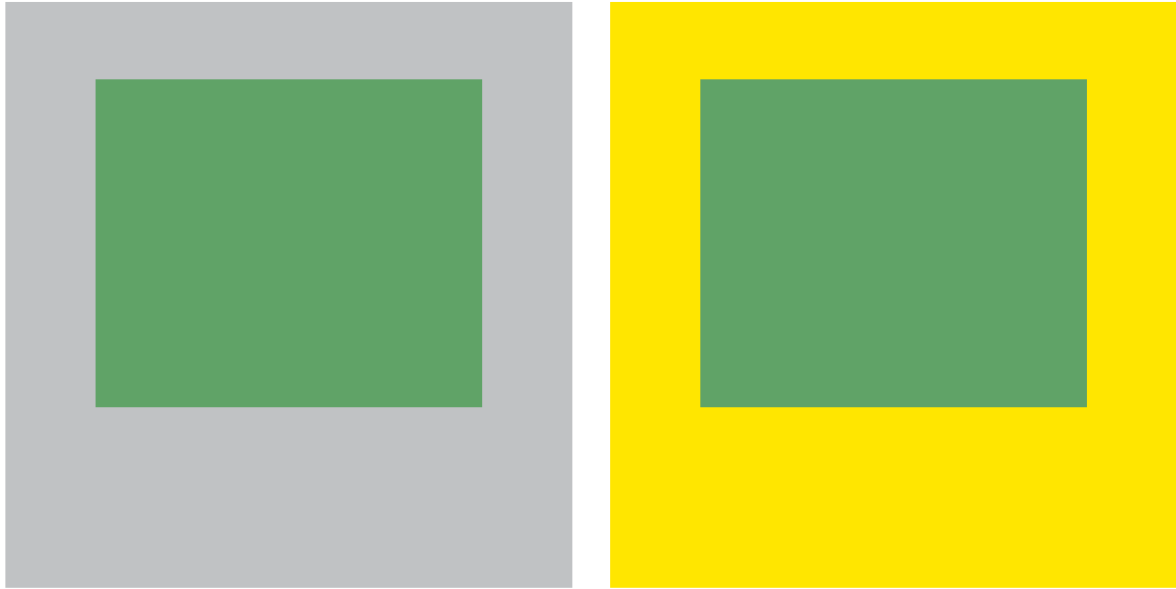
Colours can also be chosen for their properties. “Spinach green” was chosen by a surgeon for his operating theatre to reduce the glare and peripheral distraction of a stark all-white operating room (Birren, 1961: 264; Pantalony, 2009: 402–403) (Fig. 3.5). It also helps to “counteract colour after-image from red” (blood) (Dalke et al., 2006: 352-3). In a high-end spa, a similar green is paired with white and yellow to provide sense of calm (Fig. 3.6).

**Fig. 3.6** Flinders University (n.d.). Operating Room



**Fig. 3.5** Maos Design (2017). Nimman Spa, Shanghai, China.

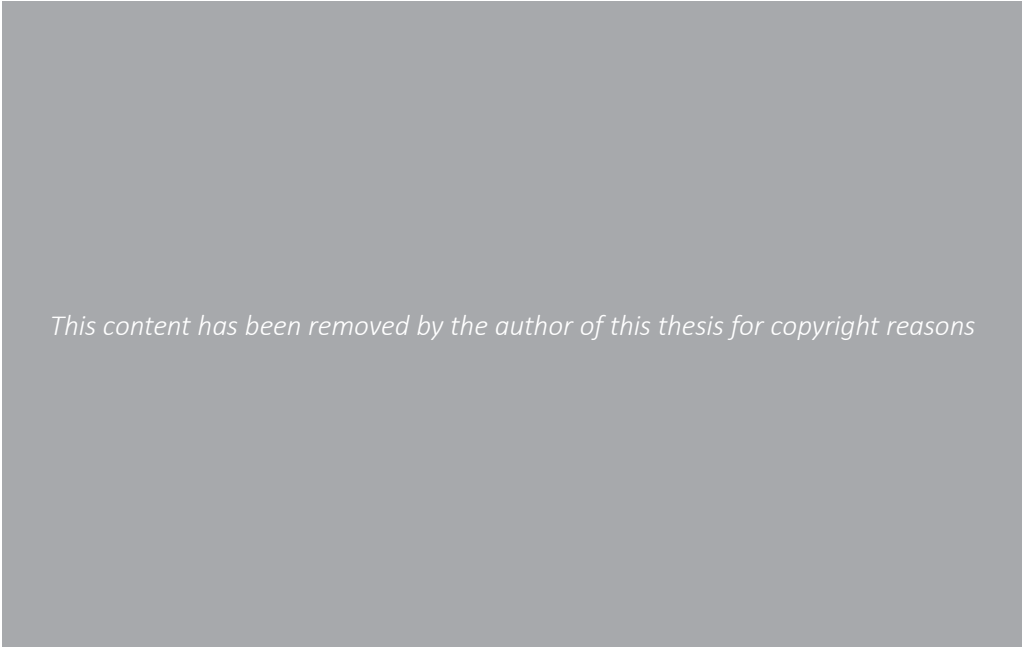




**Fig. 3.8** Green inner squares appear differently when the surrounding colour changes

SPRING	THE BODY	FRUIT
young grass	bile	lime

**Fig. 3.7** The same green can allude to different things depending on the context



**Fig. 3.9** Knighton (1955). *Hospital Colour Schemes*.



**Fig. 3.10** Peeled back paint to reveal original colours in Dadley Trust Hospital for Crippled Children (1964), Auckland. The pale green is consistent with the common paint colours used at the time (fig. 3.9).



## 80's-90's

Desaturated grey tones, large areas of contrasting colours



Children's Hospital of Alabama  
(Nurses station)

Birmingham AL, USA



Children's Hospital of Alabama  
(Outpatient Waiting)

Birmingham AL, USA



Cardinal Glennon Children's  
hospital

St Louis MO, USA



Rainbow Babies Cleveland

Cleveland OH, USA



St Louis Children's Hospital

St Louis MO, USA



Children's Mercy Hospital

Kansas City MO, USA



Hasbro Children's Hospital

Providence RI, USA



The Children's Hospital of  
Philadelphia

Philadelphia PA, USA



Starship Children's Health

Auckland, New Zealand



**Fig. 3.11** [Next 3 pages] (2017). *Colours of other Children's hospitals.*

Charts of colour palettes of children's hospitals were made by picking out key colours found in their photographs.

Resources: Komiske, 1999, 2005, 2012; and hospital's websites

## 90's-00's

More nature themes, mustard tones



The Hospital for Sick Children  
(SickKids)  
Toronto, Canada



University of Miami School of  
Medicine, Batchelor Children's  
Research Institute  
Miami FL, USA



Arkansas Children's Hospital  
Little Rock AR, USA



Texas Children's Hospital  
(Heart Centre lobby)  
Houston TX, USA



The Children's Hospital of  
Philadelphia  
(New south tower atrium)  
Philadelphia PA, USA



Mt Washington Pediatric  
Hospital  
Baltimore MD, USA



Child life area, Children's Hospital  
and Regional Medical Center  
Seattle WA, USA



St Jude Children's Research  
Hospital (Teen activity room)  
Memphis TN, USA



## Contemporary

Bright, colours only as accents  
upon a white neutral base



Nationwide Children's Hospital  
Columbus, Ohio, USA



The Royal Children's Hospital  
Melbourne, Australia



Juliana Children's Hospital  
The Hague, Netherlands



The Herman & Walter Samuelson  
Children's Hospital at Sinai  
Baltimore MD, USA



Johns Hopkins Hospital  
Baltimore MD, USA



Phoenix Children's Hospital  
(Interior Waiting room)  
Phoenix AR, USA



Rainbow Babies and Children's  
Hospital  
Cleveland OH, USA



Rainbow Babies and Children's  
Hospital (Therapeutic Garden)  
Cleveland OH, USA



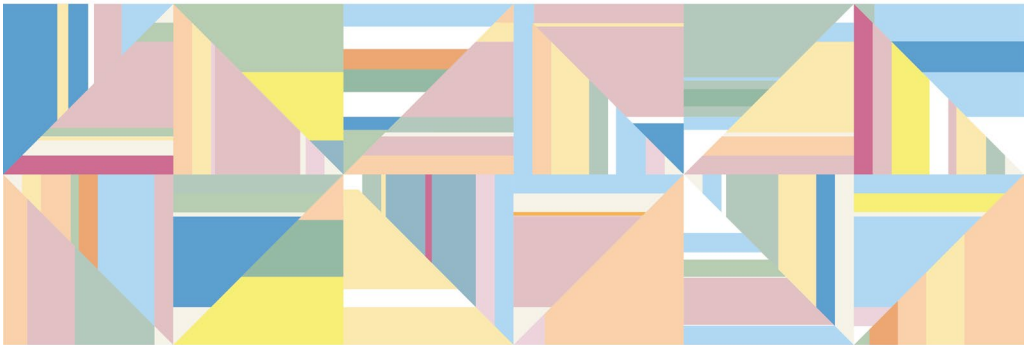
St Louis Children's Hospital  
Specialty Care Center  
St Louis MO, USA



South Glasgow University  
Hospital and Royal Hospital for  
Sick Children  
Glasgow, Scotland



**Fig. 3.12** Geometrical colour palettes.  
Setting the original and updated colours in geometrical  
arrangements helped to see them as synchronised palettes.



Starship Colour Palette (1991)



Starship Colour Palette (2016)



Flowers of the Winter Garden



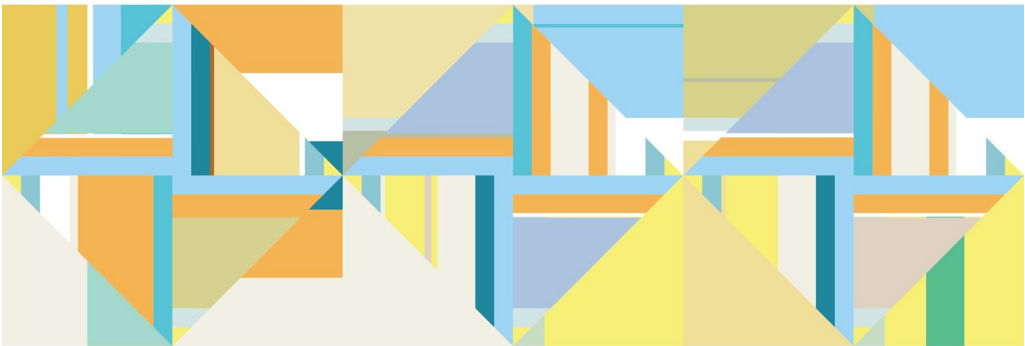
Sky from morning to night



Redwood Forest



Southern Lights



A warm beach



**Fig. 3.13** Colour adjacent surfaces.

---

## COLOUR CATCHERS

*This content has been removed by the author of this thesis for copyright reasons*

**Fig. 3.14** Jongerius (2017). “Breathing Colour” Exhibition.

Artist Josef Albers in *Interaction of colour* (2006) was concerned with “the interaction of colour; that is, seeing what happens between colours” (p. 5). His work explored the composition of colours and how they affect what we see. Industrial designer and artist Hella Jongerius’s exhibition “Breathing Colour” explores how our perception of colours is affected by the environment they are placed in. Her cardboard “colour catchers” test external factors such as colours of adjacent objects, lighting quality, shape of the object, and material/texture of the object. My series of photographs (figs. 3.13, 3.15, 3.16) adapts her method to capture how colours interact.

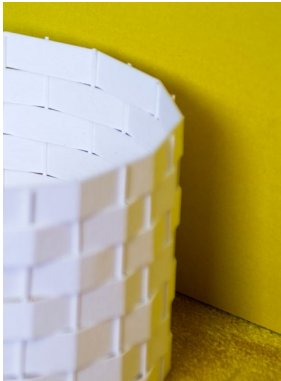
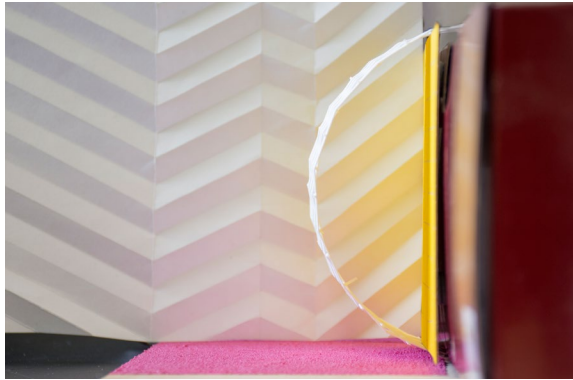
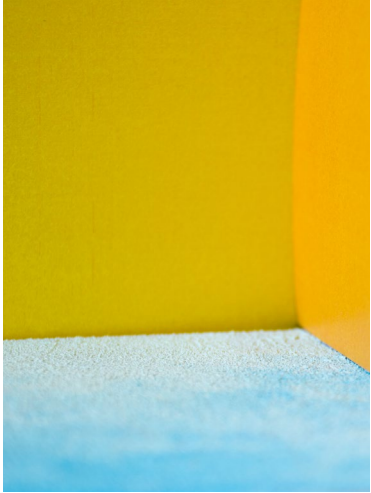
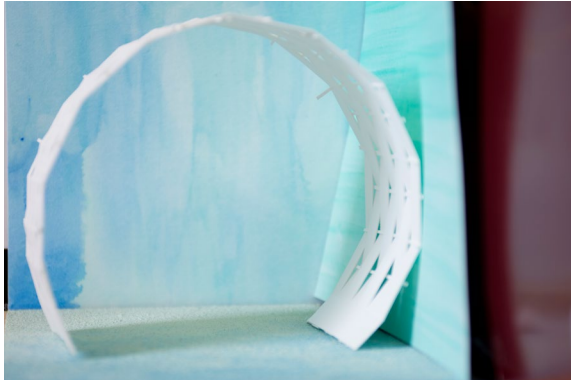
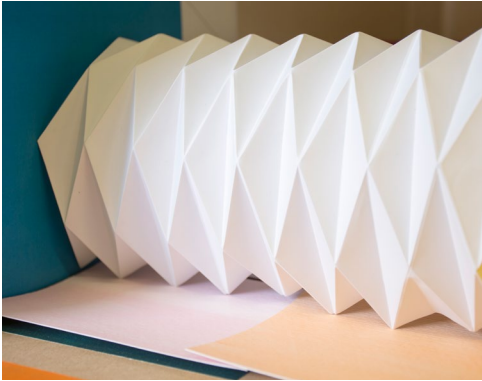




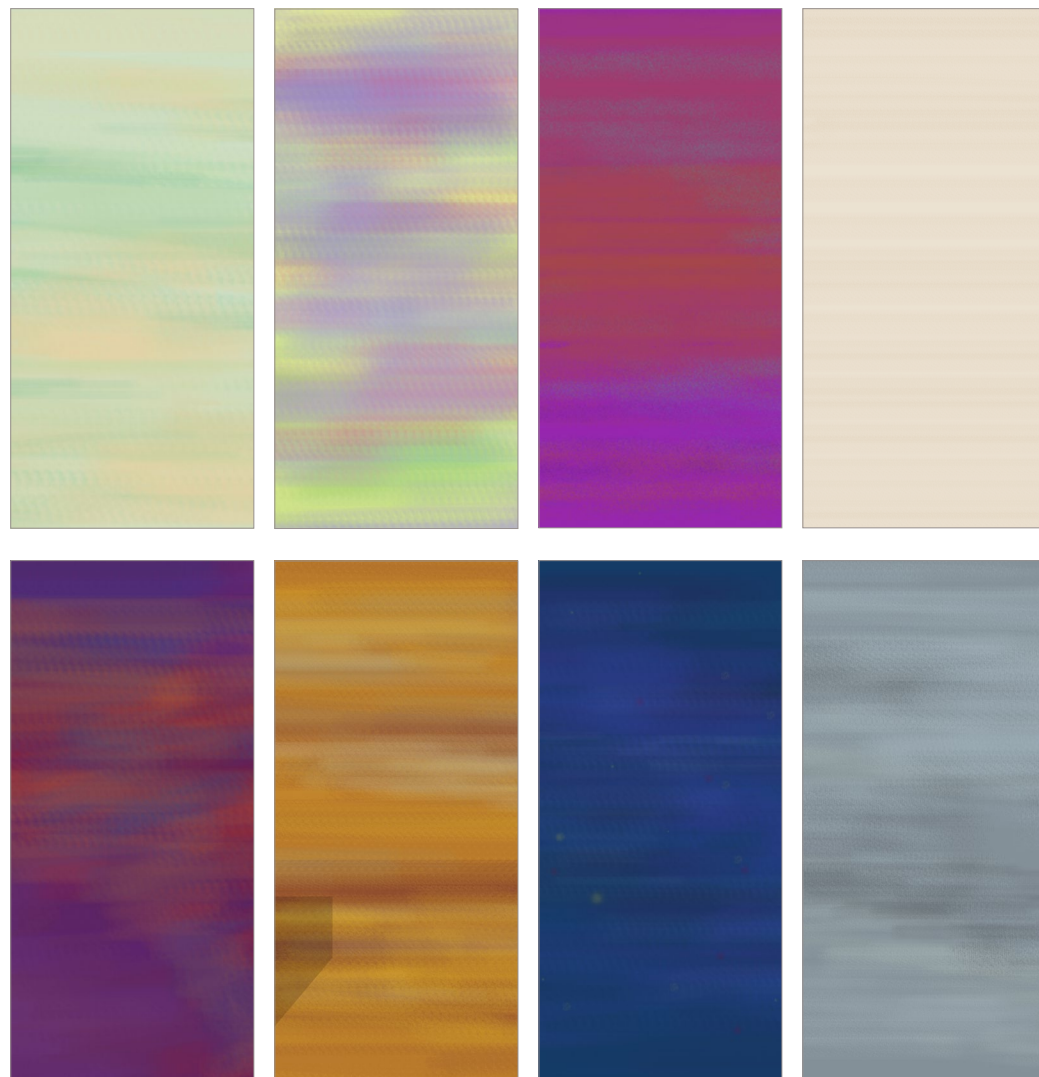
**Fig. 3.15** Experiments to see how colours of adjacent surfaces can react with each other.



**Fig. 3.16** Experiments to see how colours of adjacent surfaces can react with each other.

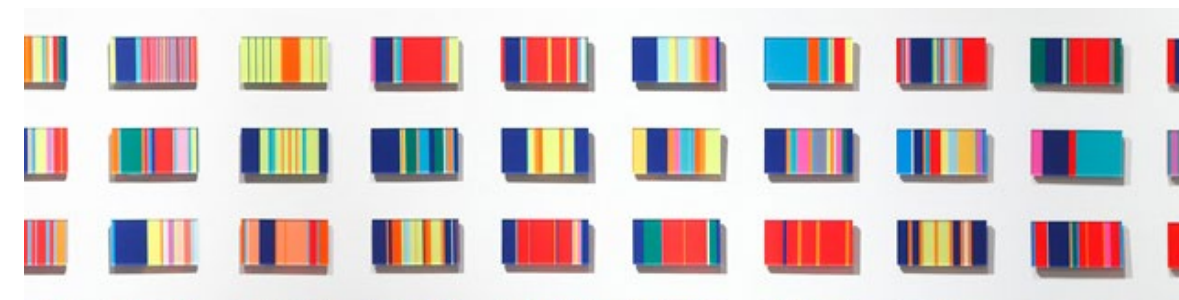
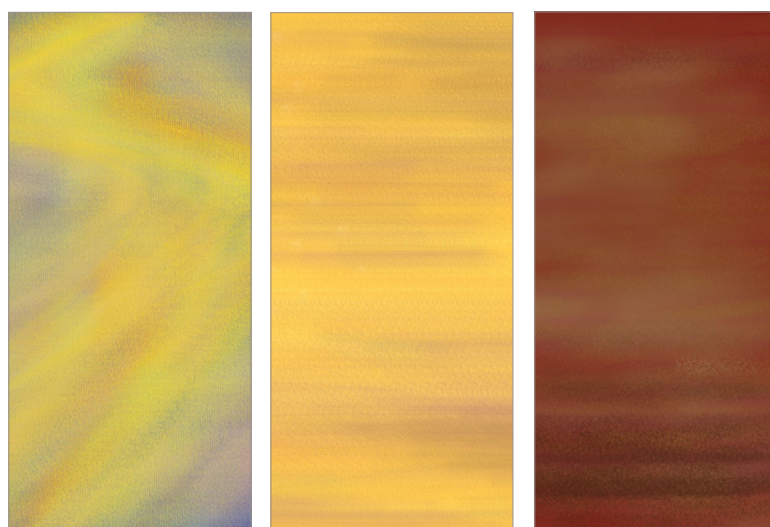






**Fig. 3.17** Cross-sensory colour representations.

[From left to right, top to bottom]  
 A good morning  
 A spring morning  
 2:21pm  
 Drawing a blank  
 Evening  
 Warm dusk  
 Trying to sleep  
 Groggy morning  
 Listening to electro-pop music  
 Another electro-pop song  
 Hungry

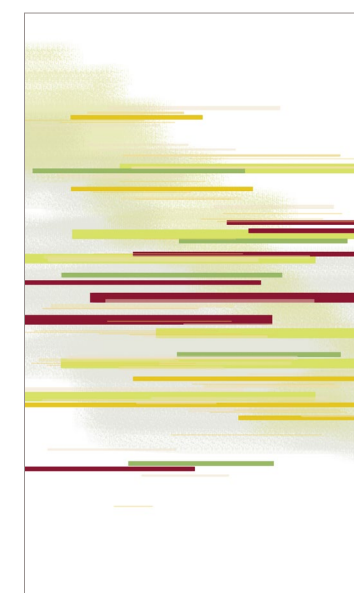
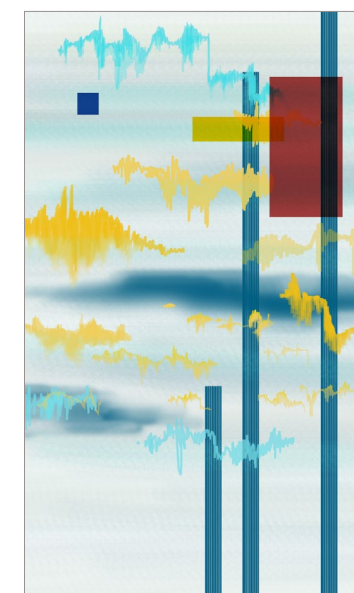


**Fig. 3.18** Yamada and Kabayashi (2011). *Life Stripe*.

### CROSS-SENSORY SWATCHES

From the provocation that colour can evoke a cross-sensory response, these panels here show how I experienced certain times or moods (figs. 3.17, 3.19, 3.20).

Using a similar concept, artists Haruna Yamada and Hirokaru Kabayashi have created a series of coloured panels in the work “Life Stripe” (fig. 60). In these works, they use bright coloured stripes to graphically represent activities by people in different professions over a 24 hour period.



**Fig. 3.19** [Upper] Cross-sensory visual representation of the vacuous atrium air.

**Fig. 3.20** [Lower] Cross-sensory visual representation of a crisp morning.



# site connections.

Starship is situated in the city centre of Auckland, within the Auckland City Hospital complex. Surrounding the area is one of Auckland’s oldest parks, the Auckland Domain, which used to be a Pā site (fortified Māori village). Connections to the geological context were sought through mapping, revealing geological features around the site such as a buried waterway, the Waipapa and Waiparuru Stream, natural springs, and hills of weathered greywacke and sandstone nearby (Fig. 3.26).



Fig. 3.24 Auckland map with Starship marked in orange.



Fig. 3.22 Auckland Domain, looking towards Auckland Hospital



Fig. 3.21 Winter Gardens



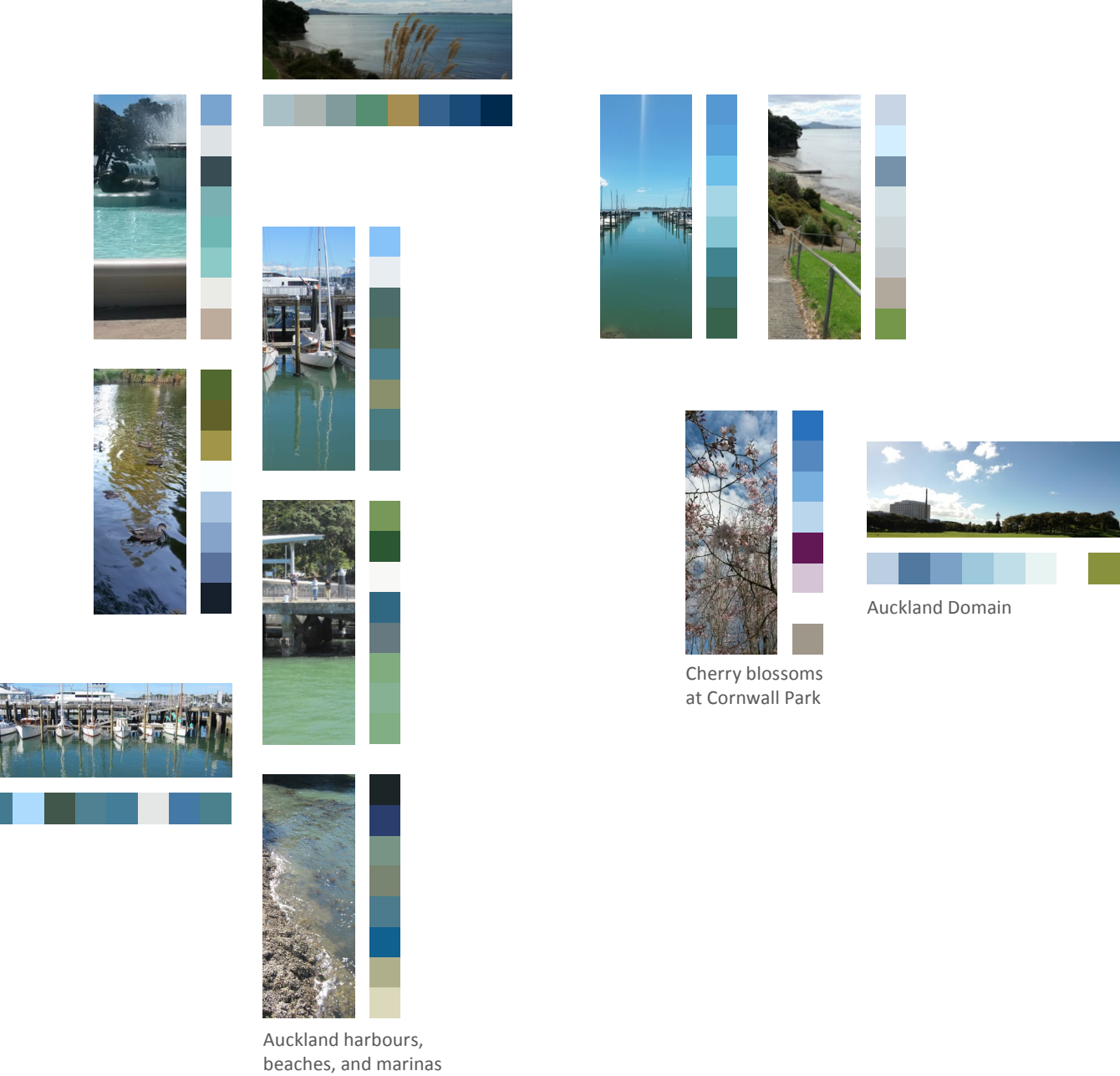
Fig. 3.23 Duck ponds / Natural springs at Auckland Domain





**Fig. 3.25** Extended Site Map showing geology near the hospital.  
Reference resource from:  
Auckland Council. 2008. *Stream Daylighting- Identifying Opportunities for Central Auckland: Concept Design December TR2008 /027*, p.43-56.  
Auckland Council Resource GeoMaps. Accessed March 4 and May 26, 2017.





## CONSTRUCTING COLOUR PALETTES FROM THE SURROUNDING SITE

A connection to the wider context of Auckland and New Zealand was created through an extension of the colour palette. Colours were taken from photographs of the Winter Gardens, Auckland Domain, and various places around the country.

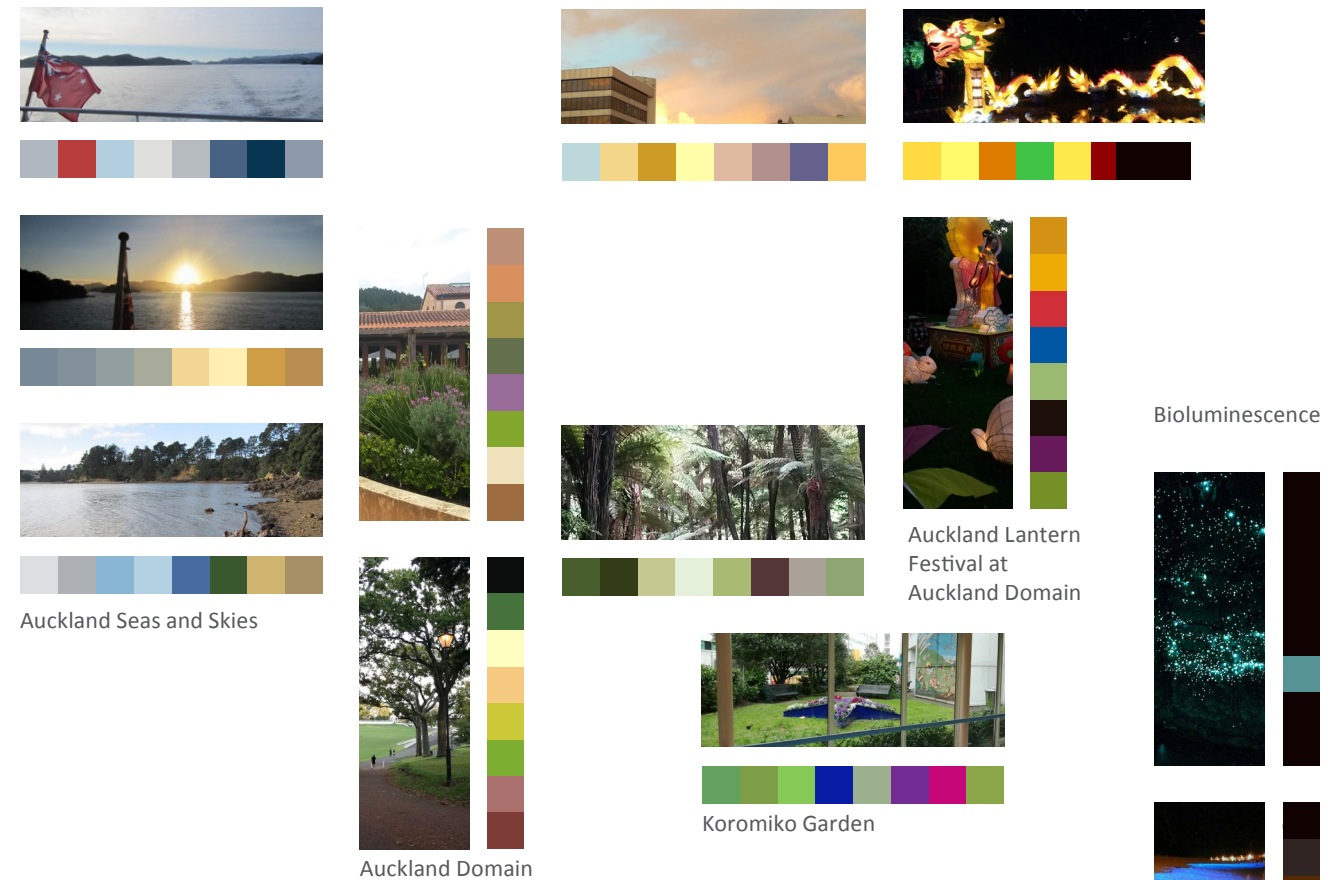


Fig. 3.26 Colour charts from wider context part 1.



Fig. 3.27 Colour charts from wider context part 2- Winter Gardens.



Winter Gardens, Auckland Domain







**Fig. 3.28** Plaster “greywacke” rock  
 Greywacke is found in the Grafton suburb that  
 Starship is situated in (fig. 25). Marbled plaster is  
 used to imitate this type of rock. When the surface  
 is scraped back, swirled shapes are revealed. Cracks  
 are filled with white plaster to imitate minerals  
 depositing in cracks to form veins.



## creating a palette.

Staff interviews and contextual literature review identified project constraints that include using the hospital's colour palette, health and safety considerations, and designing for different ages. Incorporating voices from staff and children with the hospital's identity is also an opportunity for exploration. This body of experimental work aimed to expand upon the constraints of the Starship colour palette. Through tests in texture, media, pattern and geometries, the flat colours of the palette begin to evolve and open up more playful options. Findings from the children's design charrette showed that imagery of nature and connections to outdoor spaces is important to children within the hospital. A site analysis of the wider site context helped identify elements that could be integrated into the design, creating a connection to the city through materiality and a layout strategy.

Figures 3.29-3.34 show abstract patterns that allude to elements found in the children's artwork or extended site analysis.



**Fig. 3.29** "Solving constraints and Material testing" at Porte Cochère "Material" Exhibition.





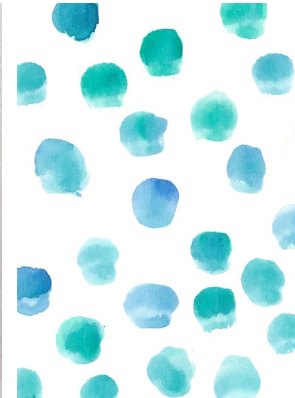




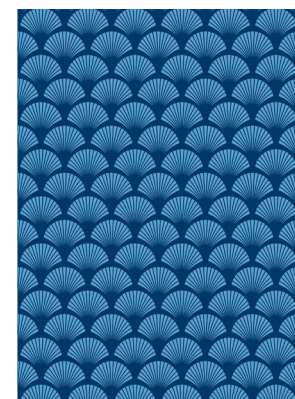
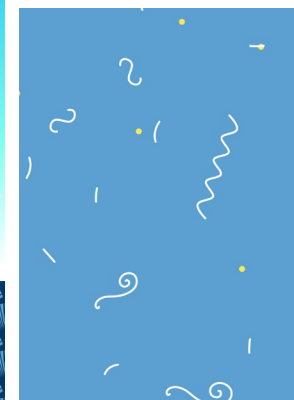
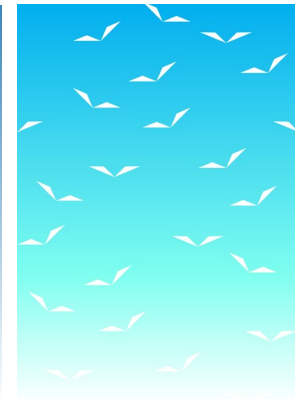
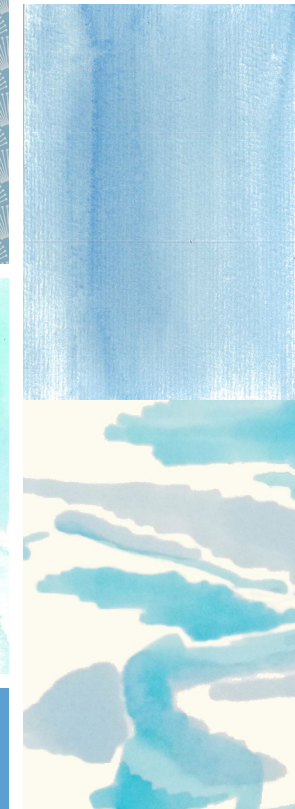
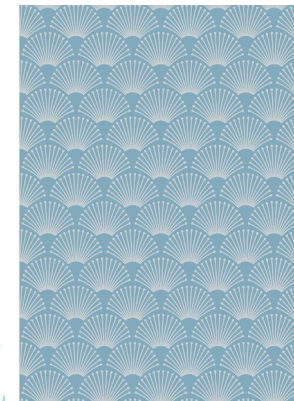




Watercolour on paper



**Fig. 3.34** Colours, Patterns and Micro narratives based on the Starship colour palette-Blue.



Plastic-coated printed paper

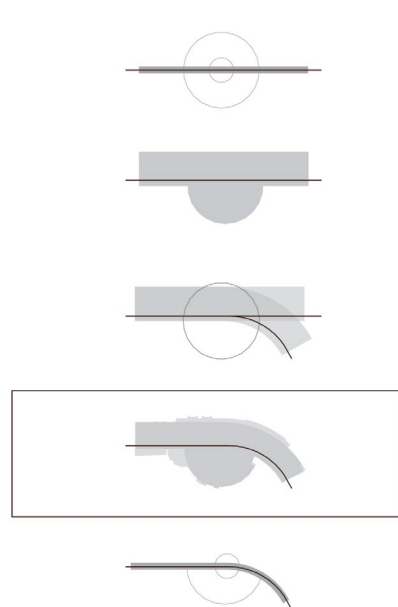
## drawing.

Starship's modernist grid is softened by a bend and interspersed with evenly placed columns (fig. 3.37-38). The subtle curve is also seen in the round verandas and bridge (fig. 3.35). This bend-shaped motif can also be seen in the cross section of coved joint details that are common in hospitals.

Drawing became a method to explore the curve motif as abstract representations of play, terrain shifts, and interventions. It also helped to interpret children's charrette artwork into potential features. Iterative drawings developed the final concept design that is presented in the next chapter.



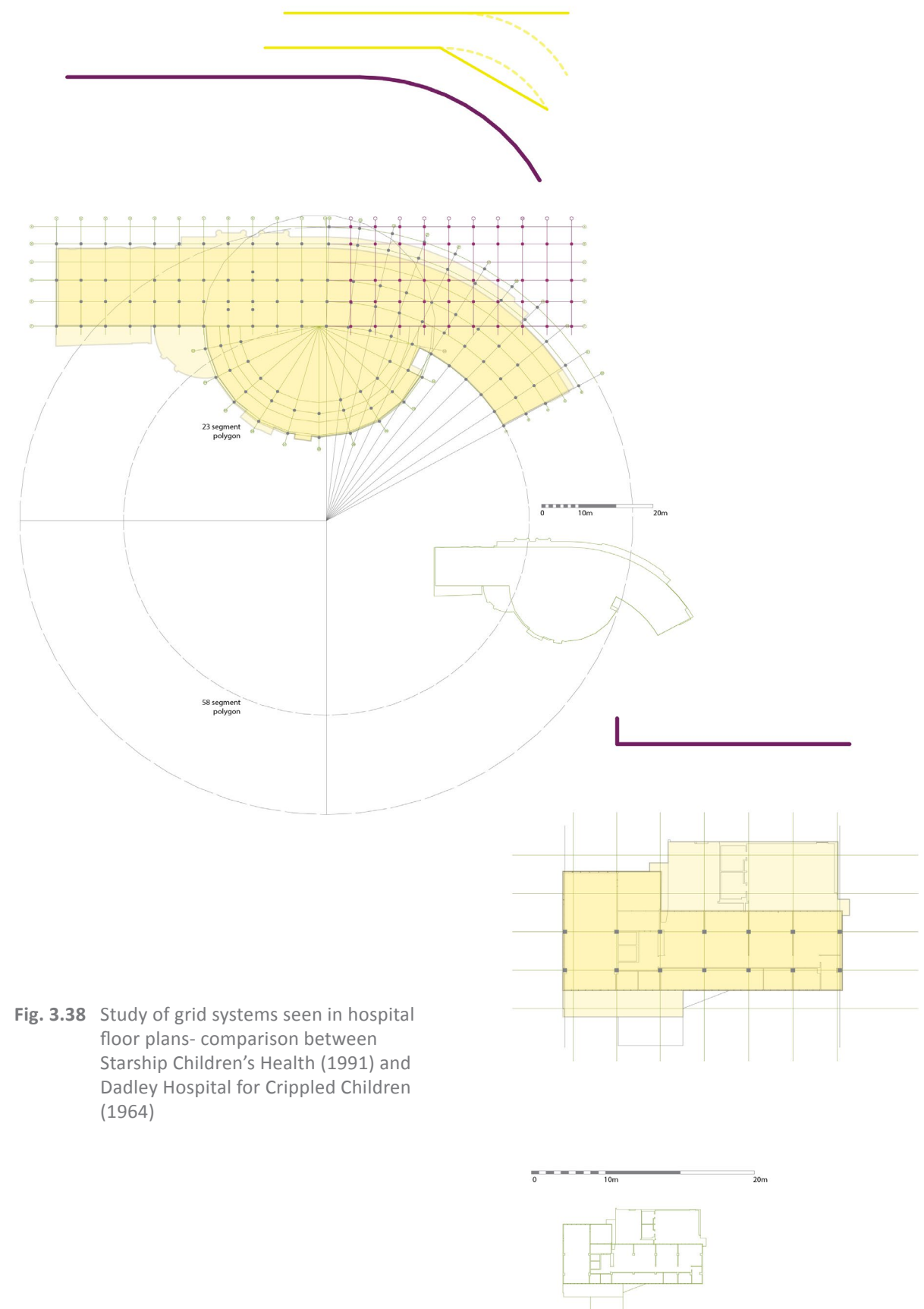
**Fig. 3.35** Curves of the bridge in the atrium.



**Fig. 3.37** Diagram representing the "bend" in Starship's floor plan



**Fig. 3.36** Simplified floor plans of hospitals that are composed of straight sections



**Fig. 3.38** Study of grid systems seen in hospital floor plans- comparison between Starship Children's Health (1991) and Dadley Hospital for Crippled Children (1964)









Fig. 3.40 A reverse colouring page- coloured patterns initiate ideas that are drawn in black ink.





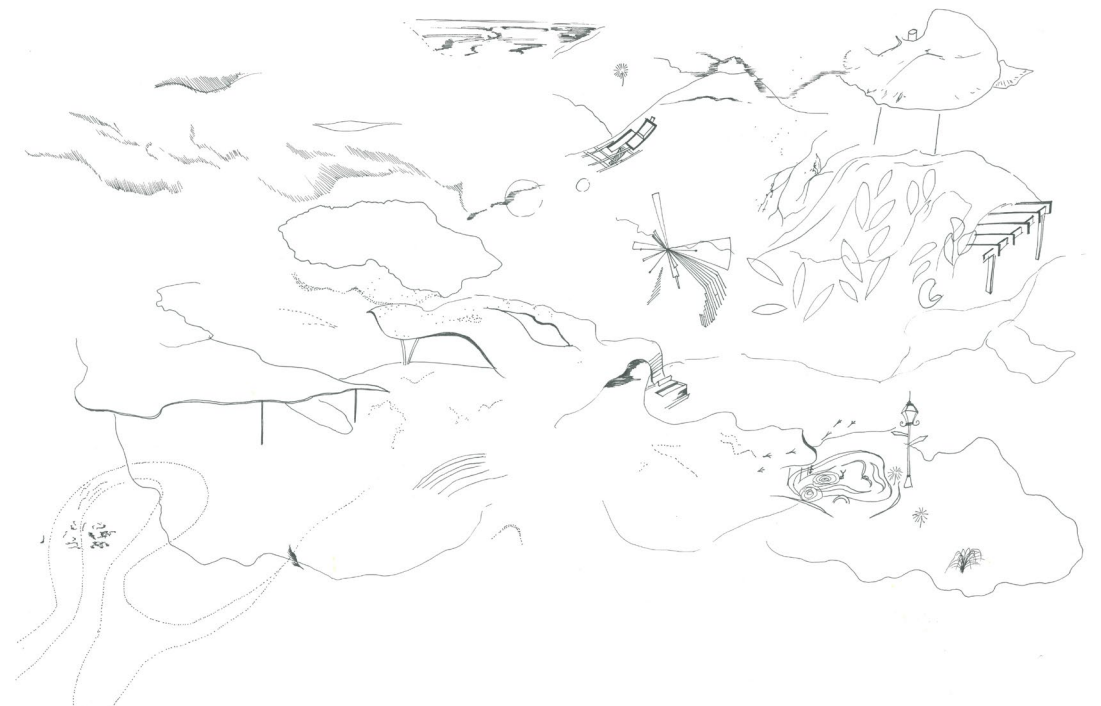
**Fig. 3.42** Sketch- Permeable threshold between the indoors and outdoors through organically-shaped flooring patterns that move from the mezzanine to the garden.



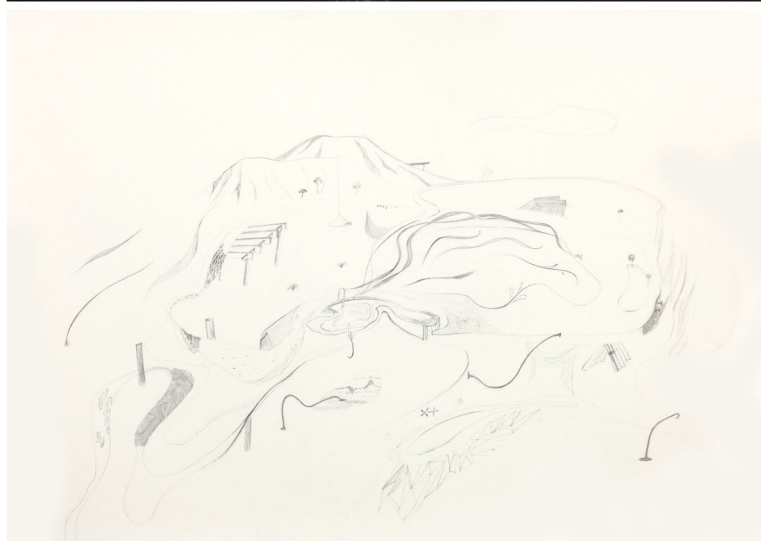
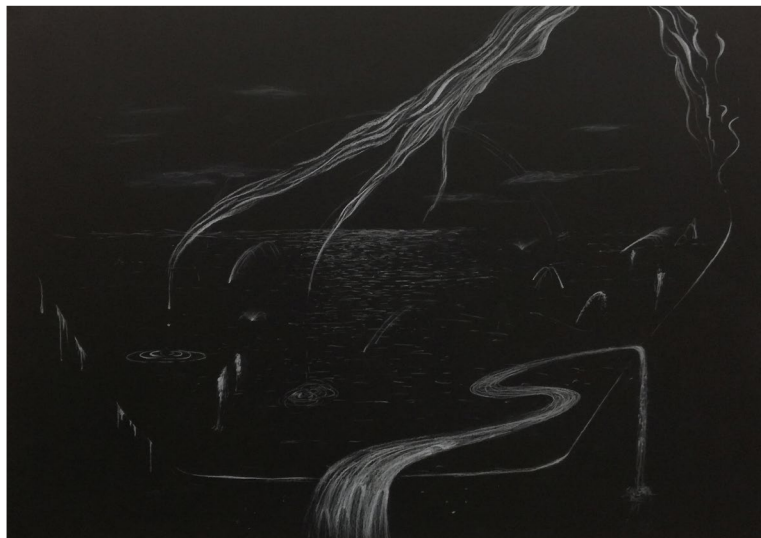
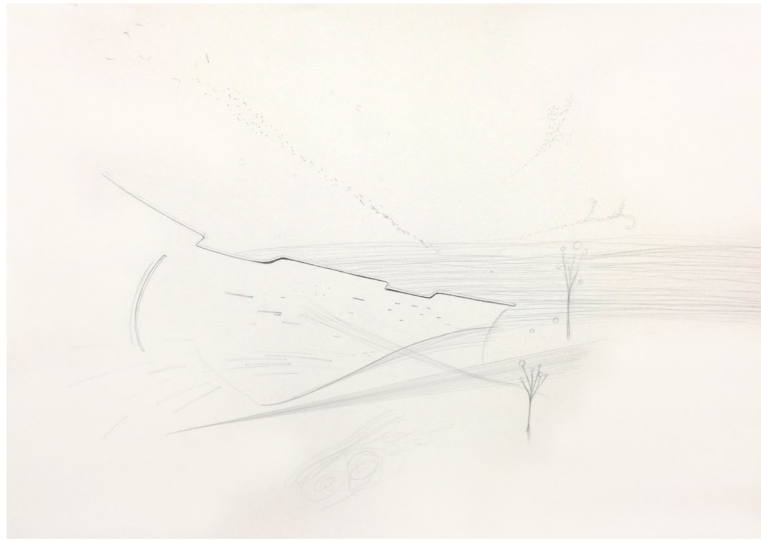
**Fig. 3.43** Playing with topographical lines and ground surfaces peeling.



**Fig. 3.41** Sketch- Drawing freeform shapes and colours into space.



**Fig. 3.44** Play with elevated terrain



**Fig. 3.45** Conceptualising colour palette associations.  
[left] Earth  
[top right] Sea  
[bottom right] Sky



**Fig. 3.46** Imaginative concept of pet therapy programme space



**Fig. 3.48** Koromiko Garden concept sketch-Wonderland garden



**Fig. 3.47** Contours of the extended site



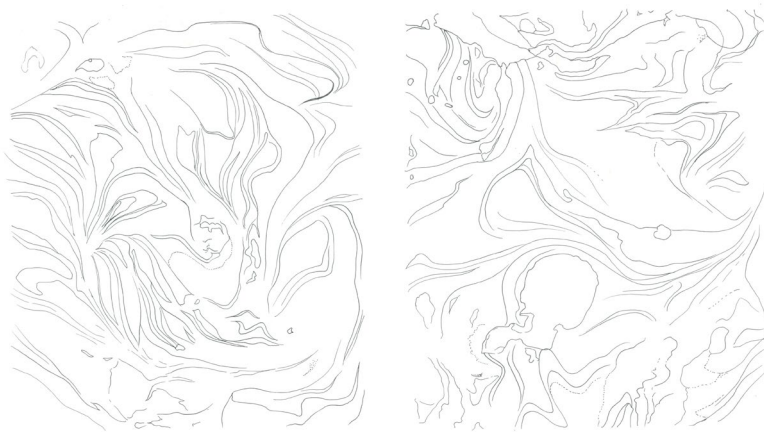


Fig. 3.49 Marble outlines.

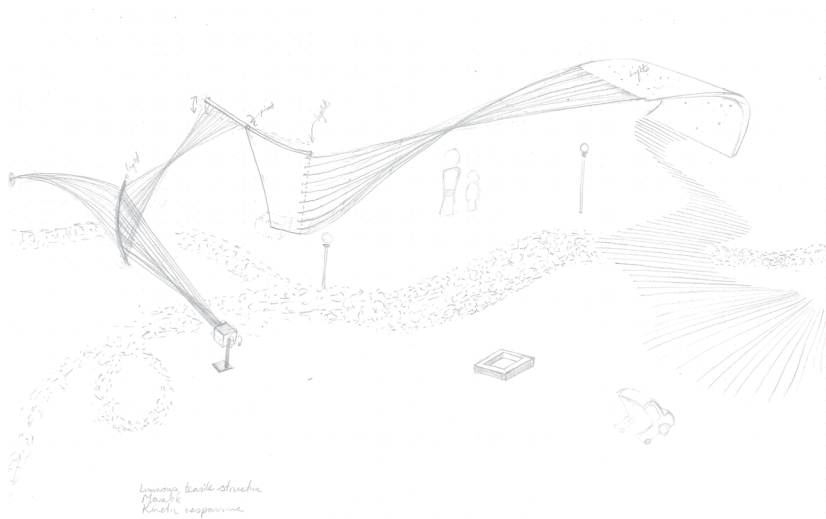


Fig. 3.51 Interactive fabric structure, criss-crossing hatched flooring

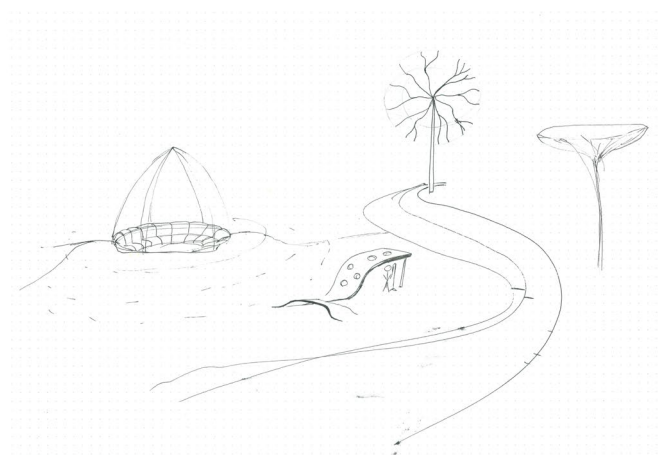


Fig. 3.50 Nooks along a path

### MODULAR UNIT CONCEPTS

Patients in wards can feel empowered when they can “customise their immediate or personal space with belongings or light controls” (Dalke et al. 2006, 361). This notion of personalisation has been explored in terms of space making through partition walls and modular building equipment that can build seating, nooks, or climbable surfaces.

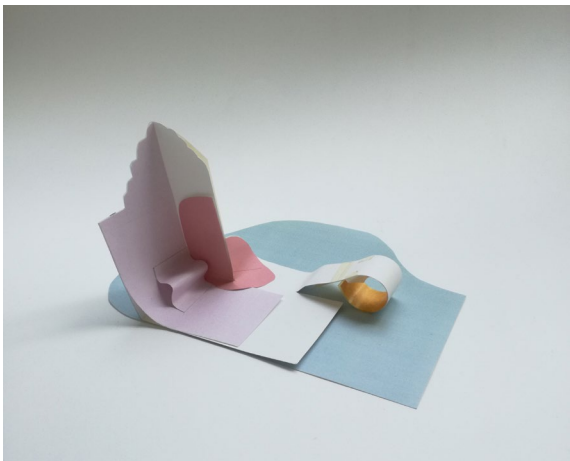


Fig. 3.54 Ground peeling to become walls or seating. Surfaces can be climbed on, crawled through, or leaned against.

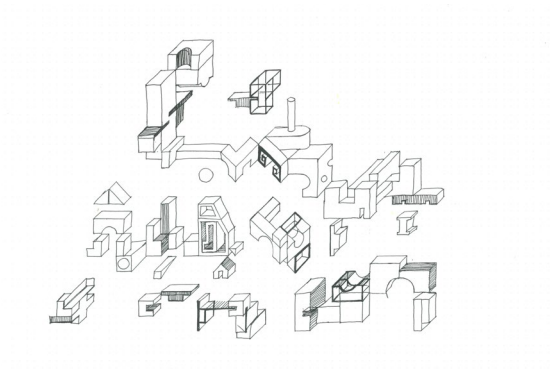
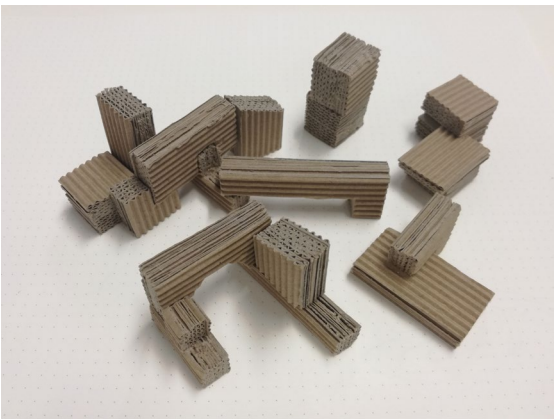


Fig. 3.52 Series of space-making modules based on axonometric drawing

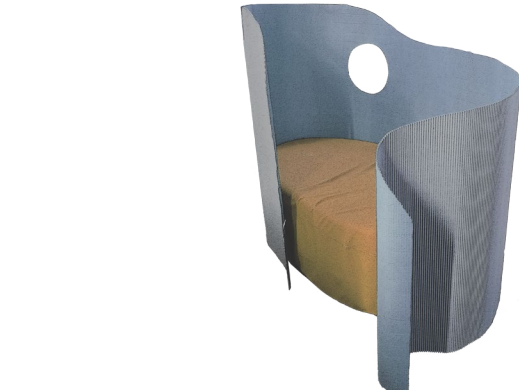
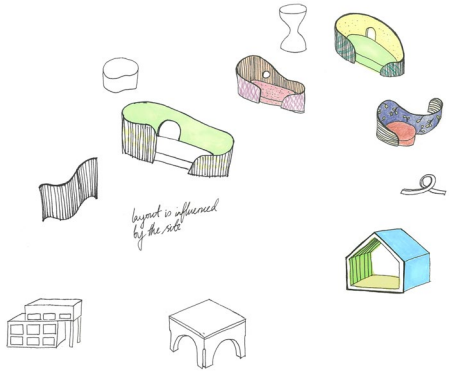


Fig. 3.53 Personalisable space-making



SYNTHESIZING DATA INTO FORMS

Concept designs began by translating some of the children's art into the space.

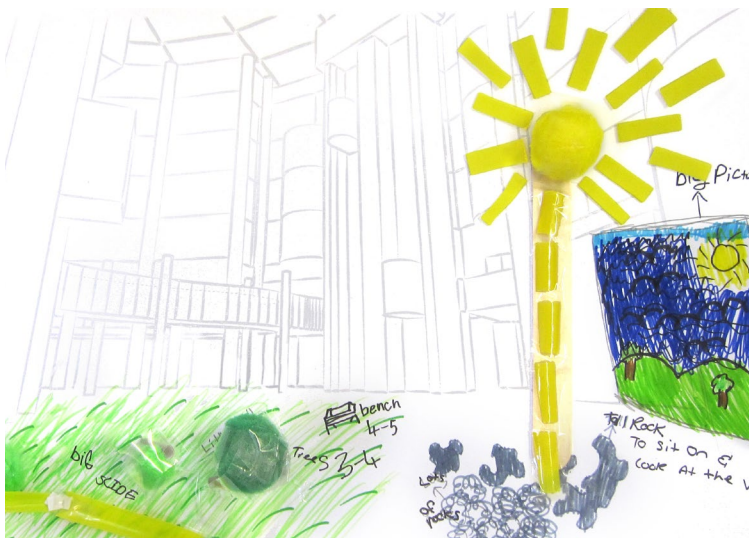


Fig. 3.55 Children's Charrette artwork- Park. (Boy, 9, Patient)

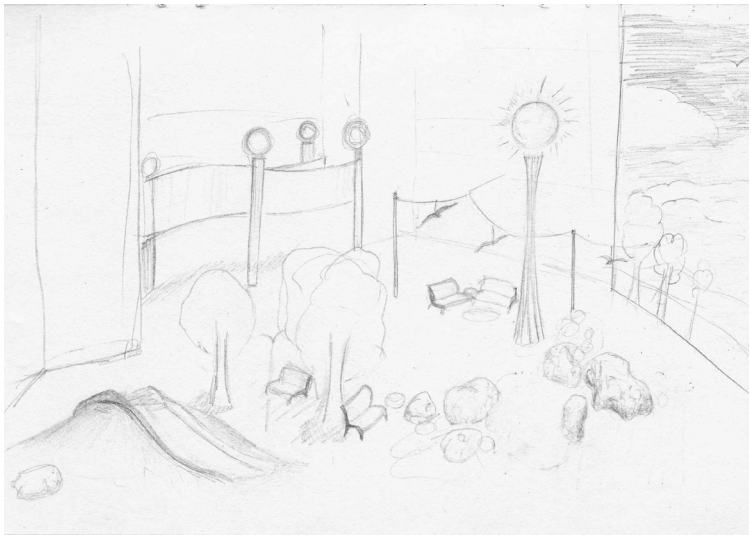
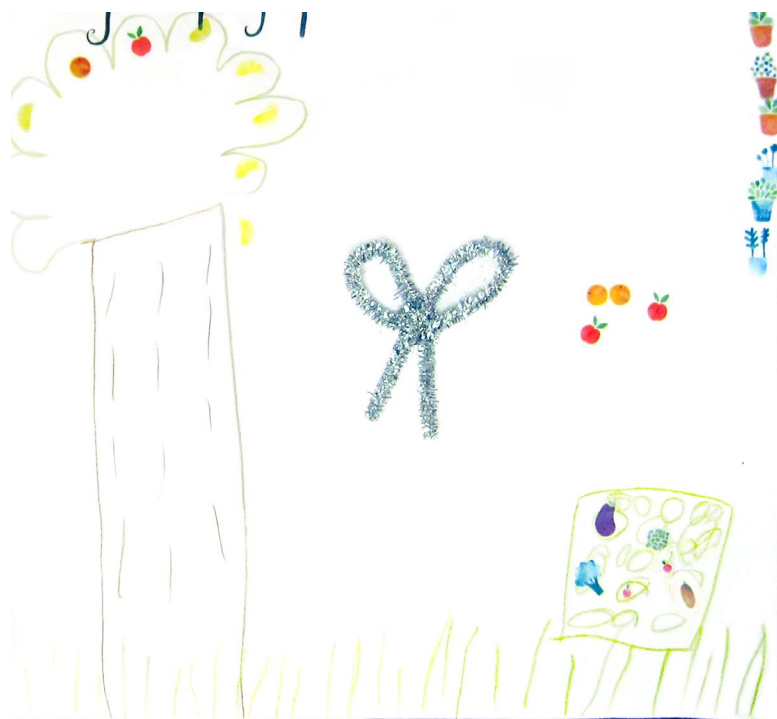


Fig. 3.56 Reinterpretation sketch- Indoor park with beach imagery



Fig. 3.57 Reinterpretation sketch- Park in the atrium.





**Fig. 3.59** Children's Design Charrette artwork- Garden  
(Boy, 9, Patient)



**Fig. 3.58** Reinterpretation sketch- Vege Garden



Corresponding Children’s Design  
Charrette artwork for figures 3.63-3.65:

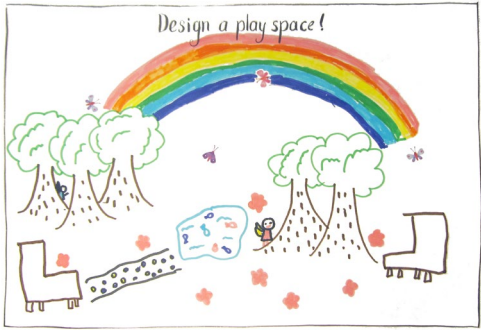


Fig. 3.63 Fairy Garden (Girl, 9, Patient)

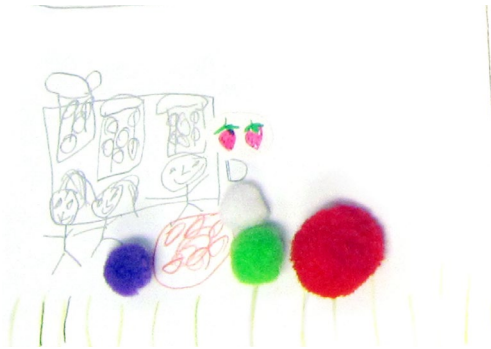


Fig. 3.61 Outdoor Movies (Boy, 9, Patient)

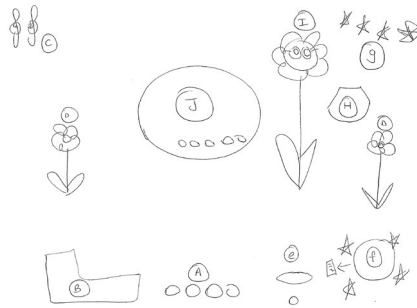


Fig. 3.62 Healing spaces (Girl, 10, Patient)



Fig. 3.65 Reinterpretation sketch- Fairy Garden.



Fig. 3.60 Reinterpretation sketch- outdoor movie theatre with popcorn and beanbags

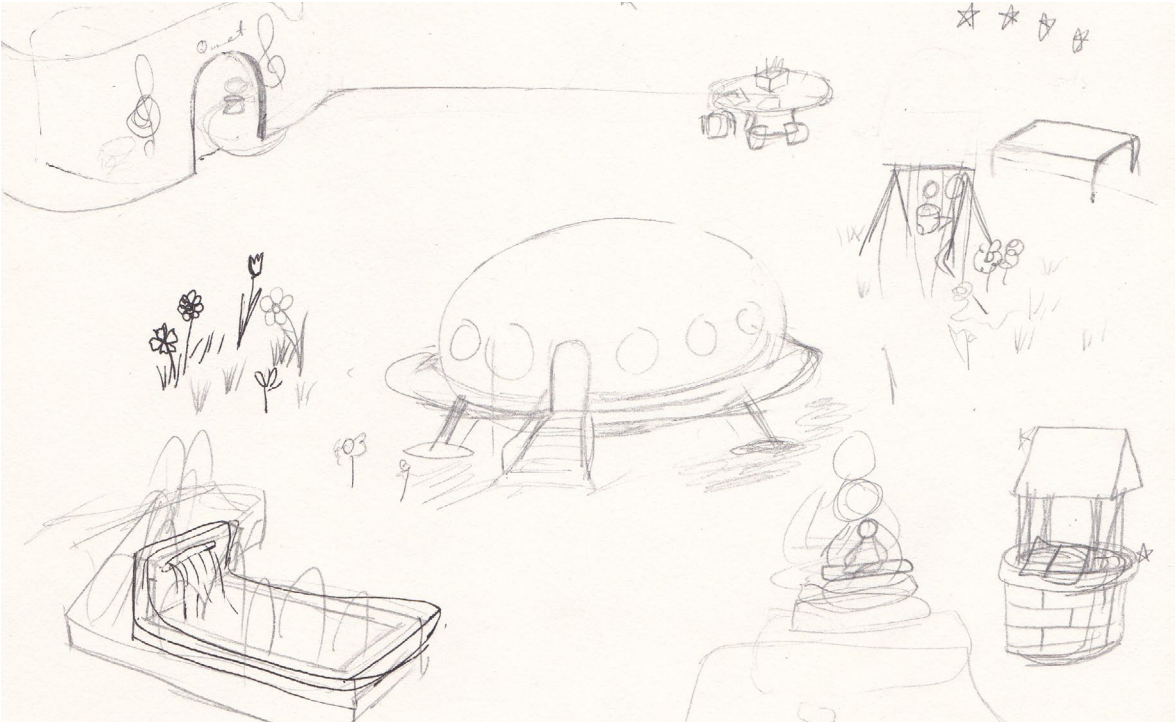


Fig. 3.64 Reinterpretation sketch- healing spaces





Fig. 3.66 Pet Corner.  
Fig. 3.67 Tiny Bites to garden.



Fig. 3.68 Dining Area.  
Fig. 3.69 Reading area.



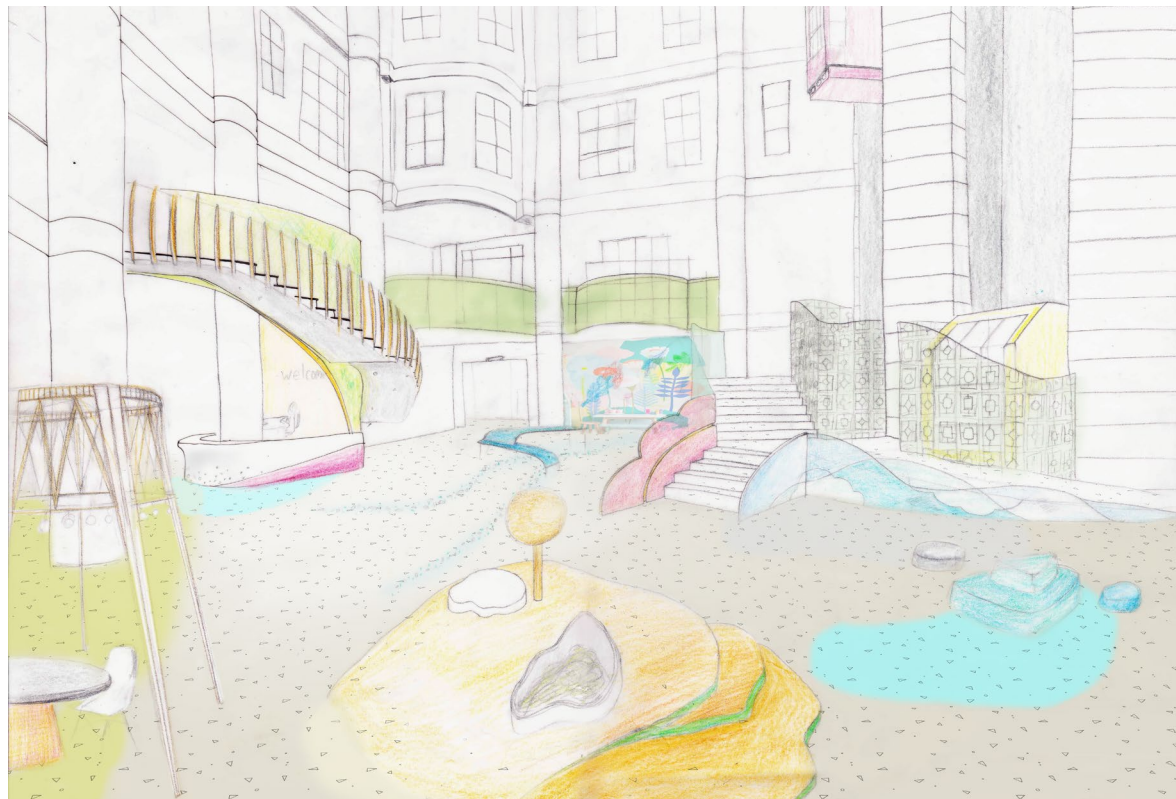


Fig. 3.70 Atrium floor.



Fig. 3.71 New entrance and reception desk.



## chapter 4

# output.

## layering voices.

The public spaces at Starship provide an opportunity to improve the experience of a hospital visit by creating an environment that can help address patients' needs. Through user-engagement methods (staff interviews and a children's design charrette), the brief was framed to try and ensure that a diverse range of personalities, ages, and abilities, can have an environment that works for them.

Users and stakeholders from Starship and a wider site analysis were layered to form the final concept. Usage of the existing colour palette helps tie these public areas with the rest of the hospital and its history. Explorations of colour, materiality, and terrain became design details and interventions to manifest play therapy into an environment for children. This chapter presents the final design proposal and how iterative concept sketches and narratives from the people's voice and site context are woven together. These are *drawn* into the space at two scales- firstly as 'macro narratives' in overall space planning and secondly as 'micro narratives' at a detail level.

Design motifs include the energetic movement of freehand shapes, a curve motif from the floor plan, coved connections synonymous with hospitals, and spheres from the column capitals found in the architecture.

# macro narratives.

Overall space planning was primarily influenced by the neighbouring land and the hospital’s identity. Layered over the plan of the atrium space, these histories and terrains are set at different scales as a means of drawing and connecting the city into the space. Shifting lands, contours and positions of a star cluster suggest places to mark out zones. Raised ground surfaces respond to the overlaid contour lines, and positions of each star in the Matariki star cluster alludes to their tale; a quiet reading area is marked out by Ururangi, Matariki’s daughter who loves to hear stories told by her grandmother (fig. 4.2).<sup>1</sup>

From the Starship colour palette, the five colours are distributed throughout the plan, indicating which areas may be quiet or loud, open or intimate. Zones of quiet or excitement are gently defined through use of colour and flooring, as well as separate areas dedicated to different age groups.

<sup>1</sup> Matariki is a star cluster seen in the New Zealand skies every year around June, heralding the Maori New Year. Its 7 stars are based on the legend of Matariki and her six daughters.

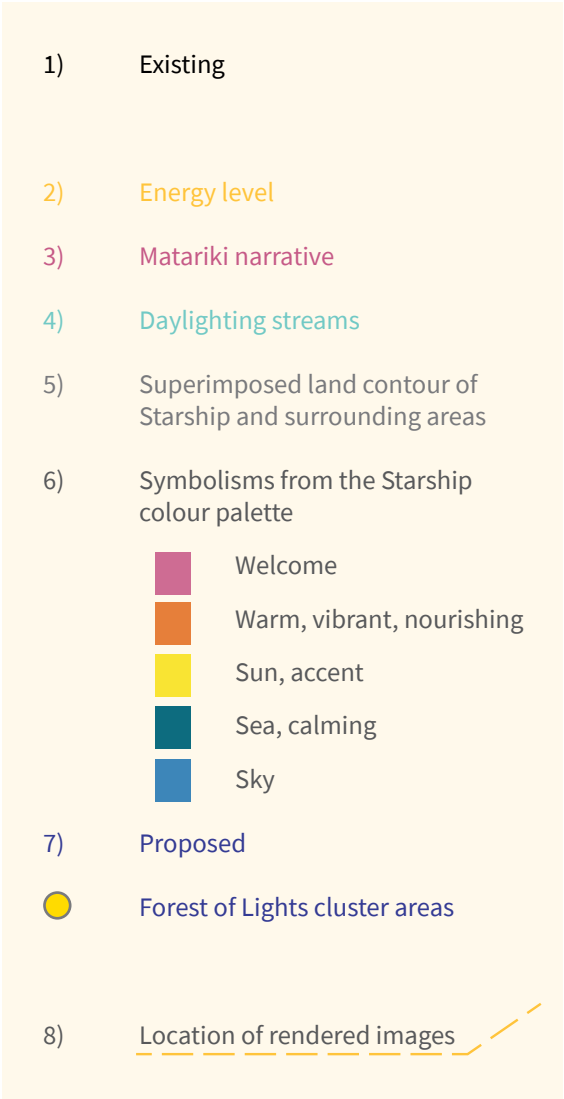


Fig. 4.1 Conceptual key for figures 4.2-4.3, showing how these narratives have informed space planning.



Fig. 4.2 Conceptual Plans @ 1:200 scale Level 2.

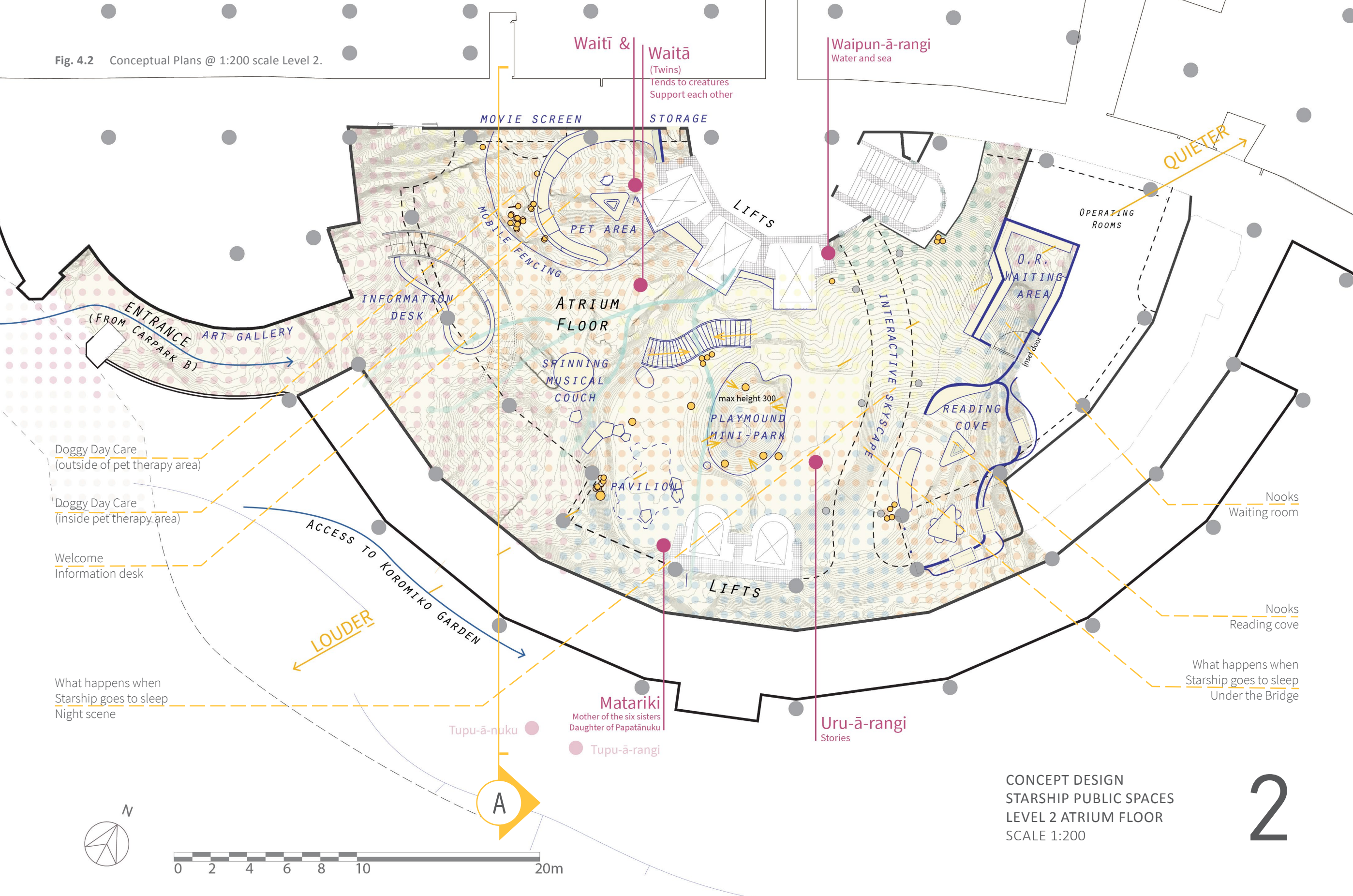
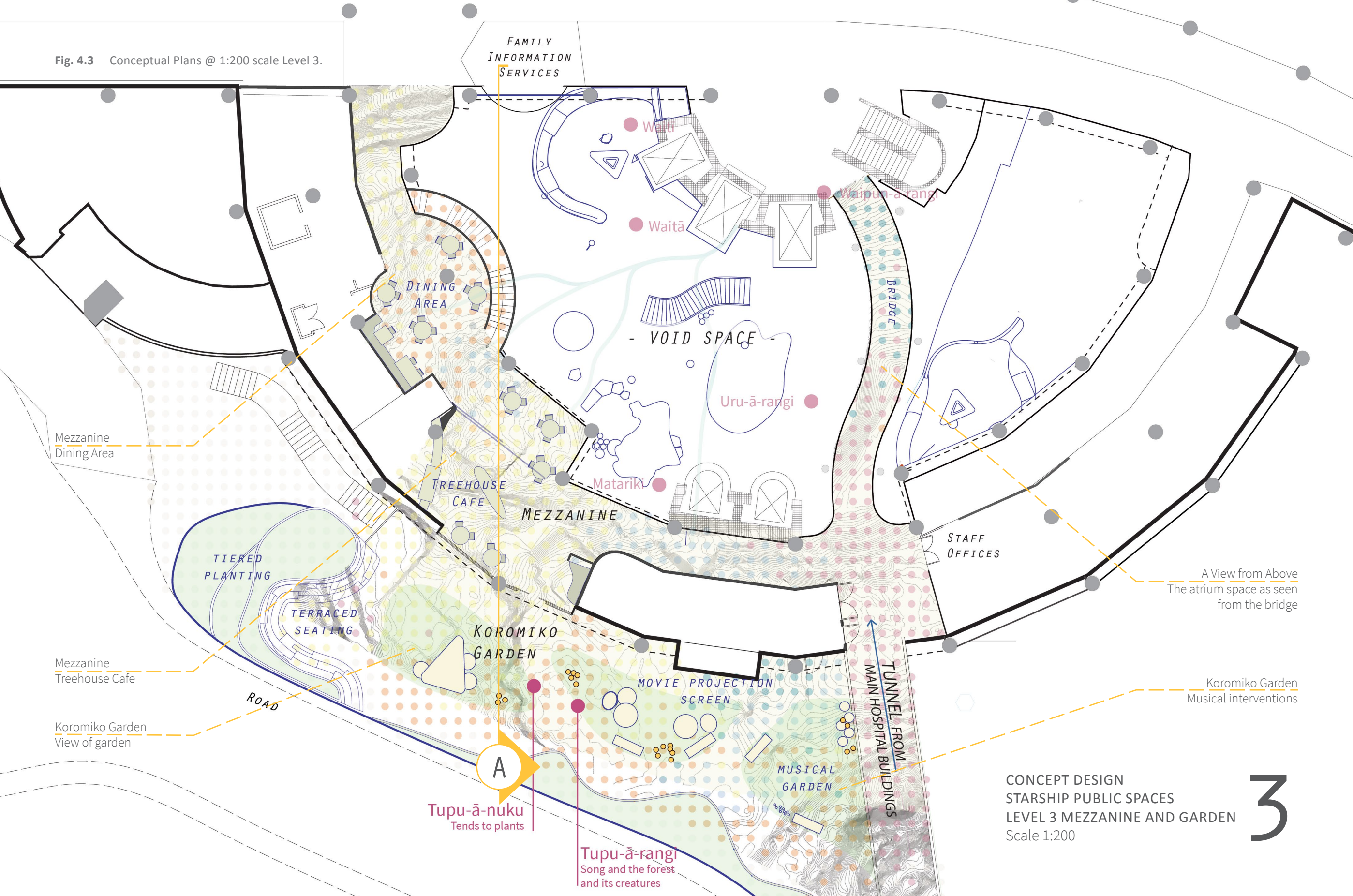




Fig. 4.3 Conceptual Plans @ 1:200 scale Level 3.



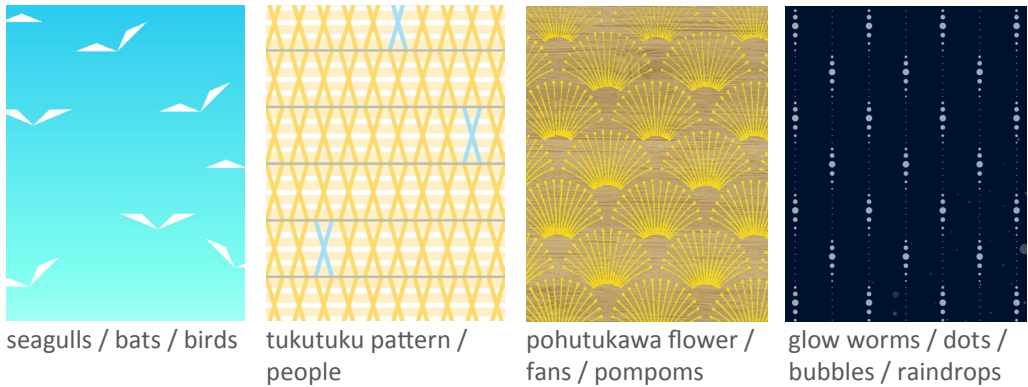


# micro narratives.

Material studies seek narratives in play and interferences between surfaces and colour, drawn together to offset the rigidity of the hospital environment. Colour, materiality, pattern and geometry were explored as suggestions of form and surface detailing that would be compatible with common hospital design considerations such as health and safety.

Themes and surface treatment feature patterns inspired by drawings from the children’s design charrette. They appear as motifs to carry ‘micro narratives’, which can applied as flat surface details into the space to create visual interest. Occupants can discover these details and create their own stories based on how they interpret the intentionally ambiguous forms.

Fig. 4.4 Four micro narratives and various interpretations.



Extending the Starship Colour Palette

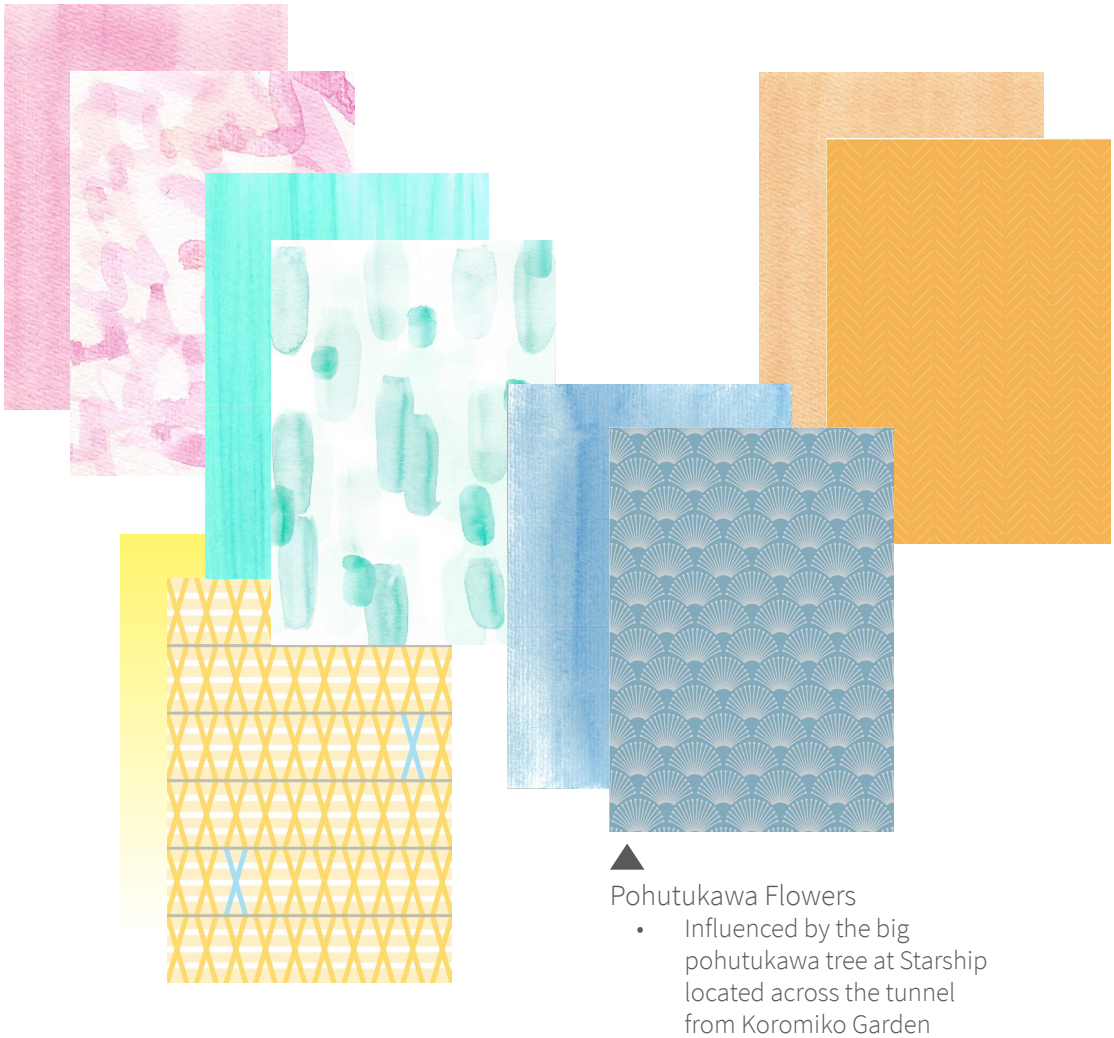


Fig. 4.5 Colour palette micro narratives.

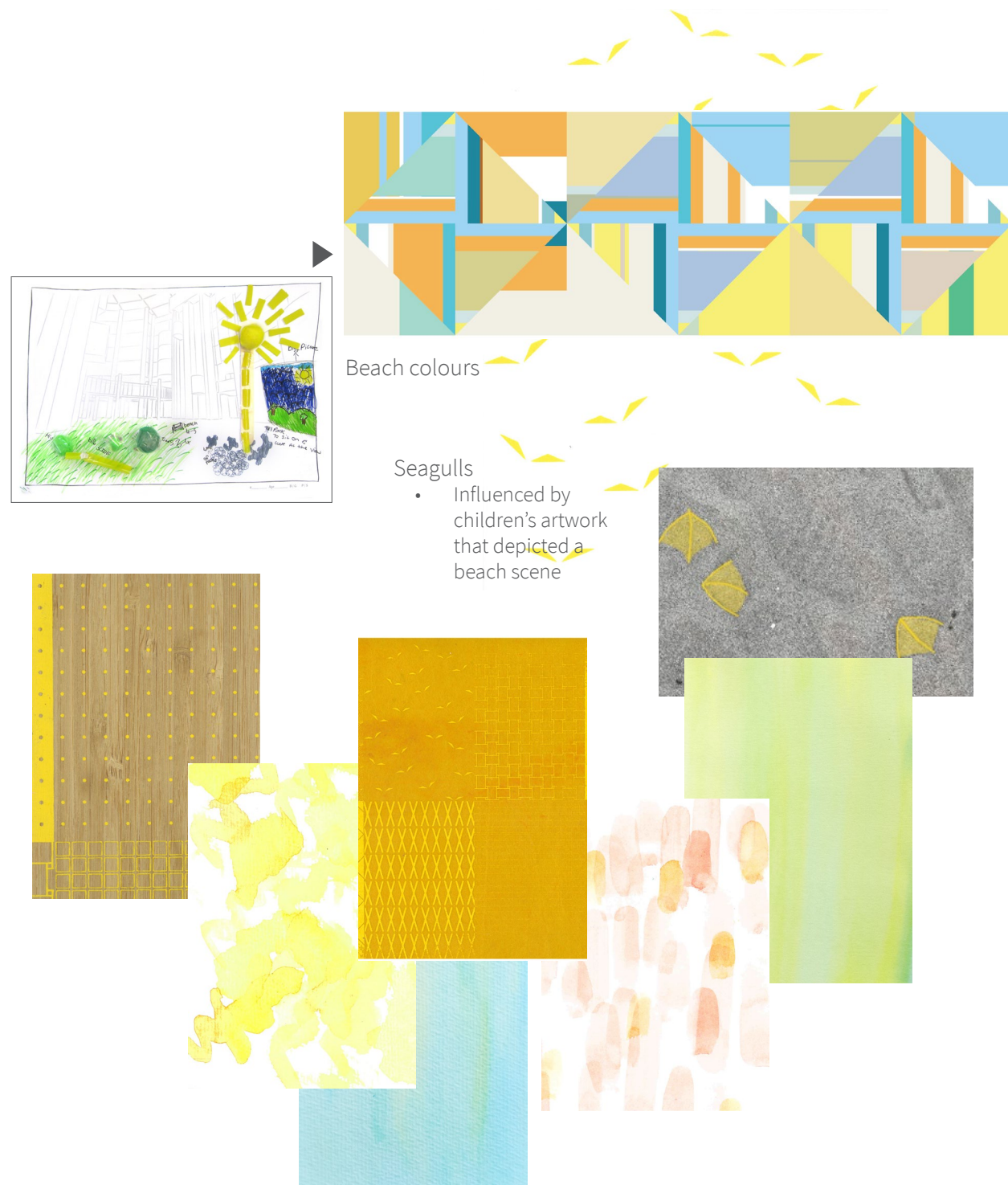


Fig. 4.6 Beach micro narratives.

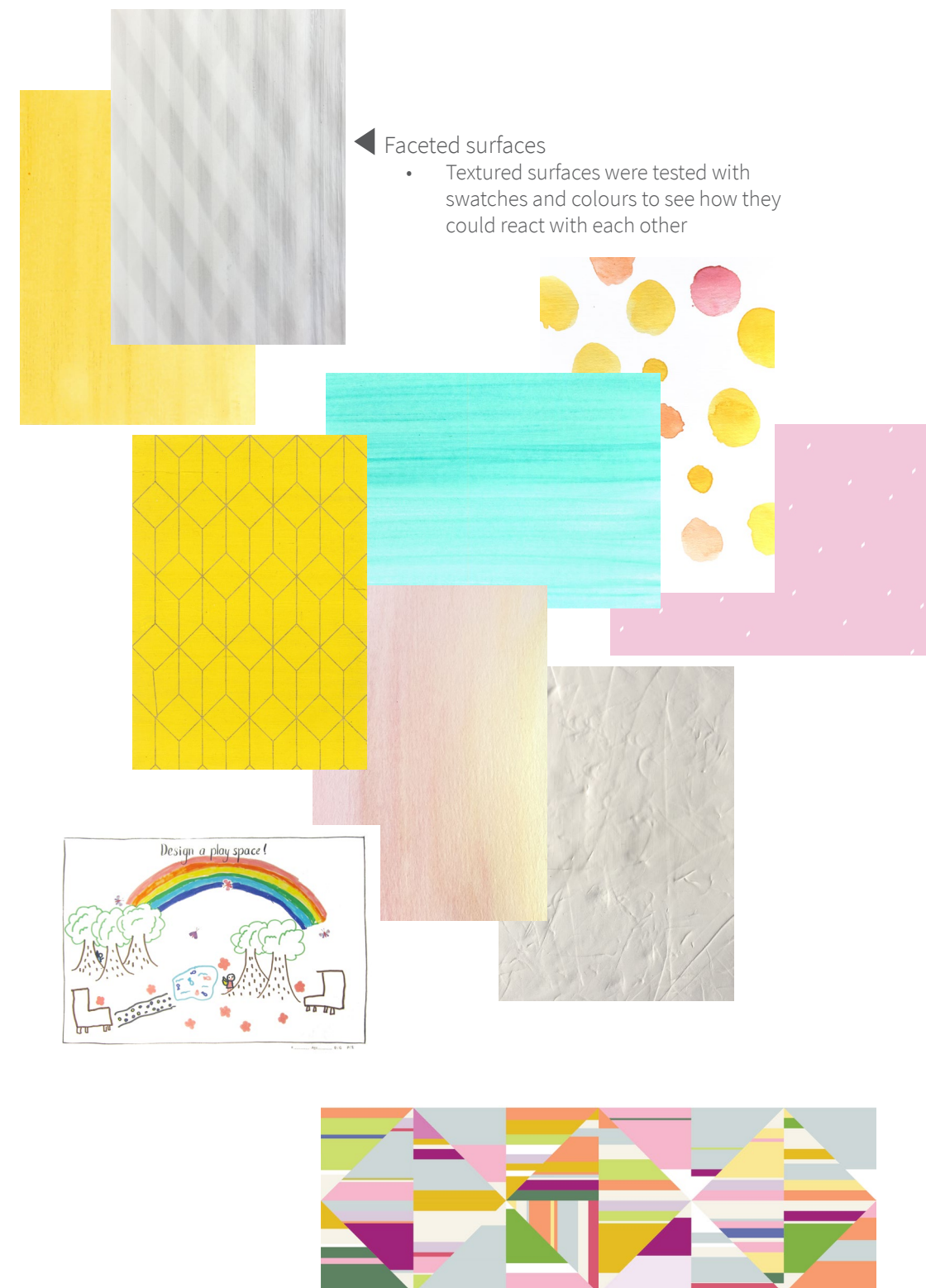
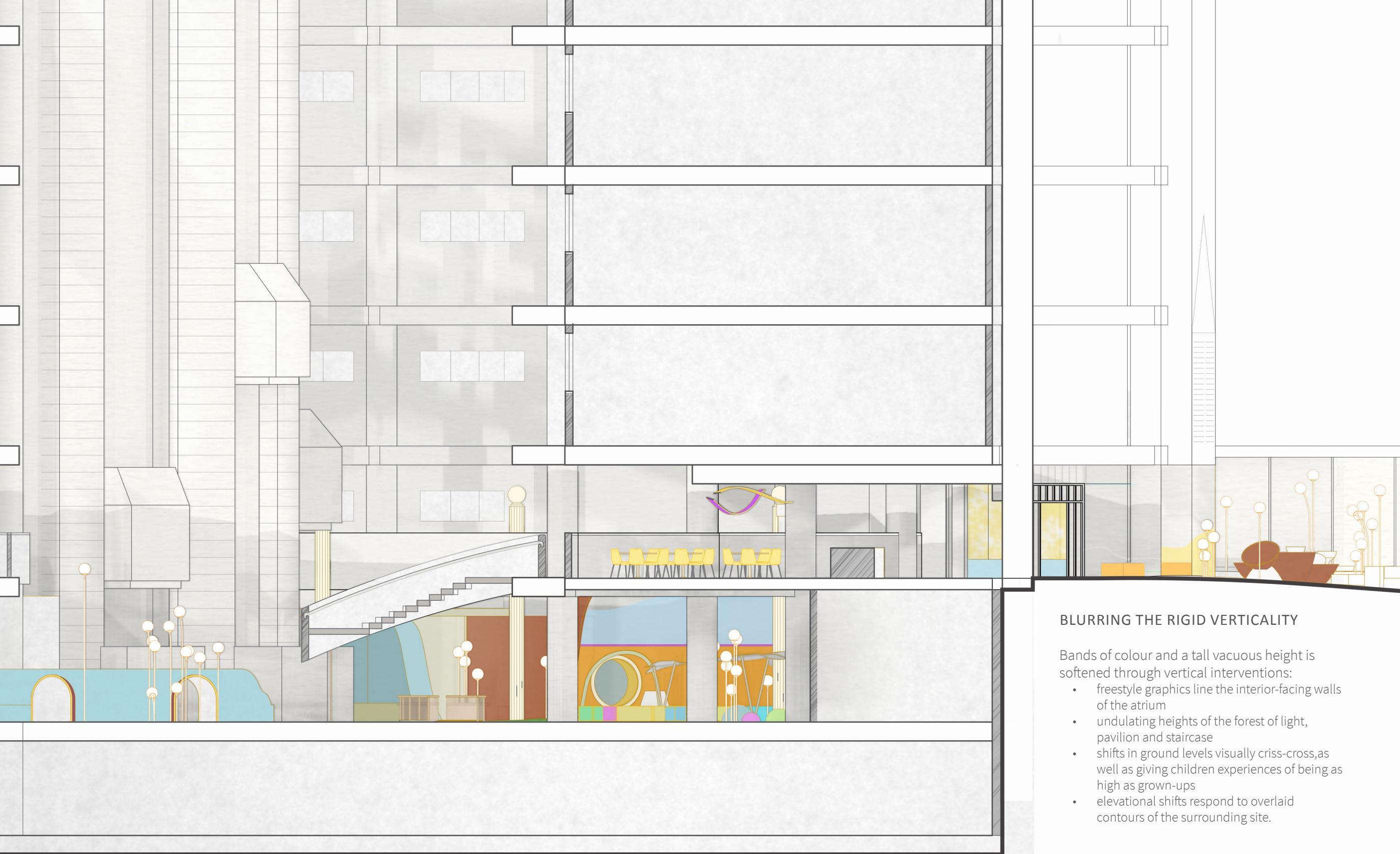


Fig. 4.7 Winter Garden colours micro narratives.





#### BLURRING THE RIGID VERTICALITY

Bands of colour and a tall vacuous height is softened through vertical interventions:

- freestyle graphics line the interior-facing walls of the atrium
- undulating heights of the forest of light, pavilion and staircase
- shifts in ground levels visually criss-cross, as well as giving children experiences of being as high as grown-ups
- elevational shifts respond to overlaid contours of the surrounding site.

**Fig. 4.8** Partial Cross Section (A) Scale 1:100.





**Fig. 4.9** Night scene from middle of atrium looking towards the eastern side.

### WHAT HAPPENS WHEN STARSHIP GOES TO SLEEP?

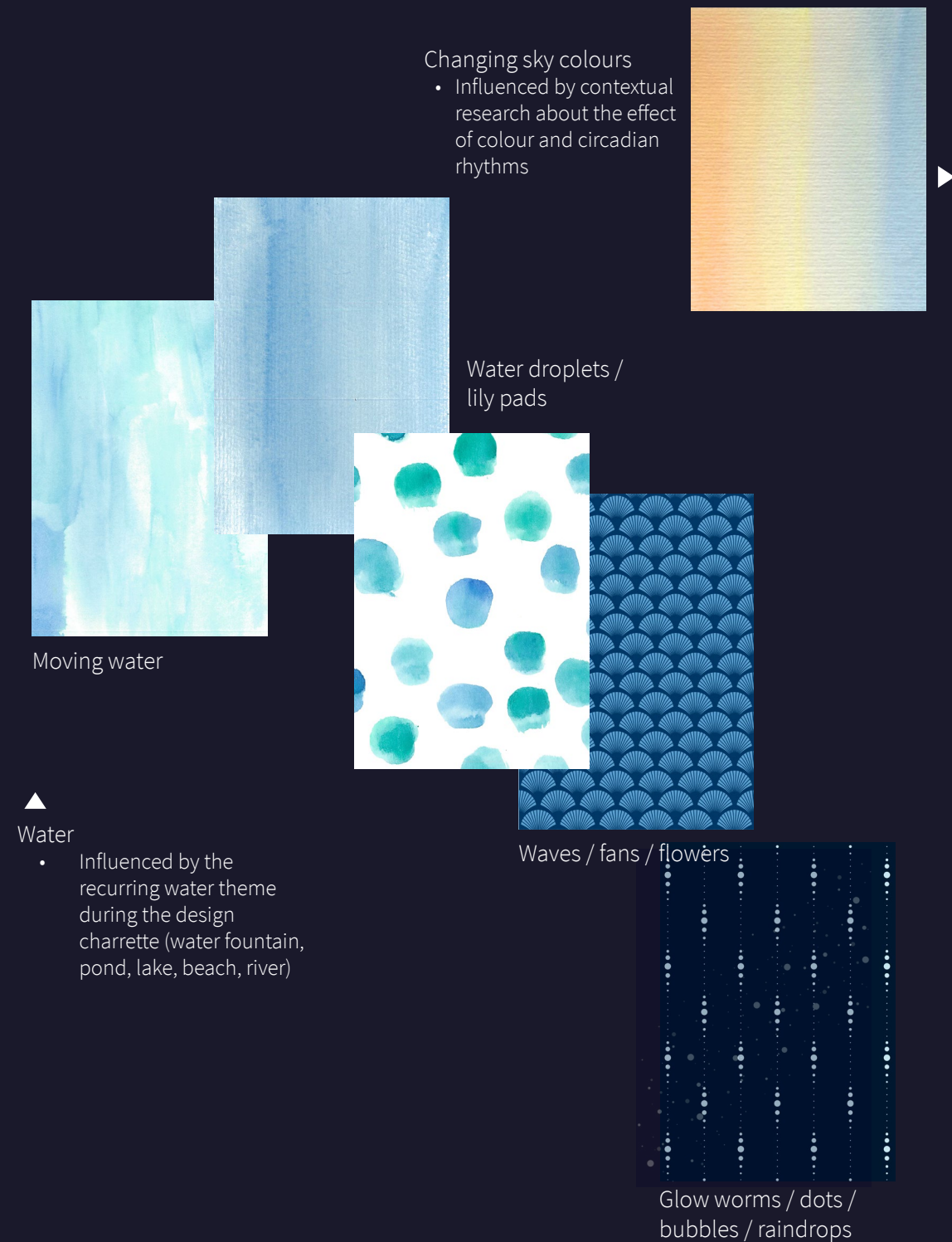
Interactive skyscape under the bridge

Colours and lighting support circadian rhythms to improve sleep cycles

Influenced by the Matariki narrative and starry night themes in children's artworks

night.



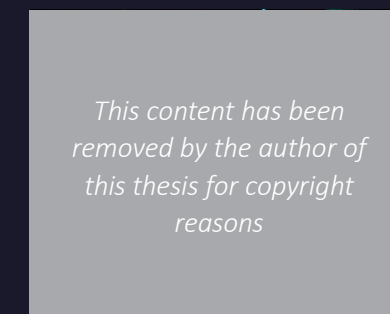


**Fig. 4.10** Night scenes (water and luminescence) micro narratives.

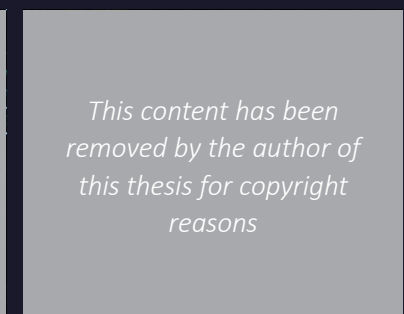


Colour palette of changing skies

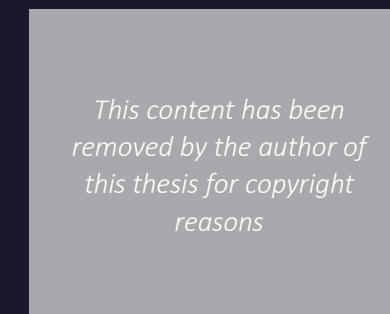
#### Lighting inspired by NZ natural phenomenon



**Fig. 4.11** N/A (n.d.) Waitomo glow worm caves



**Fig. 4.12** Ho (2014). Bioluminescent plankton



**Fig. 4.13** Hartill (n.d.). Southern lights / Auroras

# INTERACTIVE BRIDGE

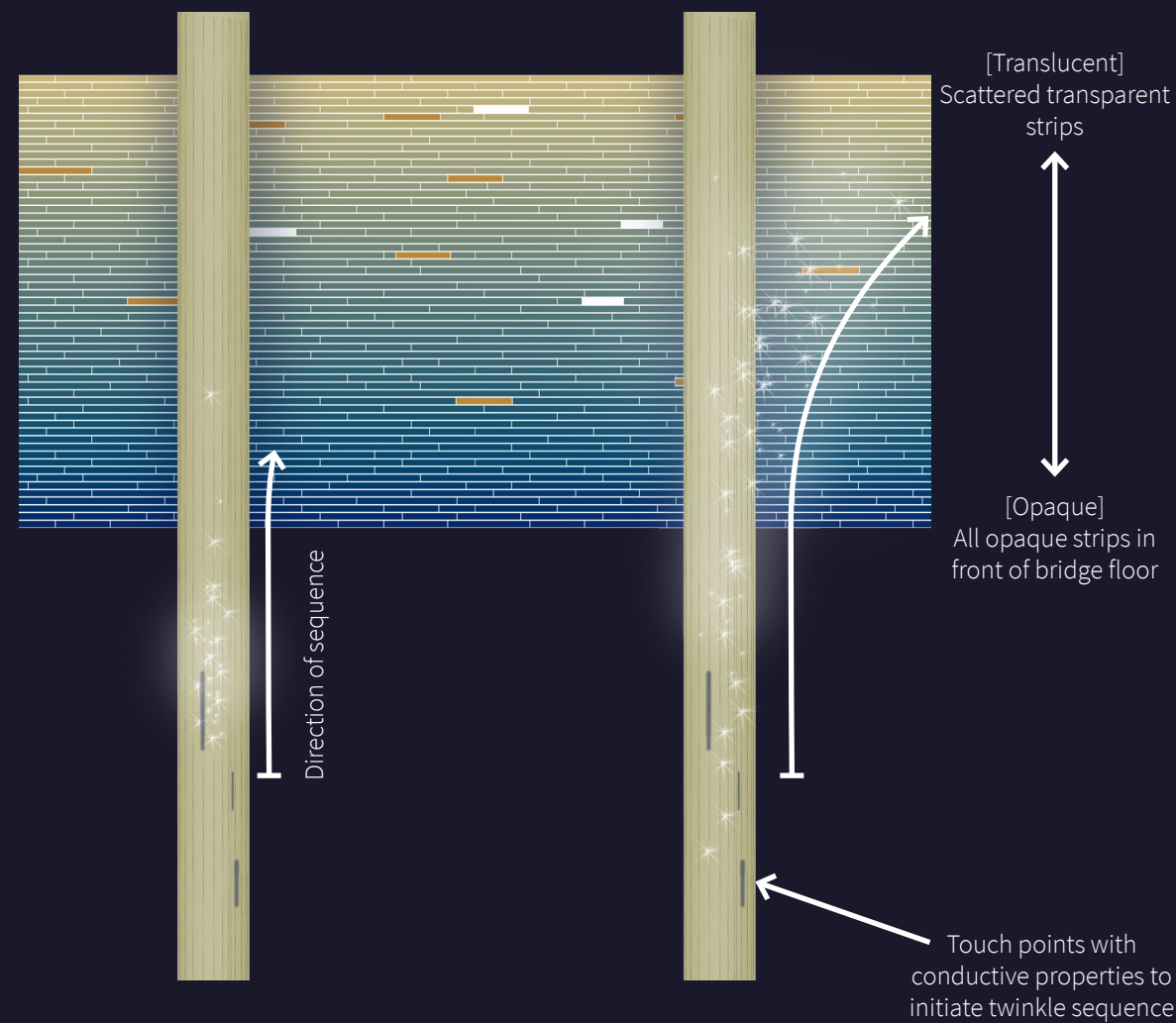
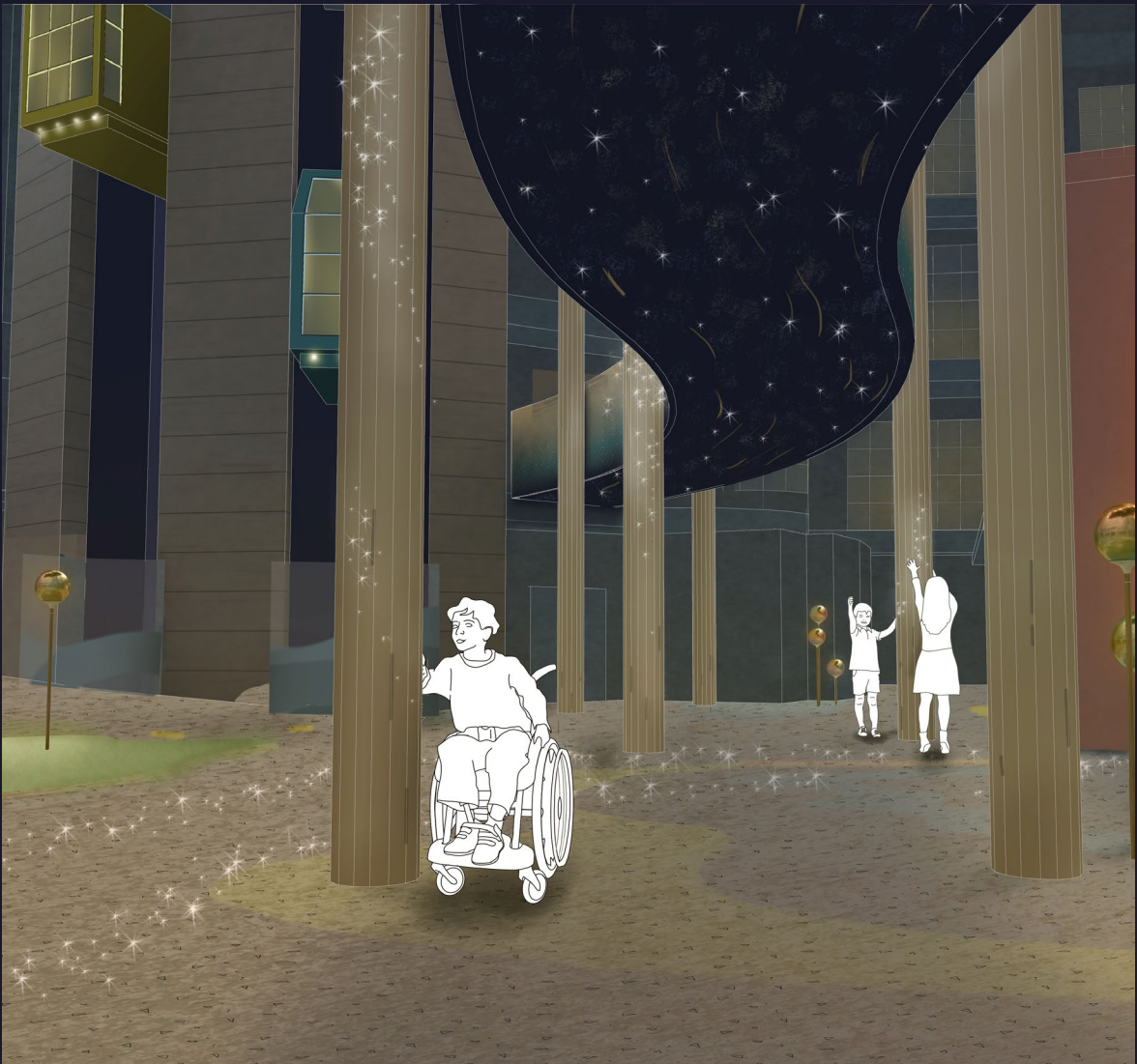


Fig. 4.14 Diagram of interactive bridge.



# UNDER THE BRIDGE

The columns have touch-responsive patches (e.g. conductive paint) that initiate a **twinkly** effect on the bridge. It creates a slow meteor-like effect that travels up the **column** onto the bridge's facade and fans out.

Fig. 4.15 Underneath the interactive bridge.



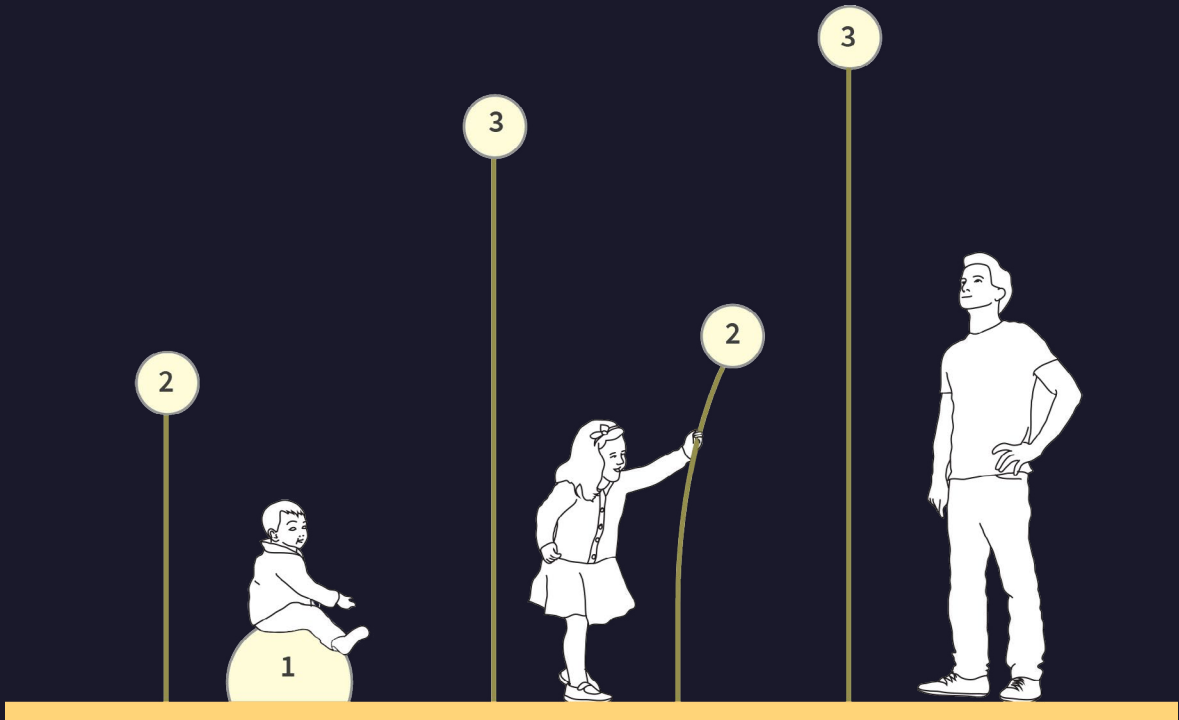
# FOREST OF LIGHT

These lights can be imagined as trees, bubbles, or balloons.

**Colour changing globes** have LED bulbs (RGB) programmed to respond to the time of day and year, or to suit special occasions or functions

Normally during the day, only a scattered selection will have bright white lights. From the evening, colours shift from sunset reds and oranges glows to tranquil blue-green hues at the break of dawn. This is to reflect with colours that aid the body's natural **circadian rhythm** to assist with sleep patterns.

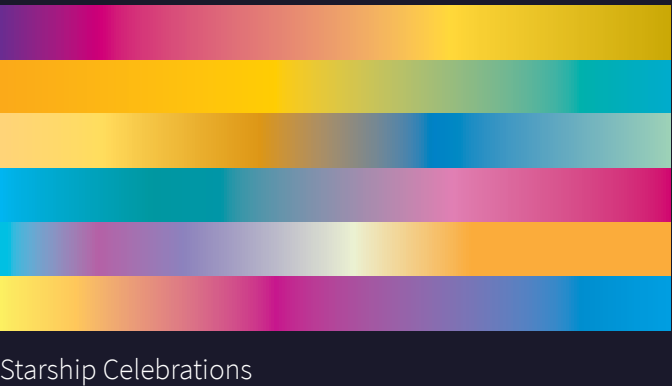
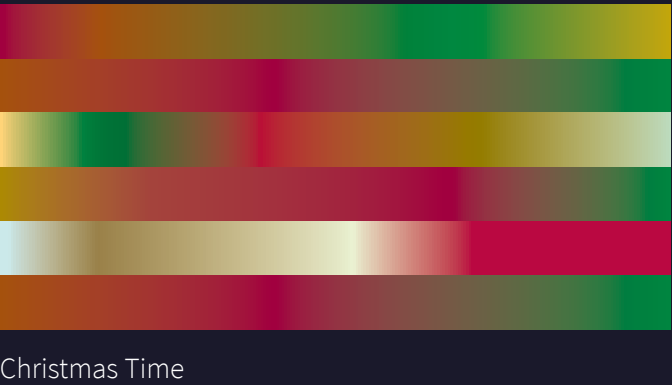
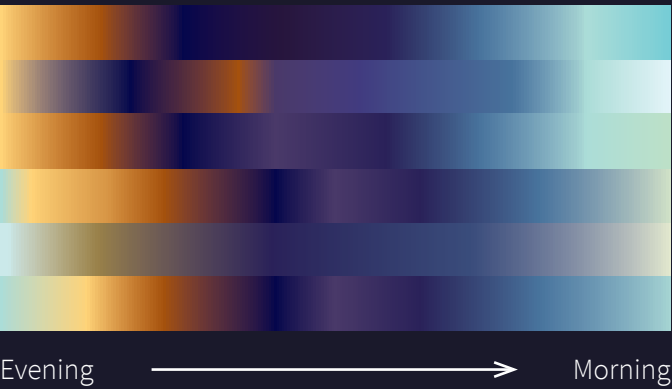
**VISUAL MOTIFS**  
This shape reflects the rhythmic columns topped with spherical capitals throughout the building.



**HEIGHT VARIANTS**  
1- Grounded squishy squabs  
2- Medium semi-flexible  
3- Tall stationary lamps

Fig. 4.16 Forest of Lights diagrams.

## COLOUR CHANGES FOR LIGHTING PROGRAMME



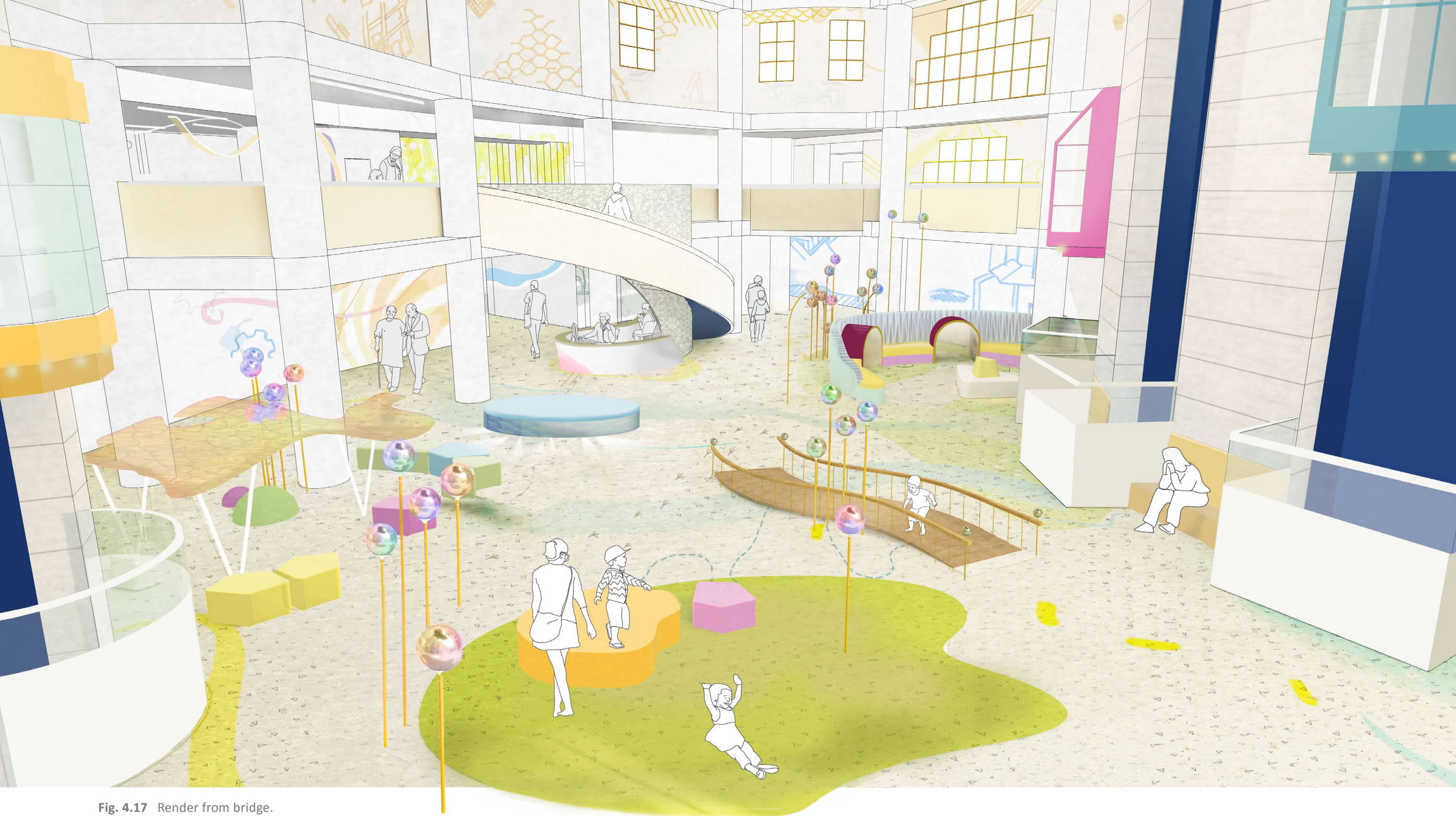


Fig. 4.17 Render from bridge.

## A VIEW FROM ABOVE

Looking through the bridge on level 3 down to see the sweeping elevational shifts

atrium.





Fig. 4.18 Bridge.

BRIDGE ACOUSTICS

As you walk, hear the distinct sonorous board-walk **sound**. The handrail is textured so that it acts like a guiro (musical instrument) as you run your fingers across it.

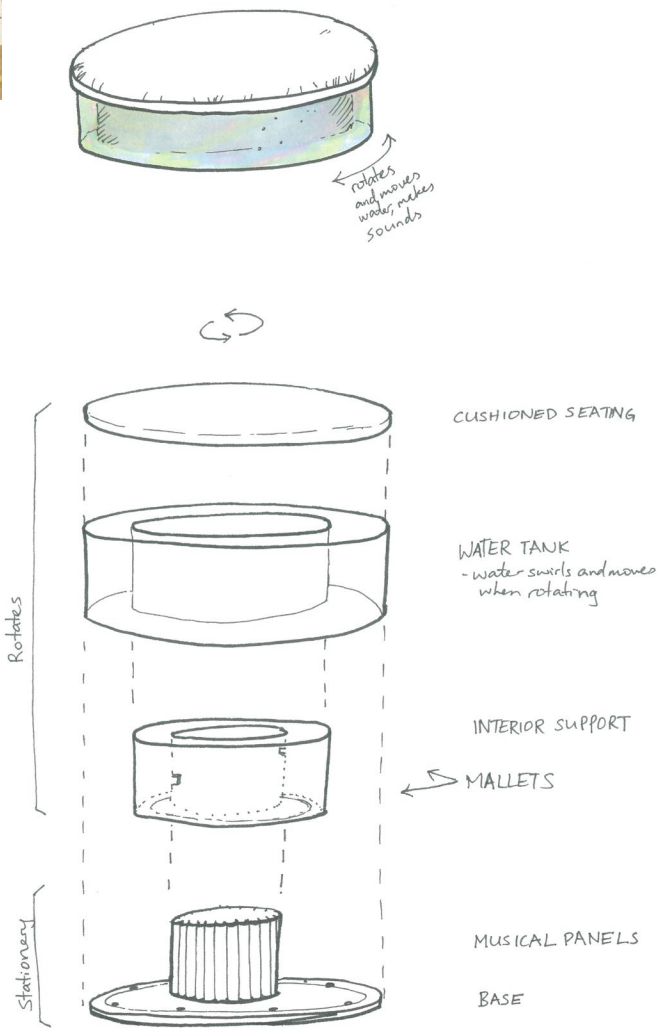


Fig. 4.19 Spinning Musical Couch.

DYNAMIC FURNITURE

To encourage movement and also deter theft of furniture, some temporary pieces make sounds or light up when moved.

PROGRAMMATICS

How can the space be adaptable or have **seasonal changes**?  
What is the **future** of paediatric healthcare spaces?  
What role can **digital technology** play to improve healthcare experiences?

Fig. 4.20 Weekly activities for families - an example.

Day	Activity	Design consideration
Monday	<b>Story time</b> Visiting authors read books to children	Acoustic panels line the alcove ceiling and soft furnishing on the seats absorb sound
Tuesday	<b>Building</b> Using modular units to construct objects	Washable building units. A range of technical difficulty for different age groups and hand-motor skills. (Potential for physio-therapeutic play)
Wednesday	<b>Pet Therapy 1</b> A chance to cuddle furry friends and see family pets	Wipe down surfaces and fenced area
Thursday	<b>Tech Tac Toe</b> 3D printing Circuit drawing Pin-hole cameras Science demonstrations	Caters for older children- an age range that currently needs more activities
Friday	<b>Movie Night</b> Screening of 2 movies projected onto the wall. A 4pm session would be aimed at younger kids and the 6pm session would be aimed for children over 12.	Beanbags can be brought in to allow more seats. Caters for two age groups. A chance for social gatherings
Saturday	<b>Pet Therapy 2</b> A chance to cuddle furry friends and see family pets	-
Sunday	<b>Paper craft</b> Origami, cards, decoupage, drawing	Suitable for all ages

# PET THERAPY AREA

This scene shows a session of Starship’s pet therapy programme and how it can be adaptable for other activities

Influenced by the pink, orange and yellow colours of the Winter Gardens. In the Starship colour palette, these colours symbolise being welcoming, warm and nourishing. Orange is also the colour that represents land, which ties in with the Waiti and Waitā narrative associated with this area.



Fig. 4.21 Pet Therapy area colour board.



Fig. 4.22 A Pet Therapy session inside this nook.



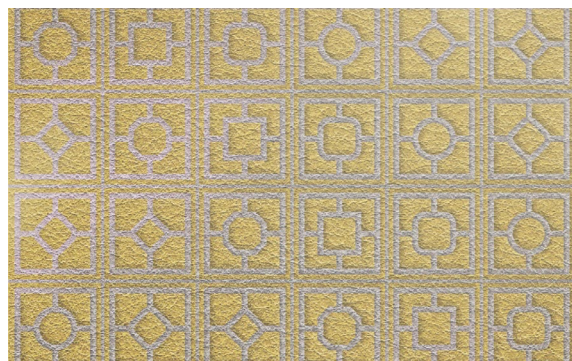


Fig. 4.23 Embossed PVC seat covers.

## FLOORING

The space is zoned by **Waiti** and **Waitā**, the Matariki stars associated with looking after insects. A grass pattern with spirals and wavy lines can be read as abstract insects, or squiggles or confetti. Subtle animal footprints make tracks across the floor.



Fig. 4.24 Pet Therapy flooring micro-narrative.

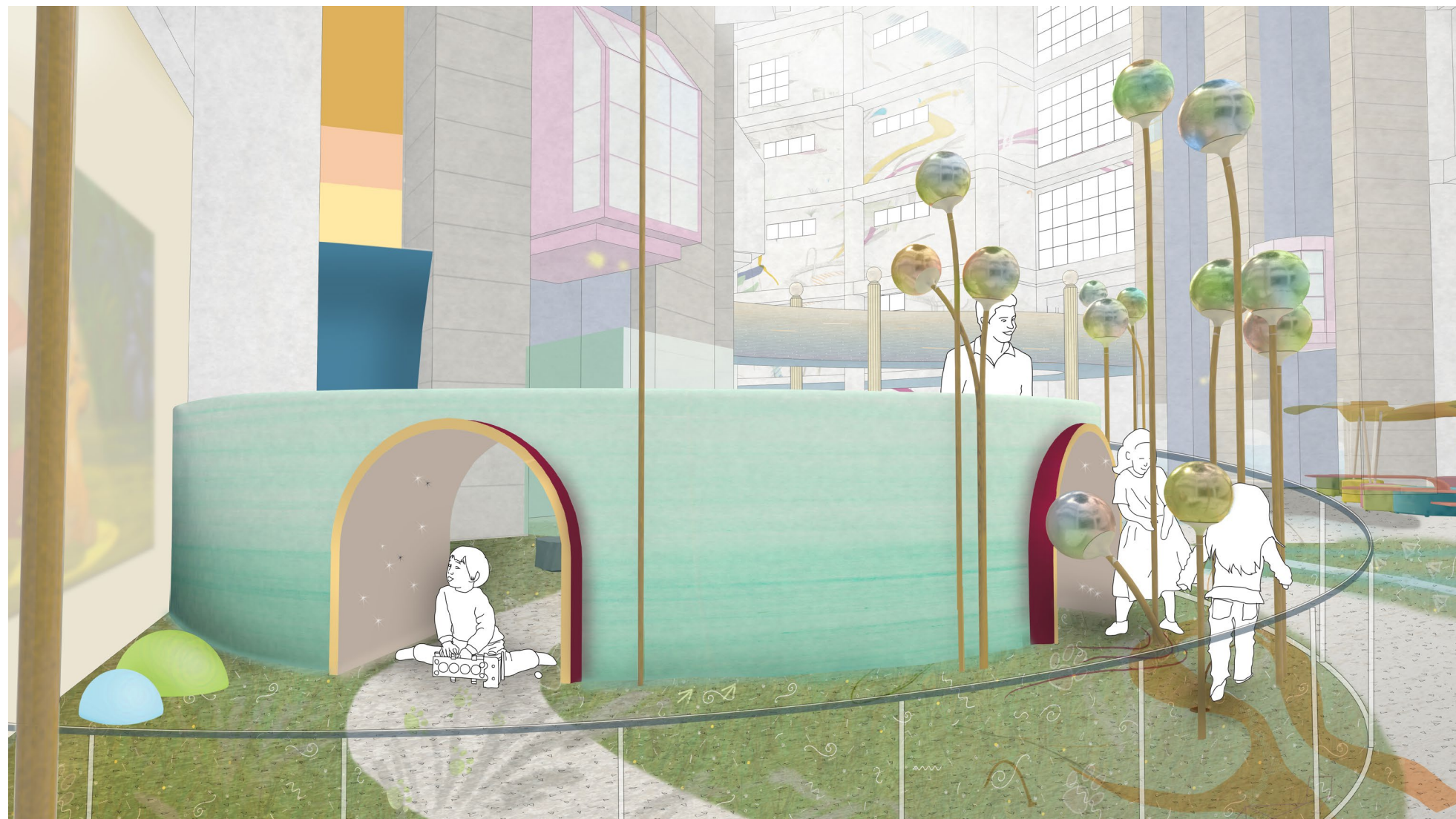


Fig. 4.25 Outside of the large couch and a removable fence.



# digital platform.

With the popularity of augmented reality and digital games, a platform to connect visitors could be a mobile app. “Field Guide” Interactive Mobile App is a concept that could be used by patients and families to interact with the space and other players. The “map” mode is a wayfinding tool to help visitors search and be guided to their destinations. In the “Free Explore” mode, patients and visitors can find “Points of Discovery” throughout the space and click on the yellow arrows to open an activity: there are multi-player games, educational information, snippets about the space’s design story, and sound bites. Difficulty levels can be adjusted based on age. Technologies used include GPS and Wi-fi to locate the player’s position, augmented reality, mobile device such as a phone or tablet, and physical icons that can be scanned through the device’s camera.

## PRECEDENTS

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Fig. 4.27 Niantic (2016). “Pokemon Go” app

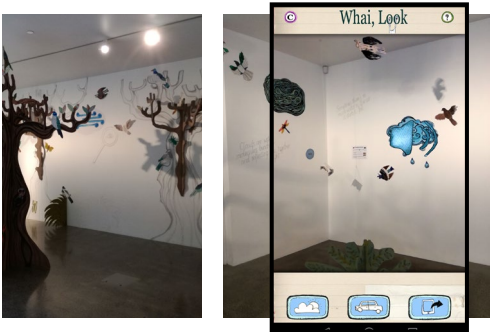
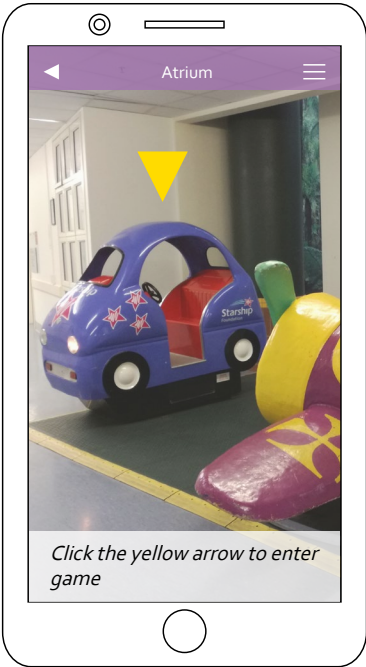


Fig. 4.26 F4 (2017). O-Tu-Kapua (What Clouds See) (TEMP Project)

## FREE EXPLORE MODE

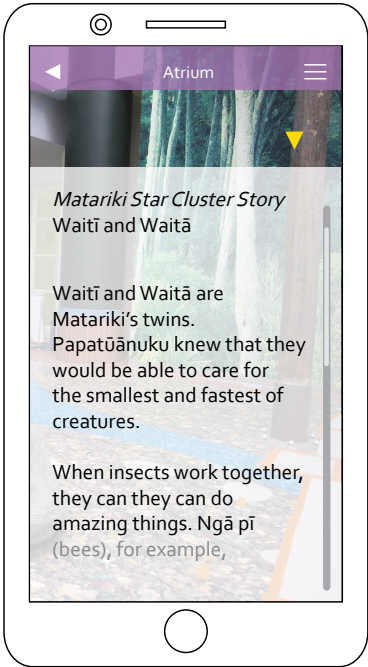
Multiplayer games



Scavenger hunt + Sound bites



About the redesign



## MAP MODE

Search function to find services, activities, and facilities around Starship

Learn about activities or plants

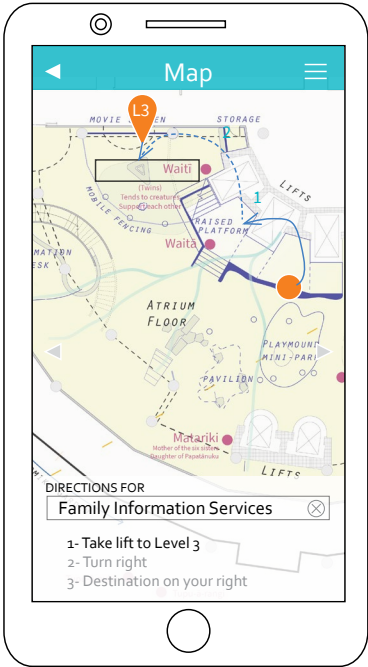
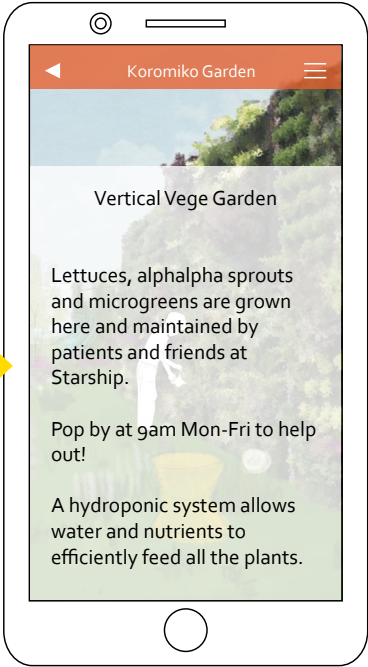


Fig. 4.28 App concepts.



# mezzanine.

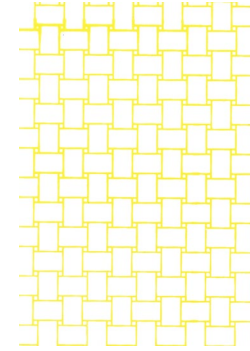
## CAFE + DINING AREA

An open area that continues the yellow/sun themes of this floor level and connects the atrium to the Koromiko Garden.

Fig. 4.29 Dining area.



Fig. 4.30 Yellow micro-narratives.



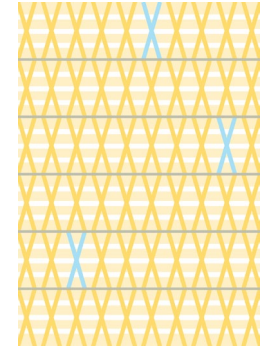
Woven basket /  
knuckle bones /  
grid



Seagulls / bats /  
birds



Yellow cloud-  
watching pattern

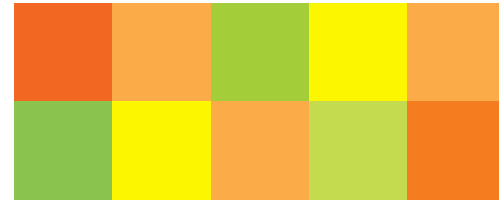


Tukutuku pattern /  
people





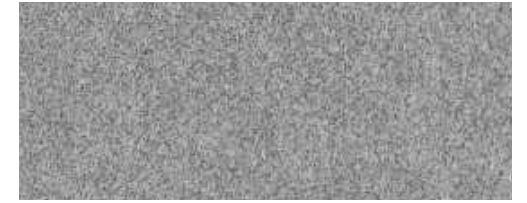
Continuation of the level 3 sun/yellow theme



Accent colours chosen can help to increase appetite



Geometrical terrazzo-like flooring pattern



More soft furnishings and acoustic panelling absorb noise and reduce echoes

**Fig. 4.31** (Above) Cafe colour and material palette.

**Fig. 4.32** Treehouse Cafe.





# garden.

## KOROMIKO GARDEN

An outdoor space for relaxation and activities in nature. The garden extends motifs of the **forest lamps** and curved coloured **paths**. It also has motion activated **sounds, musical instruments**, and a vertical **vege garden** that is tended to by children at the hospital. Being a shaded area, warm **colours** help make the space seem brighter. Red and oranges contrast and bring out the green in the grass and plants.

Fig. 4.33 West side of Koromiko Garden.





Fig. 4.34 Garden details.

MUSICAL INTERVENTIONS  
IN THE GARDEN

Reed xylophone

Rain drums



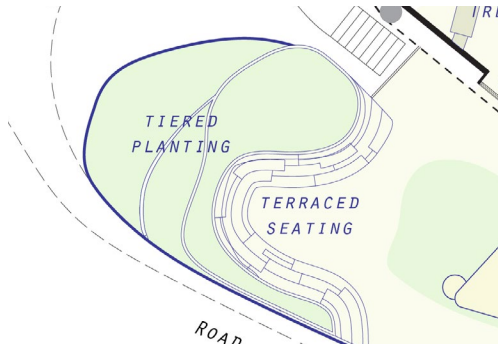
VEGETABLE GARDEN

A vegetable garden programme is an idea that stemmed from staff interviews and children's design charrette.



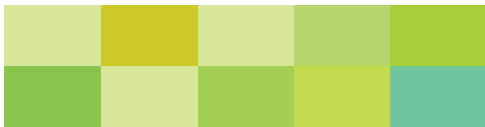
TERRACED SEATING

Terraced seating creates vertical variation and responds to the natural fall of the land where it is positioned.

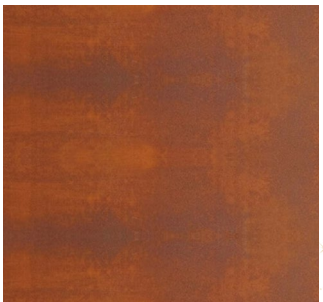


COLOUR

Reds and oranges create contrast with the plants to make greens appear greener.



Twinkle lights in the ground



GREENERY

Exposure to sunlight and landscaping is known to have therapeutic properties. The colour green that is most often found in nature is also referred to as "the master healer" (Biley, 1996, 114).

CONTRAST

Warm tones from terracotta clay or corten steel

PATHS

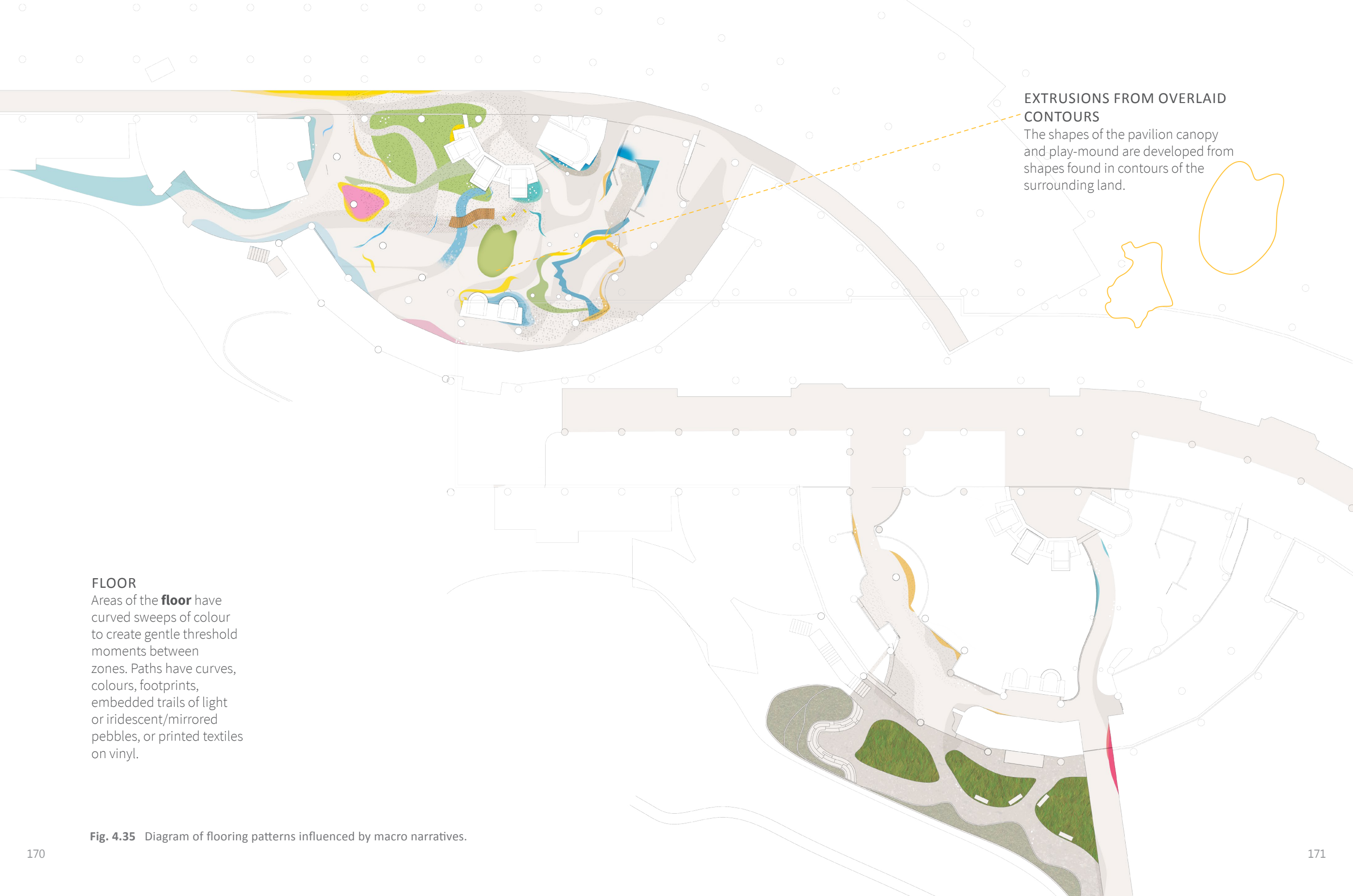
Composite concrete footpaths with shells and pebbles alluding to the beach. Its white colour is chosen to reflect and maximise light in the shaded garden.

DISCREET SPEAKERS AND MOTION SENSORS



Time/Place	Motion-activated sound
5-9am	Morning chorus (birds)
9-12pm	Water fall
Lunch	Rustling leaves
Afternoon	Rain
6-10pm	Crickets





**EXTRUSIONS FROM OVERLAID CONTOURS**

The shapes of the pavilion canopy and play-mound are developed from shapes found in contours of the surrounding land.

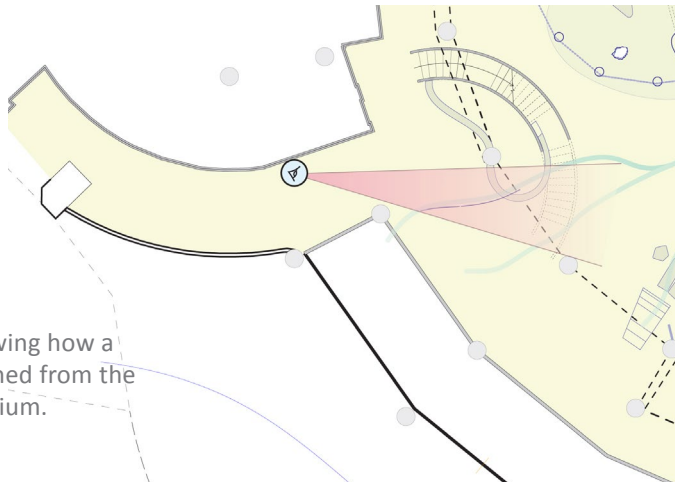
**FLOOR**

Areas of the **floor** have curved sweeps of colour to create gentle threshold moments between zones. Paths have curves, colours, footprints, embedded trails of light or iridescent/mirrored pebbles, or printed textiles on vinyl.

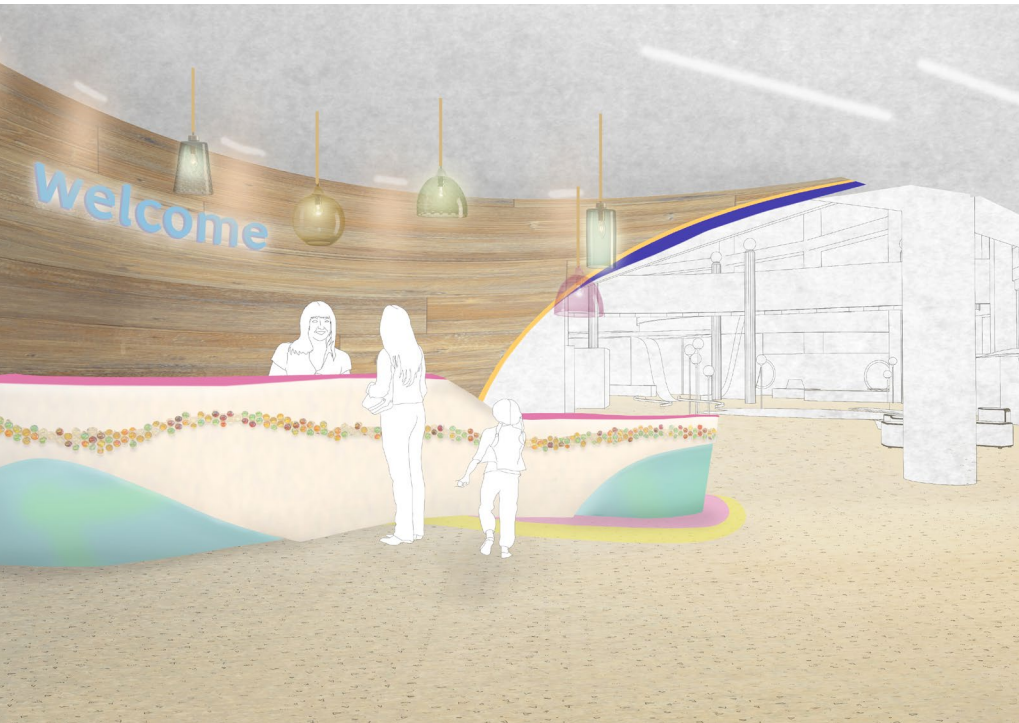
**Fig. 4.35** Diagram of flooring patterns influenced by macro narratives.

# WELCOME

The enclosed reception at the end of the Carpark B entrance has been changed opened up. The **line of sight** now extends into the space, improving a sense of arrival.



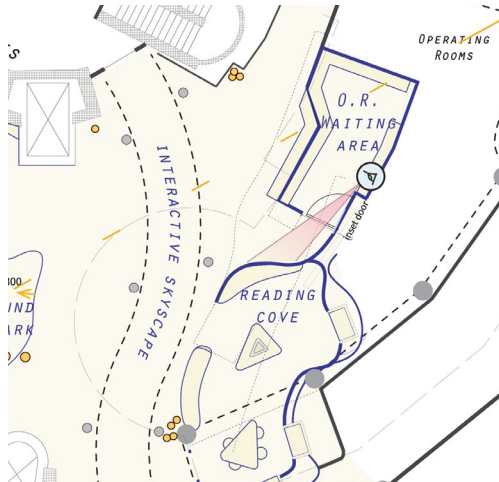
**Fig. 4.37** Reception- Plan showing how a line of sight has opened from the entrance into the atrium.



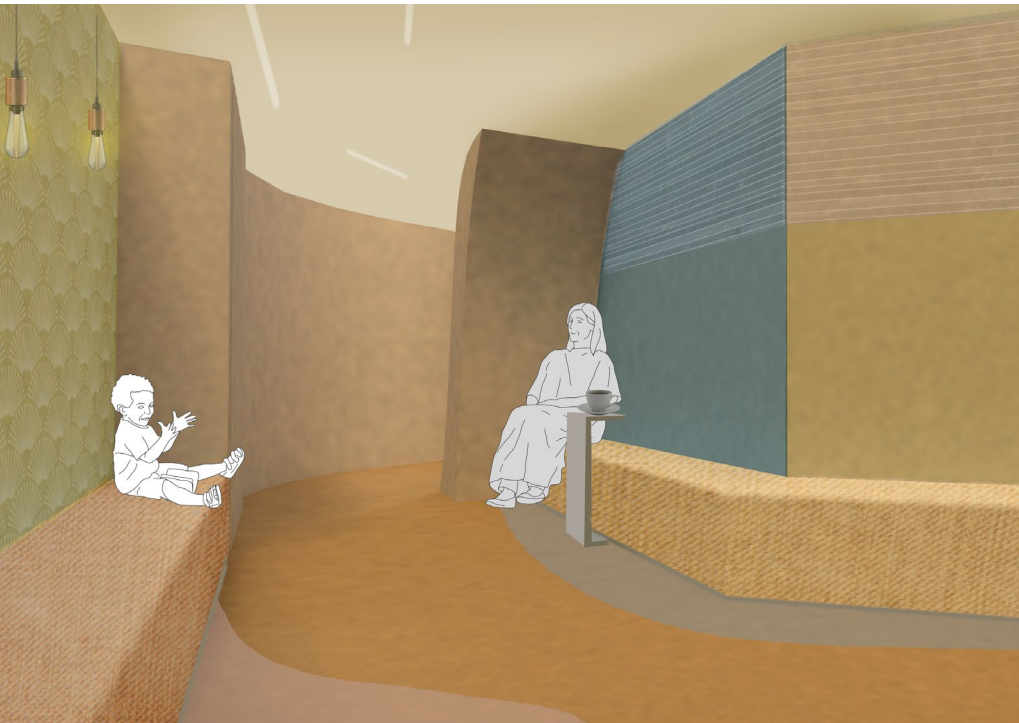
**Fig. 4.36** Reception- The information desk has light-up-marbles; a detail set at a child’s eye level.

# NOOKS

A variety of wide open spaces as well as nooks and crannies are spread throughout the atrium to suit people with different moods or personalities.



**Fig. 4.39** Operating room waiting room- Plan showing how a curved wall at the entrance blocks line of sight into the waiting room for privacy.



**Fig. 4.38** Operating Room Waiting room.

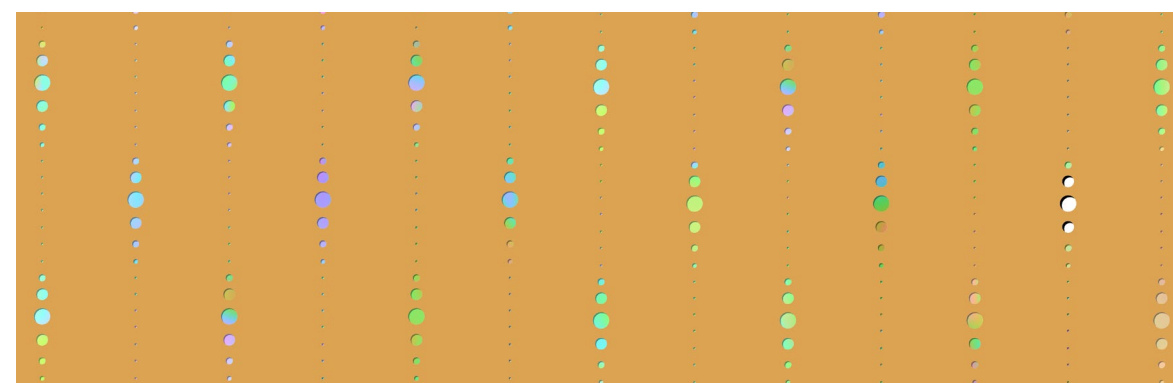




## READING NOOK

**Fig. 4.45** Reading nook with circular seating coves and activity table.

**Fig. 4.46** Iridescent 'glow worms' micro narrative. Some are holes that disguise speakers. ▶



# discussion.

With patient-centred design in mind, this research focussed on the holistic needs of children in Starship Children's Health's public spaces. This project began by asking how an enquiry into play could activate therapeutic hospital environments through empathy, imagination, enchantment and discovery. As "play" can often be interpreted as merely playgrounds (along with its risk of injury), this word was carefully framed for this project. The value of play in a children's hospital was seen to lie in its ability to offer young patients a sense of control and expression as well as a form of escape and comfort.

As a cross-disciplinary research project (spatial and healthcare design), the impact of user-engagement was considered fundamental to the approach. Interviews with staffs/stakeholders<sup>1</sup> highlighted the need to shape a user-centric brief to include the hospital's identity and aspirations for an inviting public space- a place of play that resides outside the procedural and medical aspects of the hospital experience. As children's experiences are normally heard through the proxy voices of adults (parents/guardians or health care professionals), this method helped to advocate for children's voices (Dickinson, Wrapson, and Water, 2014). Their artworks helped to give agency to their views when engaging with the hospital stakeholders, and in some cases evoked powerful responses from those in positions of power or influence.

Interviewees recommended a variety of available traditional and newer, high-tech interventions found in other hospitals that they thought children might like. These types of interventions are also commonly found in other children's spaces such as science-technology museums.

Responses from charrette participants felt more

---

<sup>1</sup> Stakeholders include play specialists, family information services, project managers, and also regular meetings with Starship management. Refer to Appendix C:1.



imaginative and conceptual, free from constraints and practicalities that adults would focus on. Many children drew physical forms of interaction, whereas staff were more hesitant about major physical interventions due to the risk of injury. Their voice gave this proposal 'permission' to have a more creative and abstract concept. Some participants were very aware of their environment and showed care for the wellbeing of other patients by drawing rest areas, soft surfaces, and healing artefacts. "Play space" was commonly associated with playgrounds as shown through drawings of equipment like monkey bars and slides. Themes of enchantment and discovery were revealed through the charrette. One (child) participant spoke extensively about a fairy garden with nooks along a path to discover pixies and plants.<sup>2</sup> Nature themes in all of the children's artworks supports Starship's use of nature theming and shows that children also recognise nature as a good place to play, affirming literature around the benefits of exposure to the outdoors (Louv, 2005; Biley, 1996).

Participatory art-based methods were chosen over direct interviews with children as they are familiar form of communication, more inclusive and work as a means to find out what children perceive as important within a hospital environment.<sup>3</sup> The addition of the craft trolley worked as an ice breaker, something exciting and playful, and to show them that this activity was created especially for them.

The children's artworks were synthesised into a series of micro narratives and thematic ideas. Micro narratives were explored through material, surface and colour to spatially activate the atrium. These became layered stories that allowed the space to be rich with details that could be uncovered over time. Macro narratives act as a space planning device and link the

2 Participant #22 Appendix C:2 page 206.

3 Art based methods were also used in a study for an adjacent space at Starship (Outpatients department) (Water et al., 2015).

geological context of the hospital and the surrounding urban context to the hospital interior, allowing for a connection to the wider city. The domain, natural springs and volcanoes that are part of our city scape are reinterpreted as terrain shifts and zones of exploration.

Upcoming developments for Starship include a refurbishment of these public spaces (atrium, garden, and mezzanine). This proposal will be presented to Starship management and the Refurbishment Steering Committee as an input into the next stage.

The next steps for the project would include returning to the users through a family-engagement activity to evaluate the proposal. Hospital management have indicated that they would be interested in running a larger scale 'hackathon' with children and their families.<sup>4</sup> Using the approach to this research's charrette as a precedent, there would be some adaptations to the toolkit and activity to make it more applicable and engaging to a wider range of participants. Further research could also involve the development of participatory design methods for teenagers, as there was no participation from this age group.<sup>5</sup>

The design proposal presented here offers quiet and loud zones for different activities. Likewise, future design workshops should consider the different needs of participants. A larger workshop like the hackathon might provide a more collaborative and creative environment for extroverted participants, but could be intimidating for others. As equally, large workshops can provide participants with more time and space to work individually and have less pressure to immediately discuss their work with myself or other facilitators. Charrette participants in this project appeared mostly at

4 Hackathon= Large scale design workshop or charrette.

5 Teenagers often find themselves stuck between childish activities or feeling patronised by activities aimed at adults (Nakarada-Kordic et al. 2017: 3).

ease to have one-on-one discussions with me. However it is possible that some may have been more comfortable with more time by themselves to develop their ideas.

The colour swatches I made for participants to pick out their preferred combinations were not an effective tool- the same result could be achieved by simply asking for their favourite colours.<sup>6</sup> A future engagement might instead ask children to create combination of colours using more interesting swatches.

The proposal was founded on the hospital's heritage, the wider urban context, and its users. This suggests how a methodology of user-engagement combined with more traditional spatial design techniques can contribute to a proposal empathetic to the site and its users. Interviews and research into the original design establish that play has a key role in the purpose of the atrium. The charrette showed that play for children is a mix of both physical and imaginative activity. Although the design is site-specific to Starship and Auckland, New Zealand, the user-engagement research and interpretation of findings through micro and macro narratives could be applied in other hospitals. It also shows how an adapted holistic notion of play can contribute to healthcare environments.

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6 Refer to Appendices B.4 and C.2.



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# appendices.

## **Appendix A: Ethics Approval**

- A.1 Letter of Approval
- A.2 Letter of Approval for Amendment

## **Appendix B: Tools**

Staff / Expert interviews (incl. focus group)

- B.1 Interview questions
- B.2 Participant Information Sheet
- B.3 Consent form

Children's Design Charrette

- B.4 Charrette plan
- B.5 Participant Information Sheet
- B.6 Consent form
- B.7 Letters of support

## **Appendix C: Sample of thematic analysis**

- C.1 Thematic analysis of expert interviews
- C.2 Thematic analysis of children's design charrette

## **Appendix D: Research outputs from thesis or publication from thesis**

- D.1 Design4Health Journal Abstract

## A.1 Ethics: Letter of Approval

AUT

### AUTEC Secretariat

Auckland University of Technology  
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T: +64 9 921 9999 ext. 8316  
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27 March 2017

Susan Hedges  
Faculty of Design and Creative Technologies

Dear Susan

Re Ethics Application: **17/76 Playscapes/ Pure Ludens**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 27 March 2020.

As part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through <http://www.aut.ac.nz/researchethics>. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 27 March 2020;
- A brief report on the status of the project using form EA3, which is available online through <http://www.aut.ac.nz/researchethics>. This report is to be submitted either when the approval expires on 27 March 2020 or on completion of the project.

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to obtain this.

To enable us to provide you with efficient service, please use the application number and study title in all correspondence with us. If you have any enquiries about this application, or anything else, please do contact us at [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz).

All the very best with your research,



Kate O'Connor  
Executive Secretary  
Auckland University of Technology Ethics Committee

Cc: [jewelyan.jy@gmail.com](mailto:jewelyan.jy@gmail.com); Stephen Reay



## AUTEC Secretariat

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28 June 2017

Susan Hedges  
Faculty of Design and Creative Technologies

Dear Susan

Re: Ethics Application: **17/76 Playscapes/ Pure Ludens**

Thank you for your request for approval of amendments to your ethics application.

I have approved the following amendments to your ethics application:

1. Changes to the recruitment and data collection protocols for the purpose of interacting with children in their play spaces, with parental consent;
2. Changes to the research methodology;
3. Additional research outputs.

I remind you of the Standard Conditions of Approval.

1. A progress report is due annually on the anniversary of the approval date, using form EA2, which is available online through <http://www.aut.ac.nz/researchethics>.
2. A final report is due at the expiration of the approval period, or, upon completion of project, using form EA3, which is available online through <http://www.aut.ac.nz/researchethics>.
3. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form: <http://www.aut.ac.nz/researchethics>.
4. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.

Please quote the application number and title on all future correspondence related to this project.

AUTEC grants ethical approval only. If you require management approval for access for your research from another institution or organisation then you are responsible for obtaining it. If the research is undertaken outside New Zealand, you need to meet all locality legal and ethical obligations and requirements.

For any enquiries please contact [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz)

Yours sincerely,

Kate O'Connor  
Executive Manager

## Notes:

- Complete consent form
- Audio-record if permitted
- Introduce my work in progress
- Site includes Atrium, Koromiko garden and Level 3

## Themes of interview:

- What is the space currently used as?
- What is its potential from your perspective (purpose, activities)?
- Project constraints

## Interview questions:

- What is your role at Starship?

## Atrium space questions:

- What is the purpose of this space and who uses it? (e.g. patients, staff, families?)
- How is it currently used? (e.g. entrance, waiting space, play space?)
- How could the space be more effectively used?
- Play is a major theme in my research. How is it evident in the hospital, would you like to see more of it? How could it be facilitated more in the atrium?
- What is the role of the OR waiting room? How is it used? Can this be more integrated with the atrium? Coffee?
- Access to Garden?

## Other:

- What should I keep in mind to make the space inclusive for children of different ages and abilities?
- Is there a space missing at Starship that could be placed in the atrium?
- Is there anything else you would like to mention?

## Design workshop/hackathon/charrette:

- I hope to organise a design workshop using art-based methods that will give children a voice into the project. What I hope to gain from this exercise is an insight into what matters to them.
- In our meeting I will bring along 3 preliminary ideas about engaging children and ask for your feedback and ideas about what children might enjoy playing with.

## Role-specific questions:

### Project manager:

- Starship Colour palette
- Roof cleaning

### Play Specialists:

Play questions:

- What is the role of play in a hospital?
- What do children need in a hospital?
- What conditions or environments enable play? What stops play?
- How do children play in Starship? Where do they go to play and explore?
- What is available for teens?

Play therapeutic?

- Digital and analogue toys/activities?
- Sensory overload?
- Abstracted playscapes (such as those by Isamu Noguchi and Aldo van Eyck) vs themed?
- Garden- vege garden? What other projects have you got in the works?

### Family Information Services:

- What methods do you use to get feedback from families?

### Project manager 2:

- What are significant design aspects of the outpatients remodel?
- In what ways could there be a connection to the Atrium space?



**AUT**  
TE WĀNANGA ARONUI  
O TĀMAKI MAKAU RAU

## 12 March 2017

## Playscapes: Pure Ludens

Hello, my name is Jewel Yan. I am currently completing a Master of Art and Design degree at Auckland University of Technology (AUT) and I would like to ask for your help with my research. This project aims to research notions of play for children in a healthcare context, which will then influence a design proposal for the atrium space in Starship hospital.

This project asks how notions of play might influence the design in a healthcare setting to create a sense of re-enchantment, enjoyment and comfort. Sited at Auckland's Starship Children's Hospital, this research will critically look at the design of children's spaces, play, power dynamics and healing spatial design. From this, I hope to create a design proposal for the atrium space within the children's hospital that will be both functional and invite imagination. The design will be sensitive to the needs and abilities of staff, young patients, and support persons.

The final output will be in the form of an exegesis and exhibition as part of the qualification requirements.

I have approached Stephen Reay (Co-director, Design for Health and Wellbeing Lab of Auckland City Hospital) and Emma Maddren (General Manager, Starship Children's Hospital) to ask if they knew of anyone who would be able to or would like to help me. You have been invited to participate because they have indicated that you might be interested and your expertise will be valuable. Emma has helped forward a voluntary call for interest on my behalf, which invites you to contact me (via email) if you would like to participate.

If you wish to participate, please contact me at [jewelyan.jy@gmail.com](mailto:jewelyan.jy@gmail.com). If you would like to discuss anything before completing the consent form attached to this invitation, please do not hesitate to ask me.

Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will not disadvantage you in anyway. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

If you would like to participate in this research then I will ask you some questions about your experiences in relation to play spaces at Starship, patient experience, and usage of the atrium space. I will ask you to share your expertise as it relates to the research. This will include asking you about your thoughts on these physical spaces as well as non-physical aspects of the experience, and any interesting observations you may have in relation to these topics. The aim of the questions is for me to understand your experience and perspective, there are no wrong answers and I am grateful for any thoughts you would like to share with me. You may also ask me any questions that you have about my research, or choose to end the conversation at any time if you change your mind about participating.

I will be making notes during the session. The session will also be audio taped as an aid for memory but will not be fully transcribed and there will not be an opportunity to review the notes.

We don't expect there to be much discomfort or risk in this research; however, you may feel uncomfortable sharing your opinions with me.

If you are uncomfortable with any question you may choose not to answer and will not be required to give any reasons. You can also choose to end your participation at any point, no questions asked. If your discomfort can be eased by more information, please feel free to ask me any questions you may have.

I benefit from this research by using the results to support my project, and complete a qualification. I also get to practice my skills and gain experience running a project like this.

In return I hope that you will benefit from the opportunity to share your thoughts and experiences. You will also have the chance to contribute towards the improvement of the atrium space at Starship. I hope that this will benefit you and your patients in the future.

You will be not be anonymous to me as the researcher which means that I will know your name and who you are. I will however respect and maintain your privacy and confidentiality.

Your privacy will be protected by a code, instead of your name, on written notes. There will be nothing in my research output that will identify you. Any information that I collect about you (consent form, and written notes from our interviews), will be securely kept and destroyed after a 6 years.

There is no cost to you for participating in this research except for a time contribution. There is no mandatory time contribution, however it is expected that any interview session will take approximately thirty minutes to an hour. You may be contacted at a later date for follow up interviews if your expertise is needed again in relation to the research. However, you will be under no obligation to participate in these further interviews and the duration of any interview sessions will be made flexible according to your availability.

You will have two weeks to consider this invitation to participate in my research. The decision is up to you, and if you do not wish to participate you will not be approached again.

If you would like to receive feedback on the results of this research you may provide a contact email address where I can send a copy of the finished dissertation and invitations to exhibitions/presentations.

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, *Susan Hedges*, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), +64 9 921 9999 ext 6562.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTC, *Kate O'Connor*, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz), 09 921 9999 ext 6038.

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

*Jewel Yan, jewelyan.jy@gmail.com*

Project Supervisor Contact Details:

Susan Hedges, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), 09 921 9999 ext 6562

Approved by the Auckland University of Technology Ethics Committee on 27.03.17 AUTC Reference number 17/76

# Participant Information Sheet- Focus Groups

## Date Information Sheet Produced:

12 March 2017

## Project Title

Playscapes: Pure Ludens

## An Invitation

Hello, my name is Jewel Yan. I am currently a completing a Master of Art and Design degree at Auckland University of Technology (AUT) and I would like to ask for your help with my research. This project aims to research notions of play for children in a healthcare context, which will then influence a design proposal for the atrium space in Starship hospital.

## What is the purpose of this research?

This project asks how notions of play might influence the design in a healthcare setting to create a sense of re-enchantment, enjoyment and comfort. Sited at Auckland's Starship Children's Hospital, this research will critically look at the design of children's spaces, play, power dynamics and healing spatial design. From this, I hope to create a design proposal for the atrium space within the children's hospital that will be both functional and invite imagination. The design will be sensitive to the needs and abilities of staff, young patients, and support persons.

The final output will be in the form of an exegesis and exhibition as part of the qualification requirements.

## How was I identified and why am I being invited to participate in this research?

You have been approached because I approached Stephen Reay (Co-director, Design for Health and Wellbeing Lab of Auckland City Hospital) and Emma Maddren (General Manager, Starship Children's Hospital), to ask if they knew of anyone who would be able to or would like to help me. You have been invited to participate because they have indicated that you might be interested and willing to help.

## How do I agree to participate in this research?

If you wish to participate, please complete the consent form attached to this sheet.

Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

## What will happen in this research?

If you would like to participate in this research, you will join a small group discussion about your experiences in relation to play spaces at Starship, patient experience, and usage of the atrium space. I will ask the group some questions and you will be able to share your expertise as it relates to the research. This will include questions about your thoughts on these physical spaces as well as non-physical aspects of the experience, and any interesting observations you may have in relation to these topics. The aim of the questions is for me to understand your experience and perspective, there are no wrong answers and I am grateful for any thoughts you would like to share with me. You may also ask me any questions that you have about my research, or choose to end the conversation at any time if you change your mind about participating.

The session will be audio taped as a memory aid and I will be making notes during the session.

## What are the discomforts and risks?

We don't expect there to be much discomfort or risk in this research; however, you may feel uncomfortable sharing your opinions with me.

## How will these discomforts and risks be alleviated?

If you are uncomfortable with any question you may choose not to answer and will not be required to give any reasons. You can also choose to end your participation at any point, no questions asked. If your discomfort can be eased by more information, please feel free to ask me any questions you may have.

## What are the benefits?

I benefit from this research by using the results to support my project, and complete a qualification. I also get to practice my skills and gain experience running a project like this.

In return I hope that you will benefit from the opportunity to share your thoughts and experiences. You will also have the chance to contribute towards the improvement of the atrium space at Starship. I hope that this will benefit you and your patients in the future.

## How will my privacy be protected?

You will be not be anonymous to me as the researcher which means that I will know your name and who you are. I will however respect and maintain your privacy and confidentiality.

Your privacy will be protected by a code, instead of your name, on written notes. There will be nothing in my research output that will identify you. Any information that I collect about you (consent form, and written notes from our interviews), will be securely kept and destroyed after a 6 years.

Your fellow participants will also have signed a consent form so that your identity and the discussion is confidential to the group and I agree to keep this information confidential.

## What are the costs of participating in this research?

There is no cost to you for participating in this research except for a time contribution. There is no mandatory time contribution, however it is expected that any interview session will take approximately thirty minutes to an hour. You may be contacted at a later date for follow up interviews if your expertise is needed again in relation to the research. However, you will be under no obligation to participate in these further interviews and the duration of any interview sessions will be made flexible according to your availability.

## What opportunity do I have to consider this invitation?

You will have two weeks to consider this invitation to participate in my research. The decision is up to you, and if you do not wish to participate you will not be approached again.

## Will I receive feedback on the results of this research?

If you would like to receive feedback on the results of this research you may provide a contact email address where I can send a copy of the finished dissertation and invitations to exhibitions/presentations.

## What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, *Susan Hedges*, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), +64 9 921 9999 ext 6562.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEK, *Kate O'Connor*, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz), 09 921 9999 ext 6038.

## Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

*Jewel Yan*, [jewelyan.jy@gmail.com](mailto:jewelyan.jy@gmail.com)

Project Supervisor Contact Details:

*Susan Hedges*, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), 09 921 9999 ext 6562

Approved by the Auckland University of Technology Ethics Committee on 27.03.17 AUTEK Reference number 17/76



AUT

TE WĀNANGA ARONUI  
O TĀMAKI MAKĀU RAU

Consent Form- Expert Interviews

Project title:  
Project Supervisor:  
Researcher:

Playscapes: Pure Ludens  
Susan Hedges  
Jewel Yan

☐ I have read and understood the information provided about this research project in the Information Sheet dated 12 March 2017.

☐ I have had an opportunity to ask questions and to have them answered.

☐ I understand that notes will be taken during the interviews and that they will also be audio-taped to aid with memory (full transcripts will not be made and I will not have the opportunity to review the tapes).

☐ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.

☐ I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.

☐ I agree to take part in this research.

☐ I wish to receive a digital copy of the exegesis (research outcome) and an invitation to any exhibitions. (please tick one): Yes☐ No☐

Participant’s signature: .....

Participant’s name: .....

Participant’s Contact Details (if appropriate):  
.....  
.....  
.....  
.....

Date:  
Approved by the Auckland University of Technology Ethics Committee on 27.03.17 AUTEK Reference number 17/76  
Note: The Participant should retain a copy of this form.

2 July 2015

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This version was last edited in June 2016

AUT

TE WĀNANGA ARONUI  
O TĀMAKI MAKĀU RAU

Consent Form- Focus Groups

Project title:  
Project Supervisor:  
Researcher:

Playscapes: Pure Ludens  
Susan Hedges  
Jewel Yan

☐ I have read and understood the information provided about this research project in the Information Sheet dated 12 March 2017.

☐ I have had an opportunity to ask questions and to have them answered.

☐ I understand that identity of my fellow participants and our discussions in the focus group is confidential to the group and I agree to keep this information confidential.

☐ I understand that notes will be taken during the interviews and that they will also be audio-taped to aid with memory (full transcripts will not be made and I will not have the opportunity to review the tapes).

☐ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.

☐ I understand that if I withdraw from the study then, while it may not be possible to destroy all records of the focus group discussion of which I was part, I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.

☐ I agree to take part in this research.

☐ I wish to receive a digital copy of the exegesis (research outcome) and an invitation to any exhibitions. (please tick one): Yes☐ No☐

Participant’s signature: .....

Participant’s name: .....

Participant’s Contact Details (if appropriate):  
.....  
.....  
.....  
.....

Date:  
Approved by the Auckland University of Technology Ethics Committee on 27.03.17 AUTEK Reference number 17/76  
Note: The Participant should retain a copy of this form.

2 July 2015

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This version was last edited in June 2016

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Design Workshop with Children at Starship

Information for Play Specialists and Starship staff

Objective

This workshop aims to examine user perceptions of the public spaces (atrium, garden, level 3 mezzanine) in Starship. Children’s voices from patients and siblings will be considered through imaginative drawings, models, and discussions. The art-based activities seeks to understand what kinds of play they enjoy and what makes spaces feel comfortable and playful.

When

Date: Thursday 27 July, 2017  
9:00 – 15:00

Agenda: 08:55 Meet Lindy at Tiny Bites  
09:00 Playroom – Lindy (Ward 23B)  
10:30 Contingency/Break  
11:00 Playroom – Paula (Ward )  
12:30 Contingency/Break  
13:00 Playroom – Carolyn (Ward 27)  
14:30 Contingency/Break  
15:00 Event Finishes

1½ hour per playroom (but about 30mins for a child’s individual participation)  
Other playrooms may be visited to reach preferred number of participants.

Who

Facilitators: Myself  
AUT project supervisors (Susan Hedges, Steve Reay)  
Starship play specialists  
**A play specialist must be present to supervise activities with children at all times**

Participants: • Children at Starship- patients and siblings  
• At least 5-6 (patient) participants per age group: (Young (0-6), Middle (7-11), Teens (12-18). No minimum or limit for sibling participation.

Participant recruitment: • Play specialists will point out suitable participants, and/or approach them and their guardian on my behalf first. This may occur before event.  
• Guardians will be consulted on the nature of project and what participation is needed. An information sheet will be provided.  
*Eg: Hi my name is Jewel, I am a design student with the hospital’s design lab and I’m doing research for a project looking to improve the atrium and level 3 mezzanine. Today, I am running a design workshop to allow children to have a voice into the project, so I would like to invite your child to participate. It is a drawing activity about play spaces and colour. It will take about ½ an hour.*

*You and your child will remain anonymous. The only information I will take is boy or girl, age, patient or sibling, and some notes describing their drawings. At the end I will take a photo or photocopy of the artwork but there will be no photos of people whatsoever. Here is the information sheet. Do you have any questions?*

Consent & Assent

- Parents/guardians need to sign a consent form
- Children (reading age) need to sign an assent form
- Young children need circle “yes” on the special assent form, and have their parent’s/guardian’s signature.

Privacy

- Anonymous- no photos of participants, no names recorded with data
- Information recorded: Code number, gender, age, patient/sibling.
- Notes may be taken from discussions about the participant’s drawing

Permissions & contact persons

My contact information: Jewel Yan, [jewelyan.iy@gmail.com](mailto:jewelyan.iy@gmail.com), 021 268 3208  
Project Supervisor: Susan Hedges, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), 09 921 9999 ext 6562.

Ethics: Approved by the Auckland University of Technology Ethics Committee on 28.06.17. AUTEK Reference number 17/76. (Executive Secretary, AUTEK, Kate O’Connor, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz) , 921 9999 ext 6038.)  
This activity has been approved by Starship Child Health Senior Leadership Team. (Emma Maddren)

Event plan

Whereabouts

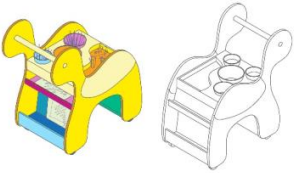
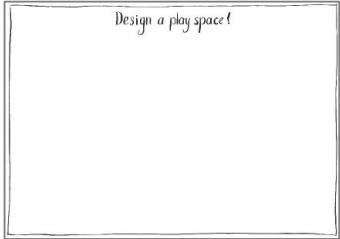
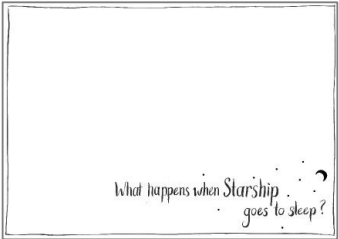
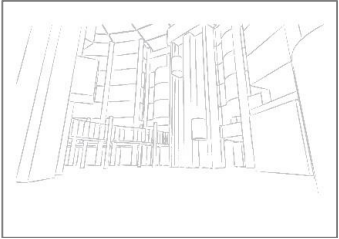
Roaming workshop: I will go between playrooms, and wards if appropriate

Plan at each playroom

- Check-in with play specialist at their playroom
- They will introduce my workshop activity and myself to a family/families who might be interested.
- Parents/guardians will have the opportunity to consider and accept/decline invitation to participate.
- Consent and Assent forms. (Some consent forms may be completed beforehand with play specialists)
- Colour Activity
- Drawing/Model-making activity
- Discussion
- Documentation (photographing or scanning the work)



Activity

Style	Art-based workshop Participants will be asked a series of provocations and respond through drawing, model-making, writing, or discussion.
Materials	<div><ul style="list-style-type: none"><li>• ‘worksheets’ to draw/write on</li><li>• colour swatches</li><li>• drawing materials- e.g. markers, colour pencils</li><li>• model-making materials- e.g. pipe cleaners, pompoms, stickers</li><li>• * trolley (pictured) to transport the above materials and forms</li></ul></div> <div></div>
Overall theme	What would make you more comfortable in Starship? How would you like to ‘play’ in the atrium?
Warm up	<div>Colour activity</div> <ul style="list-style-type: none"><li>• How do these colours (swatches will be provided) make you feel? <i>Eg Warm, happy, cold?</i></li><li>• Use coloured paper/pens to make your favourite colour combination?</li></ul>
Drawing / model-making activity	<div>Provocation: What do you like to do for fun/What activities do you like? Choose from...</div> <ul style="list-style-type: none"><li>• Design your ideal play space! (eg playroom, place in a video game, theme park, playground)</li><li>• What happens when the hospital goes to sleep? (could be a creative story-telling activity)</li><li>• Design a play space the atrium</li></ul> <div><ul style="list-style-type: none"><li>• During the activity, facilitators might ask them to discuss what they have drawn, notes may be taken. <i>Eg “That’s really cool! What do you like about [something in their artwork]? What makes it a great place to play?”</i></li><li>• Conclusion: Photos/photocopy of work is taken. Children can keep their drawings/models</li><li>• Worksheets:</li></ul></div> <div><div></div><div></div><div></div></div>

Supporting documents

Play specialists	AUT letterhead Information Sheet for your participation <i>(contains similar information to this document but is in a more formal layout)</i> AUT letterhead Consent Form for your participation <i>(Please sign this 😊)</i>
For participants to read and sign	AUT letterhead Information Sheet for parents/guardians AUT letterhead Consent Form for parents/guardians AUT letterhead Information and Assent Form for older children <i>(reading age)</i> AUT letterhead Information and Assent Form for young children <i>(for those that aren’t able to read yet)</i>
Promotional	Poster <i>(Can be printed and placed in playrooms to make parents aware of the upcoming activity)</i>



Children’s Design workshop  
Participant Information Sheet- Parents/Guardians

Date Information Sheet Produced:

1 June 2017

Project Title

Playscapes: Pure Ludens

An Invitation

Hello, my name is Jewel Yan. I am currently completing a Master of Art and Design degree at Auckland University of Technology (AUT) and I would like to ask for your help with my research. This project aims to research notions of play for children in a healthcare context, which will then influence a design proposal for the atrium and nearby spaces in Starship Children’s Health.

What will happen in this research?

This invitation is for children (patients and siblings) to participate in a design workshop to add a children’s voice into my research project. It will focus around themes of play and Starship’s atrium space, Koromiko garden, and level 3 mezzanine area. A play specialist will be here to supervise throughout the interaction.

The first activity is to describe how certain colours make them feel. The second activity is a drawing or model making activity about play spaces. These activities will help begin conversations about what they might like in a hospital. They are free to use any tools that they choose to express themselves with.

I will take written notes from these conversations and photograph/scan their artwork to record data, ensuring that people are not in photos. The information gathered associated with each drawing/model will only include: a code number, the child’s gender, age, and whether they are a patient themselves or a sibling of the patient.

How will discomforts and risks be alleviated?

I am grateful for any thoughts your family would like to share with me. You may also ask me any questions that you have about my research, or choose to end the conversation at any time if you change your mind about participating.

If you or your child/ren are uncomfortable with any questions or activities, you may choose not to answer and will not be required to give any reasons. You can also choose to end your participation at any point, no questions asked. If your discomfort can be eased by more information, please feel free to ask me any questions you may have.

What are the benefits?

I benefit from this research by using the results to support my project, and complete a qualification. I also get to practice my skills and gain experience running a project like this.

In return I hope that you will benefit from the opportunity to share your thoughts and experiences. You will also have the chance to contribute



towards the improvement of the atrium space at Starship. I hope that this will benefit you and other families in the future.

How will my privacy be protected?

You will be not be anonymous to me as the researcher which means that I will know who you are. I will however respect and maintain your privacy and confidentiality.

Your privacy will be protected by a code, instead of your name, on written notes. There will be nothing in my research output that will identify you. The only information I will obtain about your child/re is a numbered code, their gender, age, and whether they are a patient or a patient’s sibling. Any information that I collect about you (consent form, and written notes from our interviews), will be securely kept and destroyed after a 6 years.

The findings from this workshop will be shared with Starship Children’s Health Management and may be used in future design projects of the hospital.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, *Susan Hedges*, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), +64 9 921 9999 ext 6562.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEK, *Kate O’Connor*, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz), 09 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

*Jewel Yan, [jewelyan.jy@gmail.com](mailto:jewelyan.jy@gmail.com)*

Project Supervisor Contact Details:

*Susan Hedges, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), 09 921 9999 ext 6562*

This activity is approved by Starship Child Health Senior Leadership Team

Approved by the Auckland University of Technology Ethics Committee on 28.06.17 AUTEK Reference number 17/76





Participant Information Sheet- Facilitators

Date Information Sheet Produced:

1 June 2017

Project Title

Playscapes: Pure Ludens

An Invitation

Hello, my name is Jewel Yan. I am currently a completing a Master of Art and Design degree at Auckland University of Technology (AUT) and I would like to ask for your help with my research. This project aims to research notions of play for children in a healthcare context, which will then influence a design proposal for the atrium space in Starship hospital.

What is the purpose of this research?

This project asks how notions of play might influence the design in a healthcare setting to create a sense of re-enchancement, enjoyment and comfort. Sited at Auckland’s Starship Children’s Hospital, this research will critically look at the design of children’s spaces, play, power dynamics and healing spatial design. From this, I hope to create a design proposal for the atrium space within the children’s hospital that will be both functional and invite imagination. The design will be sensitive to the needs and abilities of staff, young patients, and support persons. The final output will be in the form of an exegesis and exhibition as part of the qualification requirements.

How was I identified and why am I being invited to participate in this research?

I have approached Emma Maddren (General Manager, Starship Children’s Hospital) who has introduced me to the head of the play specialist service. You have been invited because they have indicated that you might be interested and your expertise will be valuable.

How do I agree to participate in this research?

If you wish to participate, please contact me at [jewelyan.jy@gmail.com](mailto:jewelyan.jy@gmail.com). If you would like to discuss anything before completing the consent form attached to this invitation, please do not hesitate to ask me.

Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will not disadvantage you in anyway. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

This invitation is to help facilitate a design workshop with patients and their siblings to get a children’s voice into my research project. It will focus around themes of play and Starship’s atrium space, garden, and level 3 mezzanine area. The event is intended for Thursday 27 July, 2017. The workshop will use art-based methods and I will bring tools such as drawing paper/activity sheets, visual prompts, stickers, pens, and pipe cleaners. The first activity is to describe how certain colours make them feel. The second activity is a drawing or model making activity about play spaces. These activities will help begin conversations about what they might like in a hospital. I will take written notes from these conversations and photograph/scan only their drawings/models to record data, ensuring that people are not in photos. The information gathered associated with each drawing/model will only include: a code number, the child’s gender, age, and whether they are a patient themselves or a sibling of the patient.

If you would like to participate in this research then I will arrange a time on this day to visit your ward/playroom. I will ask you to introduce this workshop to families of suitable patients (and siblings if appropriate) based on their ability and willingness to participate in a workshop like this. I will ask you to supervise throughout the workshop to ensure interaction with children is appropriate and fits within Starship protocols. If you would like to discuss ideas for the atrium space or my project with me, I would be happy to do so.

What are the discomforts and risks?

We don’t expect there to be much discomfort or risk in this research; however, you may feel uncomfortable sharing your opinions with me.

How will these discomforts and risks be alleviated?

If your discomfort can be eased by more information, please feel free to ask me any questions you may have.

What are the benefits?

I benefit from this research by using the results to support my project, and complete a qualification. I also get to practice my skills and gain experience running a project like this.

In return I hope that you will benefit from the opportunity to share your thoughts and experiences. You will also have the chance to contribute towards the improvement of the atrium space at Starship. I hope that this will benefit you and your patients in the future.

How will my privacy be protected?

You will be not be anonymous to me as the researcher which means that I will know your name and who you are. I will however respect and maintain your privacy and confidentiality.

There will be nothing in my research output that will identify you. Any information that I collect about you (consent form and written notes), will be securely kept and destroyed after a 6 years.

What are the costs of participating in this research?

There is no cost to you for participating in this research except for a time contribution. There is no mandatory time contribution, however it is expected that this workshop session at your playroom will take approximately thirty minutes to an hour.

What opportunity do I have to consider this invitation?

You will have two weeks to consider this invitation to participate in my research. The decision is up to you, and if you do not wish to participate you will not be approached again.

Will I receive feedback on the results of this research?

If you would like to receive feedback on the results of this research you may provide a contact email address where I can send a summary, and/of a copy of the finished dissertation and invitations to exhibitions/presentations.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, *Susan Hedges*, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), +64 9 921 9999 ext 6562.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEK, *Kate O’Connor*, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz), 09 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

*Jewel Yan*, [jewelyan.jy@gmail.com](mailto:jewelyan.jy@gmail.com)

Project Supervisor Contact Details:

*Susan Hedges*, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), 09 921 9999 ext 6562

Approved by the Auckland University of Technology Ethics Committee on 28.06.17 AUTEK Reference number 17/76

# Design Workshop

Project name: *Playscapes: Pure Ludens*

Hello!

My name is Jewel and I am with AUT University and the Design for Health and Wellbeing Lab. I am working on a redesign project for the atrium, garden, and mezzanine at Starship Children’s Health.

On **Thursday 27 July (9am-3pm)**, I will be running a children’s design workshop to get an insight into what they might like in these spaces and how colour might affect their experience. We will be doing some drawing and making, and I will be asking children about what they like to play with and what colour combinations they like or don’t like.

You and your child’s privacy is very important so the only information I will use is the child’s age, gender, and whether he or she is a patient at Starship or a patient’s sibling.

I hope you are able to participate, it will be a great help for my research project!


Thank you 😊



*This activity is approved by Starship Child Health Senior Leadership Team  
Ethics approved by the Auckland University of Technology Ethics Committee on 28.06.17 AUTEK Reference number 17/76*

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*What do I do if I have concerns about this research?*  
Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor,  
Susan Hedges, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), 09 921 9999 ext 6562.  
Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEK, Kate  
O'Connor, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz), 921 9999 ext 6038.  
Researcher, Jewel Yan, [jewelyan.jy@gmail.com](mailto:jewelyan.jy@gmail.com)  
Starship General Manager, Emma Maddren, [EMaddren@adhb.govt.nz](mailto:EMaddren@adhb.govt.nz)



# Consent Form- Facilitators

Project title: *Playscapes: Pure Ludens*  
Project Supervisor: *Susan Hedges*  
Researcher: *Jewel Yan*

☐

I have read and understood the information provided about this research project in the Information Sheet dated 1 June 2017.

☐

I have had an opportunity to ask questions and to have them answered.

☐

I understand that my role will be to help facilitate this workshop, and help assist with ensuring interaction with children is appropriate and fits within Starship protocols

☐

I understand that notes will be taken during the workshop and that drawings and models will be photographed or scanned (no people will be photographed).

☐

I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.

☐

I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.

☐

I agree to take part in this research.

Participant’s signature: .....

Participant’s name: .....

Participant’s Contact Details (if appropriate):  
.....  
.....  
.....  
.....

Date: .....

**Approved by the Auckland University of Technology Ethics Committee on 28.06.17 AUTEK Reference number 17/76**

*Note: The Participant should retain a copy of this form.*

2 July 2015

page 1 of 1

This version was last edited in June 2016



PLAYSCAPES: PURE LUDENS

INFORMATION SHEET AND ASSENT FORM FOR CHILDREN

(parent/caregivers please read to children)

This form will be kept for a period of 6 years

AUT

TE WĀNANGA ARONUI  
O TĀHAKU MĀHARAU RĀU

When I am there I will do some writing and you will notice me. You will know that I am not one of your play specialists or nurses. You can talk to me and we can get to know each other. You can ask me about my work whenever you want to. Let me know how you feel about this by colouring in one of these words -

Happy

Fine

Not Sure

Worried

If you are not sure or worried come and talk to me about it or ask your play specialist or your parents about this.

I am doing a project to make the Starship atrium area nicer to be in, and I hope that you can help me with that today. We will be doing some drawing and making, and I we'll talk about what you like to play with and what colours you like or don't like.

We will all work together on this.

Hello – my name is Jewel.

I would like to spend time at your playroom/ward today.

YES

Please circle YES if you would like to take part in this drawing and making workshop


NO

Please circle NO if you do not want to do this

MAYBE

Please circle MAYBE if you are not sure. If you cannot decide that is fine because you can come along later and tell me or your play specialist or your parents that you want to join in.

This is my photo



I hope we can do this together. It will be great to meet you and you will know who I am because of my photograph. I will also wear a badge with my name, Jewel, when I am in your playroom/ward.

Thank you for completing this form – will you ask you parent/caregiver to sign here

(signature)

(Date)

if they feel that you understand what the project is about and give this form back to your play specialist please.

Researcher Name: Jewel Yan

WHAT DO I DO IF I HAVE CONCERNS ABOUT THIS RESEARCH?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Susan Hedges, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), 09 921 9999 ext 6562.

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEC, Kate O'Connor, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz) , 921 9999 ext 6038.

Approved by the Auckland University of Technology Ethics Committee on 28.06.17 AUTEC Reference number 17/76

# Design Workshop

Project name: *Playscapes: Pure Ludens*

Hello!

My name is Jewel and I am with AUT University and the Design for Health and Wellbeing Lab. I am working on a project to redesign the atrium, garden, and mezzanine at Starship Children’s Health.

Today I am running a design workshop to get an insight into what children might like in these spaces. We will be doing some drawing and making, and I will be asking you about what you like to play with and what colours you like or don’t like.

You can keep your creation at the end of the workshop but I would like to photograph or scan it so I can put it in my report. I will also take written notes from our conversations. Your privacy is very important so your name will not be recorded. The only information I will ask for is your age, gender, and whether you are a patient at Starship or a patient’s sibling.

If you have any questions, please ask away!

I hope you are able to participate, it will be a great help for my research project!

If you are happy to help out, please sign on the back

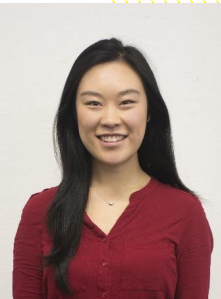
Thank you ☺

Researcher Name: Jewel Yan

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Susan Hedges, [susan.hedges@aut.ac.nz](mailto:susan.hedges@aut.ac.nz), 09 921 9999 ext 6562.

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEK, Kate O’Connor, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz) , 921 9999 ext 6038.



AUT

TE WĀNANGA ARONUI  
O TĀMAKI MAKĀU RAU

# Assent Form

For completion by people aged under 16 years. This must be accompanied by a Consent Form. This form will be kept for a period of 6 years

Project title: ***Playscapes: Pure Ludens***

Project Supervisor: ***Susan Hedges***

Researcher: ***Jewel Yan***

- ☐ I have read and understood the back of this sheet telling me what will happen in this study
- ☐ I have been able to ask questions and to have them answered.
- ☐ I understand that notes will be taken and that my drawings/made objects will be photographed or scanned.
- ☐ I understand that I can stop being part of this study whenever I want and that it is perfectly ok for me to do this.
- ☐ If I stop being part of the study, I understand that then I will be offered the choice between having any information that that other people can know is about me removed or letting the researcher keep using it. I also understand that sometimes, if the results of the research have been written, some information about me may not be able to be removed.
- ☐ I agree to take part in this research.

Participant’s signature: .....

Date: \_\_ \_\_ / \_\_ \_\_ / 2017

***Approved by the Auckland University of Technology Ethics Committee on 28.06.17 AUTEK  
Reference number 17/76***

*Note: The Participant should retain a copy of this form.*



## Parents/Guardians Consent and Release Form



*Project title:* **Playscapes: Pure Ludens**

*Project Supervisor:*      **Susan Hedges**

Researcher: Jewel Yan

- ☐ I have read and understood the information provided about this research project in the Information Sheet dated 1 June 2017.
- ☐ I have had an opportunity to ask questions and to have them answered.
- ☐ I understand that notes will be taken during the workshop and the artwork will be photographed for research documentation.
- ☐ I understand that taking part in this study is voluntary (my choice) and that I may withdraw my child/children and/or myself from the study at any time without being disadvantaged in any way.
- ☐ I understand that if I withdraw my child/children and/or myself from the study then I will be offered the choice between having any data that is identifiable as belonging to my child/children and/or myself removed or allowing it to continue to be used. However, once the findings have been produced, removal of our data may not be possible.
- ☐ I agree to my child/children taking part in this research.

Child/children's name/s : .....

Parent/Guardian's signature: .....

Parent/Guardian's name: .....

Date: .....

*Approved by the Auckland University of Technology Ethics Committee on 28.06.17 AUTEC Reference number 17/76*

*Note: The Participant should retain a copy of this form.*



**Service:**  
Phone:  
Fax:  
Address:  
  
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**CHILD HEALTH DIRECTORATE**  
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Auckland City Hospital  
Private Bag 92-024  
Auckland 1142

25 May 2017

To whom it may concern

Auckland DHB has had a close partnership with the AUT School of Art & Design through our collaborative venture, the Design for Health & Wellbeing Lab (DHW Lab). This relationship is ongoing and consultative, and is proving of significant benefit to both organisations.

A key focus of the DHW Lab is supporting research (both student and staff) to explore healthcare problems with the aim to designing new solutions to improve the experience for patients, families and staff. Each specific research project proposed as part of the research platform has been identified through this close consultation/collaboration, and we will work closely to ensure that the research undertaken (and associated approach or methodology) is appropriate for the context or situation in that specific environment.

Starship Child Health is collaborating with Jewel Yan (student), Steve Reay and Sue Hedges (academic staff) at AUT ensure that her approach is most appropriate for our patients, families and staff.

Yours sincerely

*[Signature]*

Emma Maddren  
General Manager  
Starship Child Health  
Auckland District Health Board

SITE DIAGNOSTICS:  
EXPERT INTERVIEW  
FINDINGS

Summary

This qualitative research has found that the atrium, garden, and level 3 mezzanine currently is uninviting, cold, poorly defined and inactive. These spaces need to feel welcoming, modern, cosy, and like an escape from hospital wards for patients and families. It could be re-activated with more appealing things to do such as a programme of activities and playful design/equipment. Exemplary children’s hospitals overseas have nice bright spaces, modern interactive features (especially digital technologies) that are often a collaboration with a community group or sponsor, and look comfortable. Play is important to make children feel comfortable which in turn helps parents relax. By making these spaces more appealing, it will help improve the non-clinical moments of a hospital experience.

Methods

The participants were recruited through Starship and DHW leadership so that the voluntary nature was emphasised and they would not feel coerced into participating. The range of participants crossed different departments: managerial staff, play specialists, family information support, and project managers. This diversity offered insight with staff familiar with project management at Starship, allied staff that work with patients, staff that work closely with parents, staff whose offices look over the atrium, staff that use the atrium, and staff that frequently eat lunch at Tiny Bites café tables. Managerial staff are also consulted through regular meetings.

These interviews were conducted through 30-60min sessions with participants. There was 1 ‘focus group’ with 4 staff (that will henceforth be regarded as an interview), the others were individual interviews. I began by introducing the project, and upon request, a brief introduction was sent out in advance. I outlined the scope and site of my project and its role as a research project resulting with an aspirational design proposal. I had prepared open-ended questions for them that were tailored to discuss the staff’s area of expertise and knowledge, and visuals of some ideas and photos of the space. They were encouraged to speak about their own experiences as well as feedback they have heard about it.

Key themes for interviews

Current usage + user feedback, potential of the site, project constraints  
Role of play in Starship, how could the Atrium accommodate notions of play

Results

Atrium space

Current feel of the space

It is cold, dull, not inviting, underused and lacks identity.

- Cold, dull, dreary, outdated, cavernous, not inviting/ welcoming. “I think it’s the most awful space”
- There is nothing to do, what is it’s purpose? This space is not clearly defined and lacks purpose. Seems to be more of a place to pass through.
- Underused and does not have things to keep people engaged. Not a lot happens in the atrium.
- Lack of seating, especially comfortable seating: they are cold and hard instead of soft and welcoming

Purpose + target audience

It should be a welcoming, inviting space for mainly patients and families as a space of escape, play, and/or social activities.

- Words to describe how it needs to be feel: safe, playful, enjoyable, inviting, welcoming, cosy, a nice place to be in, warm, fun, light, well-used, occupied, clearly-defined, modern, comfortable
- Central: its presence is important and it connects to other spaces
- It is an escape from the hospital routine and wards.
- For children (patients and siblings): space to go play and have an escape away from wards, interactive equipment.
- For parents: The design needs to help relieve stressed parents. There is a lot of pressure placed on them to get their children to the right place on time, finding parking, finding the right ward etc. So treatment rooms are focused on children, but these public spaces must also consider parents.
- Opportunities for social interaction
- Mix of vibrant and soothing, uplifting and peaceful spaces

Activities

Currently there is uncomfortable seating, Radio Lollipop, the pet therapy programme is on hiatus, a carousel, rocks, and 2-coin operated rides. There needs to be more “things

to do” and comfortable furniture. It should cater for different events and a range of ages and abilities.

- Needs interesting interactive features that are playful and fun, a place be free to move around, comfortable seating especially if they are waiting
- Multi-purpose: Must be reasonably open to facilitate events. Staff sometimes use it for award ceremonies. E.g. presenting awards to nurses on International Nurses Day. Starship Foundation uses it when they launch new services or open up a new ward. Sometimes it hosts concerts and plinths (seating) are brought in for children
- Atrium Playroom: exclusive, only for Day Stay and Paediatric Intensive Care patients
- Ella’s cuddle corner- weekly (Wednesdays) programme when patients can interact with dogs. There are ideas to expand it by increasing the frequency of these sessions and types of animals brought in. However this program has been on a break since the end of last year due to elevator renovations.
- Radio Lollipop activates the space in evenings. Often 10-14 people.
- Open space: Freedom to run around and have gross matter burn out. Place for upper gross motor activities (eg basketball for patients in wheelchairs)
- Play specialists can bring down patients who stay in beds/wheelchairs
- Gathering space
- There used to be clown doctors
- Zones: Young children and teenagers need some separate spaces/zones to play. There is not much for teenagers in the hospital.
- Things to do: Modern interactive features (such as science-museum things) could be good. Digital games like Pokémon Go are also good ideas.
- Lots of waiting. The atrium is a waiting space for families with children in surgery. Currently the enclosed O.R. waiting room is not often used and feels crowded when there are more than 2 sets of parents, or if there is a family with kids in there.

Wayfinding/Entry

From the outside, the space can be accessed from three entry points but the atrium itself is currently not an “entrance”. The atrium should help people feel in-place and find their destinations.

- Wayfinding in the hospital is always a well-known issue- especially when people are stressed about parking, finding relatives, and getting to the appointment. To get to Starship you have to go in and out of various buildings.
- Entry 1: Tunnel from the outside to Starship Level 3.
- Entry 2: From Level 2 Carpark B is the most used and was once the main entrance. One used to be able to

park here and enter. After ACH was built, it became the main entrance for emergency services instead. It is not inviting and does not feel like a main entrance. It doesn’t lead you into the atrium because you walk in and move around a wall and then face another wall with the information kiosk. Might be good to see the atrium straight away and then decide where to go from there.

- Entry 3: From lifts inside Auckland City Hospital to Outpatients at Starship level 3. Because of the expansions and adhoc additions, it does not feel like an entrance.
- Most popular destinations: lifts to visit wards, and Outpatients on level 3.
- How can we assure people they have reached Starship?
- The atrium used to be an entrance space, and now it is just ‘another space’. Starship itself has lost its main entrance
- Consider how it the atrium looks from the mezzanine and above in surrounding windows

Temperature

Space is very cold especially in winter so some people avoid the atrium altogether. An economic heating solution has not yet been found. How can the space be visually warmer?

- The cold temperature is a recognised problem, and it is very difficult to heat, if there were a solution it would have been implemented already.
- Visual heating: How can we visually suggest something is not cold? The space felt warmer with the park theme, and felt cooler with the current rainforest/ NZ bush theme (possibly because of the association it has with cool shade instead of soothing).
- Temperature contrast at the beginning of the bridge
- In the winter it can be colder in the atrium than outside.
- Cost of heating example- Ella’s Cuddle Corner – there was a suggestion to put a lid on it and heat just that space but it was estimated to be \$25k
- It feels especially cold because patients are used to warm rooms. Parents know about the cold and choose not to go there.

Sound

Sound travels from the atrium to the wards and surrounding offices, it is noisy and echoey. How can the noise be managed?

- Sound from atrium echoes and travels directly to offices and wards.
- This is a problem for children trying to sleep, especially at night when Radio Lollipop uses it. Office spaces also can hear everything including merry-go-round jingle on a loop. (They need windows open for ventilation)
- Carousel music can “drive you nuts”



*History*

The atrium space was more active years ago. It used to have more community involvement, be larger in size, and internal wards had windows looking into the space.

- The rainforest looked better when the full design was there, e.g. the suspended clouds.
- The right side has now been converted into clinical space. Before, it had play equipment such as slides.
- Original intent was that the kids in their wards could see into the atrium. However, now most of the windows facing the atrium are offices.
- In the past, someone donated Christmas trees
- Outpatients area used to get Smith and Caughey’s Christmas window displays afterwards
- 10 years ago it was quite a busy place (e.g. Youthtown hosting activities during school holidays), but now there are only couple of events a year. Drew you in because it had something to do.

Koromiko Garden

*Issues*

Limited access, not inviting, unclear as to who can use it

- Access to the garden is very limited (e.g. doors sometimes locked at 3:30pm). Locking the swimming pool fence (although it might be a fire escape) might allow the main access to be open more.
- Not inviting and it is unclear as to who can use it. Needs a lot of improvement to draw people out and let them know they can go out there (possibly using e.g. automatic doors?)
- Not nice and lacks care: Lawn not mowed. Cigarettes butts and empty packets lying around despite being a smoke free area.
- Current users: Random assortment of people, mostly adults and smokers, not often children.
- Shaded and south-facing

*Purpose + target audience*

Patients therapeutic garden? Or an outdoor escape for everyone?

- Play specialists have proposed a vege + therapeutic garden for patients
- A parent of a long term child patient wanted an outdoor space that is nice, sunny and close by. It is like an escape from hospital rooms/wards. (Indoor example: Ronald McDonald family room is another nice place in the hospital that the parents can ‘escape to’)
- Staff could use it as a nice space for breaks away from their office.

*Link to other green space*

- There is a forest-like garden with a big Pohutukawa tree between Marion Davis Library and the tunnel.
- Mostly used by smokers at the moment
- Ideally there would be a link/path between these two green, natural spaces: this walkway and Koromiko Garden.
- Nature trail might be possible

Mezzanine

*Tiny Bites*

Does not feel like a nice café, it is the most accessible food outlet, expensive, dark, small

- Could be better
- Is also used by staff
- Tiny Bites food is expensive and has a limited range, esp. for people who are here for a long time.
- Close by- Other hospital cafés (e.g. Planet Espresso) are sometimes used but often Tiny Bites is the best place to go because of its proximity- parents would not want to leave their child for long and often they are waiting for a consultant and want to be able to go back quickly as soon as they are called.
- It is more child-friendly than other hospital food outlets
- Doesn’t look like a café- the dining area is dark (dark blue walls), has a small seating area, looks old fashioned and dark.
- There is a need for healthy, accessible and reasonably priced food options.

*Vending machine area*

Wasted space

- Can move vending machine but not probably not the electrical wall near it.
- Vending machine have chips and lollies and therefore not consistent with health messages.
- There is actually a lot of unused space if we remove the machines

Pragmatics and Constraints

*Money*

Consider on-going maintenance and running costs, theft prevention, demonstrating understanding of these ideas will help in presentations to stakeholders.

- There will be a budget
- Taxpayer-run institution: divesting money from medical treatment to be justified
- What are ongoing costs- e.g. gardener, cleaning

(within 1 month since cleaning, the ledges are already look dirty), mechanical maintenance, cleaning aerial structures. When proposing my design: people will critique it based on aspects such as ongoing costs. Demonstrate understanding of practicalities when presenting to stakeholders, it aligns you alongside them.

- Design interventions should not be removable because things get stolen, even bean bags and big stackable blocks. Mentality is that “the hospital has got a lot. They can just get another one”

*Health and safety*

Materials must comply with infection control guidelines. Children should be supervised by parents/caregivers in the Atrium, although this is not always the case.

- Materials: Lino- easy to clean and hygienic. Possibly could use laminate that feels warmer.
- (Fabric) chairs are often just replaced rather than cleaned (as it is cheaper).
- No buttons/choking hazards, no gaps or if something does fall into a gap it should be easy to access.
- Hygiene, infection control organisation for properties of materials. Possible option: There is an artificial grass that can be washed and vacuumed to clean
- The atrium is open 24 hours/day and unlike playrooms, it is ‘unsupervised’. So safety needs to be considered for children playing without close supervision (e.g. parents might be distracted). No climbing walls!
- Needs to be age appropriate

*Colour*

The Starship colour palette holds significance and cannot be changed. Colour can be used modernise and have therapeutic effects. Be careful not to overstimulate.

- Colour palette- each colour has a meaning and must be maintained.
- Used to be pastel tones (like in the atrium) but has been recently updated. Level 6 uses the more modern, fresher version of the colours.
- Each level is themed to a something in the colour palette (e.g. Level 2- sun/yellow). Colours used to be the same inside the wards
- “Colour therapy is such a big thing”
- No bright lollipop colours- nauseas space needs to be calmer- its better to under stimulate rather than over stimulate
- Dark grey is often not liked but could work for teens
- Repaint the wall colours and consider improving its treatment (e.g. pattern)

*Maori World View*

Needs to be considered in the design

- Maori world view needs to be respected- e.g. tikanga, Treaty of Waitangi, Te Whare Tapa Whā
- In fitting with natural phenomenon theme- stars- 7 sisters

Play

*Play Resources at Starship*

The main resources are Play specialists and playrooms. Two techniques include therapeutic and recreational play

- Play specialists: licensed by the Ministry of Education and are qualified teachers (incl. Early childhood education)
- Playrooms: 9 in Starship, managed by 1-2 play specialists per room, well-resourced with equipment and specialists
- Service for patients (ages range from 0-18), siblings and parents --> FAMILY CENTERED CARE
- (Technique) Therapeutic play- helps prepare and support young patients before a procedure so they know what to expect. Materials include prep books, dolls, and stories.
- (Technique) Recreational play- means of distraction. Materials include toys, games, and books.

*Role of play in a hospital*

Play as a comfort for children, familiarity, way of expression.

- A hospital is an unfamiliar environment full of bright lights and odd smells. This can be stressful for patients.
- For children, play is their language, a safe way of expression, their norm, and how they see the world. Therefore play is used to help explain, learn, express and manage emotions. Play gives children control which is especially important in a hospital context where many things are decided for them.
- Play helps create positive experiences, and this image of positive experience can help Starship feel safer and less daunting
- Careful of the wording of ‘play’ - most kids in the hospital may be too unwell to play. The word stands out. No running. Restrictions around play in the hospital
- Careful not to have garish over-stimulation (e.g. with colours)

*Environments for play*

What enables or hinders play? Accessibility to spaces, mobility, appeal to multiple senses, social and solo

activities, ages.

- Accessibility enables or hinders play- e.g. to play room and play specialists
- Time restrictions: Playrooms are open for a set time whereas the atrium can be accessed 24/7
- What kind of play suits which patients? You can always find a form of play that is suitable
- What hinders play? Mobility / physical condition. There can be mounds and tunnels for wheelchairs and IV poles as long as they fit.
- Solo projects as well as group/social-installations (e.g. void)
- Diverse or special needs- jandal xylophone
- Auditory, textures, all the senses for children
- Abstract vs. themed- general agree with abstract- full of options.
- Teenagers- there is a growing international trend for adolescent spaces in hospital. The interviewees would like to see a space for teenagers in the atrium. The “Teen Lounge” on the 5th floor is under renovation so there is currently no physical space especially for teenagers. It will have computers and tech equipment

*Carousel*

Currently the most popular play activity in the space, possibly because of limited options

- Merry –go-round, and airplanes + cares are enjoyed a lot, but they look displaced
- Carousel is used a lot, but maybe it’s the only thing to do apart from running across the benches. Lots of potential
- Merry-go round appeals to younger children

Design workshop

*Feedback*

Play specialists are happy to help facilitate. What are good provocations that can get a good, specific responses from participants? Consider ages of participants. What is feedback from parents as well?

- Recruit clinical and managements staff, patients, families
- Open ended questions (because if you make a suggestion, they might be influenced). How tailored do I want it to be? Or is it just a test of current?
  - What helps to make a hospital a “happy place”/ feel better.
  - What would make them feel more comfortable?
  - If you were able to go into the atrium, what would you like to do? This may help identify how

people of different abilities can use the space or what they find difficult.

- What’s your favourite thing to do? If there was something in the atrium that could make you feel better, what would that be?
- If you were going to design a playground, what would you have in it?
- What colours would you choose? What colours make you feel happy? Warm/cold?
- Ages: perhaps discussion for older or art-based for kids drawing while talking
- The play specialists did a similar workshop for a vegetable garden proposal- provocation example: “what do they miss most about the outdoors?”
- “What happens when the hospital goes to sleep?”- They like this provocation.
- Gain their voice
- Ask parents what they might need to relax

Design ideas

*Precedents*

Royal Melbourne Children’s Hospital is always referenced. There is an interest for features that are interactive (e.g. science museum), sensory, use modern technologies, appealing to all ages, hospitals that partner with other organisations to provide equipment (community involvement). Aquariums and animals are popular.

- Waikato- “Where’s Wally” style mural with local icons e.g. ducks, pukeko, helicopters. Distraction.
- Labyrinth- therapeutic, good for parents too
- Sylvia park- Seat of a morphous form that allows for different configurations e.g. lying down or seating
- Airports- furry shelves for autistic children to enclose from over stimulation
- John Hunter Children’s Hospital Fairy garden- with nature sounds such as birds and trickling water
- John Hunter Children’s Hospital Starlight Room- Teen space with digital games and activities
- The Royal Children’s hospital (Melbourne) + Aquarium and Zoo- is like a Science museum- interactive stuff! Welcoming.
- As with The Royal Children’s hospital (Melbourne), what if Kelly Tarlton’s could sponsor an aquarium? Water and fish are popular for all ages. Aquariums appeal to young and old, is aesthetically calming, iconic feature.

*Digital*

Incorporate interactive digital technology, esp. since we’re in the digital age and kids like it

- Evalina, London- Sony: They create their own fish and release them into the digital tank. – Animal themed
- Alder Hay: trying to be UK’s first cognitive hospital.

- Digital aquarium. Digital hospital.
- Self-check in- way finding booth.
- Communicating through resources available e.g. health videos. Run a succession of these somewhere. Continuously.
- Interactive digital walls. Transforms just a wall or walkway.
- E.g. <https://vimeo.com/53977649> large artworks
- Digital hide and seek games around the hospital (like Pokemon Go)
- Wi-Fi is not great in the hospital but the teenage space should have a strong Wi-fi connectivity. It is a big issue. Patients can have their own logins.
- Projection (Kinect) Responsive touch on floor

*Holistic health*

Promoting well-child messages

- Promote healthy well-child messages for other family members/visitors e.g. immunisations, diet, exercise. A place for support groups e.g. Plunket, Kidney Kids. Partner.
- Promoting healthy eating. Farmers market once a fortnight

*Other Design ideas*

- Shade-sails might make it cosier (The sail currently there is not part of the design, it is just for the construction.
- Climbing in cubby holes
- Possible activities: Basketball hoops- Even wheelchair patients can use
- Mechanical canopy- retractable awning
- Theming: Open ended and abstract is preferred over a themed (like Disney) space. Idea: Like sky and stars/ bioluminescence. Sky lighting- like a canopy
- Mirrors (non-breakable) to make silly faces. Note: do not use distorting mirrors as it could negatively affect patient’s perceptions of body image, plain mirrors are honest.
- Terrain- out of pathway
- Textures
- Magnetic wall
- Children’s art- people just love actual children’s art, it is therapeutic and moving, Art exhibition of children’s art. In the UK. Frame that changes the image itself-monthly. Kids feel proud and have an ownership of the space
- Interactive bubble column
- Teens: see-through or semi-permeable partitions to have some visibility into the space while still feeling secluded
- Families looking from the windows- views
- Nicky’s whanau tree as an example- but who’s going to maintain it?
- Seasonal programme e.g. Snow- winter wonderland. COULD be changed each season

- In Christchurch concept design – non contained area-tree canopy thing outside in
- They have movie nights here but it has a small capacity
- Probably can’t be hanging chairs (swing) but inset seating/tent

Outpatients area

- Outpatients area is being completed in stages. Reception is being opened next week and next stages may be: sub-wait areas, plaster room, parent room.
- Research for outpatients area: Handed out surveys and asked parents
- Sun is the theme for level 3: yellow and grey battens, sky and clouds on the ceiling
- Other features: Organically squiggle-shaped seating. Reception sits low so that wheelchair users are treated like everyone else, has alcoves for wheelchairs as well, and is illuminated.
- Art for wall behind paediatrics reception (may feature birds and look bright), which will be cohesive with a level 5 artwork. Art could also connect sub-wait areas
- Don’t want too much busyness of environmental noise
- Modern (helps to appeal to all ages), inviting
- Technology- digital, self-check in.

Other

- More coordination between projects and initiatives from different departments would be good.



# Children’s Design Workshop at Starship Report

## Acknowledgements

I would like to thank the Play Specialist department at Starship Children’s Health their time, support and expertise to help facilitate this workshop. Thank you also to the Starship Child Health Senior Leadership Team for their guidance and the opportunity to host this workshop.

## The Event

### Purpose

This workshop aims to examine user perceptions of the public spaces (atrium, garden, level 3 mezzanine) in Starship. Children’s voices from patients and siblings will be considered through imaginative drawings, models, and discussions. The art-based activities seeks to understand what kinds of play they enjoy and what makes spaces feel comfortable and playful.

### Location

Roaming workshop between playrooms 23B, 24A&B, and wards 27A&B

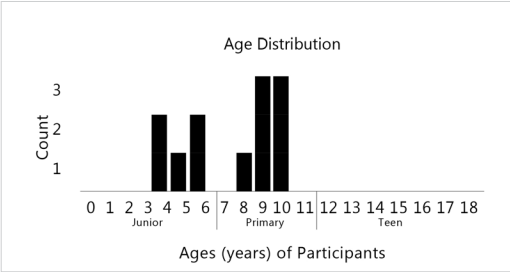
### Date

Thursday 27 July, 9am-3pm  
Tuesday 1 August, 10-11am

## Results

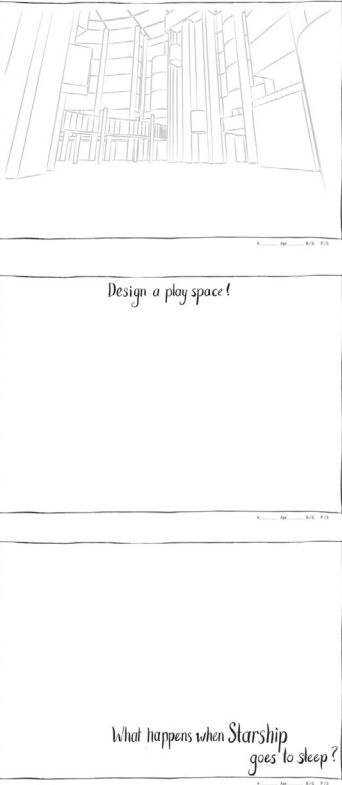
### Participation

Girl (9)	Boy (3)
Patient (10)	Sibling (2)



## Toolkit

### Worksheets



### Trolley of art and craft supplies



## Engagement

Overall, this workshop was successful in generating ideas for my project and, most importantly, gaining insight to better understand what children find important for this space. During the discussions, many guardians were also very willing to share what their child enjoyed playing with, or ideas for the atrium.

Most of the participants were not familiar with the atrium so they were shown past and present images of the atrium as a starting point.

- Things that did not work / need improvement
- no teen participants
  - colour activity was not fruitful, the free drawing/model-making activity was much more engaging
  - consent form process was too long

## Common themes:

- Outdoor spaces (Almost all were based outdoors)
- Grass, trees, sun and sky (#21, 22, 23, 25, #27, #28, #30, #31, #32)
  - Beach (#31), outdoor theatre (#21) and transport (train, #29)
  - Water design element (#22, #28, #30, #31, #32, caregivers)

- Adventure (#24)
- Nooks / places for discovery (#22, #24)
  - Tracks and paths (#22, #28, #29)
  - Tactile interaction (#29, #30, #31)- participant enjoyed constructing objects
  - Traditional playground equipment (#24, #25, #26, #27, #30, #31, #32)
  - Active play such as climbing
  - Vertical trees and chairs and nooks as a way to alter terrain and hiding spaces

- Social
- Playing with other children (#21, #30, #31)
  - A space for caregivers and children to do activities together- watching the interaction between children and caregivers during the workshop, it is crucial that there is space for them to play together as a caregiver’s presence nearby reassures and comforts children.
  - Civic activities and places for people to spend time together (eg meditation space #30, movie theatre #21).

- Safe for children in hospital
- Consideration of the hospital environments (#22, #28, #30, #31). They projected vulnerability when they described the spaces using words like soft and safe, and emphasised how their spaces would be inclusive for others.

- Having options and zones for different activities (#21, #22, #24, #28, #30, #31)
- Light / illumination (#24, #26, #28, #31)
- Framing / boundary around whole space (#28, #32)
- Rest / seating space (#21, #22, #30, #31)

- Healing objects
- Sun (#31)- vitamins, warmth, and light
  - Flower (#30)- “gives oxygen to protect the children”

- Fantasy, enchanted, magical worlds (#22, #28)

- Familiar/personal-connection story (#25, #28, #31)
- Referenced a story about something they love

- Animals or toy characters
- (#22, #24, #25, #26, #27, #28, #32)
  - Plants to attract birds

## Overall

- None of these images feel at all like a hospital. They all reflected familiar play-spaces, activities, or stories. This might suggest that the atrium should be void of clinical aspects and purely focus on play.
- Activation- The spaces were all about what you could ‘do’ in there as opposed to what would ‘look’ cool.
- Inclusivity- Participants often spoke about how other children could enjoy the space, rather than how they themselves would use it.
- Safety- Some participants were very careful to design a space suitable for a children’s hospital, and made sure that people (esp. patients) were not likely to get hurt.

Artwork Index



#21  
Boy, 9  
Patient



#22  
Girl, 9  
Patient



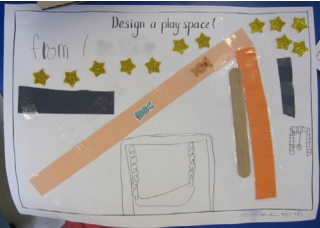
#23  
Girl, 4  
Patient



#24  
Girl, 8  
Patient



#25  
Girl, 9  
Patient



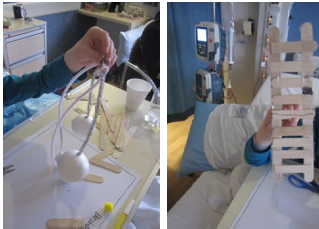
#26  
Girl, 6  
Sibling



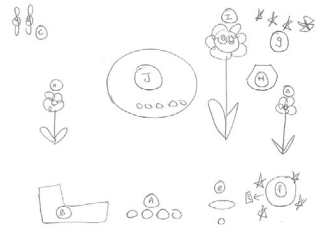
#27  
Girl, 10  
Patient



#28  
Girl, 6  
Patient



#29  
Boy, 5  
Patient



#30  
Girl, ~10  
Patient



#31  
Boy, 10  
Patient



#32  
Boy, 4  
Patient



#21  
Boy, 9  
Patient

Description

**An outdoor movie theatre in the Koromiko Garden.**

Outdoor space with grass and trees. There is be a popcorn stand and comfortable beanbags. A place for many kids to hang out together. Kids can also play with torches/flash-lights. It must be wheelchair friendly.

The right of the drawing is a vege garden. The patient's favourite fruits were strawberries and mangoes.

Favourite colours: blue and red



Key design aspects

Outdoor movie theatre with popcorn, torches  
Beanbags  
Vege Garden

Analysis

Going to the movies with your friends is a popular activity at his age so it would be great to have a similar activity here.

I wonder how much of the design was lead by adults and their own ideas- which were intended to be prompters but may have been interpreted differently.

The participant chose to finish the activity when his play specialist left for a minute, which shows the importance of having a familiar person that he trusted in the room.

I drew some things that he couldn't (strawberries and mangoes) for him to stick on.

Key themes from analysis

Outdoor space  
Cool camping-like activity  
Social space  
Role of play specialist/trusted adult





#22  
Girl, 9  
Patient

**Description**  
**A fairy garden in the Koromiko Garden.**

Figures of fairies could be found in nooks throughout the garden. There would be fairy lights, pond with gold fish, real butterflies, pink flowers and a pebbled path. She loved the idea for it to light up. Her grandmother also suggested that it could be musical. There is seating on both bottom corners of the drawing. A lovely big rainbow is also seen in the fairy garden. Her grandmother also suggested a fountain or other water feature.

Favourite  
colours:  
pink



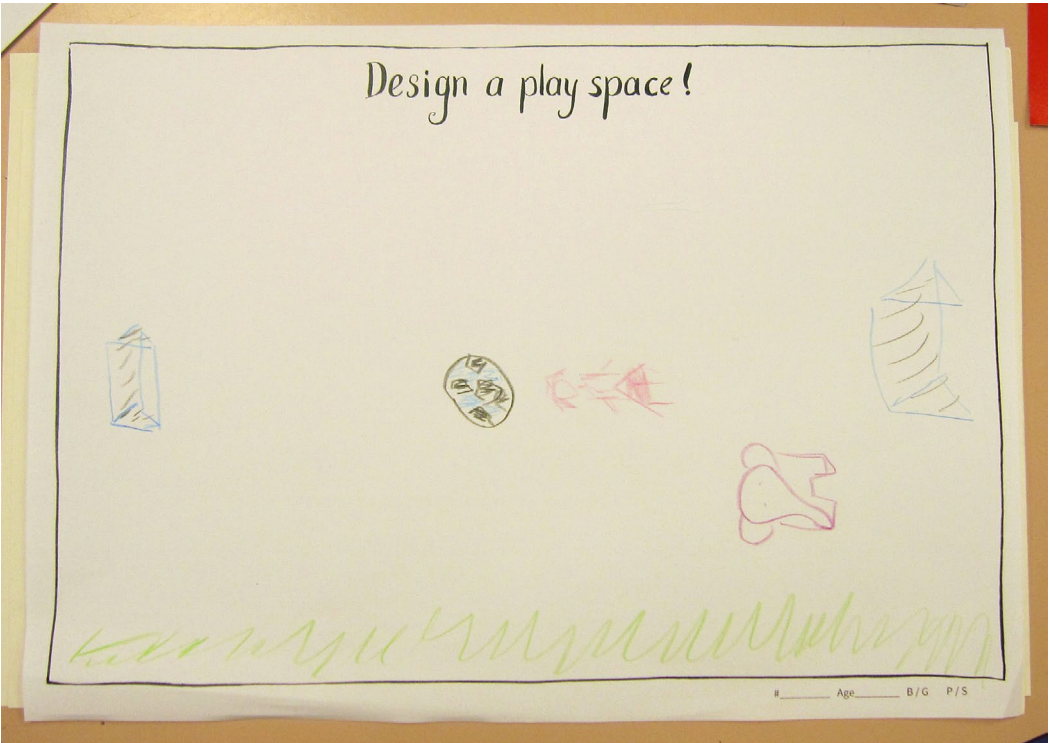
**Analysis**  
This participant really liked to draw. Her outfit also showed that she loved pink and typical girly things like fairies and butterflies. She found comfort in her teddy that she brought with her to the playroom.  
After drawing this, she also made pink and purple pipe cleaner butterflies. She also made a 'taco' with lettuce, tomato, meat, and cheese fillings. The taco was personified and had arms and legs and large cartoon-like eyes. She says that she has never had a taco.



She had to take her time to walk to the playroom so the rest areas she drew were quite significant to me.

**Key design aspects**  
Fairy Garden  
Pretty and magical  
Nooks to find fairies  
Nature  
Resting space  
Pond  
Pebbled path

**Key themes from analysis**  
Magic and fantasy world  
Discovery  
Rest spaces



#23  
Girl, 4  
Patient

**Description**  
The patient's dad drew ideas of the patient on her behalf because she was unable to.

Favourite  
colours:  
-

The image depicts a soccer game. The elephant does not have any significance- it was drawn because the father knew how to draw an elephant.  
The participant chose to end her participation early

**Analysis**  
She was not comfortable without her parents very close-by.  
This drawing was difficult to analyse because she did not seem very interested in the activity.

**Key design aspects**  
Soccer

**Key themes from analysis**  
Sport  
Familiar activities  
Comfort from parents



#24  
Girl, 8  
Patient

**Description**

Monkey bars at the bottom of the drawing. There are characters (teddies and rabbit) playing on the monkey bars.

There is a cave on the bottom right, which is filled with light.

There are bubbles all through the space

Favourite colours:  
Blue



**Analysis**

She was very shy but found comfort in being able to ask how something could be drawn and using stickers

The monkey bars were drawn first, and may have been a result of drawing the first thing that comes to mind when I said playspace (-->playground).

The cave filled with light was the most interesting to both of us.

**Key design aspects**

Lights  
Cave  
Monkey bars/ playground equipment  
Bubbles

**Key themes from analysis**

Exploration  
Friendly  
Lights



#25  
Girl, 9  
Patient

**Description**

The swing set was drawn first, and the top middle monkey bars are her favourite playground equipment. The middle right is a slide. On the tree is a squirrel and there are butterflies and bushes surrounding it.

The top left are two drawings of a birdcage (the participant was happier with the lower one). She hopes that pigeons, sparrows and native birds will be there and be free and happy. The pigeons should specifically be homing pigeons- her dad once had homing pigeons and opened up the cage one day at a park. They all flew out and later returned to their home.

Favourite colours:  
Rainbow-  
bright & neon



**Analysis**

The playground equipment was the first to be drawn. Like #24, this may have been the first association for my prompter of (play space).

I think she wanted more of an aviary than just a birdcage because the birds were described as 'free'. Her fascination with them comes from her story about her dad's homing pigeons. Thus this personal connection to the birds is also a connection to her family.

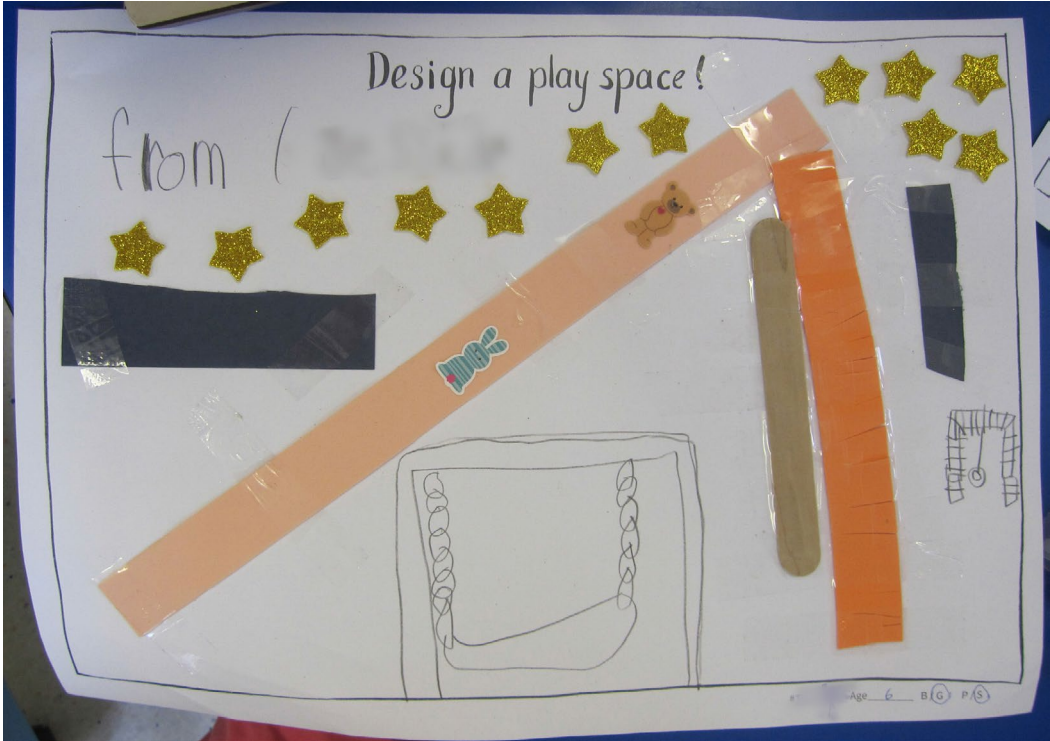
**Key design aspects**

Playground equipment  
Garden  
Animals  
Birdcage with homing pigeons  
Birds

**Key themes from analysis**

Outdoor spaces  
Animals  
Familiar animals  
Family





#26  
Girl, 6  
Sibling

**Description**

There is playground equipment including a slide made of foam strips with cut rungs, and a swing set.

Amongst the stars are dark blue patches that represent "dark", which her father interpreted as "night".

Favourite colours:  
Rainbow  
bright & neon



**Key design aspects**  
Playground equipment  
Starry night

**Analysis**

Her favourite colour choice was perhaps influenced by her sister (participant #25) as she repeated what she said.

The night sky may have been prompted by the star stickers.

**Key themes from analysis**  
Her sister is a key influence  
Likes different textures



#27  
Girl, 10  
Sibling

**Description**

She started by drawing a swing set.

After a few prompters of other play spaces, she liked the idea of a zoo so she drew a lion on green grass, an elephant, and penguin in snow. She talked about her visit to Melbourne zoo. She saw every animal except an elephant which is why she drew one.

Favourite colours:  
Purple,  
black and  
white



The spiral object does not carry any meaning.

There is a flower on the top right.

**Key Design aspects**  
Playground equipment  
Zoo animals

**Analysis**

This participant may have been more comfortable if she had some more time by herself to draw without myself and the play specialist focussed on her.

She may not have been comfortable / as willing because she couldn't draw exactly what she had imagined.

She loves to draw flowers such as the one on the top right.

**Key themes from analysis**





#28  
Girl, 6  
Patient

Favourite  
colours:  
Black



### Description

The entrance of this play space has a large rainbow sign with it's name "Storyland" on it. The sun has a light in it so it actually glows. The floor is soft like grass. Everything is soft because there might be kids in hospital that aren't that well and could fall or get hurt. Soft mountains so that children can climb on them. Big toys to sit on are soft but firm. The huggable teddy has a bad eye and you can ride on the pink unicorn, Night Fury (the black dragon from the movie "How to Train Your Dragon", and large butterfly. There is also a hanging garland of butterflies from the ceiling. The clouds will be painted white on the roof. There is a river through the land. There is a fence around the play area.

### Key design aspects

Illuminated sun  
Soft surfaces  
Climbable mountains  
Huggable creatures  
Fantasy creatures  
Consideration of the hospital environment

### Analysis

This was completed the day before the workshop under the guidance of her play specialist.

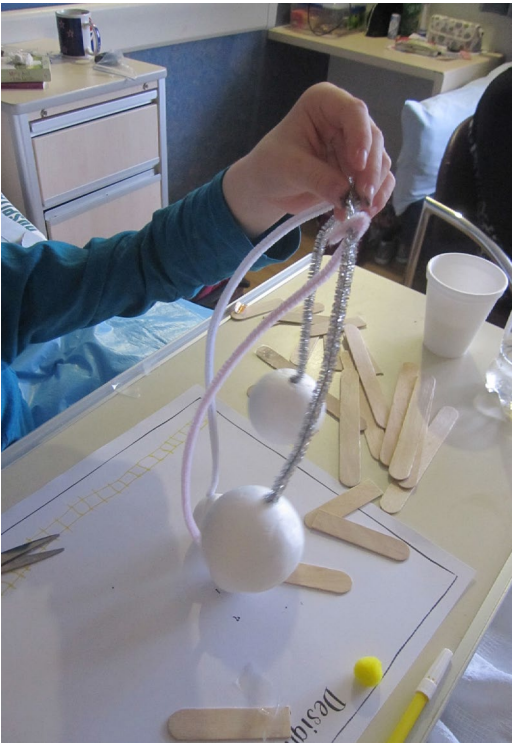
She loves to draw, in her drawing book she also drew Pokemon, organisms to understand her procedure, and dragons are her favourite to draw.

She carefully considered what is necessary in a hospital such as soft surfaces.

Familiar characters like her dragon and animals are popular.

### Key themes from analysis

A safe and friendly place  
Outdoor spaces  
Magic/fantasy



#29  
Boy, 5

Favourite  
colours:  
Blue, and  
yellow



### Description

We first started talking about what he liked to play with, and his grandmother suggested that he enjoyed building toy train sets. He began drawing a rail track with a yellow felt pen with the intention of drawing a train next.

Next he discovered pipe cleaners and polystyrene ball and made this mobile-like object that jiggles.

Then he wanted to create a track with popsicle sticks. He cut some in half and pieced them over two longer pieces. Before he put short pieces on the second set of long sticks, he 'walked' the dangling pieces. He also like to 'hide' behind the object (like peekaboo). He became immersed in his train tracks and didn't even think about the train anymore. When asked, where do you want to take a train to? He answered 'America!'.

### Key design aspects

Hanging objects  
Train tracks  
Building



### Analysis

At first he was unsure if he would want to participate but when he started making, he couldn't stop! He even took some pieces home to keep making.

He couldn't really describe what the balls creation was meant to do but he enjoyed watching in move about and clinking. He also declined using string as he preferred the pipe cleaners. The colours of pipe cleaners (pinks and purples) limited him to choosing the closest to white plus silver ones.

He's detailed oriented, and would try trim off excess tape and uses a black marker to add details to the track. We thought it also looked like a ladder. He's fearless and wanted to cut and tape it himself, although we did help with some cutting and holding tape for him to cut.

When I asked him about the colour activity, it felt like a block and he shut off and seemed confused.

Guardian's ideas: textures like natural wood of the popsicle sticks, brick, periscopes, blackboard, being able to be at the edge of a pirate ship.

### Key themes from analysis

Free making with modular units  
Construction activities  
Discovery through play  
Simple but effective supplies







#31  
Boy, 4  
Patient

Favourite  
colours:  
Yellow



#### Description

He immediately started by drawing the abstract green maze-like structure. He places his favourite animal, monkeys, on the 'swings'. Then he drew a spinning playground equipment in yellow at the bottom. He drew lakes for the crocodile and another one for the turtle. He decides that the rabbit will use the spinny thing and he gives him some food too. All the birds are grouped together.

The purple straw with a black one on top is a see saw constructed by the father. The rest of the straws were placed around the space to close it.

His father says that he likes: mazes, pirate ships, climbing walls, mounds with climbing holders (like on a climbing wall, animals, rope swings, spinny thing, in-ground trampoline, tunnels (such as in a mound), the mouse-wheel-like equipment at Takapuna beach.

#### Key design aspects

Animals  
Playground equipment  
Animal habitats

#### Analysis

His favourite animal is the monkey. He also loves stickers. His father helped him with the straws but the rest is all done by the participant.

His father described all the play spaces that he liked- they are all physical adventure and exploration-based.

This drawing began as a drawing of playground equipment then became how it could accommodate all his animal stickers. There is definitely a system to where he has placed/ grouped the animals and is thoughtful about their habitats. What is also interesting is that this image has different ground planes for the animals.

#### Key themes from analysis

Logic games (sorting animals)  
Animals  
Exploration  
Adventure

## Playscapes: Pure Ludens

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Keywords: Play, Children's healthcare architecture, Hospital design, Colour, Co-design methods

### Introduction

Intuitively, we play. Cultural theorists Johan Huizinga and Brian Sutton-Smith (1997) discuss the ambiguous nature of play and its relation to space. Play is more than just a frivolous activity or playgrounds and theme parks; it is how we - and especially children - can discover and engage with our environment. Spaces cannot force play, one of Huizinga's (1955) conditions for play is that it must be a free choice, but spaces might inspire someone to want to play. But what happens when play is situated in the very ordered structure of a hospital? This practice-led research asks how can an enquiry into play activate therapeutic hospital environments through empathy, imagination, and re-enchantment? To consider this, we explore the tension between the highly regimented hospital environment and the unregulated nature of children's play through play theory, drawing methodologies and colour. This paper describes findings and research to date and how these might be folded into a design proposition

### Site and Existing Environments

This research is a collaboration between Starship Children's Health<sup>1</sup> and the Design for Health and Wellbeing (DHW) Lab. The DHW Lab is a collaboration between Auckland University of Technology (AUT) and Auckland District Health Board, located at Auckland City Hospital to design to improve healthcare experiences with patients, their families and staff (Reay et al. 2016).

This project is situated in three connected public spaces of Starship Children's Health- the atrium, a small garden, and a mezzanine with a café. The atrium is a multipurpose environment available to people in various situations or emotional states at all times of the day and night. Access to outdoor spaces such as the garden suggest that these holistic wellbeing intentions were in the original Starship design but not maintained. Familiar food outlets (mezzanine) were also intended to make the hospital feel less isolated from civic activities (Kearns and Barnett 2000). They were intended to cater for families, however, staff interviews found that these spaces are underused, cold, dull and uninviting for patients and their families.



*Theoretical Frameworks*

To address these ideas at Starship, this research first looks at complexities in healthcare spaces. Hospital design is moving in a direction that mediates hierarchies between doctors and the medical machine, and patients (Wagenaar 2006, 41). One such way to empower patients is applying a holistic notion of wellbeing and acknowledging the effects that environmental factors have on healing. Geographer and health space critic Wilbert Gesler (1993) considers the influence of health care spaces and “therapeutic landscapes” for patients receiving treatment. These spaces may include landscaping and appeal to our biophilic tendencies, space for spiritual connections, spaces for family, and opportunities of personalisation. The rigidity of institutionalised medicine is also juxtaposed with the nature of free, unregulated play. Play and play therapy can be a medium to communicate with children in a way that they are familiar with in an often intimidating setting. Children in hospitals have many things decided for them or procedures done to them, whereas play is something they can control and is used as a form of escape or distraction from the clinical aspects of a hospital. How might a notion of play in the design improve patient experience?

**Methods**

These themes are explored through drawing methodologies and colour. Qualitative data collected by way of interviews and a design workshop supports the need for inclusive processes to incorporate perspectives of the space’s primary users (child patients, families, and staff).

Extending the site analysis beyond the confines of the hospital to the neighbouring Auckland domain reveals the histories of the site and its streams and springs, adding a geographical connection to the hospital (Figure 1). Along with research on cultural contexts, this research shows how holistic wellbeing should be considered as an intrinsic part of the design process.



Figure 1: Extended site mapping- history and geology

*Playfulness through colour*



Figure 2: Existing Atrium interior walls  
The Starship atrium is lined with five pastel colours that carry significant meanings: pink= health and wellbeing, blue=sky, aqua=sea, orange=land, and yellow=sun (Figure 2). The original design intent was to make each level themed to one of these colours and the ground floor would be an amalgamation of all them. Currently, the de-saturated pastel tones from its opening in 1991 make the space appear outdated and dull. Precedents of children’s hospitals constructed in the last ten years still use multiple colours but in brighter tones, and it is balanced with more white/neutral colours so it is not overpowering or over-stimulating. Colour theory estimates how colours are experienced while acknowledging that each person’s perception of colours may differ.

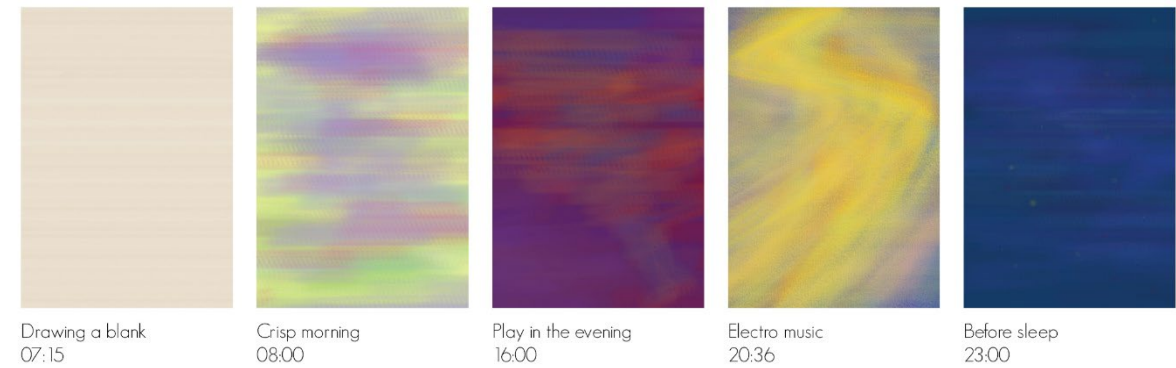


Figure 3: Synesthetic colours at different times of day

Initial exploration of assumptions around colour resulted in playful cross-sensory visual colour cards (Figure 3). These are further tested through a co-design workshop with children at Starship to gain insight into how they view their experiences and ask what kinds of play are meaningful to them. Colour, material and lighting are also considered by how it may affect our body’s circadian rhythms, and possible cross-sensory links to mood, colour, and time.

**Conclusion**

These findings examine the value of play in a children’s hospital design. It is also specific to cultural and geographical contexts of New Zealand. User-experience and input are at the core of the design process, emphasising how an understanding for the site and people can lead to an empathetic design proposal response.

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