Learning to Play Again

Playground Designs that Create Opportunities for Spontaneous and Unstructured Play

Prepared by Peng-Ho Quah

BDes (Industrial Design)

Research supervised by Katherine Gillieson, PhD

Associate Professor, Faculty of Design + Dynamic Media

Emily Carr University of Art + Design

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And finally, my most heartfelt and sincere gratitude to my beautiful family: my wife Cecilia and my three children, Kai, Yang, and Han—you are the very reason for my being and my inspiration for this research.

Preface

I have three young children and have always strived to do the best for them. Having lived in such a highly regulated and competitive society as Singapore, my wife and I have raised our children in the safest and most predictable environment possible, based on what we knew then and our natural instincts to protect them.

When it comes to outdoor play for our children, we have mainly focused on safety for physical activities. I have trained my children to play in a safe and considerate manner, sometimes to a fault—my children are highly confident in a familiar setting such as a modular playground, but when they are brought somewhere with a less “built-up” outdoor environment, they become more tentative and seem to become bored more quickly, often lacking the imagination to play when left to their own devices, as if they need some hand-holding when it comes to spontaneous and unstructured outdoor play.

The irony here is that I constantly encourage my children to take risks in their school work and work that involves many rules. It simply has not occurred to me to push them to take risks when playing outdoors.

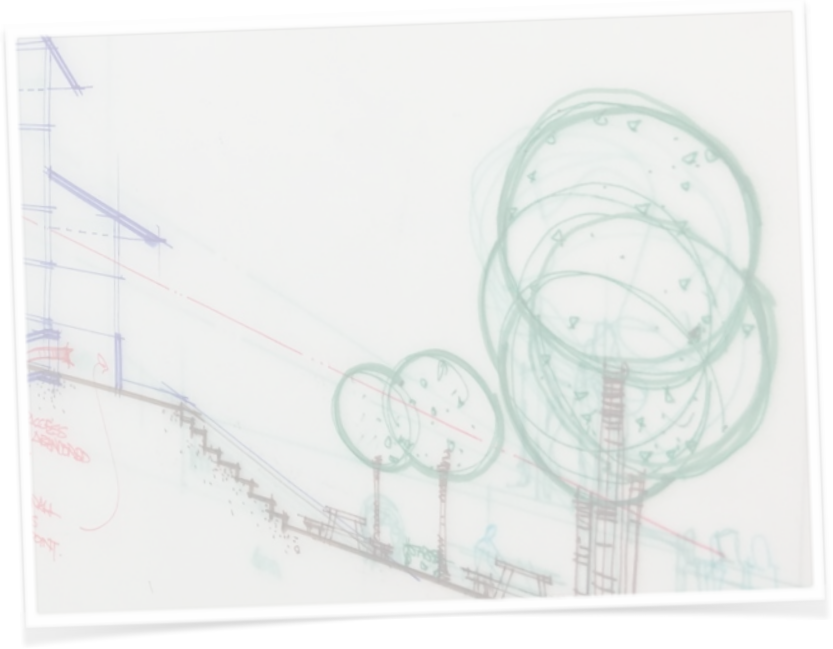
That brings us to my research—I am essentially examining our own situation to find a better way to bring up our children in today’s context of increased anxiety for their safety and that of the community in general, and also to counter an increasingly structured lifestyle. Taking risks, not taking instructions too seriously, and “learning” how to play outdoors again seem like a good place to start.

Figure 1. A sign found next to a playground in Singapore, after complaints from residents about noise. It has since been removed.

Abstract

The benefits and necessity of play for children have been well researched and documented. This project looks into unstructured and spontaneous play—activities that could encourage confidence and creativity—in the context of contemporary outdoor playgrounds and adventure playgrounds, and how playground instructions (both overt and covert) and the general design characteristics of these playgrounds affect the way children play around them.

The proposal developed within this project suggests possible ways of merging the best characteristics of adventure and contemporary playgrounds into solutions that offer increased opportunities for spontaneous and unstructured play for children from a speculative design standpoint. It also touches on additional considerations that could situate the proposal into more plausible solutions: for example, reconfiguring an existing site's components to enhance it, or utilizing an otherwise unused parcel of land, amongst others.



Keywords

Children, risky play, unstructured play, spontaneous play, pretend play, creative play, playground design, adventure playgrounds, nature, outdoors, structured activities.

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Introduction

"We have such a brief opportunity to pass on to our children our love for this Earth, and to tell our stories. These are the moments when the world is made whole." (Louv, *Last Child in the Woods*, 2008, p 316)

As today's children are spending an increasing amount of time indoors rather than outdoors, the types of play in which children generally engage seem to have changed as well. In the first page of their paper titled "*Children's Nature Deficit: What We Know—and Don't Know*" (2009), authors Cheryl Charles and Richard Louv note the numerous studies that indicate "the perception of growing demands on children's time, resulting in less free and unstructured outdoor playtime in nature than experienced by previous generations…" They also note the associated effects of reduced outdoor playtime: a growing fear of strangers, traffic, and nature itself, as well as a dramatic rise in health issues among children. Based on available historical data, the authors argue that the trend is likely to continue. (Charles and Louv, 2009) It seems that unstructured and spontaneous play has taken a back seat as concerns about children's safety, and the need to "maximize" each child's potential, even during playtime, means that there is little room left for children to engage in "meaningless" play, or play without objectives and aims.

Along with increasing urbanization, even when children do have some time to spend outdoors for ad-hoc, impromptu play, most are likely to end up playing in contemporary playgrounds that are conveniently located and compactly designed, have high production qualities built to the required safety standards, and, due to their modular construction, are highly familiar. It is almost like a fast-food version of modern playtime for children —they hop on, go through the circuit of play equipment, take in their daily dose of motor activities, and repeat another day. Parents can generally be assured that their children will be safe when playing in contemporary playgrounds while still having a good time, and that the occasional knocks or fall are not likely to lead to any serious injury.

1 Cheryl Charles, is the President and CEO of the Children & Nature Network (C&NN). Richard Louv is the author of "*Last Child in the Woods: Saving Our Children from Nature—Deficit Disorder.*"

What types of interactions might be lacking in these contemporary playgrounds, considering their safe and predictable format? Is there a place for more unstructured and spontaneous play for today's children? What are the benefits of spontaneous and unstructured play, if any?

This project examines these issues, and while it limits its proposals to the playground space, it looks beyond that space into conformity and the roles and effects of instructions as another possible way of introducing risky and spontaneous play in playgrounds.

The final design proposal is a combination of observations, insights, and ideas derived from research, my own experiences and training, which were then synthesized to form the basis of a playground that is situated in the speculative and critical design space.

Since a contemporary code-complaint playground's tendency is to focus on physical activity, safety and production efficiency, it is deemed an inappropriate model for development.

Making the proposed playground a speculative design project would therefore allow it to more readily provoke discussions, mould expectations and hopefully advance relevant issues than is otherwise possible for a code-compliant one.

The proposed playground's focus on encouraging spontaneous and unstructured play through novel means, is primarily influenced by Simon Nicholson's paper "How Not to Cheat Children: The Theory of Loose Parts"[1] as well as Bill Gaver's[2] thoughts on ludic design, both of which involved ambiguity and the fundamental aspects of play.

As a caveat, I want to mention that I am not trained in, nor have the experience of, designing playgrounds.

1 Nicholson's Theory of Loose Parts was developed in 1971 and dealt with the potential of ambiguity for creative play in children's playground.

2 Gaver's ludic design draws heavily from Huizinga's Homo Ludens, advocating—in very simplified terms—the introduction of ambiguities into design situations or proposals in order to obtain fresh perspectives and insights.

The Underlying Theory

As noted in the introduction, children today seem to lack the opportunity for spontaneous and unstructured play. Most play activities engaged in today are likely standardized and structured due to the perception of growing demands on a child's time. (Charles and Louv, 2009).

What constitutes standardized play in the playground? As noted by Dr. Joe L. Frost[1] on the design of neighborhood playgrounds, "Late twentieth century playgrounds are subjected to criticism for the so-called 'cookie-cutter' or standardised appearance, especially public school and park playgrounds (…)" (Frost et al., 2006).

Separately, in an article for *CounterPlay*, Mathias Poulsen[2] aptly described the problem with today's playgrounds as follows: "Everything is decided by someone else, and the people playing can't really shape the space, hence they are often not really participating, but only doing what the designers (…) desire." (Poulsen, 2016).

Beyond advances in material technologies, not much seems to have changed in modular playground design since the 70s. Jay Beckwith's[3] comment on playground designs still seems to apply today: "During the 1970's and 1980's, playground equipment manufacturers designed and distributed modular wood equipment (…) intended to conserve space, entice children to move in rapid succession from one motor activity to another, (…)." (Beckwith, 1985). There seemed to be few opportunities for unstructured, spontaneous play in these conventional playgrounds.

Regarding the importance of spontaneous and unstructured play for children, Dr. Frost, in an interview with the *American Journal of Play*, said the following: "limiting children's outdoor play (…) limits their physical fitness, hurts their health, and reduces the learning and ability to cope with trauma (…) when children engage in free, spontaneous play outdoors, they adapt more readily to their culture, to their society, and to the world (…)." (Frost, 2008).

1 Dr. Frost is the Parker Centennial Professor Emeritus at the University of Texas at Austin, USA, where he taught for 34 years. He is known all over the world for his more than 30 years of work on early childhood and children's play environments.

2 Mathias Poulsen, grassroots activist and founder of the "CounterPlay Festival" in 2013, an international festival bringing people from different domains, focusing on games, play & playfulness.

3 Jay Beckwith, known as one of the "fathers of modern playground design".

On a topic related to spontaneous and unstructured play, Mariana Brussoni[1] et al. in their paper "Risky Play and Children's Safety: Balancing Priorities for Optimal Child Development," argued for introducing the element of risk in children's playtime: "emerging research suggests that imposing too many restrictions on children's outdoor risky play hinders their development (of injury prevention)… Literature emerging from many disciplines supports the notion that safety efforts should be balanced with opportunities for child development through risky play (…)." (Brussoni et al., 2012).

In a study by M. W. Johnson[2], the extent of available play equipment was found to affect certain play activities. When more play equipment is available, children tend to exercise more than play, whereas they play more creatively and socialize more when less equipment is available. In other words, unstructured, spontaneous play occurs more frequently when less play equipment is available. Add socializing into the mix and one could safely assume that such situations would be even more conducive to spontaneous and unstructured play.

Building on the notion that "less is more" when it comes to creative play activities in playgrounds, architect Simon Nicholson's paper "How Not to Cheat Children: The Theory of Loose Parts" argued for spaces where play occurs to have variables or "loose parts" to allow children to mould, modify, and experiment when playing, stating that these situations would allow for more inventive and creative play. In his words, "in any environment, both the degree of inventiveness and creativity, and the possibility of discovery, are directly proportional to the number and kind of variables in it." (Nicholson, 1971).

A possible solution to the problem described above could be the adventure playground, which encourages and fosters free and unstructured play due to its non-modular and "messy" configuration and integration with natural environments, where there are more opportunities for the children to take risks and to modify the play space according to their whims and preferences.

1 Dr. Mariana Brussoni leads the CHILDS Play Research and the Injury Research programs and is a scientist at the BC Children's Hospital Research Institute and the BC Injury Research & Prevention Unit, Canada.

2 Marguerite Wilker Johnson, author of *Verbal Influences on Children's Behavior* and a former Associate Professor of Education and Director of the Nursery School at the University of Michigan School of Education, USA.

Despite their advantages over conventional playgrounds, adventure playgrounds in their truest form are more land- and human-resource intensive than conventional playgrounds are, due to their requirements for more space in general for activities as well as for trained play leaders. As a result, they tend to be less common. Is there a middle-ground, where the best characteristics of the conventional playground and adventure playground are combined? A space where children are given agency to create their own play space and mould how they play and interact with one another? And how can one start looking into the issues of limited land and/or human resources? The proposal developed in this thesis seeks to address this potential need.

The Research Process

This project consists of two investigative arcs. The primary arc focuses on playground characteristics and their possible effects on how children play around them, whereas the secondary arc concerns how instructions could have a possible influence on children's play as well.

The playground space was chosen because it involves a wide variety of factors critical to the study of play in children, of which one of the most important is the social aspect of play and how children navigate the potential risks and conflicts that can arise. The process involves observations of various playgrounds and parks as a means of gathering information on ground conditions and how the sites are typically used by families with children.

In addition, my children and I engaged in several play activities meant to spur creativity; these involved building things, improvisations, and coping with unfamiliar play situations. These were a valuable source of direct experiences and observations that might provide valuable insight despite the limited sampling size.

The study of instructions was chosen as the secondary investigate arc because playground instructions could potentially have conflicting effects on the engagement of spontaneous and unstructured play, especially if adults are involved in the process, as they generally deal with children's safety and the consideration of others as the norm. The main intent is to find practical ways to encourage spontaneous play while staying within the bounds of standard playground instructions.

An iterative, practice-based research methodology was adopted as the primary process because it is seen as the most appropriate means of gathering qualitative observations and insights on the relevant issues while allowing ideas and concepts to build on each other. Another benefit is the relative nimbleness of the process, which allows specific ideas or notions to be tweaked and modified to reflect previous observations or insights.

Combined, these two investigative arcs enabled me to cover a broad range of relevant issues within a relatively short timeframe.

The Research Activities

The following activities were undertaken to gather possible insights into several aspects of playground design and the effect of instructions on play that could in turn inform the design considerations for the final proposal of the research.

The activities presented below include images and observations as relevant.

Activity 1.0 - Initial Study on Instructions[1]

The main intent behind this activity was to gain insight into how instructions directed at children—with parental involvement—could affect outcomes, and specifically whether open-ended instructions would positively impact outcomes versus specific instructions.

Each study consisted of various questionnaires and activities contained in five packages that were given to participants. Details of each package are presented on the following page.

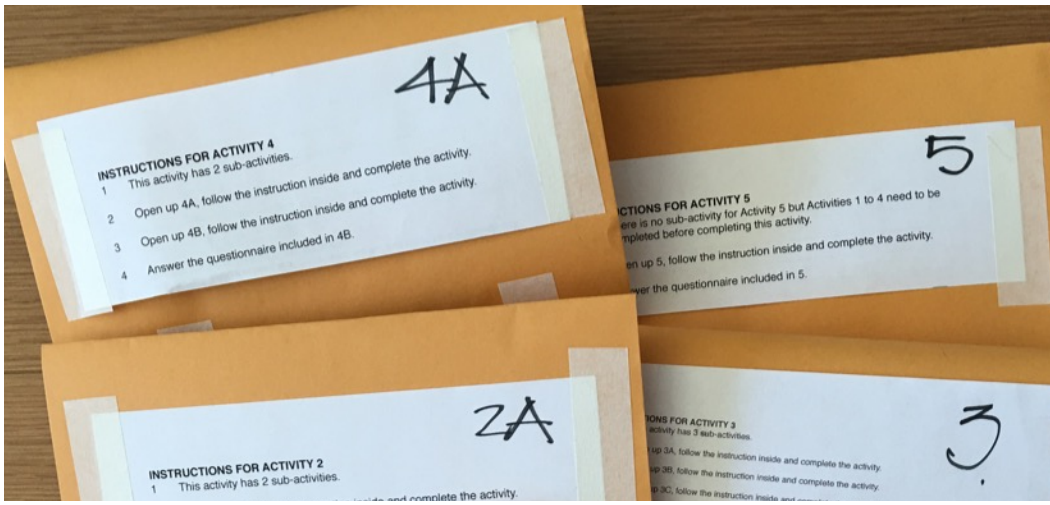


Figure 2. Sample of individually packed research activities.

1 Activity 1.0 details:

- Research period from 24 June 2016 to 15 August 2016.
- 30 study packages sent out in total.
- 6 responses received. 5 responses from children aged below 5 years, 1 response from a child aged above 5.
- Participants were drawn from a variety of sources, from the students in my children's classes to relatives of friends with children of appropriate age.
- Participants were given up to 4 weeks to respond.

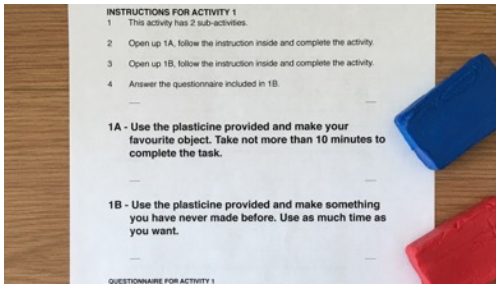


Figure 3.1. **Activity 1.1a**: Make your favourite object–plasticine provided–within 10 minutes. **Activity 1.1b**: Make an object you've not made before–plasticine provided–there is no time limit.

Figure 3.2. **Activity 1.2a**: Draw the following on each of the cards provided: Your favourite thing; Your least favourite thing; The thing you see most everyday; The loudest thing you can think of. **Activity 1.2b**: Make a story out of the things drawn, in any sequence and any form–in words or pictures–desired.

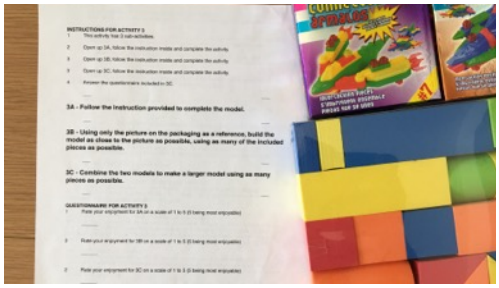


Figure 3.3. **Activity 1.3a**: Follow a set of given instructions to assemble a brick construction kit. **Activity 1.3b**: Attempt to assemble a brick construction kit from provided visuals on packaging only.

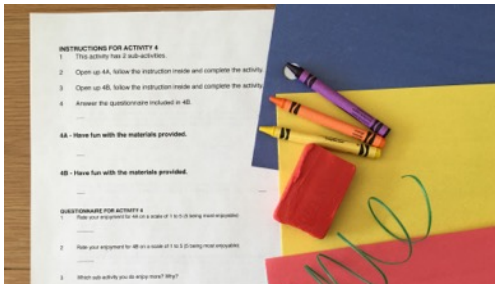


Figure 3.4. **Activity 1.4a**: Have fun with the materials provided–consisting of familiar arts and craft materials. **Activity 1.4b**: Have fun with the materials provide–consisting of materials not usually used for arts and craft.

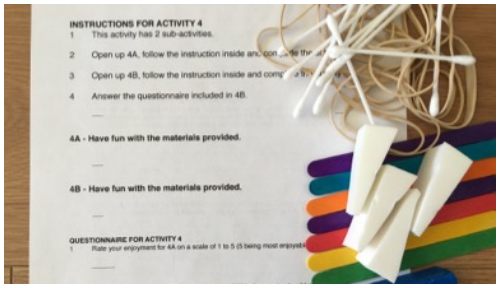


Figure 3.4. **Activity 1.5**: Choose 2 activities from the the 4 above and combine them in a manner that is interesting or meaningful for the participant.

Observations and Insights

The package was meant to provide many variables for each activity to make it compact and manageable for the participants. However, based on the results, a more suitable approach would have been to link each activity to a single variable for evaluation, so that a potentially clearer picture of the effects of each variable could be observed.

An ideal situation would have been to organize co-creation sessions with the participants for a simpler but more involved exercise, but this was not possible during the period of time when the research was conducted.

It was expected that the children's output would be limited by their own experiences. What is interesting is how similar the outcomes were across activities for each child, but across the children themselves: outcomes were consistently in the form of humanoid figurines and drawings, and anthropomorphised animals. The impression is that objects and situations that the children encountered in their daily learning experiences, be it from story books or other media, influenced them significantly.

Figure 4. Collection of similar outcomes depicting anthropomorphised forms and common objects.

One other observation is how much influence prior experiences or knowledge with the materials and context had on the outcomes: the participants rarely deviated from the prior subject when given the choice to create another object out of the same materials. Spaceships still remained spaceships when the children were asked to combine two construction kits of spaceships together; and foam blocks were still used for buildings when instructed simply to have fun with the blocks.

Based on the two observations above, it seems that exposing a child to diverse experiences and stimulants could have a significant, possibly positive, influence on his or her range of possible outcomes and responses to open-ended instructions or problems.

There were no discernible differences in outcomes between open-ended and specific instructions, and some child participants were as enthusiastic about open-ended instructions as others were confused by them. Prior knowledge and experiences seemed more influential, as detailed in the prior observations. The prompts to bend or break the rules were either ignored or went unnoticed.

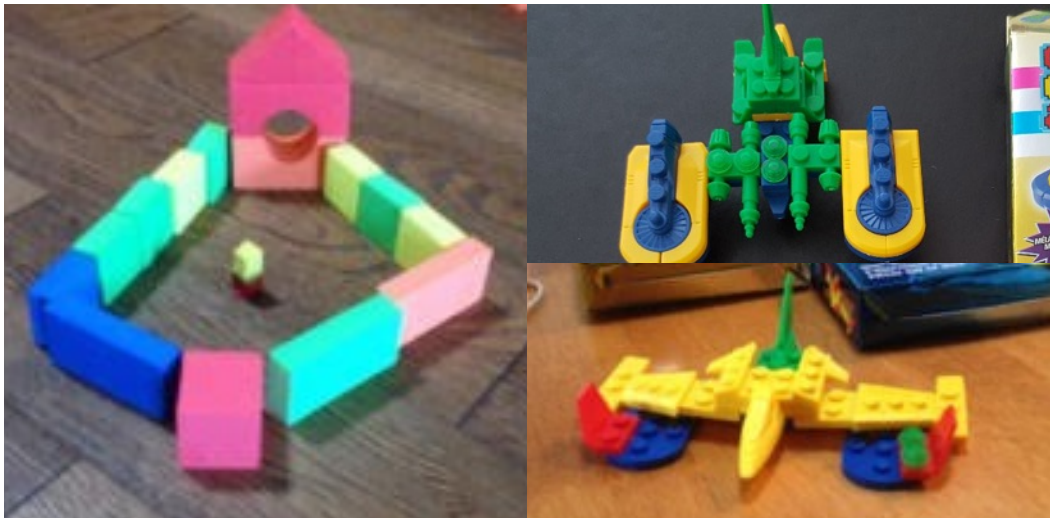


Figure 5. Collection of similar outcomes showing possible influence of prior experiences when playing with familiar toys.

Activity 2.0 - Creating Instructions[1]

Activity 2 was a direct follow-up based on the observations made in Activity 1. The idea was to study participant responses in creating instructions for randomized, possibly absurdist situations, to see whether encountering situations to which the participants were not likely to be exposed would result in any interesting outcomes or observations. The participants were asked to create instructions based on a situation dictated by three randomly written tabs, drawn blind from separate envelopes.

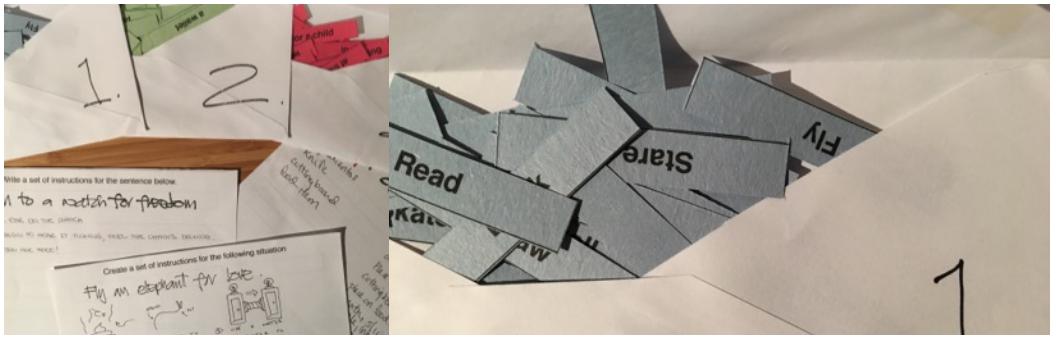


Figure 6. Tabs sorted into 3 envelops categorised into “Action”, “Object” and “Accent” respectively.

Observations and Insights

The participants consistently gave humorous or at least non-serious instruction, regardless of the type of situation that was dictated. It seemed that the game-like, randomized nature of setting up the situations prompted the impression of the activity being a fun and frivolous one, resulting in outcomes that reflected that particular impression—a possible indication of the significance of context and presentation in influencing outcomes.

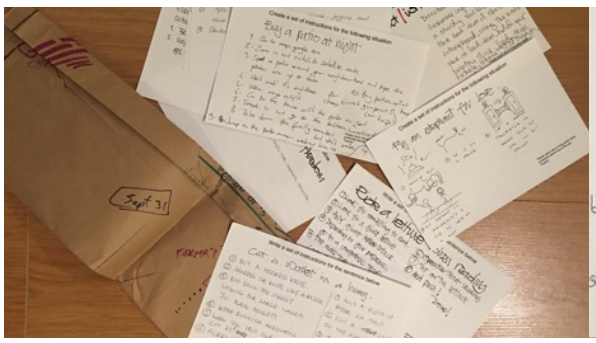


Figure 7. Assortment of created instructions, mostly in written form. Exceptions are ‘wallet’ and visual instruction created.

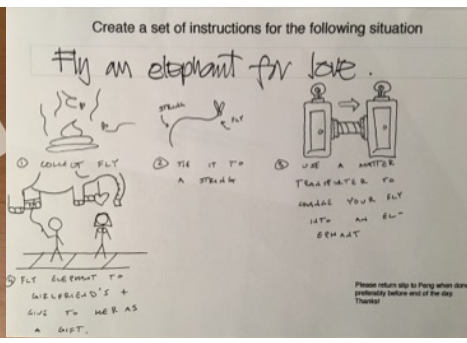


Figure 8. Close up of visual instruction.

1 Activity 2.0 details:

- Activity conducted in the Mitchell Press Studio on 30 September 2016.
- Participants were the cohort of Year 2 MDes students.
- 8 responses were received.
- No time limit was set but all responses were received within a single day.

Activity 3.0 - Tone of Instructions[1]

This activity consisted of two phases. Its main intent was to gain possible insights into the relationship between conformity and instructions.

Figure 9. Instructions for Phase 1.

Figure 10. Instructions for Phase 2.

Observations and Insights

The tone of the instructions did not seem to affect how the sweets were taken. Any differences in the pick-up rate could be attributed to randomized occurrences. While not much insight could be gathered from this activity, it is noteworthy that there was no hoarding and that most sweets were taken one at a time, so a sense of fair play and community spirit seemed to be at work.

Figure 11. Phase 1 end of day no sweets left.

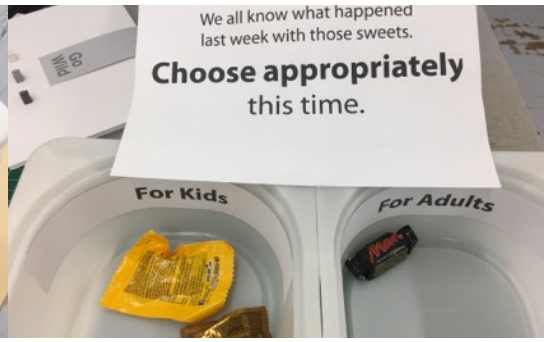


Figure 12. Phase 2 end of day.

1 Activity 3.0 details:

- Phase 1 was conducted in the Mitchell Press Studio on 4 October 2016.
- Phase 2 was conducted in the same venue on 14 October 2016.
- Both phases began at 10:30am and ended at 5pm.
- A total of 30 sweets were provided for each tub during both phases.

Activity 4.0 - Speculative Designs on Instructions

Two speculative designs were developed as a follow-up to the prior activities. Both are evolutions of the insights gathered and are intended to demonstrate the possible influences of context, curiosity, prior experiences or knowledge, and presentation on steering outcomes in a self-contained package.

The Improbable LEGO Set

The first design is an improbable LEGO set, using curiosity, some humor, and unconventional instructions to lure its audience in, instead of attracting them with bright and exciting visuals. Its primary intent is to clear the user of any preconceptions, and then challenge him or her to come up with creative solutions.

There are three stages of reveal. The first stage is the simple box art design, which is meant to situate the user in a contemplative state.

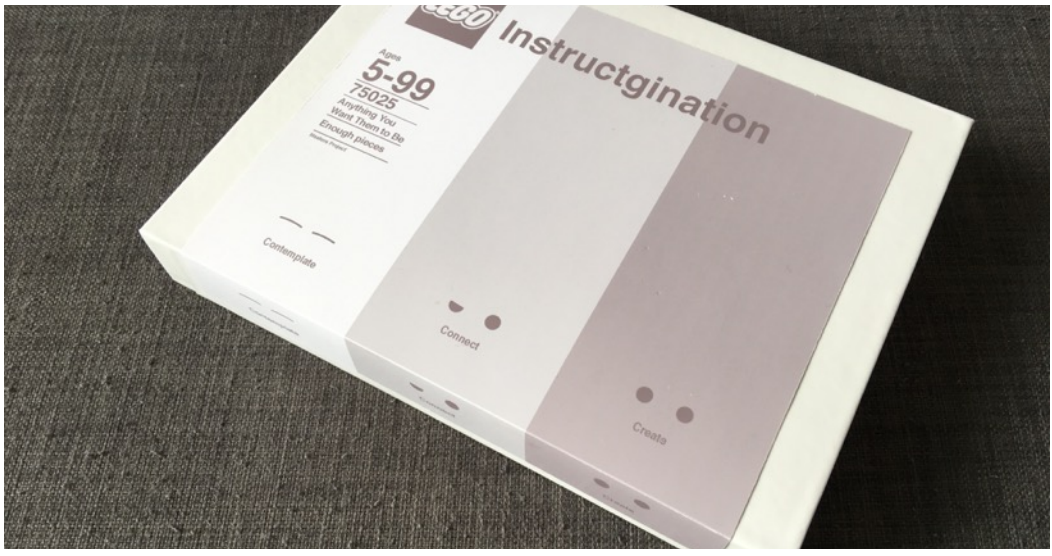


Figure 13. Stage 1 reveal.

Stage 2 uses some humor by presenting only three LEGO bricks to surprise the user.

Figure 14. Stage 2 reveal.

Stage 3 reveals a non-conventional set of instructions and LEGO bricks. The user needs to spin the instructions to initiate a challenge and then solve it by using the LEGO bricks in the most creative way possible.

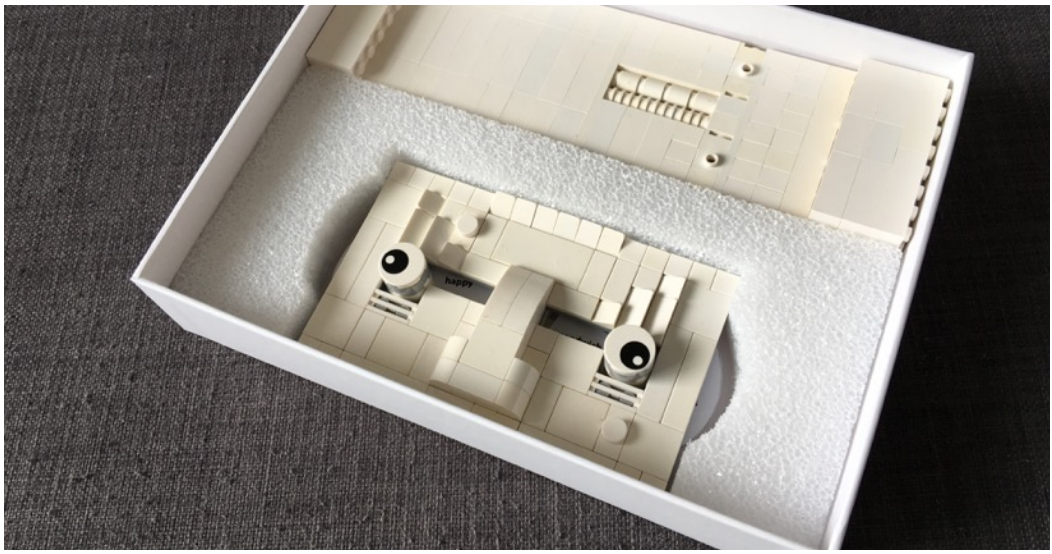


Figure 15. Stage 3 reveal. The face-like object is the set of instructions. A user would spin the “eyes” to create a randomised, often absurdist challenge for the user to complete by using the bricks included at the top of the box.

The Complex Object

The Complex Object arose out of a studio assignment that lent itself well to the follow-up research activities, with an opportunity to continue testing the notion of context, curiosity, and stealthy instructions steering outcomes into a desired direction, on a new group of participants who had no knowledge of the research.

The Complex Object is meant to represent complexity. It is conveyed through a series of coordinated actions, including creating and then subverting expectations, thereby raising curiosity around the object, and building a hidden prompt into the object. This in turn results in the final reveal through the actions of the observer, instead of the latter being directly informed of what it represents.

Figure 16. The Complex Object made deliberately to look simple at first glance, in contrast to other sculptures, creating interest in observers.

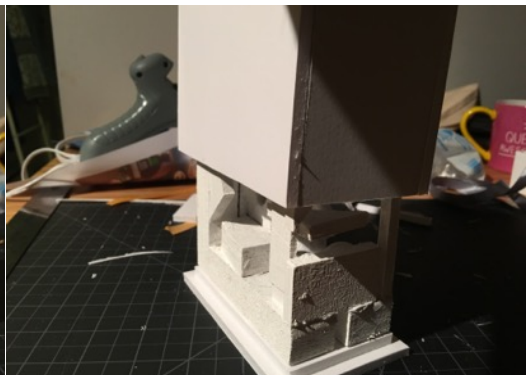


Figure 17. Once interest is engaged, the first question asked was if it can be picked up. Rattling spheres inside when picked up further piqued observers' curiosity, prompting the initial reveal of the interior.

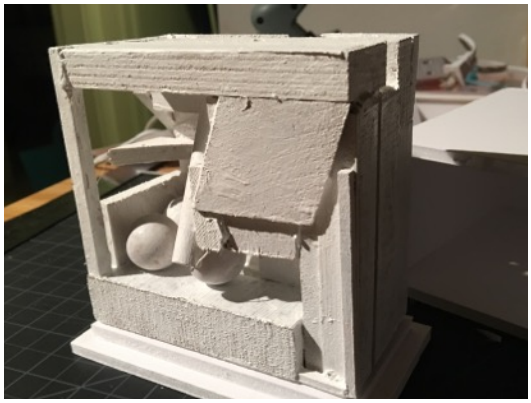


Figure 18. The full reveal, showing the complexity hidden within the simple exterior. A simple demonstration of the "more than meets the eye" scenario.

Activity 5.0 - Site Observations

A total of three sites were observed on multiple occasions, over different periods of a day as well as different days of the week. The period of observations started in late summer and ended in mid fall 2016. Areas of observations focused primarily on the playgrounds and their immediate surroundings. Adjacent park areas and amenities, if any, were not observed. A more detailed scrutiny of fewer, topically more significant sites over a longer period was chosen over a more general scrutiny of more sites over a shorter period because this was deemed more appropriate for the intents of this research, where there was a possibility of incorporating design proposals (speculative or otherwise) into each site. Beyond making observations, a critical eye was cast over the current conditions and usage of the parks against their original premise, to determine whether they lived up to their promise or fell short of it. The sites were also benchmarked against Nicholson's Theory of Loose Parts (1971), as an exercise to see how close the sites were to the ideal (although they might not have been and likely were not designed to singularly reflect the tenets of that theory), and to examine whether there were potential "hacks" that could be proposed for, or could generate ideas from, those sites.

Two of the three sites were highly acclaimed playgrounds with unique characteristics: the Terra Nova Adventure Play Environment and Garden City Community Park, both located in Richmond, British Columbia (BC), Canada. The third site was the Burnaby Fraser Foreshore Park, located along the Burnaby section of the Fraser River in BC, Canada.

Activity 5.1 - The Terra Nova Adventure Play Environment[1]

(http://www.richmond.ca/parks/parks/about/amenities/park.aspx?ID=116)

In their 2015 Regional Citation for Design, the Canadian Society of Landscape Architects (CSLA/AAPC) describes The Terra Nova Adventure Play Environment as a playground that "weaves the principles of 'nature play' into an agricultural landscape and regionally significant ecosystem. Informed by both child and adult advisors, it contrasts with conventional playgrounds in that the 'how-to-play' is multifaceted—at times purposefully ambiguous and provocative…"[2]

Observations and Insights

The space in between the clusters of play equipment—the former stable—offers great potential for variability in play, primarily because it is a featureless piece of land with a series of low timber fences and the occasional steps attached to the fences. However, there is nothing else to interest the children nor, to an extent, adults, as it is also bare of any loose items (for children to play with) and amenities (for adults to rest).

Figure 19. The former stable–fencing with steps but nothing else of interest to children.

1 Site observation details:

- First observation date Saturday, 24 September 2016. 3pm. Partly cloudy, temperature at approximately 15°C according to www.timeanddate.com. Park users primarily consisted of families with pre-teen children.
- Second observation date Thursday, 3 November 2016. 1pm. Partly cloudy, temperature at approximately 15°C according to www.timeanddate.com. Few park users, mostly adults with no children.
- Third observation date Friday, 4 November 2016. 5pm. Scattered showers, temperature at approximately 16°C according to www.timeanddate.com. Park users a mix of adults with no children and families with pre-teen children.

2 Source–http://www.csla-aapc.ca/awards-atlas/terra-nova-adventure-play-experience

While steps up a small knoll are provided next to the slide, another unplanned series of steps have been created in parallel, presumably over time by the footsteps of children who preferred climbing up the knoll instead of using the steps. It is an effective demonstration of variability provided by the ample space surrounding the slide, creating another “unsanctioned,” seemingly more interesting path to the slide.

The playground equipment, although constructed to look different, was used conventionally by the children, since the intent of each piece of equipment remains similar to that of its conventional counterpart. Two components seem to have greater potential for more creative play: the Log Jam and a tree located in the middle of the Homestead cluster of play equipment.

Figure 20. Alternative steps made over time by children accessing the top of the slide.

Figure 21. The Log-Jam mostly used for climbing only. Space below not generally utilised.

The Log Jam has the most unconventional aesthetic compared to the rest of the play equipment. However, similar to the other equipment, the majority of children used it in the most conventional manner: by climbing and stepping across the logs. Few, if any, were observed playing under the structure, which is a potentially interesting and even more variable space, although the lack of ample clearance for older children could be a contributing factor as well. A simple increase of not more than 300mm of the clearance space below could have a significant impact on how the entire structure is used, assuming height regulations allow for it. A more active “hack” could also be to place loose items under the structure to act as “instigators” to play below the structure.

Figure 22. Most children playing on the log jam tend to focus on climbing on top of the Log Jam. By placing colourful, unrelated objects underneath the structure might encourage them to explore another dimension—that of the space below—and create their own unique adventures.

The objects are deliberately chosen to be ‘unrelated’ or even at odds with one another so that the children are not prompted to think of only adventures related to a single theme, but actually have to deal with opposing / contrasting visions amongst themselves.

The tree located in the middle of the main cluster of play equipment was largely ignored, even though it has sturdy branches for climbing, which seems like a lost opportunity. Could attaching items to branches at various heights, made to vaguely emulate achievement levels, induce children to start climbing the tree more frequently?

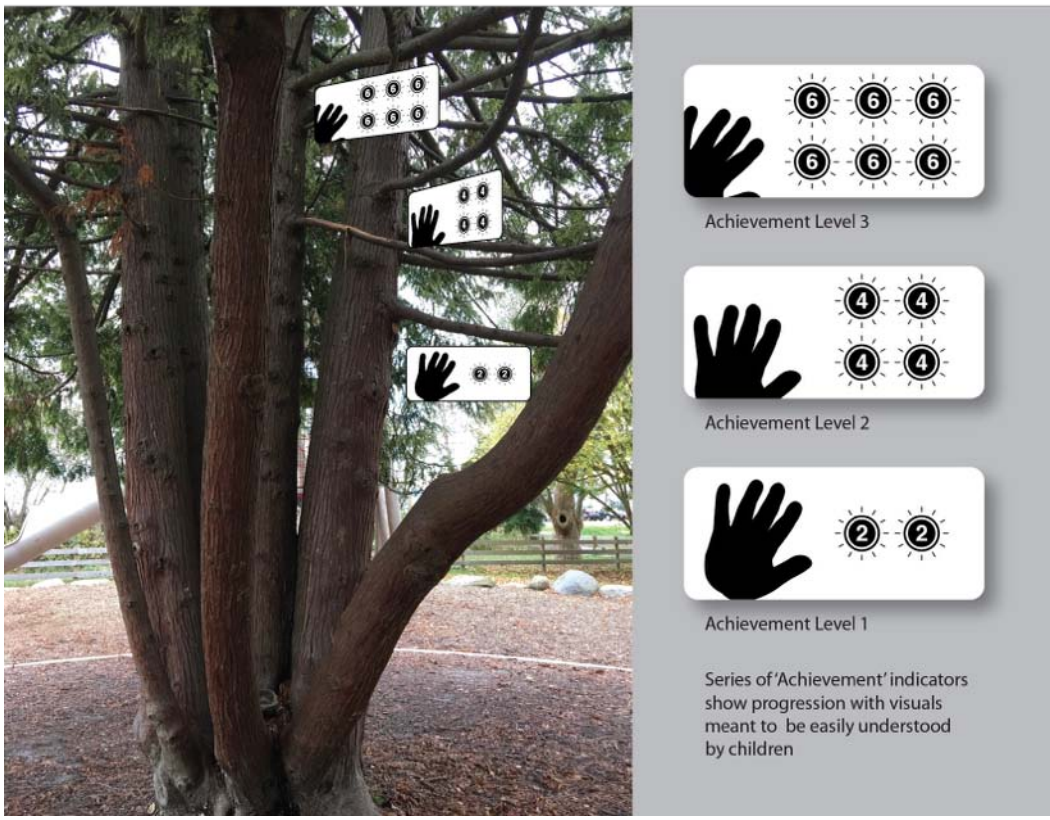


Figure 23. The observation is that children tend to play on the 'proper' play equipment, even though this particular tree is planted in the middle of the play area. Hanging 'Achievement' indicators on branches might encourage children to climb the tree and help develop a broader definition/sense of the possibilities of play, in that it can occur even without 'proper' equipment.

The nature conservation area and community farm have more spontaneous play potential, but several factors seem to work against them. For the nature conservation area, there are many loose branches and stones/gravel for children to play with, but it seems that it being a conservation area works against such intents, as there is a high possibility that visitors might be too conscientious to allow or cause potentially “disruptive” activities.

However, my children like to engage in seemingly simple activities like breaking the icy surface of frozen streams, or simply collecting sticks and stones as imaginary weapons, tools, and trinkets. Exploration of the grounds is another favorite activity of theirs, as it seems more like an adventure than just another bout of playtime at the playground.

Figure 24. The children seem more interested in “altering” the conservation area than playing with the familiar playground equipment.

Activity 5.2 - Garden City Community Park[1]

(http://www.richmond.ca/parks/parks/SigParks/parkinfo/park.aspx?ID=94)

> In awarding its 2010 Provincial Awards in Parks and Open Spaces to Garden City Community Park, the British Columbia Recreation and Parks Association (BCRPA) described the park as a site that
>
> …brings elements of nature back into the scene, bringing forth a playground that not only encourages new ways to play and have good fun, but also healthy social interaction, and cognitive and physical development. Traditional slides, climbing nets and swings are placed alongside old growth stumps and logs, banks of sand, rocks and water channels, and a variety of planting to encourage children to use all five senses as they explore the site. The goals were to provide children and adults alike with rich opportunities to express creativity, participate in physical activity and come together in social gathering.

One highlight of the park is that it gathers input from its primary users—children from the local elementary school—to gain insights into how to design the ideal park for children.

1 Site observation details:

- First observation date Sunday, 25 September 2016.1pm. Partly cloudy, temperature at approximately 17°C according to www.timeanddate.com. Park users primarily consisted of families with pre-teen children.
- Second observation date Thursday, 3 November 2016. 3pm. Partly cloudy, temperature at approximately 15°C according to www.timeanddate.com. Few park users, consisting of families with pre-teen children.
- Third observation date Tuesday, 29 November 2016. 2pm. Scattered showers, temperature at approximately 8°C according to www.timeanddate.com. Very few park users, mostly adults walking pets.

Observations and Insights

There is a dome that seems to have great potential for variability in play, since it is such an elemental form that it could be reimagined into a whole host of objects. Physically, however, the curved sides of the dome seem too sheer for most children to climb (which might be the actual intent—it was not made obvious on site) and the scale slightly too large for them to just jump to the top. It could be argued, though, that this characteristic itself could become a play feature, like an impossible challenge. In addition, would climbing it be the only perceived intent?

On its own, the scale (about 1500mm high), material (concrete), and featureless surface of the dome might be intimidating to younger children and highly probably parents, who were in fact observed on numerous occasions as avoiding the dome altogether, especially those with younger children.

Figure 25. The “featureless” dome seem intimidating.

Figure 26. Randomly imprinted some body parts onto the concrete dome to encourage the children to touch, lick, step, listen, look at it. Body parts are deliberately chosen as a consistent subject matter in this case to hopefully prompt children to use their physical senses around the dome. If at least one of the children licks or places their eyeball onto the dome, mission accomplished!

Another interesting component of the park is an assembly of interlocking tree branches that forms a vaguely bowl-shaped structure. It seemed possible for children, especially the smaller ones, to weave through the structure. Once again, however, not many were observed playing around the structure, and the few who did mostly played around the rim and not the internal space of the structure.

Figure 27. The tree branch assembly.

Figure 28. Imprinting a pattern on each tree trunk that progresses and cycles through, as a way to 'gamify' the Tree-Henge, might encourage children to interact more with this unfamiliar-looking and somewhat intimidating structure.

The use of different colours for the larger 'circulating' circle is a deliberate attempt to make the pattern a bit ambiguous, to potentially create different play scenarios might be beneficial.

The artificial stream that runs along the inside perimeter of the playground is a potentially effective space for creative play. It has great potential for variability in this playground, where the shallow running water, loose gravel, and fallen leaves could all conspire to provide the crucial loose items or opportunities critical to spontaneous play.

Figure 29. Stream has great potential for encouraging spontaneous and unstructured play.

Figure 30. Juxtaposing random, but familiar cut-outs into a natural setting, to act as lures for children to interact with the areas they might not normally go to. These can be simply constructed out of lightweight, painted rigid panels embedded into the ground with wooden poles. Once again, a diverse range of objects could create far more interesting play scenarios than if they were of a similar theme.

Activity 5.3 - Burnaby Fraser Foreshore Park[1]

(https://www.burnaby.ca/Things-To-Do/Explore-Outdoors/Shorelines---Lakes/Burnaby-Fraser-Foreshore-Park.html)

While the park is not known to have won any awards, it was chosen for its linear configuration and terrain, which, running parallel to the Fraser River, offer gentle undulating slopes and variations in heights that might provide interesting insights and ideas on risky and spontaneous play.

Observations and Insights

While the longitudinal axis of the park (its main axis running parallel to the river) connects visitors to various parts of the park, the more interesting parts of the park (for the intents of this research) seem to be along its various lateral axes, where the terrains often undulated in just the right scale and amplitude to create interesting perspectives, especially for children playing in those areas. One can easily have a commanding view of a specific spot just a few steps away from another one, allowing one to hide by crouching or lying flat on the ground. Although no one was directly observed playing in that manner at all, the potential in the variability of the terrain in affording variability in play might be a viable factor for consideration.

Figure 31. Utility building that was to become an inspiration for one of the major elements in the final design proposal.

Figure 32. Even gentle changes in ground levels have the ability to obscure or hide objects from view, which might have applications in playground designs.

1 Site observation details:

- First observation date Sunday, 18 September 2016. 1pm. Partly cloudy, temperature approximately 18°C according to www.timeanddate.com. Park users consisting of mix of families with children and adults walking pets.
- Second observation date Thursday, 3 November 2016. 5pm. Partly cloudy, temperature at approximately 15°C according to www.timeanddate.com. Park users consisting of mostly adults walking pets, few families observed.
- Third observation date Tuesday, 29 November 2016. 4pm. Scattered showers, temperature at approximately 8°C according to www.timeanddate.com. Very few park users, mostly adults walking pets.

Activity 6.0 - Experiences with Play

These activities were included in response to observations and insights gained through the other conducted activities. Three activities were included primarily due to their close alignment with Nicholson's Theory of Loose Parts.

The activities were documented with the idea of including them, but without any precise idea on how or where they would relate to the general direction of the research. It was not until after a considerable amount of further reading and reflection that it became clear how they fit in the project.

Note that these activities involve my own children—Yang, aged 9, and Kai, aged 11. While certainly not unbiased nor objective, I do remain convinced that my observations of my children can provide me with insights and thoughts that could be potentially useful in the research.

Activities with my 5-year-old daughter are not included here as the observations and insights tally with those in Activity 1, where humanoid forms were a favourite and play activities were typical of what she has experienced during pre-school class or at home.

Activity 6.1 - Fortress Building I[1]

The intent of this activity was to investigate the kind and extent of interest that children have for large discarded items, and also how long that kind of interest can be sustained.

I deliberately refrained from any involvement as much as possible, to see how the boys would do when left to their own devices. I only intervened when it was clear that they had trouble managing some of the larger-sized cartons and when they had problems cutting through them.

Observations and Insights
Teamwork was quickly and automatically established, within approximately 20 minutes, with Yang taking the role of the "architect" and Kai, the "builder." The occasional squabbling did happen, but not to be point of being disruptive to the play process.

Figure 33. Yang deciding on details and play features while Kai takes care of

1 Activity 6.1 details:

- Participants are Yang, aged 9, and Kai, aged 11.
- Wednesday, 9 November 2016 from 3.30pm to 5pm.
- It was partly cloudy during the time of activity, temperature at approximately 15°C according to www.timeanddate.com.

Enthusiasm was high and sustained for doing something that required an uncharacteristically high amount of effort with limited available help. Yang and Kai did not appear bored at any stage during their play. This was encouraging compared to when they played on playground equipment, which typically lasts no more than 20 to 30 minutes before engaging in other unstructured forms of play.

The resulting structure was extremely unpolished yet delicate. The children seemed to enjoy the process more than the result, although they were eager for it to be completed. It was already dark when they were finished. Unfortunately, the rain caused significant damage to the structure that night, so no observation could be made on how they played with it later.

The scale that allowed them to interact with the structure seemed important to Yang and Kai, with them making sure that any crawlspace made was accessible by actually crawling through it during the building process.

Figures 34 and 35. Front and back of “castle fortress” shown–the children’s intent is to have a “complete”, 4-walled structure.

Activity 6.2–Fortress Building II[1]

This activity was interesting in that it was initiated by my 9-year-old middle child, who used his earlier experiences in Activity 1 to try build a few fortresses in his school playing field with his peers. The materials available to him and his team were whatever they could safely obtain in the field, which were mostly dead branches and stems of fern that had dropped. No documentation was made of the initial fortresses that they built.

On our first build together, it was my child who initially taught me his techniques: what types of branches to use; how to tie the branches together with the flexible fern stems; and how to support the structures by using the available trees nearby.

Make-shift tripods were eventually made to enable a free-standing structure, with a rudimentary roof of crisscrossing branches and fern stems. No additional tools or materials were used for the first build, making it a challenging but highly satisfying activity once the fortress was completed.

For the second build, duct tape and a pair of scissors were used to hasten the building process, as well as to accomplish a more ambitious build. A fortress more than twice the size of the first one was eventually built.

Figures 36 and 37. Various stages of building the fortress, using only what is available on site, including using fern stems for binding.

1 Activity 6.2 details:

- Participant is Yang, aged 9.
- First build occured on Thursday, 26 January 2017, 3.30 to 5.00pm.
- Second build occured on Sunday, 29th January 2017, from 1pm to 3pm.

Observations and insights

Yang's role for both builds was predominantly "dominant," with him deciding on the sites, what building technique to use (apart from the tripod idea during the first build), and the scale and features of the fortress that he wanted to include. I simply helped to build and occasionally advised him on structurally significant matters. He was definitely more confident during the second build.

Just as in Activity 5, interaction and features were consistently important. The structures needed to be in the right scale so that the children could interact with them, allowing them ingress and egress with relative ease. The most commonly noted features were crawl spaces and private spaces for the children. These do not need to be perfect or even properly built: the idea that the features are there seems to be enough to ignite their imagination.

The desire for private spaces seems important to my children, and that desire is also manifested in their room, where favourite nooks and spaces, no matter how rudimentary, are chosen specifically for their ability to introduce them to the idea of a private space.

Figure 38. Complete fortress was only large enough for 1 child. The roof cover was an integral requirement of the fortress.

Activity 6.3–Playing with Ropes[1]

The aim of this activity was to bring the children to the neighborhood park–the Byrne Creek Ravine Park, with which they were familiar, and to have them play with ropes and carabiners, with which they had no experience. They were guided by my fellow classmate and friend, Zach.

The intent was to have the children play in a natural setting, but with something complex and with which they were totally unfamiliar. A guide was deemed appropriate for this activity to move it forward should the children make no progress with the equipment and eventually lose interest.

Figure 39. Testing tautness of barely functional zipline.

1 Activity 6.3 details:

- Participant are Yang, aged 9 and Kai, aged 11. Play leader is Zach Carmozzi, MDes Year 2 cohort.
- Thursday, 10 November 2017, 4pm to 5.30pm.

Observations and insights

Left to their own, the children were initially confused, not knowing what to do with the ropes and carabiners. They simply sorted different things out and made sense of things for a good two to three minutes before trying to work the equipment out on their own. The instinct to loop the ropes around hanging branches was exhibited early on but, not knowing any roping craft, frustration set in quickly, although it could not be ruled out that our presence might have prompted their impatience.

As expected, the children did not mind that the hastily set-up zip line was barely operational. They thoroughly enjoyed the set-up process and attempted to use it. The constant failures might in fact have contributed significantly to their enjoyment.

Figures 40 to 43. Stages of setting up rope system and playing on it.

The Influence and Interconnections of Activities

Before moving on to the final design proposal, it is useful to examine the different levels of influences and interconnections of the various activities that took place until the end of fall 2016 that led to the proposal's development.

In addition, annotated inserts have been included in the main section of the final design proposal to highlight the influences of each activity relevant to the different parts of the proposal.

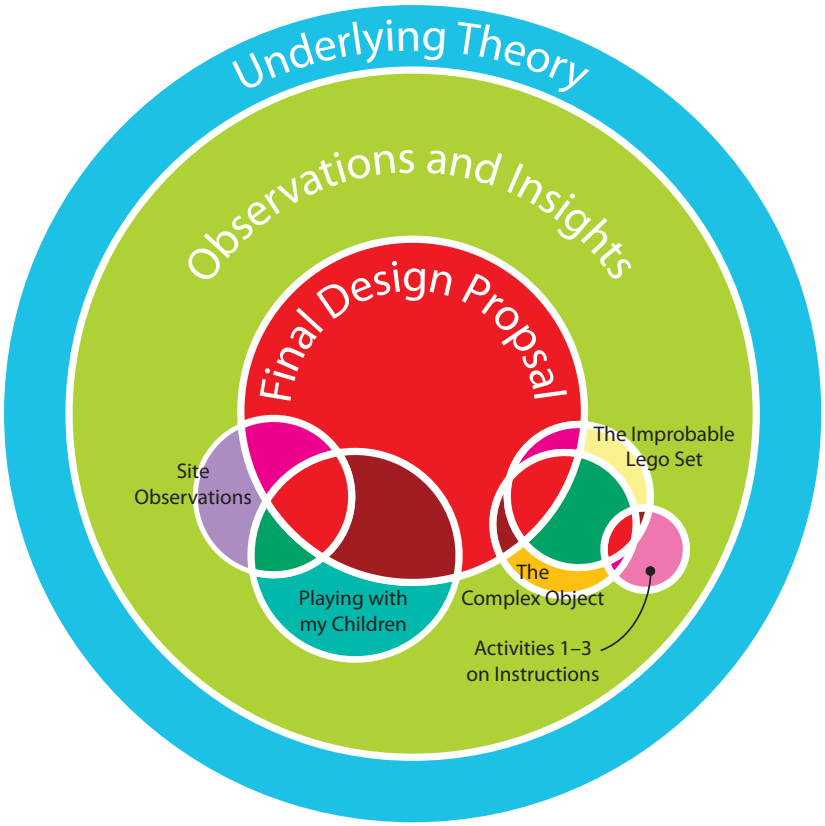


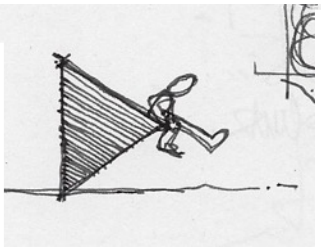
Figure 44. Influence visualisation. Although the activities in Fall 2015 and Spring 2016 do not have a direct impact on the final proposal, they do serve to steer and put more focus on the subsequent activities leading to it.

The influences from Site Observations and Playing with my Children have a more tangible impact than the activities based on Instructions, but both are significant on different levels. The former resulted in the actual components of the proposal, while the latter influenced the configuration and more subtle prompts that attempt to steer play behaviour.

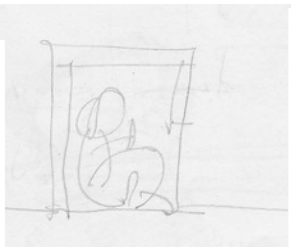
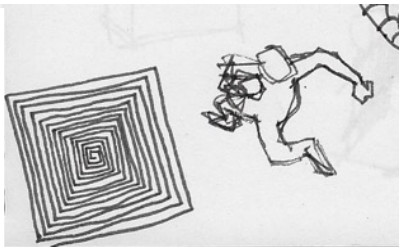
The Final Design Proposal

The final proposal draws heavily from the observations, insights, and outcomes from the research activities preceding it, as illustrated by Figure 44 earlier.

The following sketches are included to demonstrate the ideation and developmental path of the project design.


Figures 45 to 47. Series of sketches inspired by the more interesting objects encountered during the site visits. These sketches are the starting points of the ideation process.

Figures 48 to 50. Similar series of sketches but inspired by less physically tangible observations like frequently occurring play features.

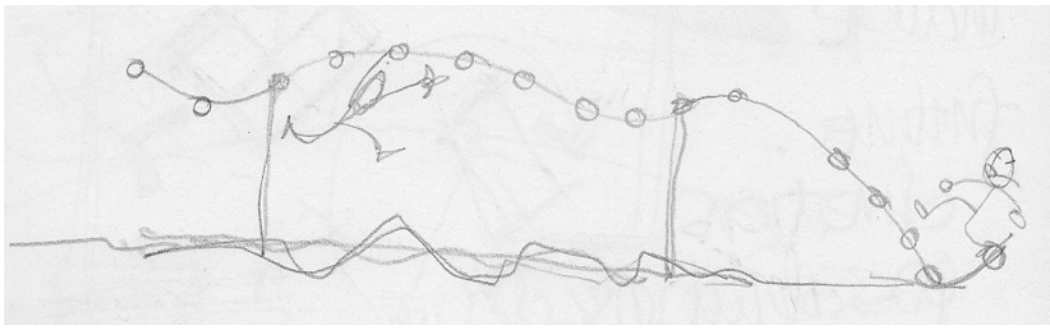
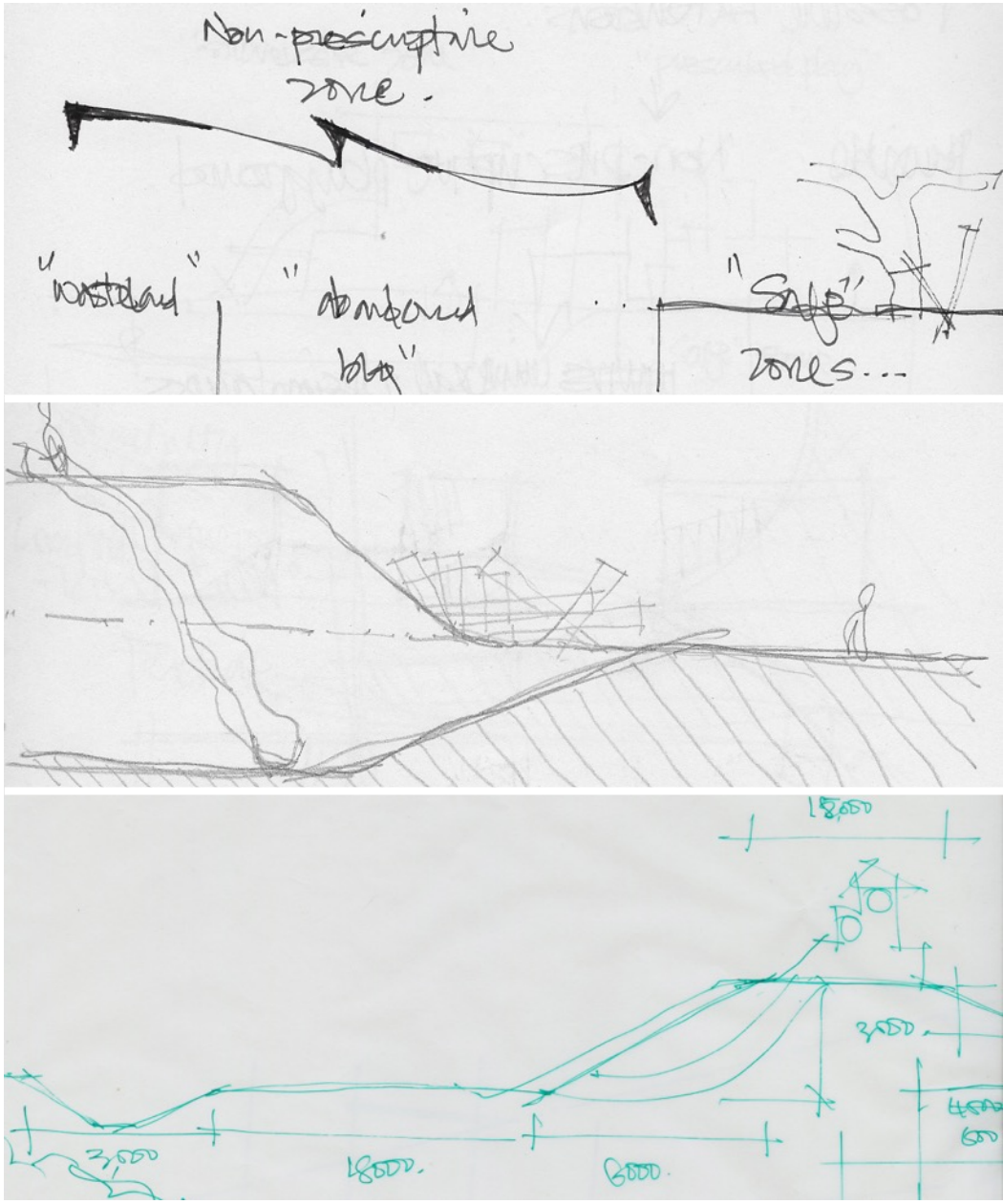


Figure 51. Sketch showing next stage of ideation, incorporating some form of possible “twist” to standard playground equipment design, such as evenly spaced monkey bars, as a potential method of encouraging more spontaneous play. This approach was subsequently downplayed in the final configuration, with a more “stealthy” feature integrated into the play equipment, both as part of an overall design intent as well as the difficulty to incorporate finer details within the scale of the final drawing.



Figures 52 to 54. Further evolved sketches showing initial ideas on playground configuration, with Figure 54 starting to show the splitting of the playground space into zones.

The Implausible Playground

As a subset of critical design practices popularized by Anthony Dunne and Fiona Raby[1], the final design proposal is speculative in nature. It is meant to open up avenues for discussions and questions regarding the hypothetical scenarios detailed within, as certain safety considerations have been side-stepped and an element of subversion has been introduced in the name of encouraging spontaneous and unstructured play.

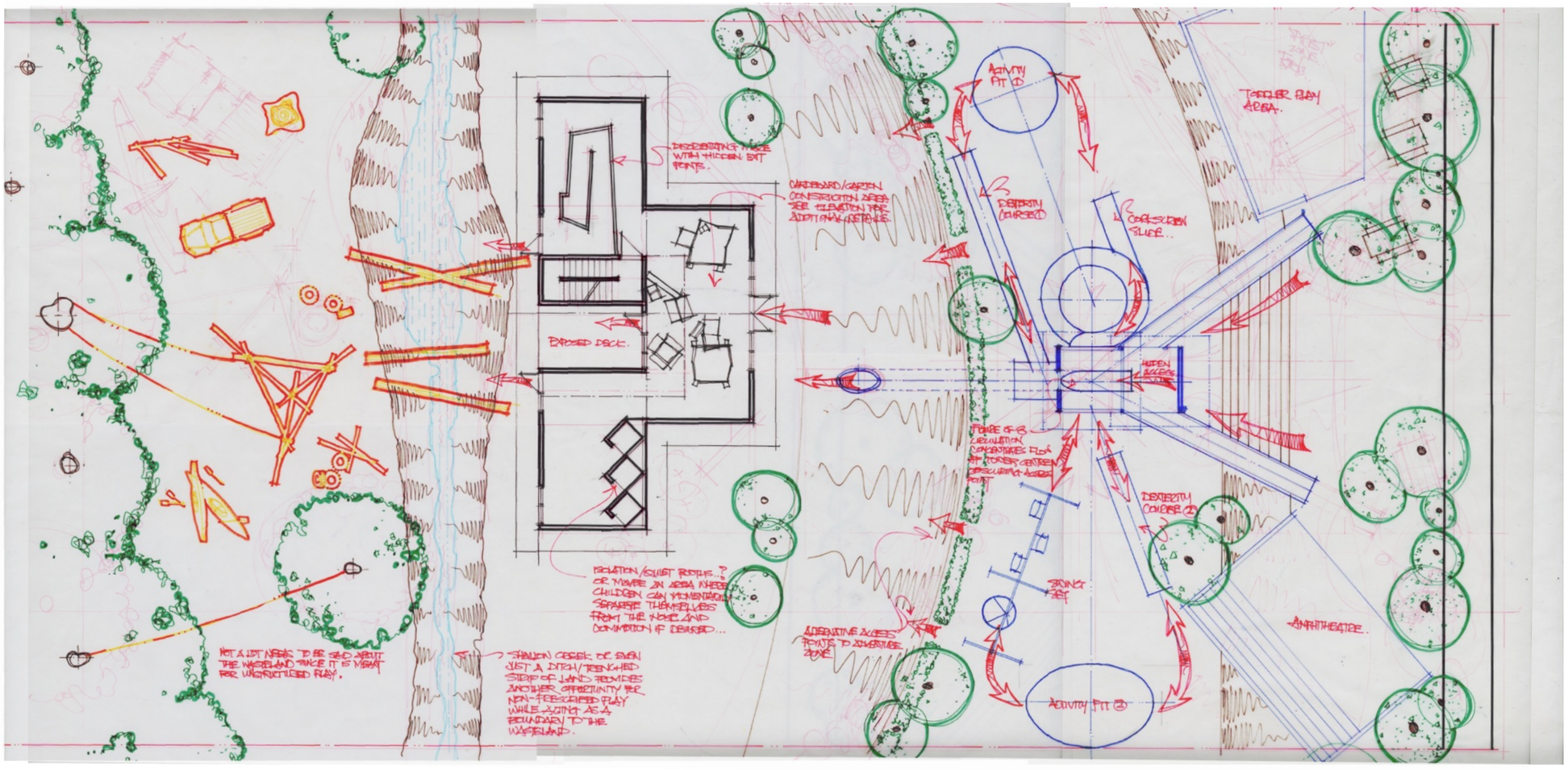


Figure 55. Plan of proposed playground.

1 The term “Critical Design” was first used in Anthony Dunne’s book “*Hertzian Tales*” (1999).

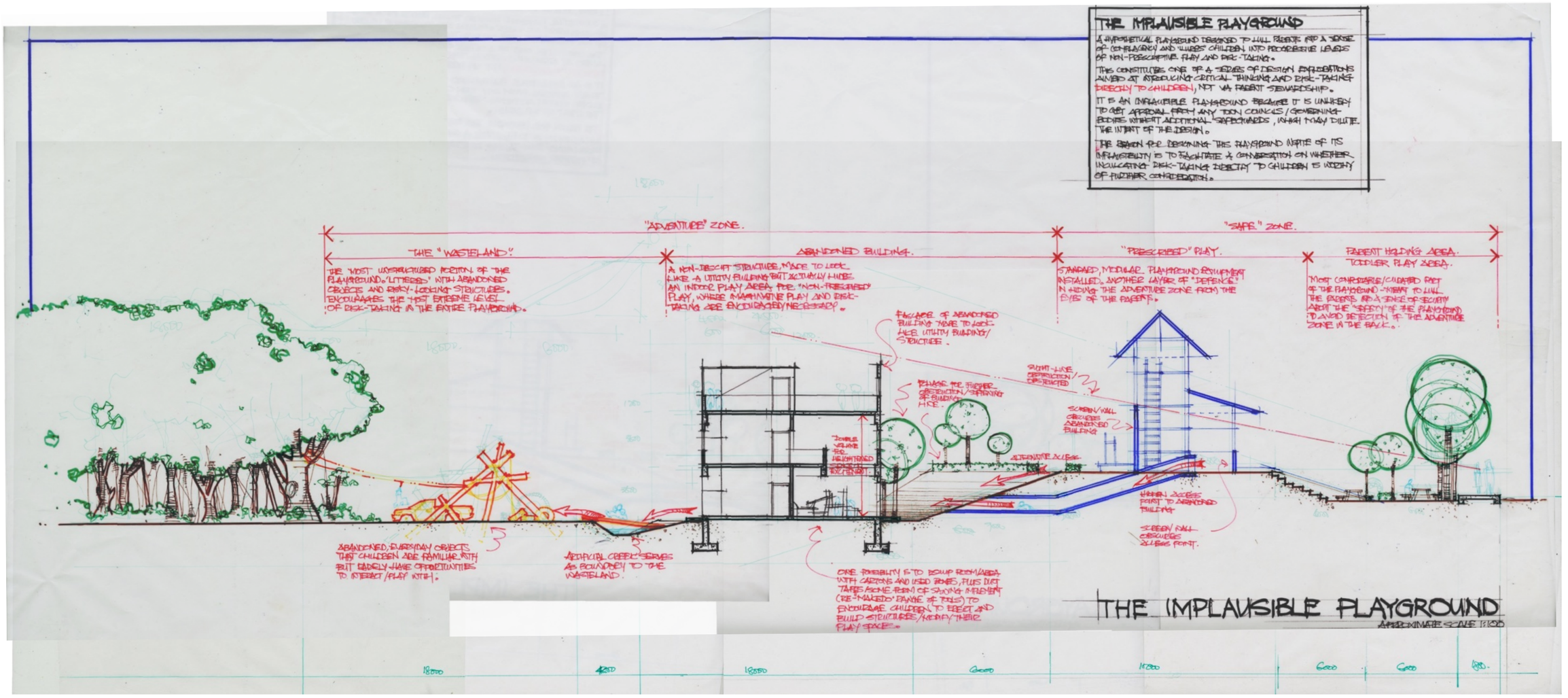


Figure 56. Elevation of proposed playground.

Major influence from Activity 6.1. Indoor space-modification activities that can be engaged regardless of weather.

Major influence from Activity 6.2. Provision of “private” spaces or nooks for either reflective play like reading or drawing, or even just tuning off.

Major influence from Activity 6.3. Outdoor space-modification activities subject to weather conditions but have the benefits of being closer to nature. Exposure to the elements could also mean more interesting play scenarios.

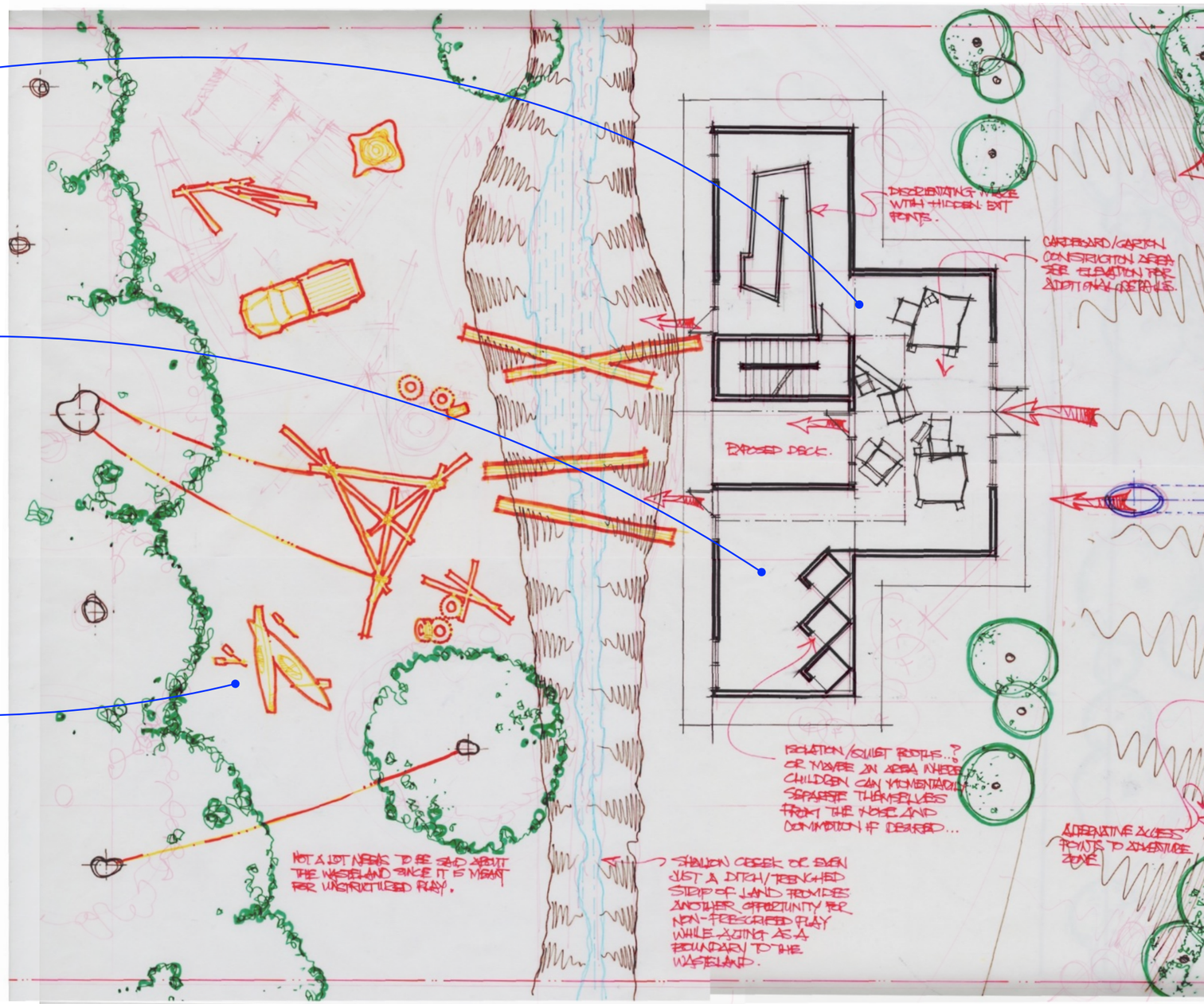


Figure 57. Plan close-up left. Included in these zoomed-in visuals are annotated inserts that relate the observations, insights and designs during the activities stage to the relevant parts of the final design proposal, in addition to the written annotations within the visuals.

1 As noted earlier, certain safety considerations have been side-stepped for this design proposal. However, most, if not all, of the basic safety considerations can be address by the inclusion of a trained team of play leaders. See section on “Other Considerations” under “Trained Team of Play Leaders” on page 51 for more thoughts on play leaders to enhance basic safety while encouraging risky play at the same time.

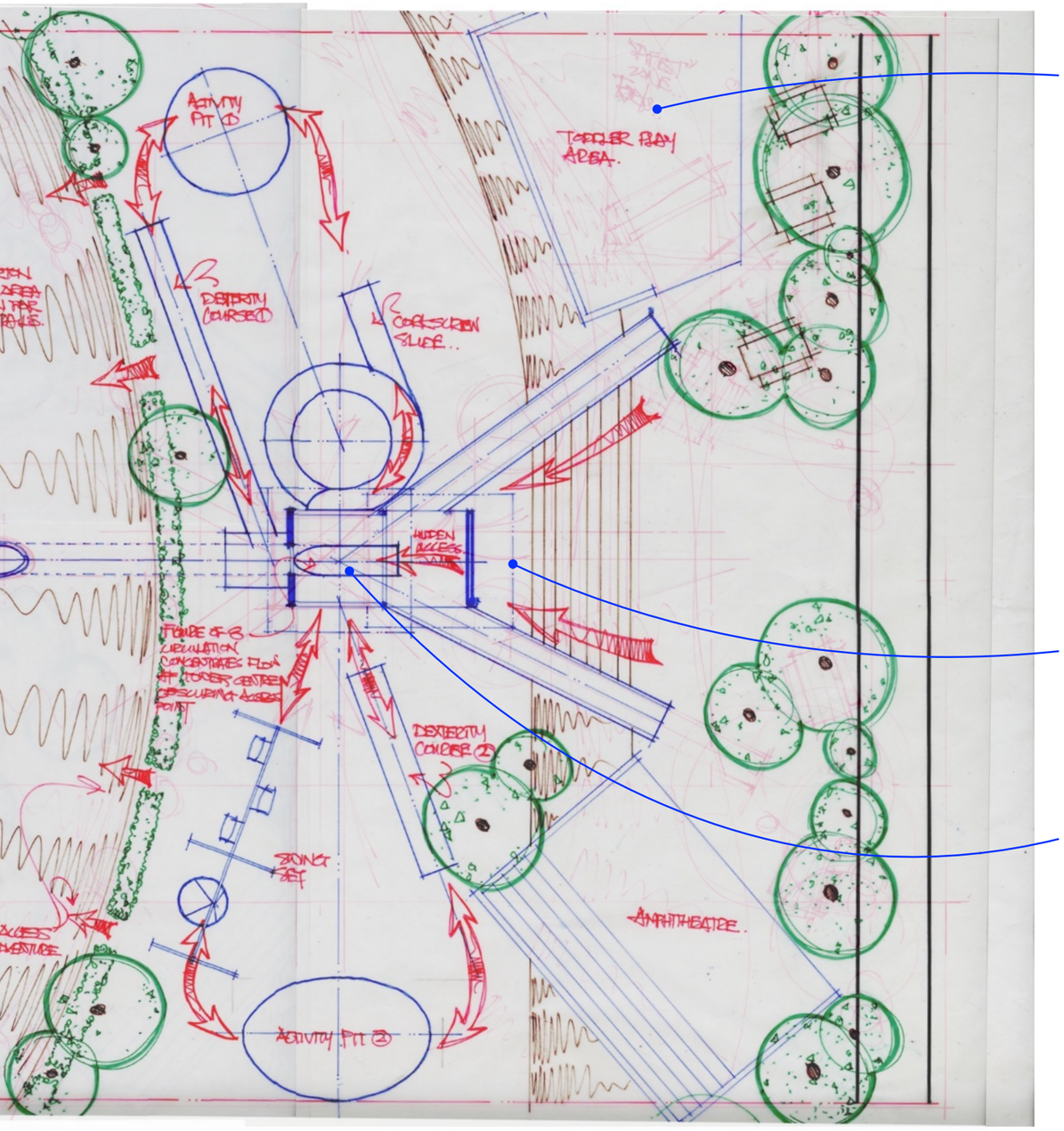


Figure 58. Plan close-up right.

Major influences from Activities 5.1 and 5.2. Toddler play area could incorporate elements that encourage spontaneous and unstructured play.

Major influences from Activities 1 and 4. Exploiting previous or ingrained experiences –top photo–to set up expectations while subverting them with hidden prompts or instructions–bottom photo.

It would be difficult to imagine this proposal being approved without watering down some of the more subversive and risk-taking elements. Expanded and continued expenditure on resources, mostly human-related, would likely be required as well.

The Configuration

The proposed playground is divided into two primary zones: the Safe Zone, where the conventional-looking play equipment and parent-centric amenities are located; and the Adventure Zone, where the riskier play areas containing an abandoned building[1] and an adventure lot are located.

The main intent of this configuration is to provide parents with a familiar facade through the conventional-looking modular playground while offering something potentially unfamiliar or even intimidating as part of their children's play activities.

A play area for toddlers is located separately, to the side of the main play zone. Amenities for parents and caretakers are located nearby to allow them to look after the younger children while potentially discouraging "helicopter parenting" in the Adventure Zone by reducing the parents' or caretakers' presence there.

The Components

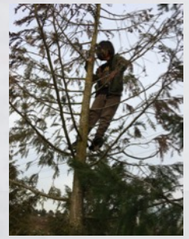
The play activities included in the Adventure Zone revolve around giving children the flexibility to modify their type of play if they choose to. In the abandoned building, there could be loose materials such as cardboards or cartons with rudimentary tools to allow them to build objects or modify the play space. Compartmentalized areas could be utilized as the children see fit: for example, as private spaces, board game areas, or meeting rooms. In that same vein, unexpected corners and nooks are peppered throughout the building for a more interesting play space in general; and the building itself has have three levels, offering yet another way to potentially change the children's perspective of the play space.

The main features of the Wasteland are the abandoned and loose objects littering the area, performing a similar function as those in the building; the unrefined structures and rigs that allow the children another form of spontaneous and

Major influence from Activity 5.2. Some parts of there woods could be “gamified” with challenges or prompts to encourage further interaction with nature.

Major influence from Activity 5.2. An alternate possibility would be to deliberately place loose out-of-context items in these spaces to encourage spontaneous play.

Major influence from Activity 5.1. Spaces with fluid elements like water, soil or loose items could make a good environment for unstructured play.



Major influence from Activity 5.3. Multiple levels allow for changing of perspectives during play.

Major influence from Activity 5.3. “Abandoned” building structure could add a sense of mystery and excitement to play, akin to entering a “forbidden” zone.

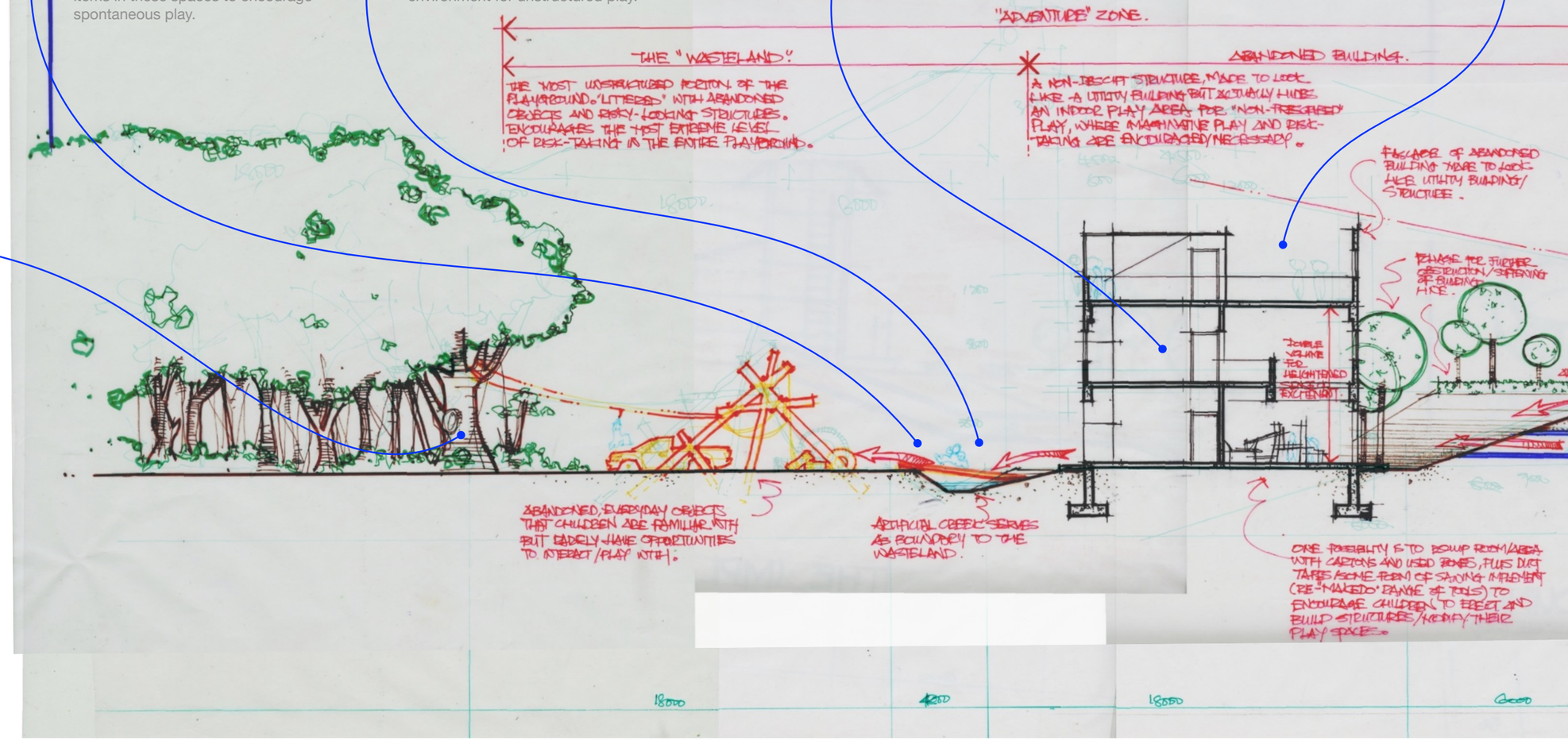


Figure 59. Plan close-up left.

1 “Are These Rules Worth Breaking?” by Jena Pincott. Psychology Today. Nov/Dec 2014, Vol. 47 Issue 6.

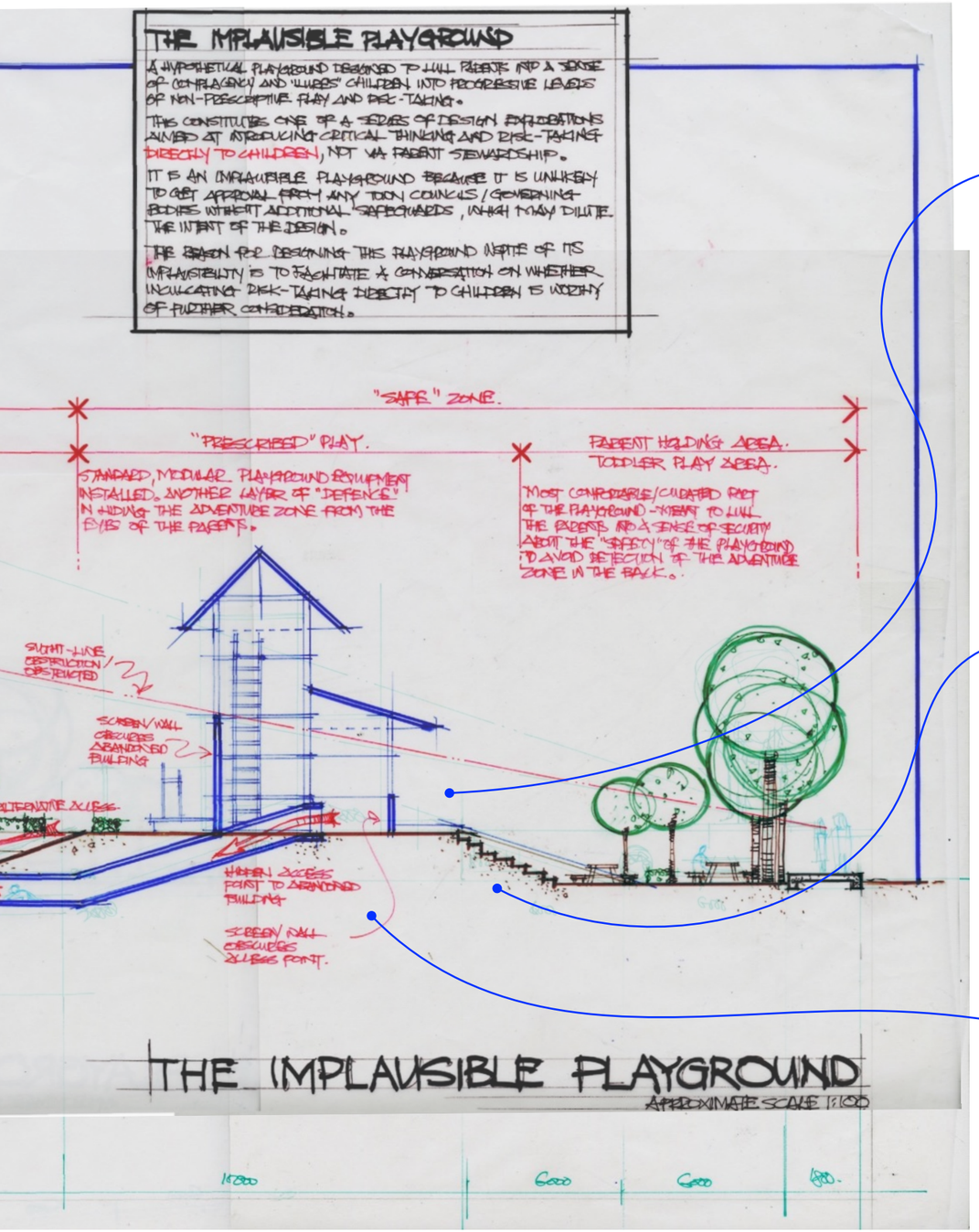
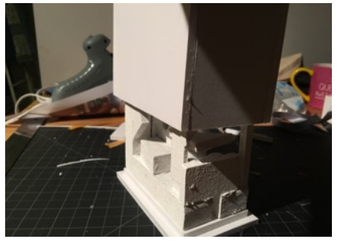


Figure 60. Plan close-up right. Note that some of the details within the annotations in both drawings have been superseded by the details in the main body text. However, the overall design premise is still valid even as the insights have evolved further than those contained in the drawings.

Major influence from Activity 5.3. The rising and falling grounds of the playground are inspired by the gentle rolling terrain observed in the Burnaby Fraser Foreshore Park. Its main functions are to allow for possible new perspectives when progressing through the playground, as well as to obscure the Adventure Zone from general view.

Major influence from Activity 5.1. Steps leading to the play equipment in the foreground creates a sense of occasion and excitement.



Major influence from Activity 4. The "hidden complexity" aspect of the modular play area in the foreground is based off the insights gained from the Complex Object. A hidden tunnel leads children from a modular play experience to a more spontaneous and unstructured play experience in the Adventure Zone.

unstructured play; and the small ravine and stream separating the Wasteland from the Abandoned Building offering another potential opportunity for imaginative and creative play.

The Terrain and Foliage

The playground utilizes changes in ground levels to create a more interesting play environment for the children, allowing for more varied play movements compared to a flat, level ground. The different ground levels could also alter a child's visual perspective depending on where he or she looks, creating more opportunities for creative play.

The terrain and foliage are also used for subversion by utilizing the lower grounds and denser foliage in the right locations to hide the risky play areas from casual views, while still allowing for multiple access points to them. Moreover, the foliage on its own has the function of providing shade to playground users, and if located strategically and under the right weather conditions, keep parents away from riskier play areas as well.

Subversion and the Element of Risk

The decision to include subversive elements was inspired by readings on breaking rules and the effects of non-conformity[1], plus a desire to instill some form of independent thinking into children through play and to give them a choice between conventional play and spontaneous play. The insights gained from Activities 3 and 4 also played a significant role in their inclusion.

The element of risk is inherent in any form of physical play, and likely more so for spontaneous and unstructured ones. By acknowledging, accepting, and embracing this notion, we could be in a position to open up discussions on the relevant issues regarding playgrounds and to offer insights on better managing these risks, rather than avoiding them altogether.

Further Considerations and Expansions

Beyond the playground's initial configuration, additional thoughts have been given to bringing the proposal closer to reality, while holding on to its original intent of encouraging spontaneous and unstructured play.

The following pages contain a few potentially promising ideas on bringing the playground closer to reality, as well as additional layers of considerations that round off the playground's intent in more elaborate detail than the plan and elevational drawings allow.

Layout and Orientation

One consideration is the layout and orientation of the playground. For example, with the original layout being “deep,” displaying only one play zone at a time, there are more possibilities for subversion and deception since it is easier to hide things. Two other configurations are proposed, each with significant differences compared to the other.

To better illustrate the primary idea behind each configuration, ideal situations are shown that allow for a smooth or uninterrupted transition from one zone to another.

In addition to discussing another consideration of the playground proposal, the following section includes attempts to translate each configuration into sites deemed suitable for the use of this specific type of playground.

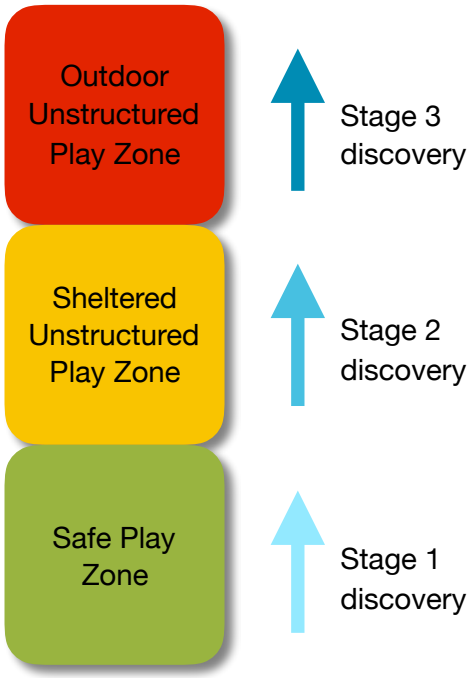


Figure 61. “Stealth” mode, the original layout, where the “riskier” play areas are hidden behind, as explained in the plan and elevational drawings. Discovery is linear and sequential as indicated.

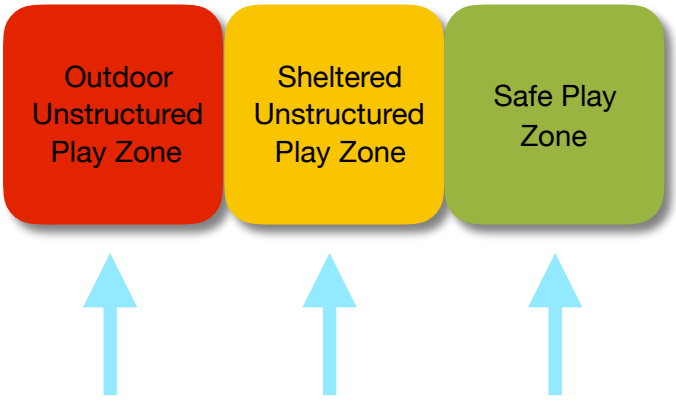


Figure 62. If the orientation was changed to one that was wide, displaying all the play zones all at once, it becomes the “Brag” or “Democratic” mode, where the every category of play area is given equal emphasis and children and parents get to choose where they play. Discovery of each zone, which linear, need not be sequential.

A different strategy might then have to be employed to encourage more parents to let their children play in the unstructured zone. Hence the “Brag” factor, where parents could proudly proclaim to other parents that their children were experienced in riskier play, or that they were fine with their children experiencing riskier, spontaneous and unstructured play.

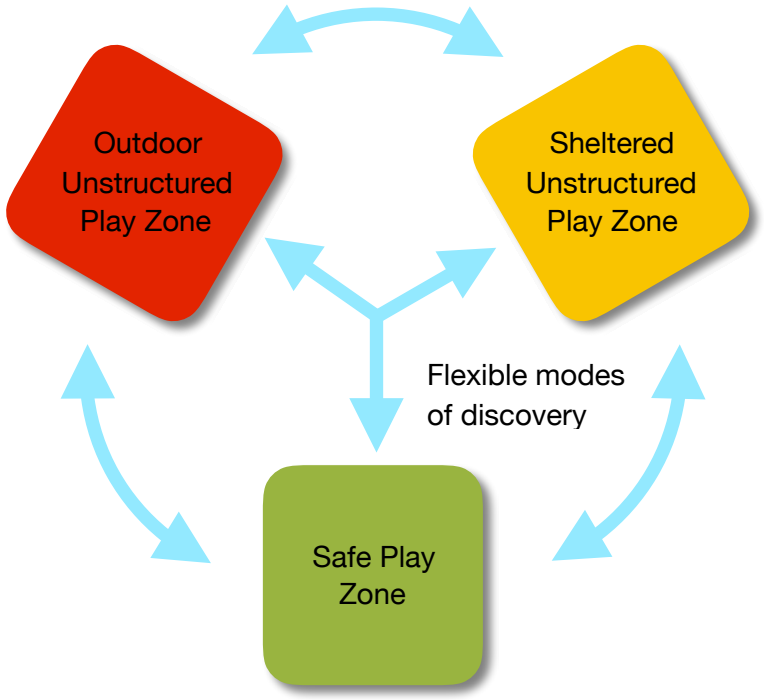


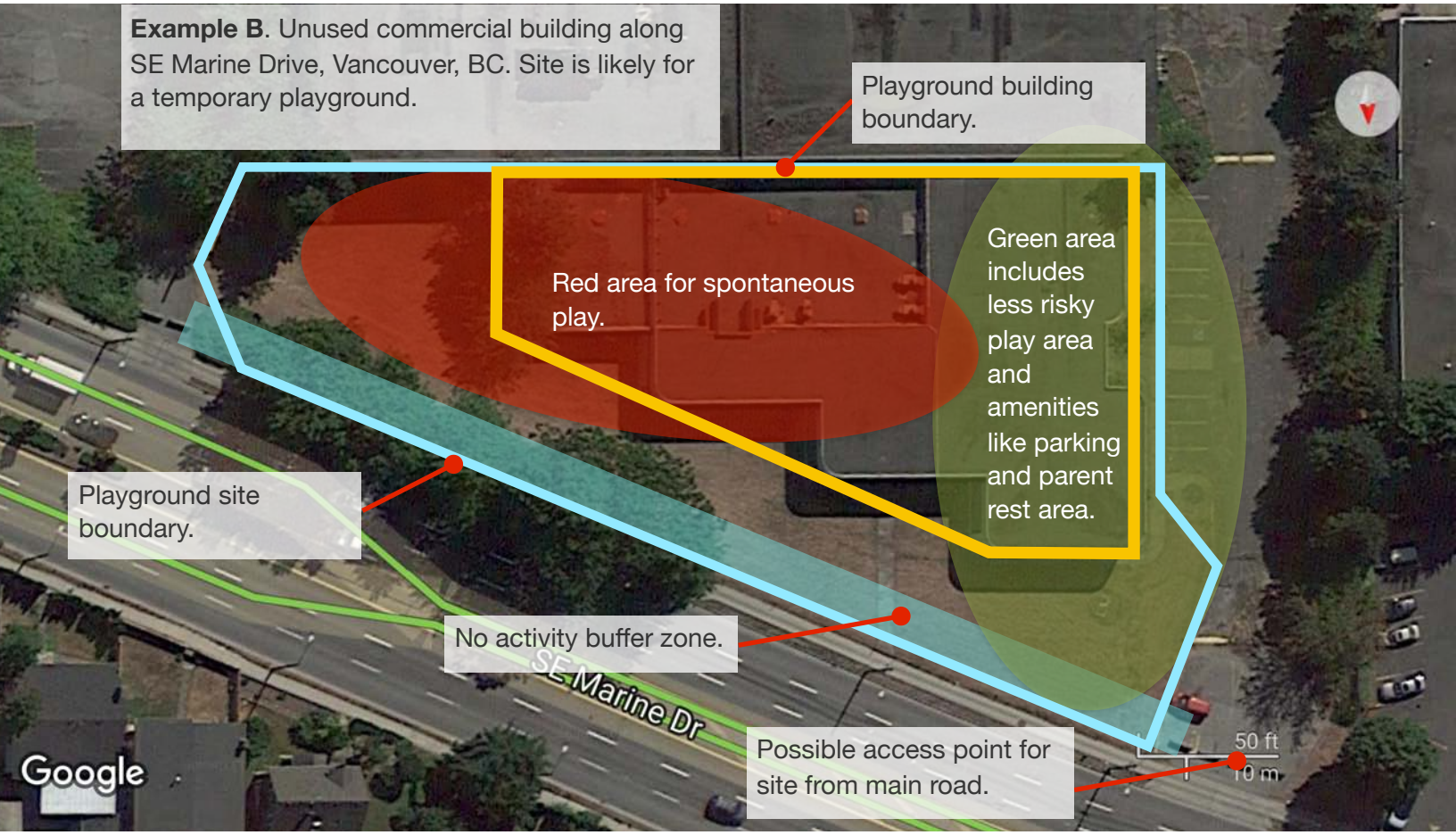
Figure 63. “Discovery” mode, where all zones are arranged in a loop for children and parents to discover as they move about the site. Discovery of each zone is flexible and because of that, would seem to be the most ideal configuration if such a playground is every built. Children could freely and easily switch and test the different zones before deciding on the zone that suits them most, for example.

Temporary versus Permanent

The primary importance of the playground is the possibility of it encouraging spontaneous and unstructured play; thus, its permanence in a specific site is not a main factor of consideration. The playground should be able to be configured as a temporary operation, so that it can travel from site to site, broadening its reach and influence.

The idea of a travelling playground that encourages spontaneous play is intriguing and could even have a possible commercial or educational dimension to it. It could be sited where there is demand or where unused land parcels can be temporarily utilized more efficiently.

Figure 64. Site at Burnaby Fraser Foreshore Park, Burnaby, BC. "Stealth" Mode. Image is a screen shot from Google Maps.



Figures 65 and 66. Site plan and building frontage respectively. SE Marine Drive, Burnaby, BC. "Brag" Mode. Images are screen shots from Google Maps.

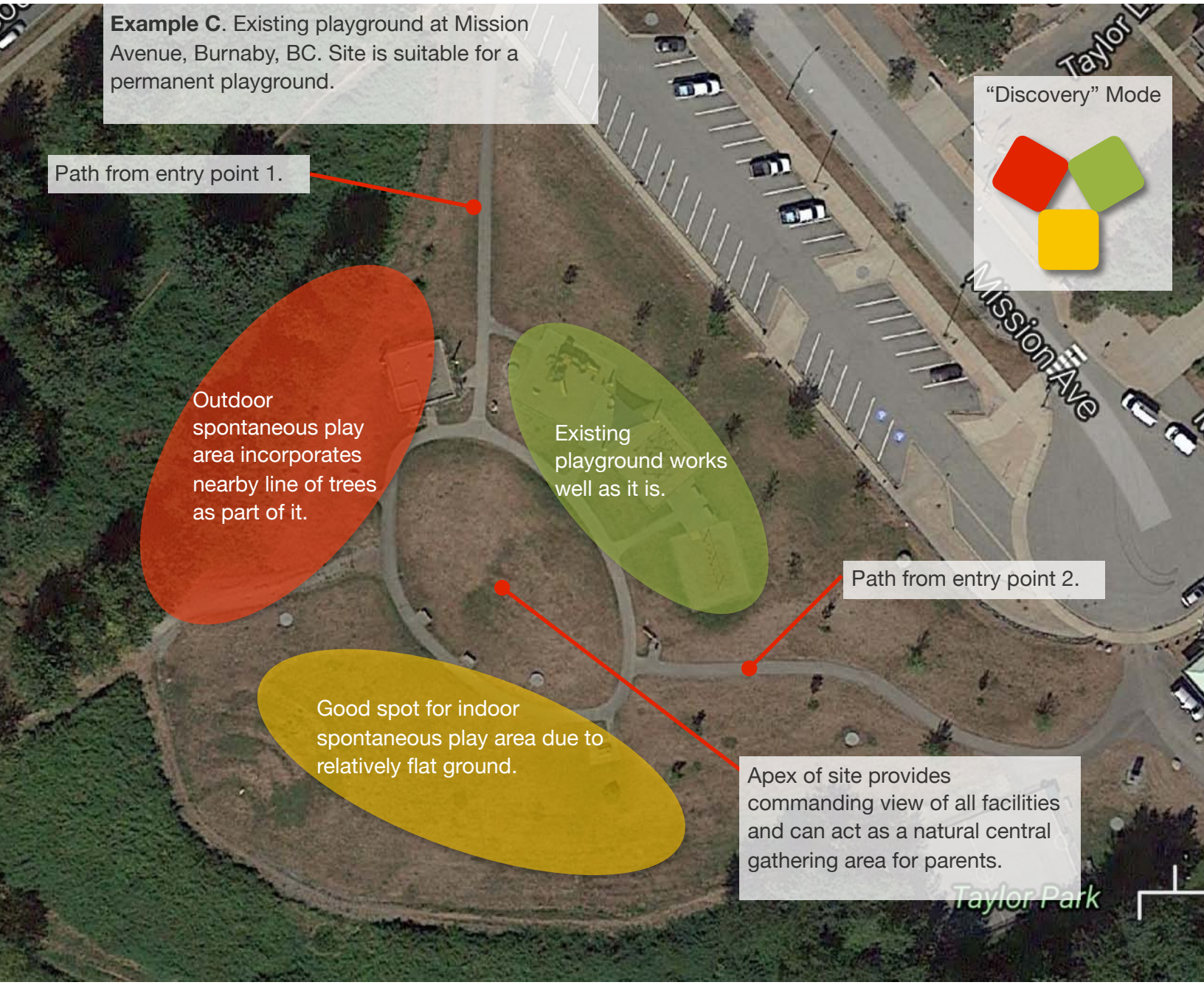


Figure 67. Playground at Mission Avenue, Burnaby BC. "Discovery" Mode. Image is a screen shot from Google Maps.

Audio

Well thought-out music or soundtracks could be an interesting addition to the playground. This method of influencing customer behavior has been well established in the retail industry but is often overlooked in children's play areas beyond the basic family-friendly music.

For example, family-friendly music could still be playing in the Safe Zone to "lull and relax" parents, while more appropriate soundtracks meant to release inhibitions could be played in the Adventure Zones. In addition to contributing an interesting dimension to the possible prompts available to a designer, this could also be used to create a more complex and thoughtful soundscape to accompany the playground.

Trained Team of Play Leaders

Another consideration is to have a team of trained play leaders or facilitators stationed in the playground around the clock to guiding children on the use of available materials, specific areas, and spontaneous and unstructured play in general. It is thought that members of a trained team could be more effective guides than parents, as the former could be less judgmental and more objective when it comes to riskier play. They could also provide a minimum level of safety within the playground without compromising the intents of spontaneous and unstructured play.

Figures 68 and 69. My fellow classmate and friend, Zach, acting as “Play Leader”. An essential component of a riskier play area if it were to be legitimised in any manner. and provides skillsets that not all parents would have regarding unstructured play and specialised play equipment or methods. Having play leaders present would not likely neglect or reduce the important aspects of unstructured play and might even enhance it by making certain equipment or activities more accessible to children. Most likely issues are available resources and funds for such a team.

Conclusion and Moving Forward

A great volume of research from various fields has supported the idea that it is beneficial to give children the agency to create, mould, and modify the space around them during play in order to engage them in spontaneous and unstructured play, as exemplified by Nicholson's Theory of Loose Parts. The many investigations undertaken over the course of this project seem to support this claim.

In this project, I also found that the manner in which instructions for the playground and the play equipment in it are presented to children and parents is crucial. Instructions have the potential to shift perspectives, influence the state of mind, and possibly even make the users excited or cautious during play. I believe that by carefully considering how intent is presented, it is possible to influence how a child plays.

Default instructions like posted sign panels, the standardized way in which play equipment is designed and configured for specific play activities, and, to some extent, the manner in which play equipment is configured are all so pervasive and familiar that the users (both children and parents) seem to engage on autopilot mode when using a conventional playground, thereby reducing the opportunities for creative play (and parenting). They seem to have become integral (and very likely legally necessary) parts of a system for designing, configuring, and setting up playgrounds, even for those that have tried to be unconventional. Thus, no matter how counter-productive these are to spontaneous and unstructured play, playground conventions are likely to stay and be quite pervasive for the foreseeable future for the majority of users.

One of the aims of this research was to recognize this system of playground conventions as a site for possible interventions, and to identify opportunities and methods to counter and possibly subvert the "conditioning" of conventional playground users that seems to have taken place. Achieving this could mean that children and their parents could be encouraged or even induced to see the existing conventional playground system from a different, hopefully less rigid, perspective. The point of view taken in this project is that using stealth and subversion could be an effective way of achieving such aims.

Implied instructions, like the paths and landscaping of a playground to potentially manage the flow and density of its users, or the deliberate scaling of play equipment to only allow

children of a certain age group or physical size to use it, could be seen as significant influencers of user behavior and could potentially be flexible and nimble enough to counter the (possibly necessary) rigidness of default instructions. As the predominantly speculative research proposals aim to show, exploiting the opportunities afforded by implied instructions could be an effective measure for subversion or, at least, for blunting the influence of default instructions.

The speculative playground, although impossible to truly build, provides various approaches that could be adopted individually. For example, the playground could be a thinking tool or part of a design process for environmental planners, architects, and designers, relating not just to play areas for children, but potentially also to spaces with which children and families are expected to interact.

With further refinements and modifications, mostly relating to scale and scope, the speculative playground could also be part of a guide or a parts check-list for elementary schools planning on developing more innovative play areas for their students.

Finally, the speculative playground could also be used as an inspirational tool aimed at parents or families who desire a more layered approach to how their children play, possibly even suggesting simple hacks or interventions to encourage the most beneficial forms of play possible for the children.

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PANEL ON RESEARCH ETHICS
Navigating the ethics of human research

TCPS 2: CORE

Certificate of Completion

This document certifies that

Peng Quah

has completed the Tri-Council Policy Statement:
Ethical Conduct for Research Involving Humans
Course on Research Ethics (TCPS 2: CORE)

Date of Issue: **10 November, 2015**

emily carr
university of art + design

1399 Johnston Street, Vancouver, BC, Canada V6H 3R9 ecuad.ca

Research + Industry Office

Emily Carr University of Art and Design
Research Ethics Board

June 23, 2016

MEMORANDUM TO:

Katherine Gillieson, Principal Investigator, Associate Professor, Faculty of Design + Dynamic Media
Peng Ho Quah, Graduate Student Co-Investigator, Faculty of Graduate Studies

Re: Application for Ethics Approval (ECU-REB #2016030707)

The research ethics application for **"There's Always Time for Play! Discovering the design possibilities of play: Can it benefit young families experiencing a significant change in their lives?"** was reviewed by the full Emily Carr University Research Ethics Board on March 16, 2016 and revisions were subsequently reviewed by delegated members on May 17, 2016. As a result of this review and the revisions made to the application, this research project **has full approval to proceed with participant research.**

The dates for this approval are June 23, 2016 – June 23, 2017 or until participant research is complete, whichever date comes first.

Please note, the following:

- This approval extends for one year, after which time renewal is available. To ensure timely renewal, you are invited to use **FORM 204.1 Annual Review / Request to Amend Approved Research** to communicate the progress of the research and to request any required changes. This form is provided with this letter.
- If you need to make any changes to any aspect of the approved application, you are required to inform the ECU-REB *prior* to the implementation of changes. **FORM 204.1 Annual Review / Request to Amend Approved Research** should be used to communicate changes. This form is provided with this letter.
- In the event of an adverse event associated with the participant research, the applicant must notify the ECU-REB within five (5) days. **FORM 204.2 Adverse Incident Report** is available for you to use to communicate these incidents. This form is provided with this letter.
- At the conclusion of the project, please complete **FORM 204.3 Research Ethics Completion** so that the file can be closed in an appropriate manner. This form is provided with this letter.

This signed Approval Status Letter is an official ethics status document. Please keep it for reference purposes. If you have not received a signed paper copy of this letter please contact me at ethics@ecuad.ca. The approval status listed above, the date of this letter, and the ECU-REB file number should all appear on materials that are circulated to the participants in this way: "This project has Full Research Ethics Approval from the Emily Carr University Research Ethics Board (June 23, 2016,

emily carr
university of art + design

1399 Johnston Street, Vancouver, BC, Canada V6H 3R9 ecuad.ca

ECU-REB #2016030707). If you have any comments or concerns about ethical issues in the research, you are invited to contact the Emily Carr University REB Coordinator at ethics@ecuad.ca or (604) 844-3800 ext 2848.".

- For multi-site or partnered research, researchers must adhere to the research ethics protocols or procedures at the other sites of research, where they exist. Thus, the researcher is expected to share notice of this approval with partners or sites of research that have their own research ethics protocols. If further ethics approval is required or new partners or sites of research become part of the project, the ECU-REB should be informed.

On behalf of the ECU-REB, I wish you much success with this research.

Sincerely,

Dr. Glen Lowry, Chair ECU-REB

Cc: Deborah Shackleton, Dean, Faculty of Design + Dynamic Media
Chris Jones, Director, Faculty of Graduate Studies
Jerri-Lynne Cameron, Director, Research Administration
Lois Klassen / Jacqueline Davidson, Research Ethics Board Coordinator

Appendix 2 - Sample Questionnaire

Sample questionnaire containing a cover letter to participants, questionnaires for before and after the activities, and instructions for the activities can be found in the following pages.

Sample Questionnaire

INTRODUCTION AND INSTRUCTIONS

Hi Parents!

Thank you very much for taking part in this research for us. As a bit of a refresher, we are looking at certain aspects of play between a child and a parent, to see if we can gather any insights that may be useful in the design development of our final thesis project for the Masters Programme.

If you have not signed the consent and media release forms, please do so (another copy has been included to this package), otherwise the results of your participation may not be included in the research findings.

There are two ways to submit your forms and data - via email or by contacting me to arrange for collection. If the email method is chosen, please refer to GENERAL INSTRUCTIONS - DATA COLLECTION below for details.

Please also refer to GENERAL INSTRUCTIONS - QUESTIONNAIRES AND ACTIVITIES before proceeding to the actual activities.

There is no need to complete all activities in one sitting if your child finds it difficult or tedious to do so. Having said that, we would like to have all data reach us via email by the end of July to give us enough time to consolidate and interpret the data.

Once again, thank you and hope to hear from you soon!

Sincerely

Peng
236-999-3154
biscuitbox.pengho@gmail.com

ABOUT THIS PACKAGE

This is the research package containing the necessary materials and activities for you to complete. There are 5 activities in total, plus 2 questionnaires (one at the start and another at the end of the activities). All activities are age-appropriate and should be relatively simple to accomplish, especially with the help of a parent.

The activities are not a 'performance' test of any kind. It does not matter if any of the activities cannot be completed to your satisfaction. Ideally, it should be a collaboration between your child and you, but if things do not work out as planned, do what comes to you naturally or intuitively - no data is too silly or frivolous for us. We are more interested in your feedback after engaging each of the activities, rather than the results of the activities themselves.

GENERAL INSTRUCTIONS - DATA COLLECTION

1 Please document your questionnaires and activities as much as possible (smartphone photos being the most convenient means of documentation, although scans may work as well) and email them to biscuitbox.pengho@gmail.com.

2 Photos of the end of each activity (or sub-activity) is important, while photos mid-way through would be good to have as well.

GENERAL INSTRUCTIONS - DATA COLLECTION (continued)

3 Avoid taking photos that may identify you, your child or your surroundings if possible. Easiest method is to document the results on a flat working surface with a closely-cropped photo.

4 While we prefer a single email from you with all the documentation, you can choose to email them to us in batches, as each activity is completed as well, if that is more convenient for you.

5 We should be able to read most attachment formats, most commonly .zip, .jpg or .pdf. It really depends on your preference.

GENERAL INSTRUCTIONS - QUESTIONNAIRES AND ACTIVITIES

1 Please go through the **QUESTIONNAIRE 1** first before you and your child engage in any of the activities provided.

2 To make the instructions simpler, assume that the instructions for all activities are meant to be directed at your child, especially for those that require a decision to be made.

2 Each activity is individually packaged, numbered 1 through 5. You and your child should engage in one activity at a time, although it is not important in what sequence the activities happen in, **except for Activity 5, which should be done last**.

3 Each activity may in turn be separated into two or three sub-activities. **It is important** that you and your child go through each sub-activity in sequence.

4 Depending on the activity, you may also need to answer a specific questionnaire on the activity at the end.

5 Complete **QUESTIONNAIRE 2**.

6 **Have fun! Break the rules if you want,** but please do tell us why - we would love to know!

QUESTIONNAIRE 1

The questions here provide some background and context to the research data. Do not worry - we are not looking for 'right' / 'wrong' / 'appropriate' answers. While we hope that you can answer all the questions included, it is fine to skip any that you do not feel comfortable answering or have problems understanding.

ABOUT YOUR FAMILY

1 List the age and gender of each child in your family from the youngest to the oldest. Indicate the child that is participating in the research if you have more than one child.

1 _____ _____ 2 _____ _____

3 _____ _____ 4 _____ _____

2 Do one or both parents work in the family? Working from home or an office?

_____

3 Do you have a extended family, eg, grand parents / siblings / other relatives, living in the same house with you? If so, do they assist in the care of your child in any way?

_____

_____

ROUTINES

4 For your child participating in the research, what is a typical weekday routine after preschool/school?

_____

_____

_____

_____

5 For your child participating in the research, what is a typical weekend routine?

_____

_____

_____

_____

ROUTINES (continued)

6 Does you child have any additional planned / routine activities after preschool/school?

_____

_____

_____

_____

PLAY!

7 What does your child enjoy most playing on his/her own? How often does that happen?

_____

_____

_____

_____

8 Do you encourage your child to go out of the house to play when the opportunity arises? Are there any reasons for doing / not doing so?

_____

_____

_____

_____

9 Do you have a specific time to routinely exclusively play or interact with your child? If so, how long do these sessions last and generally what activities are involved?

_____

_____

_____

_____

10 How often do impromptu play sessions with your child happen? If they happen, what is the general trigger and what activities are generally involved?

_____

_____

_____

_____

_____

11 Is there a favoured parent that your child requests to play with, or does the request depend on the situation and context? In the case of an extended family, would your child ask another relative to play with?

_____

_____

_____

_____

12 For the times when you play with your child, what activities does your child enjoy or request most? What activities do you enjoy most when playing with your child?

_____

_____

_____

_____

13 Are projects-based activities popular with you and your child, eg, making a toy house out of LEGO bricks or even unwanted cardboards, solving a puzzle, etc, basically any activities that may take a fair bit of focus and concentration and that may not end in a single session? If so, which activities are most memorable to you?

_____

_____

_____

_____

_____

_____

14 Do you ‘break the rules’ often when playing with your child and a specific toy, eg, using a toy shovel as a magic wand, etc? Does your child ‘break the rules’ often for that matter?

_____

_____

_____

_____

_____

_____

15 Do you consider ‘breaking the rules’ or improvising during a play session important? Can you explain why either way? What is the most memorable improvisation that you have made when playing with your child?

_____

_____

_____

_____

_____

_____

END OF QUESTIONNAIRE 1

INSTRUCTIONS FOR ACTIVITY 1

1 This activity has 2 sub-activities.

2 Open up 1A, follow the instruction inside and complete the activity.

3 Open up 1B, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 1B.

___ ___

1A - Use the plasticine provided and make your favourite object. Take not more than 10 minutes to complete the task.

___ ___

1B - Use the plasticine provided and make something you have never made before. Use as much time as you want.

___ ___

QUESTIONNAIRE FOR ACTIVITY 1

1 Rate your enjoyment for 1A on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 1B on a scale of 1 to 5 (5 being most enjoyable)

_____

3 Which factor affected your enjoyment of the activity more - the object being made or the time limit given? Why?

_____

_____

_____

INSTRUCTIONS FOR ACTIVITY 2

1 This activity has 2 sub-activities.

2 Open up 2A, follow the instruction inside and complete the activity.

3 Open up 2B, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 2B.

___ ___

2A - Draw the following on each of the cards provided:

1 Your favourite thing
2 Your least favourite thing
3 The thing you see most everyday
4 The loudest thing you can think of

___ ___

2B - Use all the 4 cards you have created and make a story out of it, in any sequence you like. It can be any kind of story, in words or pictures - funny, serious, scary, nonsensical.

___ ___

QUESTIONNAIRE FOR ACTIVITY 2

1 Rate your enjoyment for 2A on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 2B on a scale of 1 to 5 (5 being most enjoyable)

_____

3 Which factor affected your enjoyment of the activity more - the need to think and draw out the different things or the need to create a story from those drawings afterwards? Why?

_____

_____

_____

INSTRUCTIONS FOR ACTIVITY 3

1 This activity has 3 sub-activities.

2 Open up 3A, follow the instruction inside and complete the activity.

3 Open up 3B, follow the instruction inside and complete the activity.

3 Open up 3C, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 3C.

___ ___

3A - Follow the instruction provided to complete the model.

___ ___

3B - Using only the picture on the packaging as a reference, build the model as close to the picture as possible, using as many of the included pieces as possible.

___ ___

3C - Combine the two models to make a larger model using as many pieces as possible.

___ ___

QUESTIONNAIRE FOR ACTIVITY 3

1 Rate your enjoyment for 3A on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 3B on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 3C on a scale of 1 to 5 (5 being most enjoyable)

_____

3 Which sub-activity do you enjoy most - 3A, 3B or 3C? Why?

_____

_____

_____

_____

INSTRUCTIONS FOR ACTIVITY 4

1 This activity has 2 sub-activities.

2 Open up 4A, follow the instruction inside and complete the activity.

3 Open up 4B, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 4B.

___ ___

4A - Have fun with the materials provided.

___ ___

4B - Have fun with the materials provided.

___ ___

QUESTIONNAIRE FOR ACTIVITY 4

1 Rate your enjoyment for 4A on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 4B on a scale of 1 to 5 (5 being most enjoyable)

_____

3 Which sub-activity you do enjoy more? Why?

_____

_____

_____

_____

INSTRUCTIONS FOR ACTIVITY 5

1 There is no sub-activity for Activity 5 but Activities 1 to 4 need to be completed before completing this activity.

2 Open up 5, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 5.

___ ___

5 - Choose 2 favourite activities out of the 4 completed and combine them in a fun, playful or meaningful way for you.

___ ___

QUESTIONNAIRE FOR ACTIVITY 5

1 Rate your enjoyment for 5 on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 5 on a scale of 1 to 5, compared to the previous 4 activities (5 being most enjoyable)

_____

3 Which factor affected the enjoyment of Activity 5 most for you? Is it a negative or positive effect? Why?

_____

_____

_____

_____

QUESTIONNAIRE 2

The questions here provide some background and context to the research data. Do not worry - we are not looking for 'right' / 'wrong' / 'appropriate' answers. While we hope that you can answer all the questions included, it is fine to skip any that you do not feel comfortable answering or have problems understanding.

ABOUT THE ACTIVITIES

1 Which activity has the instructions that you understood the least? Why?

_____

_____

_____

2 Do you feel that step-by-step instructions are required for all children's toys or activities or would looser instructions be more beneficial?

_____

_____

_____

_____

3 Which activity did your child enjoy most? Why?

_____

_____

_____

_____

4 Which activity did your child enjoy least? Why?

_____

_____

_____

_____

5 Which activity did you enjoy most? Why?

_____

_____

_____

_____

6 Which activity did you enjoy least? Why?

_____

_____

_____

_____

7 Which activity do you think is most beneficial to your child's development? Is the answer different from the activity that your child enjoyed most? Why?

_____

_____

_____

_____

_____

8 Would you have done the activities differently, had you known all of the instructions before engaging in the sub-activities, ie, knowing what to do for the sub-activities all at once instead of knowing only after completing each sub-activity? Why?

_____

_____

_____

_____

_____

End of QUESTIONNAIRE 2

INTRODUCTION AND INSTRUCTIONS

Hi Parents!

Thank you very much for taking part in this research for us. As a bit of a refresher, we are looking at certain aspects of play between a child and a parent, to see if we can gather any insights that may be useful in the design development of our final thesis project for the Masters Programme.

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There are two ways to submit your forms and data - via email or by contacting me to arrange for collection. If the email method is chosen, please refer to GENERAL INSTRUCTIONS - DATA COLLECTION below for details.

Please also refer to GENERAL INSTRUCTIONS - QUESTIONNAIRES AND ACTIVITIES before proceeding to the actual activities.

There is no need to complete all activities in one sitting if your child finds it difficult or tedious to do so. Having said that, we would like to have all data reach us via email by the end of July to give us enough time to consolidate and interpret the data.

Once again, thank you and hope to hear from you soon!

Sincerely

Peng
236-999-3154
biscuitbox.pengho@gmail.com

ABOUT THIS PACKAGE

This is the research package containing the necessary materials and activities for you to complete. There are 5 activities in total, plus 2 questionnaires (one at the start and another at the end of the activities). All activities are age-appropriate and should be relatively simple to accomplish, especially with the help of a parent.

The activities are not a 'performance' test of any kind. It does not matter if any of the activities cannot be completed to your satisfaction. Ideally, it should be a collaboration between your child and you, but if things do not work out as planned, do what comes to you naturally or intuitively - no data is too silly or frivolous for us. We are more interested in your feedback after engaging each of the activities, rather than the results of the activities themselves.

GENERAL INSTRUCTIONS - DATA COLLECTION

1 Please document your questionnaires and activities as much as possible (smartphone photos being the most convenient means of documentation, although scans may work as well) and email them to biscuitbox.pengho@gmail.com.

2 Photos of the end of each activity (or sub-activity) is important, while photos mid-way through would be good to have as well.

GENERAL INSTRUCTIONS - DATA COLLECTION (continued)

3 Avoid taking photos that may identify you, your child or your surroundings if possible. Easiest method is to document the results on a flat working surface with a closely-cropped photo.

4 While we prefer a single email from you with all the documentation, you can choose to email them to us in batches, as each activity is completed as well, if that is more convenient for you.

5 We should be able to read most attachment formats, most commonly .zip, .jpg or .pdf. It really depends on your preference.

GENERAL INSTRUCTIONS - QUESTIONNAIRES AND ACTIVITIES

1 Please go through the **QUESTIONNAIRE 1** first before you and your child engage in any of the activities provided.

2 To make the instructions simpler, assume that the instructions for all activities are meant to be directed at your child, especially for those that require a decision to be made.

2 Each activity is individually packaged, numbered 1 through 5. You and your child should engage in one activity at a time, although it is not important in what sequence the activities happen in, **except for Activity 5, which should be done last**.

3 Each activity may in turn be separated into two or three sub-activities. **It is important** that you and your child go through each sub-activity in sequence.

4 Depending on the activity, you may also need to answer a specific questionnaire on the activity at the end.

5 Complete **QUESTIONNAIRE 2**.

6 **Have fun! Break the rules if you want,** but please do tell us why - we would love to know!

QUESTIONNAIRE 1

The questions here provide some background and context to the research data. Do not worry - we are not looking for 'right' / 'wrong' / 'appropriate' answers. While we hope that you can answer all the questions included, it is fine to skip any that you do not feel comfortable answering or have problems understanding.

ABOUT YOUR FAMILY

1 List the age and gender of each child in your family from the youngest to the oldest. Indicate the child that is participating in the research if you have more than one child.

1 _____ _____ 2 _____ _____

3 _____ _____ 4 _____ _____

2 Do one or both parents work in the family? Working from home or an office?

_____

3 Do you have a extended family, eg, grand parents / siblings / other relatives, living in the same house with you? If so, do they assist in the care of your child in any way?

_____

_____

ROUTINES

4 For your child participating in the research, what is a typical weekday routine after preschool/school?

_____

_____

_____

_____

5 For your child participating in the research, what is a typical weekend routine?

_____

_____

_____

_____

ROUTINES (continued)

6 Does you child have any additional planned / routine activities after preschool/school?

_____

_____

_____

_____

PLAY!

7 What does your child enjoy most playing on his/her own? How often does that happen?

_____

_____

_____

_____

8 Do you encourage your child to go out of the house to play when the opportunity arises? Are there any reasons for doing / not doing so?

_____

_____

_____

_____

9 Do you have a specific time to routinely exclusively play or interact with your child? If so, how long do these sessions last and generally what activities are involved?

_____

_____

_____

_____

10 How often do impromptu play sessions with your child happen? If they happen, what is the general trigger and what activities are generally involved?

_____

_____

_____

_____

_____

11 Is there a favoured parent that your child requests to play with, or does the request depend on the situation and context? In the case of an extended family, would your child ask another relative to play with?

_____

_____

_____

_____

12 For the times when you play with your child, what activities does your child enjoy or request most? What activities do you enjoy most when playing with your child?

_____

_____

_____

_____

13 Are projects-based activities popular with you and your child, eg, making a toy house out of LEGO bricks or even unwanted cardboards, solving a puzzle, etc, basically any activities that may take a fair bit of focus and concentration and that may not end in a single session? If so, which activities are most memorable to you?

_____

_____

_____

_____

_____

_____

14 Do you ‘break the rules’ often when playing with your child and a specific toy, eg, using a toy shovel as a magic wand, etc? Does your child ‘break the rules’ often for that matter?

_____

_____

_____

_____

_____

_____

15 Do you consider ‘breaking the rules’ or improvising during a play session important? Can you explain why either way? What is the most memorable improvisation that you have made when playing with your child?

_____

_____

_____

_____

_____

_____

END OF QUESTIONNAIRE 1

INSTRUCTIONS FOR ACTIVITY 1

1 This activity has 2 sub-activities.

2 Open up 1A, follow the instruction inside and complete the activity.

3 Open up 1B, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 1B.

___ ___

1A - Use the plasticine provided and make your favourite object. Take not more than 10 minutes to complete the task.

___ ___

1B - Use the plasticine provided and make something you have never made before. Use as much time as you want.

___ ___

QUESTIONNAIRE FOR ACTIVITY 1

1 Rate your enjoyment for 1A on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 1B on a scale of 1 to 5 (5 being most enjoyable)

_____

3 Which factor affected your enjoyment of the activity more - the object being made or the time limit given? Why?

_____

_____

_____

INSTRUCTIONS FOR ACTIVITY 2

1 This activity has 2 sub-activities.

2 Open up 2A, follow the instruction inside and complete the activity.

3 Open up 2B, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 2B.

___ ___

2A - Draw the following on each of the cards provided:

1 Your favourite thing
2 Your least favourite thing
3 The thing you see most everyday
4 The loudest thing you can think of

___ ___

2B - Use all the 4 cards you have created and make a story out of it, in any sequence you like. It can be any kind of story, in words or pictures - funny, serious, scary, nonsensical.

___ ___

QUESTIONNAIRE FOR ACTIVITY 2

1 Rate your enjoyment for 2A on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 2B on a scale of 1 to 5 (5 being most enjoyable)

_____

3 Which factor affected your enjoyment of the activity more - the need to think and draw out the different things or the need to create a story from those drawings afterwards? Why?

_____

_____

_____

INSTRUCTIONS FOR ACTIVITY 3

1 This activity has 3 sub-activities.

2 Open up 3A, follow the instruction inside and complete the activity.

3 Open up 3B, follow the instruction inside and complete the activity.

3 Open up 3C, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 3C.

___ ___

3A - Follow the instruction provided to complete the model.

___ ___

3B - Using only the picture on the packaging as a reference, build the model as close to the picture as possible, using as many of the included pieces as possible.

___ ___

3C - Combine the two models to make a larger model using as many pieces as possible.

___ ___

QUESTIONNAIRE FOR ACTIVITY 3

1 Rate your enjoyment for 3A on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 3B on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 3C on a scale of 1 to 5 (5 being most enjoyable)

_____

3 Which sub-activity do you enjoy most - 3A, 3B or 3C? Why?

_____

_____

_____

_____

INSTRUCTIONS FOR ACTIVITY 4

1 This activity has 2 sub-activities.

2 Open up 4A, follow the instruction inside and complete the activity.

3 Open up 4B, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 4B.

___ ___

4A - Have fun with the materials provided.

___ ___

4B - Have fun with the materials provided.

___ ___

QUESTIONNAIRE FOR ACTIVITY 4

1 Rate your enjoyment for 4A on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 4B on a scale of 1 to 5 (5 being most enjoyable)

_____

3 Which sub-activity you do enjoy more? Why?

_____

_____

_____

_____

INSTRUCTIONS FOR ACTIVITY 5

1 There is no sub-activity for Activity 5 but Activities 1 to 4 need to be completed before completing this activity.

2 Open up 5, follow the instruction inside and complete the activity.

4 Answer the questionnaire included in 5.

___ ___

5 - Choose 2 favourite activities out of the 4 completed and combine them in a fun, playful or meaningful way for you.

___ ___

QUESTIONNAIRE FOR ACTIVITY 5

1 Rate your enjoyment for 5 on a scale of 1 to 5 (5 being most enjoyable)

_____

2 Rate your enjoyment for 5 on a scale of 1 to 5, compared to the previous 4 activities (5 being most enjoyable)

_____

3 Which factor affected the enjoyment of Activity 5 most for you? Is it a negative or positive effect? Why?

_____

_____

_____

_____

QUESTIONNAIRE 2

The questions here provide some background and context to the research data. Do not worry - we are not looking for 'right' / 'wrong' / 'appropriate' answers. While we hope that you can answer all the questions included, it is fine to skip any that you do not feel comfortable answering or have problems understanding.

ABOUT THE ACTIVITIES

1 Which activity has the instructions that you understood the least? Why?

_____

_____

_____

2 Do you feel that step-by-step instructions are required for all children's toys or activities or would looser instructions be more beneficial?

_____

_____

_____

_____

3 Which activity did your child enjoy most? Why?

_____

_____

_____

_____

4 Which activity did your child enjoy least? Why?

_____

_____

_____

_____

5 Which activity did you enjoy most? Why?

_____

_____

_____

_____

6 Which activity did you enjoy least? Why?

_____

_____

_____

_____

7 Which activity do you think is most beneficial to your child's development? Is the answer different from the activity that your child enjoyed most? Why?

_____

_____

_____

_____

_____

8 Would you have done the activities differently, had you known all of the instructions before engaging in the sub-activities, ie, knowing what to do for the sub-activities all at once instead of knowing only after completing each sub-activity? Why?

_____

_____

_____

_____

_____

End of QUESTIONNAIRE 2