what's on the floor

: The flooring affects to the use and experiences.

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A thesis submitted to the School of Architecture and Design, Victoria University of Wellington, in fulfilment of requirements for the degree of Mastersof Landscape Architecture

Victoria University of Wellington

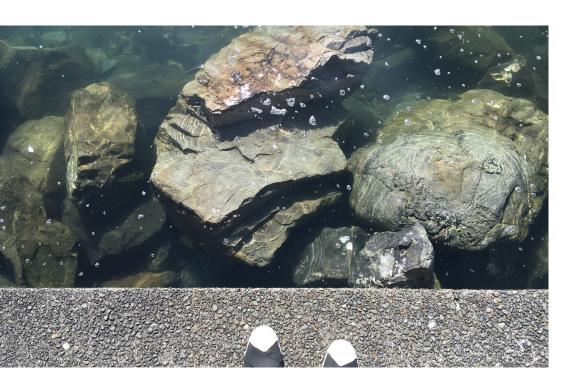


abstract

This research investigates the impacts of urban surfaces that are influencing human behaviours and experiences. A variety of surface conditions are seen in most public places, and they seem to have some influence on people.

Why do people love sitting on the grass? what is it about the grass that gets people to sit on or lie down? If by assuming the soft condition of it, it would probably not be a case or enough reason for people to seat themselves. What the grass speaks to you is that the earthiness of its layers to the tip of the leaf is prompting you to feel in a certain way. This can be out of one's consciousness in everyday life. It might not always be seen clearly through bodily interaction, but the conversation between the particular surface and user is what interesting here.

As we all might have seen the Tactical Ground Surface Indicator is designed for blind people, and that's how the conversation creates between them. As they are paying attention to the surface, it speaks back but in a more guiding way rather than making one feel the experience of the place.

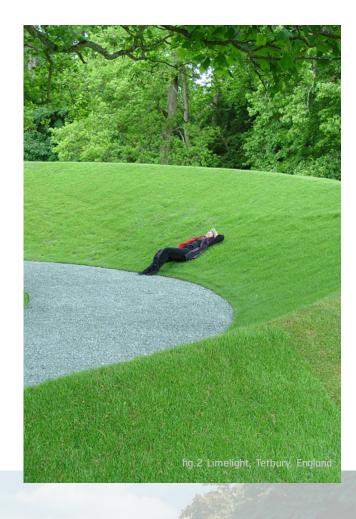


Acknowledgement

As a result of this thesis, I wish to thank both of my supervisors, Vikki who has always been cheering up my ideas and guide me to directions that I would never think of, and Peter who has always been trying to understand what's in my head. Even though we, us three, have not been actively spoken that often through the process, but every time I get to discuss, I always find a lot more stuff to digest in further exploration. It has been a pretty tough year with the crisis, I would like to acknowledge and thank my colleges who are met once in a while throughout the year, with a bit of chat had helped a lot with the stress. A Special thanks to Thip, my very supportive sister, for helping out and feeding me well whenever I needed it. As Thip had helped me relieve the stress through gaming exercise, it was more than enough to uplifting my condition. I would also like to acknowledge and thank Carles, Bruno, and every other one that has been taking part in feedbacking my process throughout the year. Last but not least, thanks to Mom who has always been cheering and thinking of me even we are not together and unable to meet due to the crisis.

Preface

Flooring in public spaces affords a wide range of ways people use it. Through the use of public spaces, people do have their ways of responding to the surface that they are occupying. What's on the floor that bouncing back creating a particular moment or a certain territory to the place. This research has come from the initial hunch of why do people love sitting on the grass. The grass area where people tend to sit or lie down on has a specific character to it, whether it be the sun, the flatness, the slopes or the grass quality, etc. On the other hand, people do 'also' love to sit on the rocky bumpy surface, where it often seems to be nearby the water with an appropriate sizing to sit on. The two sitting experiences have their own specific characters which make the place different. It could generally be found that on the same piece of grass, people do act differently, but what gets one to respond to a certain thing is worth looking at.



Research question

How to design with the surface?

How can we implement the experience of the surface in urban spaces through design in order to provide more opportunity and possibility of paying attention to the surfaces.





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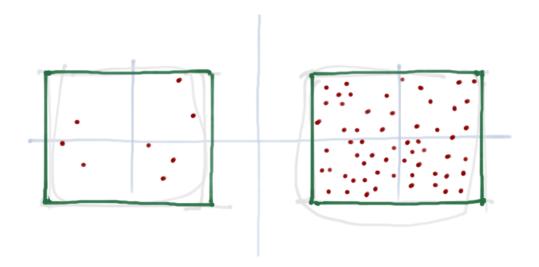
urban surfaces



Either of the soft grass or hard surface gets you to react, but the way people response to it is what interesting.

What is our relationship with the space in public places? The relationship between us humans and places can be felt through, from the ground to our consciousness. The experiences of place are not necessarily be formed only from/by the ground, but the fact that humans have to make their way to a certain spot, that requires an interaction between bodies and grounds. Why does it feel different on the different ground surfaces? And What does that get one to act in a certain way? The feeling underfoot and the way people respond to it, like a bouncing conversation between each other, are goals to look at. Only the ground cannot create this relationship, hence the combination of human and floor is necessary, as a graph need both x and y axes to be completed.





A successful piece of public space may not necessarily be the place where it is used by a massive amount of people or be contained and compacted to its maximum capacity. Although, it can be, but not always. The key is what makes that piece of ground being used differently.

Now, talking about the word 'capacity', it is not just about the size of the space or area that could contain fewer or more people. It is also about how 'close' they, people, are. The closer people are, the greater number of them can occupy on site. This can also be referred to as the close in distance or on the other hand, the relationship. When someone is close to one another, that can be reducing the distance apart between the two, which creates clusters rather than scatter.

As being learned from the below images, 'it's not the scale of green space but proximity that is most important.' (Ivers, B. C.) When the same patch of grass is used by different amount of users, where one sunny lunchtime, it is filled to capacity by workers escaping from office hours. (Ivers, B. C.) Now, as mentioned about a 'lunchtime', there seems to be a time factor to this event, It can also be understood in two separate directions, as the time in regards to people's daily agenda or the time in relation to the surrounded climate.

With this example, it's only allowing to understand that this particular piece of surface is convincing the same response from people even at a different time.

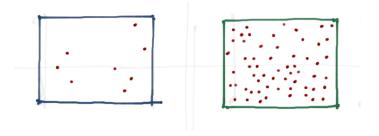




fig.5 Crabtree Field, London — A small public open space

The interesting side here is that only the size cannot be used to define its capacity, but there are also time and its conditions to be included. Then, what are the conditions? As pointing out about the grass patch, this relates to the initial interest about why do people love sitting on the grass. Could we, therefore, say that the key condition here is the grass surface that inspired interaction?

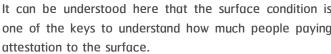




The capacity of different surface conditions can be seen that each condition attracts different users and different desires to use the space. For example, when a square with a hard-paved surface is used by pedestrians circulating, passing through, or stopping by, and all these activities are happened to be on-foot, once the square has been turning into a patch of grass, same size and same location, it influences more sitting and laying-down activities. More body parts are influenced to be in contact and interacting with the ground.

Trafalgar Square, the main civic squares in central London has been transformed into a lawn for two days, has completely changed the way people use the space. The softness underfoot and comfortable to sit on were the keys. By applying this idea into a piece of space, the different changes of feeling underfoot through different surface conditions get people to do things in certain ways. People tend to shift themselves to the more comfortable area to relax and spend more time whereas the rough zone tends to be more active. This does not mean that the comfort zone will always be the go-to place of all people but this idea could be used to define programs or user types to the place.

It can be understood here that the surface condition is one of the keys to understand how much people paying



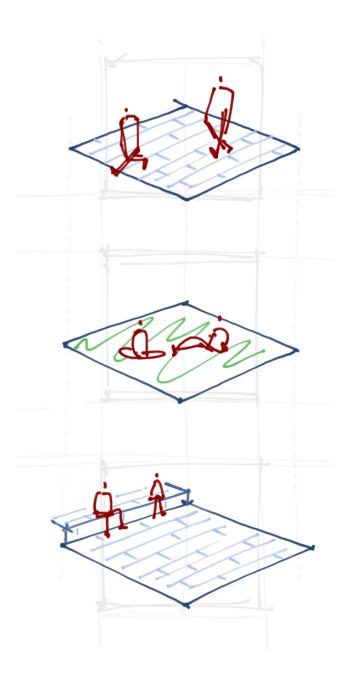
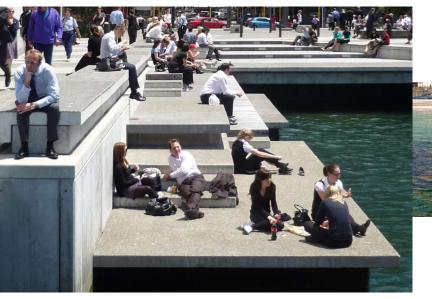


fig.7 Different uses when surface conditions changes (Authour, 2020)

fig.6 Trafalgar Square, London

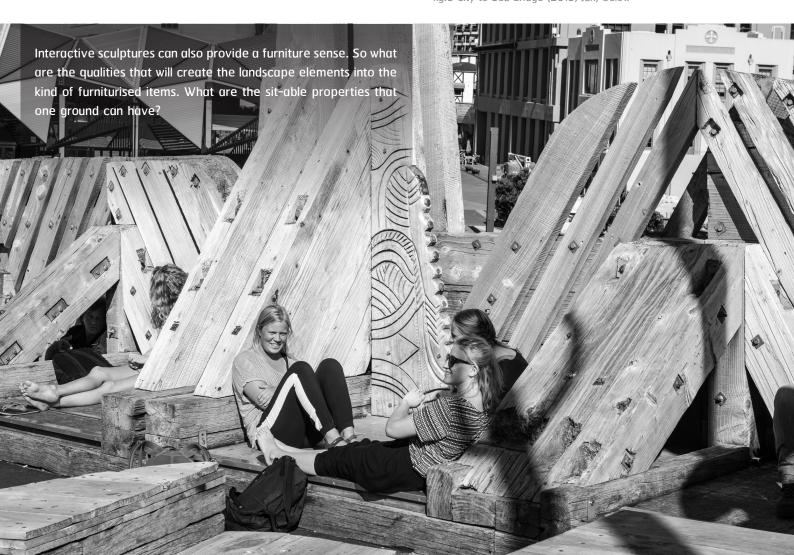


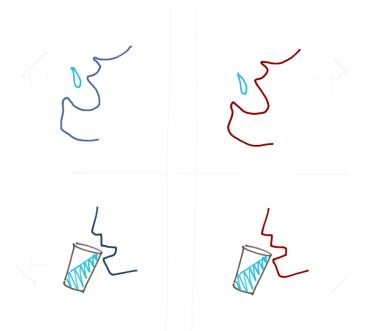
The elevated layered floor is another aspect that allows users to allocate themselves in different positions. From these designs, they are seen that people would often find some distance to be apart from somebody else in public to have their own comfort space. Is it far away enough to be able to lean back? Is it okay to lay down next to this person?

fig.8 Kumutoto (isthmus) left

fig.8 Oriental Bay (isthmus) right

fig.9 City to Sea Bridge (2019, Jan) below





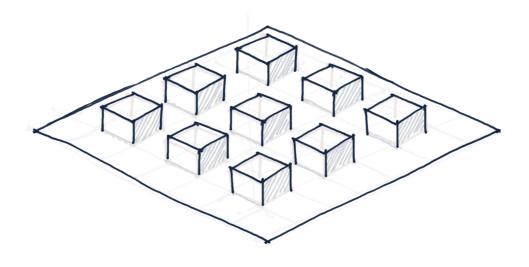
The different experiences of surface textures may be demonstrated in a way of how people felt when drinking a glass of water. To further explain that, it may seem quite personal, but with that person, it creates a variety of individual experiences. When the two different persons tasting water from the exact same source, despite the taste, there is no other different experience between them than drinking water. Once the water is offered to be tasted in a glass, the texture of the glass is what creates the drinking experience. This is a noticeable factor in our everyday life where we prefer different textures or thicknesses of the glass or cutlery we use.

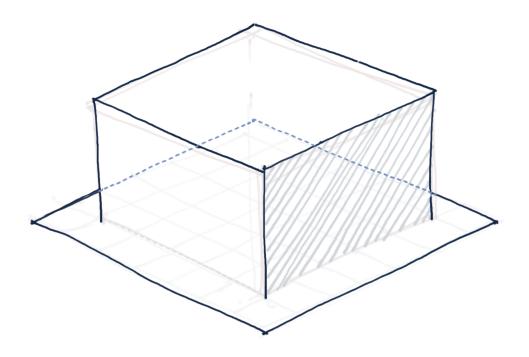
fig.10 Expression of tasting water with the different glass (Author, 2020)



fig.11 Le Miroir d'Eau at Bordeaux

Le Miroir d'Eau at Bordeaux shows that when the ground has a film of water from the fountain, it provides multiple atmospheres including when the mist and the water are where people are drawn to. (Ivers, B. C.) With this particular landscape, its function is flexible where the ground fountains can be turned on and off eventually, which provides different energies to the site. When those fountains are off, space becomes a big open space without any obstacle to pedestrians, once they are on, a different atmosphere is created. With a thin layer of hydro covered, the communication from the floor changes.





Talking about Urban Surfaces, there is a range of surfaces in urban areas from an open surface to a table surface. At what height above the ground can be considered as a surface? What we are looking for is the ground surface, and this does not necessarily need to be on a (0,0) level of the ground. As mentioned, the relationship between surface and human can be achieved when ones have made their way to a spot, which seems to be requiring onfoot activity. Besides that, even for wheelchair users, the level of this relationship stays relatively the same which is on ground level. Therefore, this research will be focussing on the surface level that can be accessed easily by feet or pedestrian level of space.

fig.12 Kumutoto's slope and interaction, Wellington, New Zealand (Author. 2020) $\,$



Something is fascinating about the surface where it gets you to feel in a certain way and which prompts you to experience the place.

Feel the ground

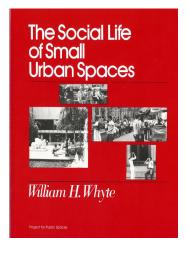
Once it gets you to start paying attention to the ground, you somehow being drawn into it



fig.13 Jacob Riis Park bathhouse, promenade, and beach (RUP)

As referring to William H. Whyte's - The Social Life of Small Urban Places and — Rethinking Urban Parks (RUP), if Whyte is focusing on the small parks & plazas and RUP is mainly focusing on the large open space in their investigation. Then what about this thesis—what exactly kind of urban surface this research is aiming for. By studying off RUP focus on the large open space, one of the spaces was a beach with a large section from land to the water. This section was extracting out from their picture and is learned that there is a variety of interaction throughout different parts of the surface. When drawing out in section following a similar way of looking across, several areas are considered as surface, but not all of them that are easily accessed. As touched on above about what is our relationship between ground and human, the key of the relationship is the fact that you have to make your way to a particular spot to receive the conversation between the ground and you, then the surfaces that are easily accessed by foot are the key to look at.

The section was drawn representing the section across the image. It shows that there are various uses of space and a range of interactions and relationships between humans and the surface. By applying the idea of the cross-section to interpret what can be called 'surface' for this research, the second roll section was created. Most kind of surface can bodily interact but the accessibility to each of them are different. The higher level from the ground the more difficult it to reach. The moment of reaching the taller surface reduces the focus of attention to its surface experience. The easier foot-access ones can be attracting your attention at parts of the journey.





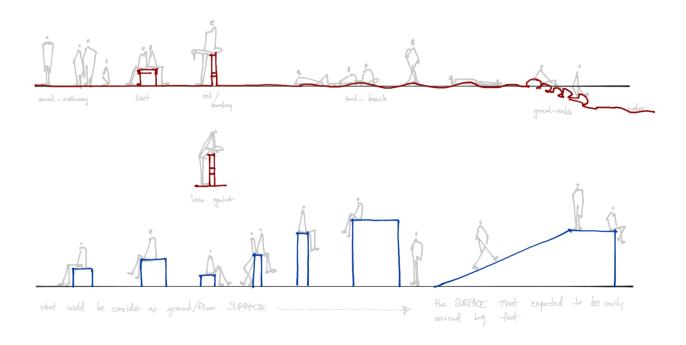
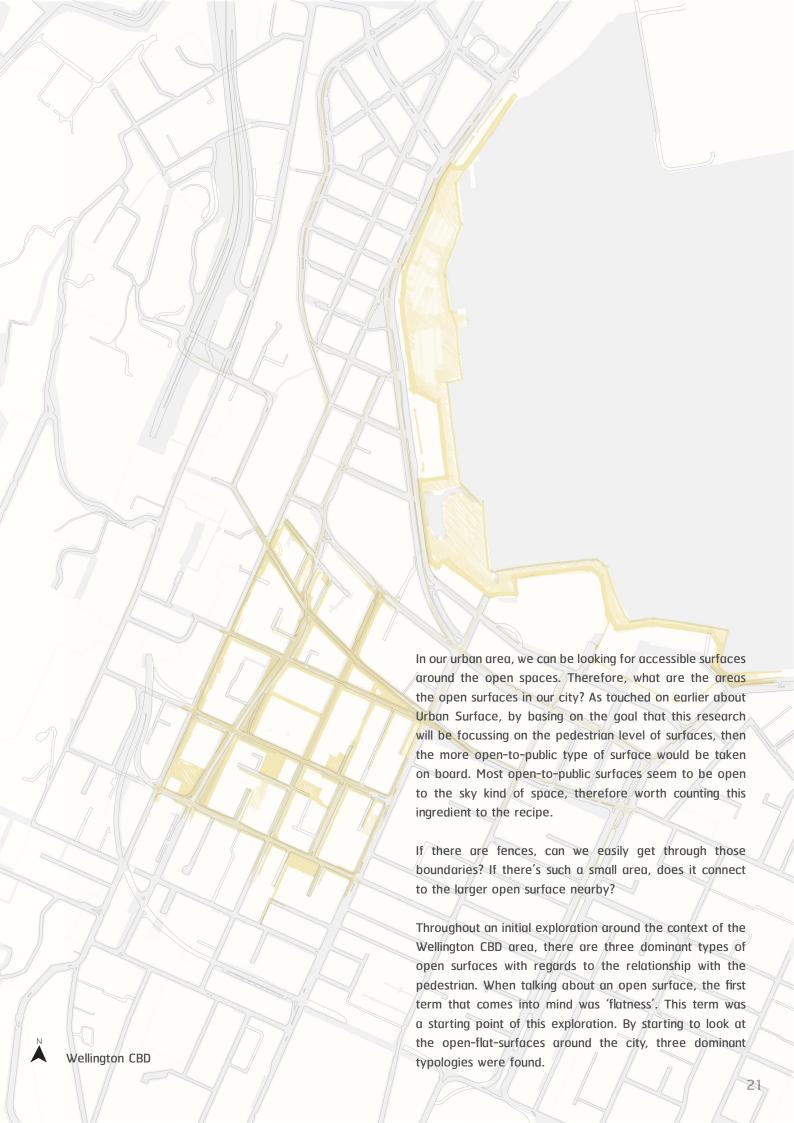
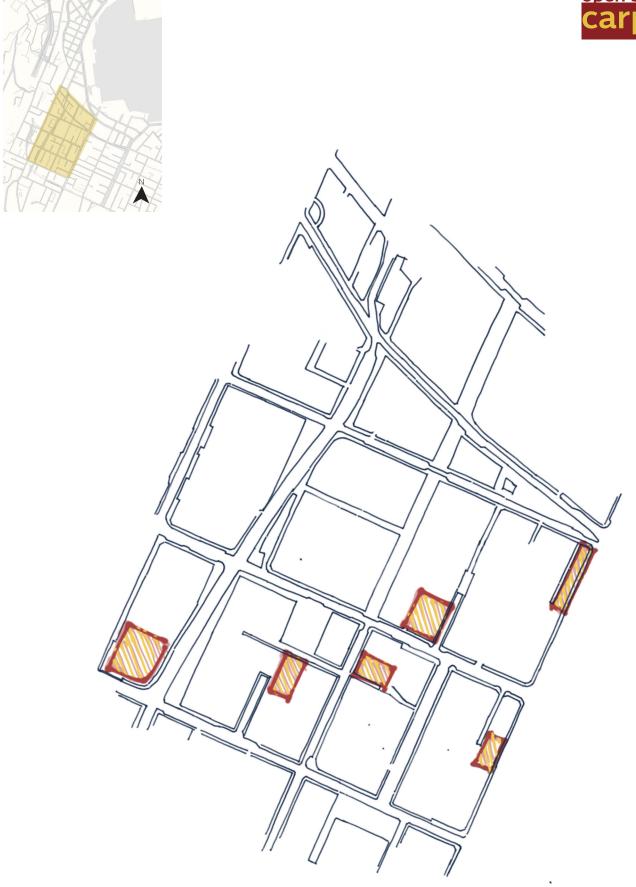


fig.14 Interretation of Surface Accessability (Author. 2020)

open surfaces



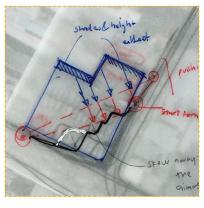


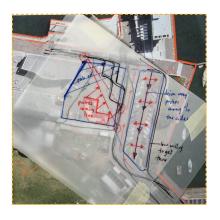


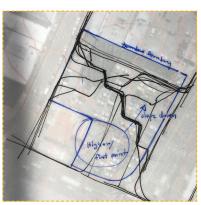
When thinking about the words 'flat' and 'open surface', carpark seems to be the first type of space to imagine as it contains all those characters. Even though most of the time carparks are not always being completely flat but they are relatively flat enough to be considered as. 'Carpark', the flat open surface which is easily accessed through by pedestrians and being packed or empty at different occasions. The capacity, sizes and emptiness are some key aspects to the pedestrian decision whether to enter the space and make their way through the carpark surface. The most convincing factor to enter to any carpark seems to be the low-traffic of vehicle, which makes this type of surface welcoming people whether it's packed by cars or empty.

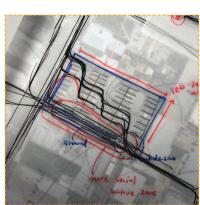
Carpark Analysis - Wellington CBD Area



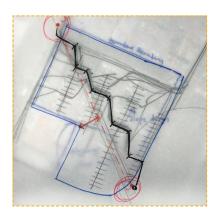












Throughout the studies of a number of different carparks in the Wellington CBD, it is learned that not only the floor surface influencing the way people shifting around, but they're also the impacts from surrounded elements such as the building nearby or the site boundary. Even though the surface of most carparks are relatively flat, but the surrounded elements are seen to be affected the flows and circulations involuntary.

fig.15-21 Wellington Carpark Analysis (2020)

findings

From the analysis, it can be demonstrated into three different affects regarding carpark system and the way people interact and engage in the space.

aiming line

Giving that between point (A) and point (B) is the aiming line, as refer to the direction or destination that one is aiming to reach.

The most interesting part here is the understanding of what makes influences the way people shifting throughout the area.

Straight-line affect — This affect happens when there are no or there aren't many obstacles within the context. The direction and the way people cut through space tend to align with the 'aiming line' as expected.

Skew effect — This affect happens when such surrounded building has influenced the movement. The cut has now shifted slightly away from the aiming line as a result of the impact of the building pushes people away from a straight line and this happened involuntarily. With this skew effect, it is when the surrounded big element is not yet fully take place of the whole space, and partly be around the boundary line.

aiming line
aiming line

Obstacle — This affect happens when any big or small elements are taking place within the site and becoming obstacles or making it less smooth to cut through space. People tend to find themselves going around the boundary line and less intending to cut through. These obstacle elements are clearly seen pushing away the movements out of the space.

fig.22-24 Carpark Analysis (Author. 2020)





Most carpark surfaces are definitely made out of materials that support vehicle activities and less support human bodily interaction. So, what are the potential areas that carpark can support social interaction? It seems to be the driveway section when there is no car driving or be the empty parking slot that people can stop by.

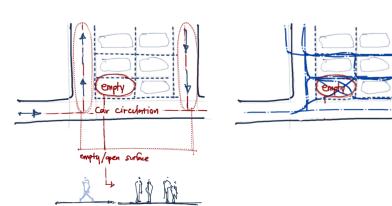
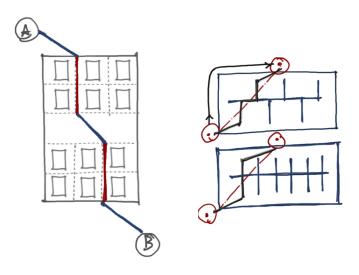


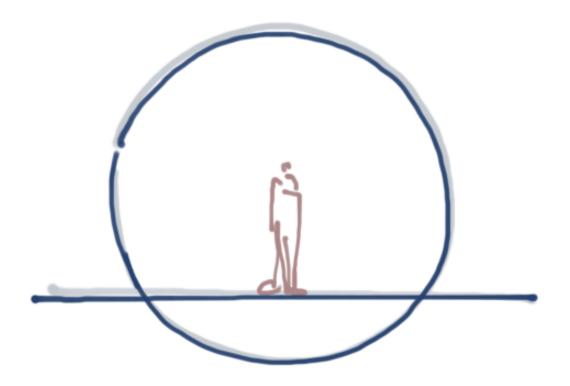
fig.25-27 Carpark and social interaction (Author. 2020)

The unoccupied parking lot provides a sense of openness and can be influencing the gathering vectors, whereas the drive section more influences an active movement that can be rushed away from the vehicle quickly.

As people cutting through the niche between vehicles in a straight line, when reaching the driveway section, people tend to turn themselves into a diagonal line to cut through space, calling this as Turn&Thru behaviour.

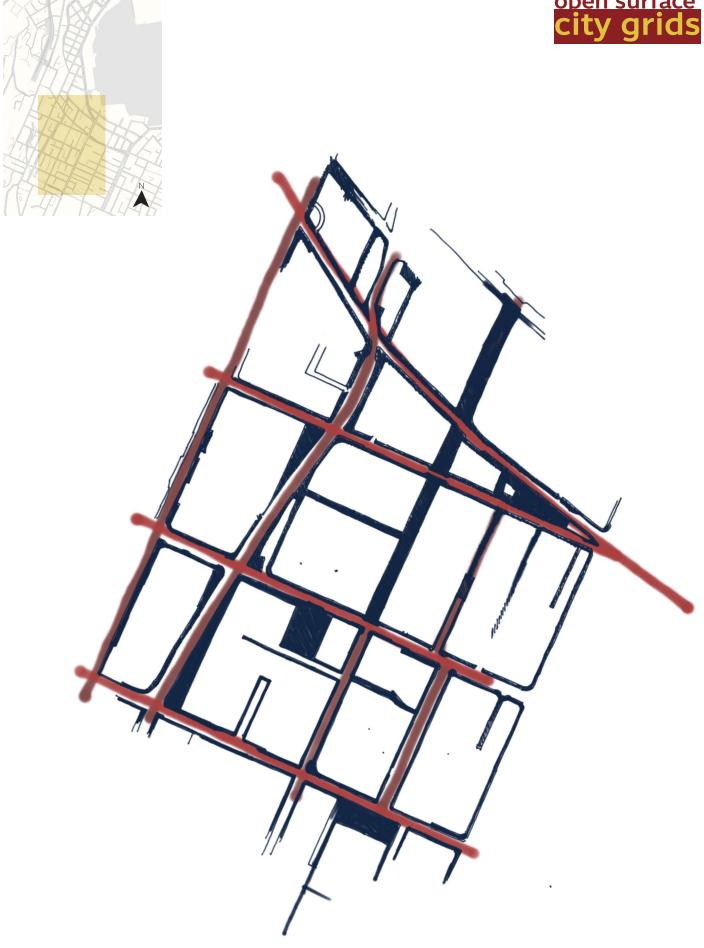
Not that this Turn&Thru behaviour will always happen, the arrangement of parking slot is a very important key whether it allows an easier cut or it can be defending away from the wiliness of getting through.





This relationship creates territory at a wider scale, as one experiences
the space, as the effect of the surrounded element in a wider distance.





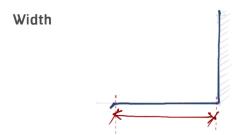
City Grids - Wellington CBD Streets

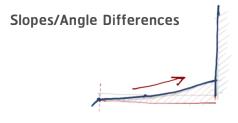
An open surface does not always have a wide-open space. The second category of the Open Surface goes to City Grid. This includes streets and sidewalks as both are along the grid lines, open to the public and sky, and about each other. It is definite that all sidewalks are the pedestrian level of the surface, but some streets are well crowded by the pedestrian as well. It is not only the shared street to be seen as a pedestrian-friendly surface, but some regular roads with low traffic are frequently used by jaywalkers.

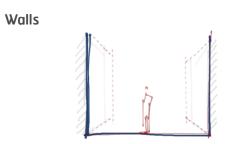
With the sidewalks, any little changes on the ground surface can impact users, whether it be sizing, a growth of slopes, or an occupation of street signs. The wall of shopfronts nearby also inspiring the use. The little changes of slope could differentiate territories along the width of it. When crossing over into the road part of the street, a similar factor of low traffic is happening which rises the willingness of entering the surface.



fig.28 Availability of Sidewalk, Courtney Place, Wellington (Author. 2020)





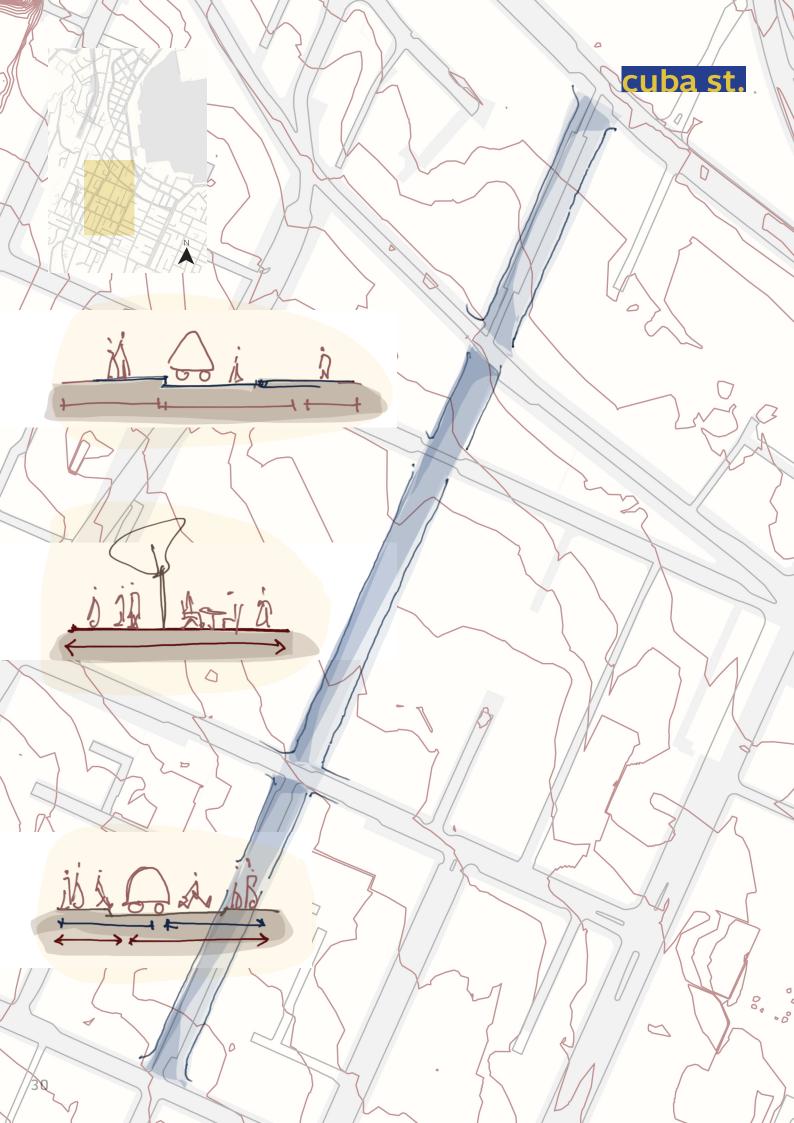


Along the width of the pavement, there can be a number of things going on that affect the experience while walking. Whether it be some elements forcing you to shift away involuntary, such as street signs, etc., or the impact of the wideness where it allows other activity to take place on the pathway.

As for those homeless users, the dimension of the path influences a lot into decision making where to place themselves. It is wide enough? Or is it flat enough to lie down?

The subtle changes in slopes can create territories on a particular part of the walkway. As by little slope, it can divide the whole width of pavement into sections. Sometimes it can be less useful when it squeezes down the walking area whereas it can be powerful when it can create a different experience on a different section of the path.

Not only the impact of a particular moment on the sidewalk but also the impact of building along the street creates a room-like atmosphere, where those shopfronts are playing the roles of walls and the street becomes a living space.





Section B, this area is known as a pedestrian-only street locating at the relatively center of the city. As being a pedestrian-only walkway, it usually is crowded. Most of the time of a journey along this street, it can be felt as a whole along the cross-section of the street. As-a-whole in a sense of everything seems to be connecting to each other across the street.

streets around the city are the place where people tend to cut through.

Section C, this area is also a one-way road but not a shared one. Even though the curb along both edges of the street is strongly differentiated the driveway and walkways, but with a character of low-speed traffic, this section of Cuba Street become frequently engaged by pedestrian across the driveway. The experience of this part here is slightly different from others. It is a combination of belonging and engagement. The road itself makes you willing to be part of as to cut across or slowly walk. The road also gives the sense of merging with the sidewalk which seems to be the character of this street that is attractive to most people. By comparing sections, A and C, from the field study, it turned out that section C of Cuba Street tends to be used by pedestrians more than section A.





fig.29–31 Cuba Street, Wellington (Author. 2020)



This relationship greates torritory with degrees of scale when one experience	
This relationship creates territory with decreases of scale, when one experience the space, as the effect of a closer surrounded element in a closer distance.	es

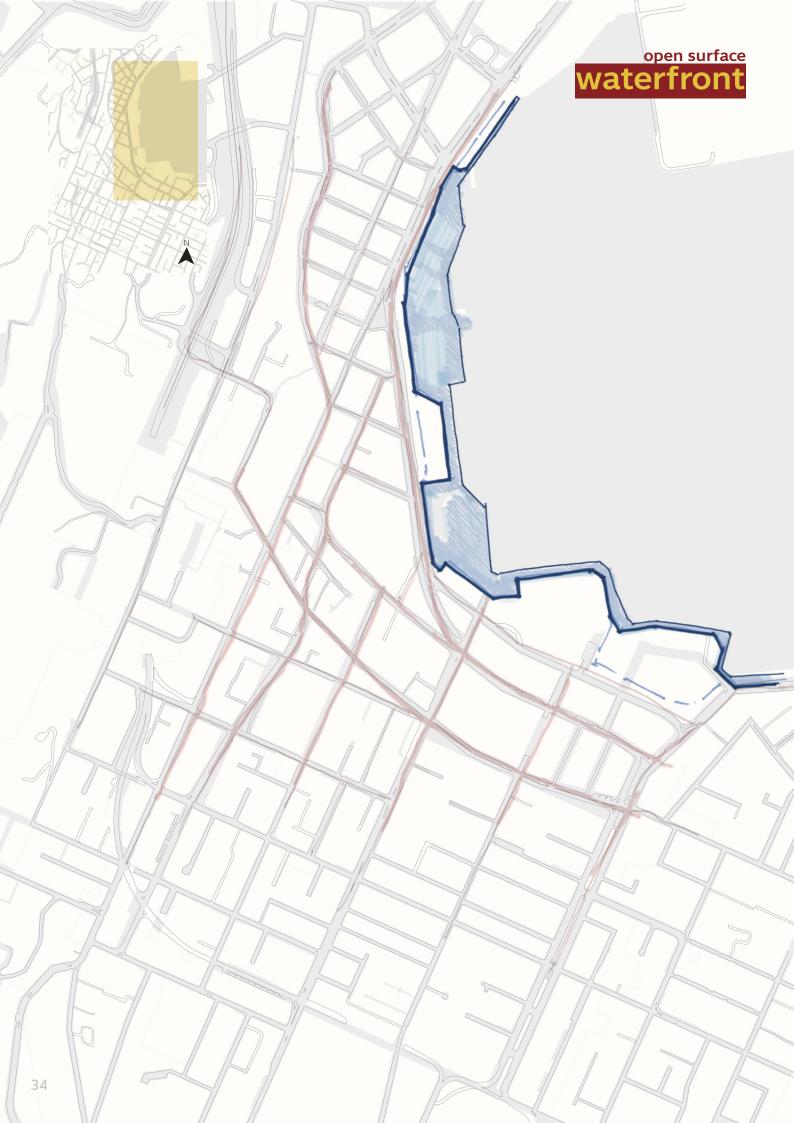




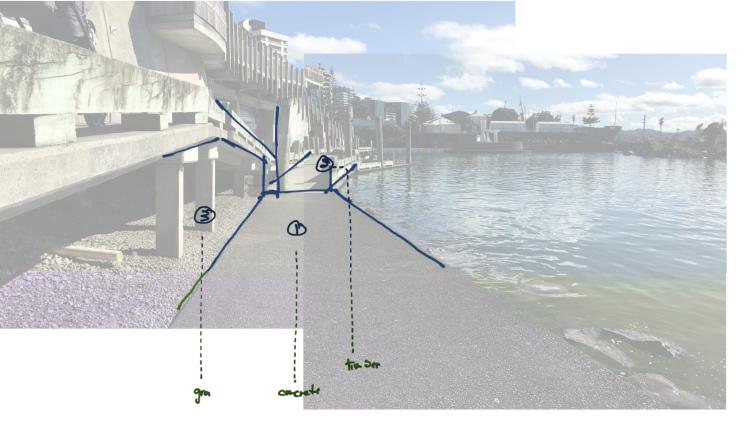




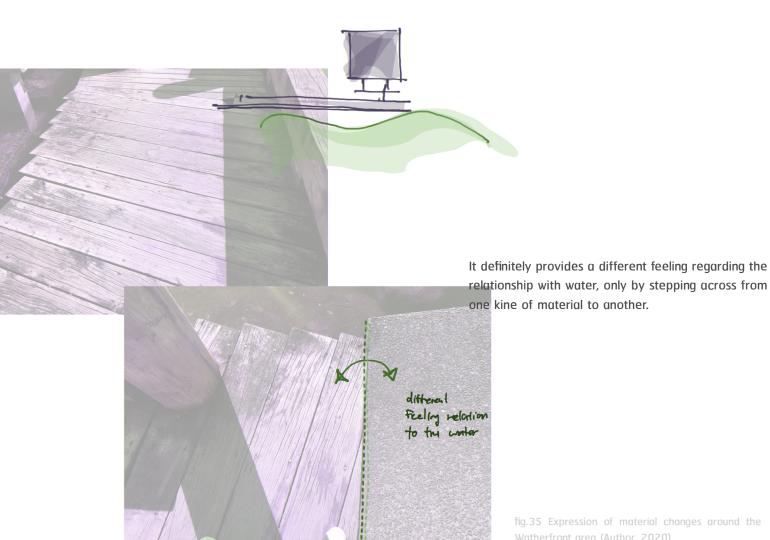
fig.32-34 Wellington Harbour Waterfront Wellington (Author. 2020)

Destination – Wellington Harbour Waterfront

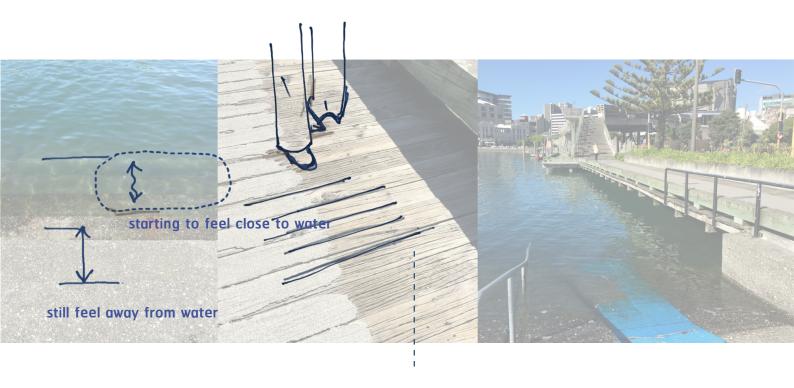
The third category of Open surface goes to the Waterfront area, particularly by the Wellington Harbour. It is the kind of 'destination' open surface that is also the highlight of the city. Most parts along the area are relatively flat despite some dropped layers near water. The most interesting part about this surface is the way it is a go-to kind of space unlike the inner part of the city. The very obvious finding is the scale of rushing around the space, in saying that, it is not about the speed of movements around the surface but the level of opportunity that would allow people to really pay attention to the surface is greater. Through the surface area exploration, there are moments where it can be felt close to the ground and intimate to the water layer underneath. All this experience applies to what has been mentioned about the relationship with the surface when the surface really gets you to feel in a certain way regarding a particular spot of standing or taking place. The feeling underfoot is what's connecting us humans and the surface. Surface condition and materiality play key roles in this observation.



range of material changes throughout this area, all of each seem to be giving out the close-to-water experience in its own way.



Watherfront area (Author. 2020)



while walking on the timber bridge, it gives the experience of intimacy and gets to feel each of the single pieces of the timber in every step taken.

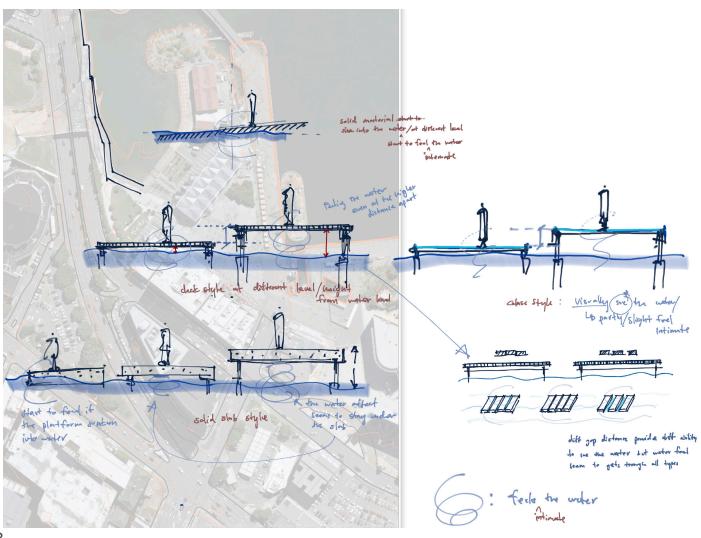
There is also another interesting way of seeing the impact of the smooth feeling underfoot that shows through a selection or a decision of people's activity, where the smooth-flat-hard-paved part of the surface tends to afford wheel-activity.

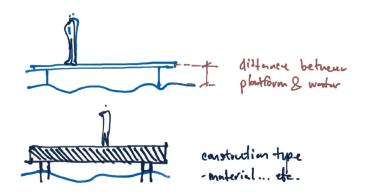


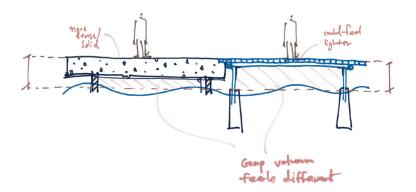


The study below allowed understanding the impact of changes in distance between the platforms and the water. Throughout the exploration, most parts along the Waterfront are over the water, whether it be bridges, extended platforms, or the docks. Those are the open surface areas where a pedestrian can access. The founding of the exploration was the intimate relationship between humans and the beneath water, which was felt through the media of those platforms. It is not only the distance that provides the intimate relationship but also the materiality differences and the way it is constructed.





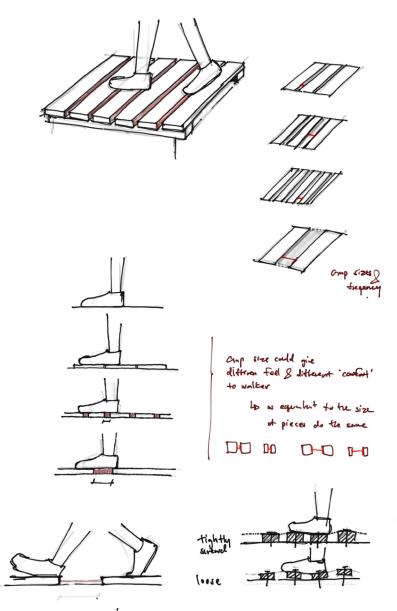




The concrete slab could be right on top of the water but the solidness of it might not give the feel of close to water.

It was learned that the distance apart of each timber piece makes a difference to the experience of different timber platforms.

This particular study was mainly focusing on the feeling underfoot on a range of different dimensions. Whether it be a larger piece of timber with closer gaps in between or it is the thinner piece with larger gaps, all this affects the experience and behaviours. The larger the gap, the larger step for one to make. The smaller gaps, the smoother the walk. If the gaps are too wide, it can be less willing for one to step on.





This relationship creates territory with a closer scale, when one experiences the space, as the effect of a felling underfoot at a closer distance, the intimate connection is created.



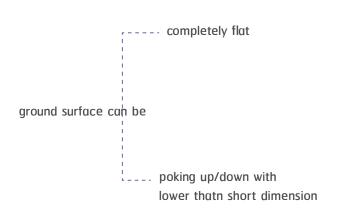
Site Selection and Analysis

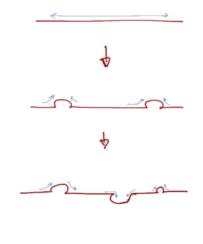
In the Wellington CBD area, there happen to be two dominant vectors circulating, where one is the go-to-water vector and the walking-in-town vector for another. So what are the areas that make Wellington, most of the time the line of streets, from Lambton Quay via Willis and Manners through Courtney Place, is seen to be a key route of the city. But is that the only line? As if the line mention earlier, playing a role of horizontally to the harbour, then which can be the vertical cut to it. From past experiences, Cuba Street seems to be perfect for this role as a vertically intersects to the line above. At the particular intersection point, the area seems to be potential for further investigation.

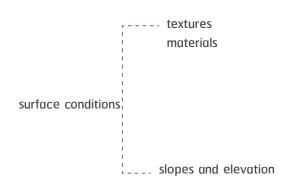


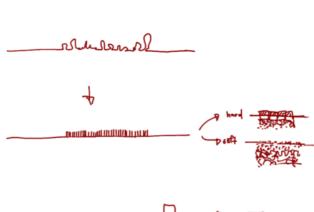
vectors

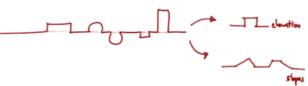
walking-in-town go-to-water

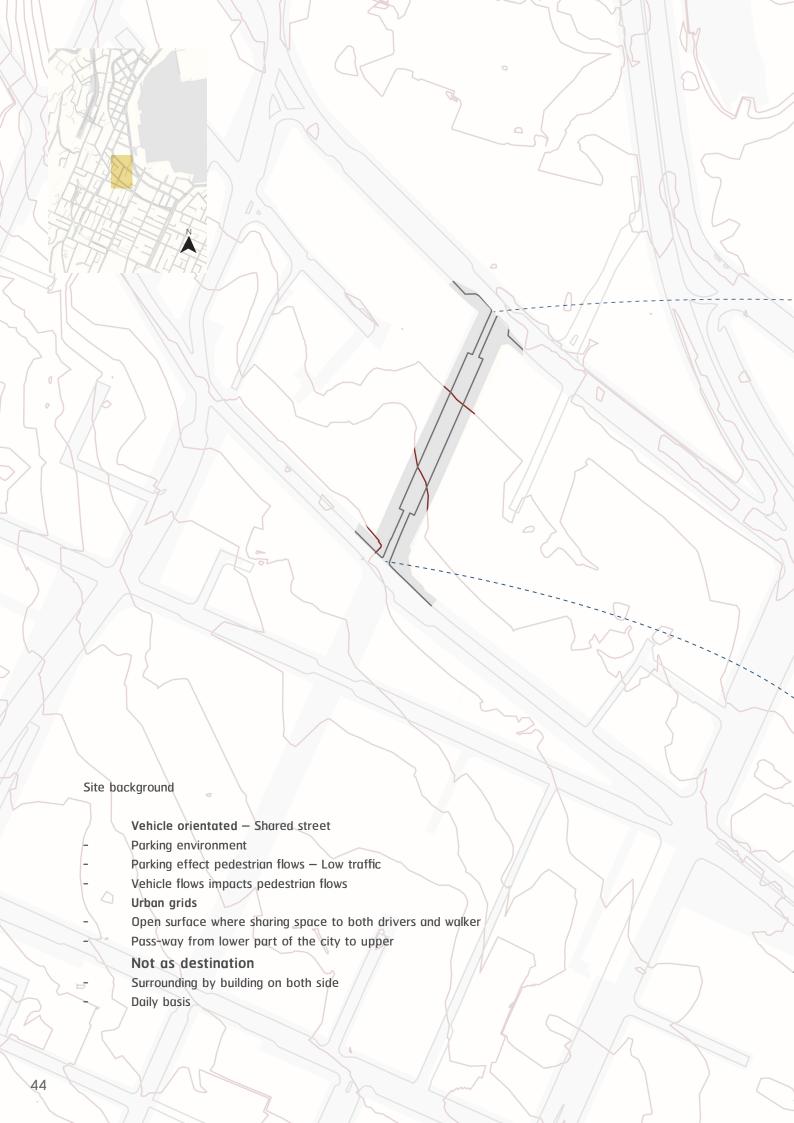












Design Goals

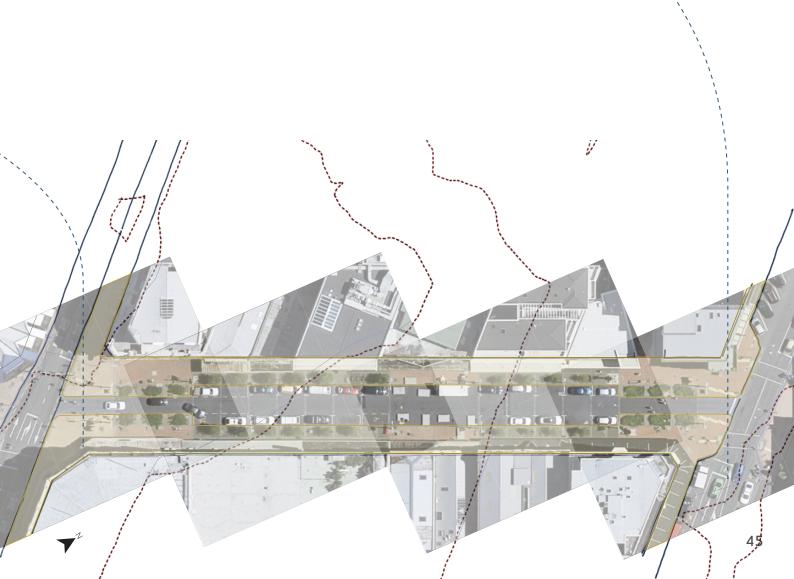
With the previous analysis, this area is linked to all the aspects regarding an open surface that this research is looking for. It is the intersection where frequently crowd by 'pedestrian' as well as being a street within the 'City Grid'. The low traffic and shared street identity of this area can be referred to as the vehicle-related area.

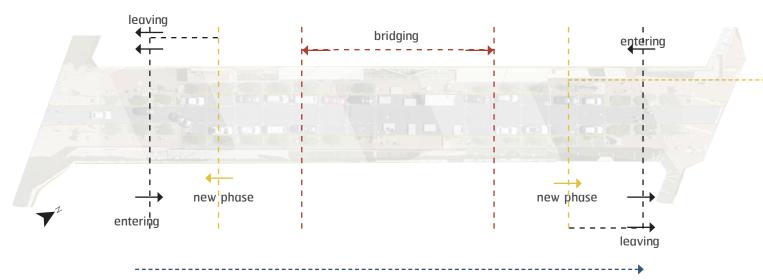
As previously talked about the Wellington. Harbour Waterfront being a destination space, this particular investigation is aiming to develop into the area where is closer to everyday living space, in order to see what we can do with the surface with limitations. This is also to aim for, how can this research influence the behaviour of paying more attention to the surface in our daily basis where we tend not to.

Site selection process

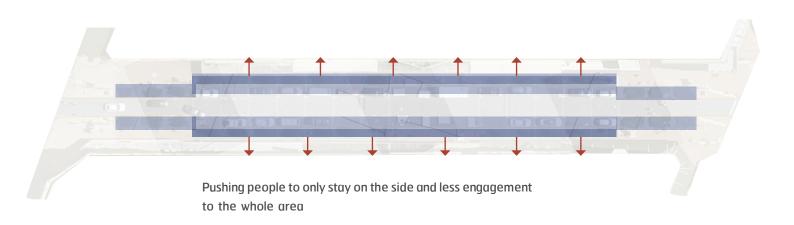
- Vectors / go-to-water & shopping walking in town Pedestrian
- Streets that make it wellington.. what makes wellington

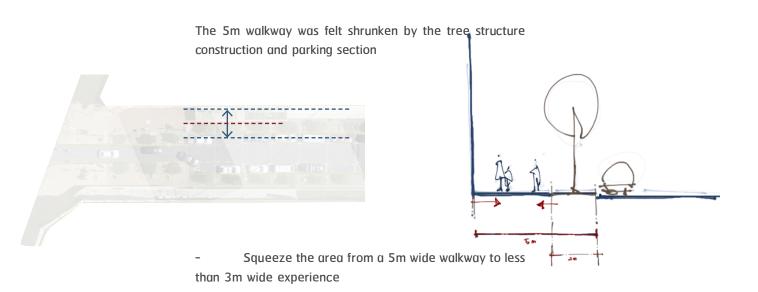
 City Grid
- Low traffic / parking and engagement to the street Carpark





The journey along the whole street has divided the area into sections. The experience changing from one end to another.





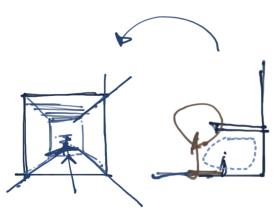


The moment of entering to completely new phase of the street / new-space-like

Pushing people to only stay on the side and less engagement to the whole area. -Therefore, this street become only being used to pass-by from one end to another







feel very contained and being led / directed towards the other end - keep going with walking pass this street quickly



literatures &

precedents

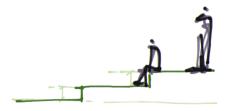


Glover Park – Wellington CBD, New Zealand

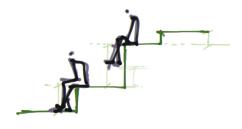
By focusing on the impact of the surface condition on human behaviour, this place has strongly shown its character of those elevated floors. The layers changes across the site provide different interactions.



Some are at the height that comfortably afford the seating.



Changes of height as well as the distance apart provides space for different uses.

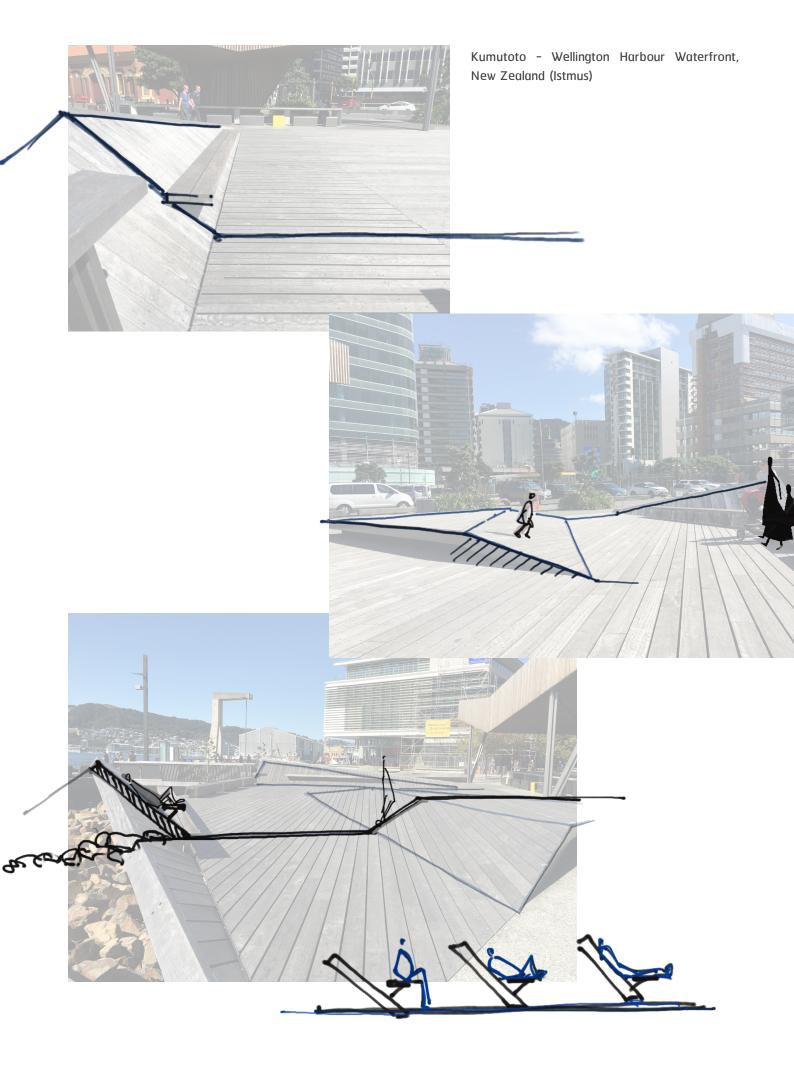


Cobblestone Park — Wellington, Te Aro, New Zealand













En Detalle: Pavimento y Drenaje del Bulevar Sabana Grande en Caracas, Venezuela –

This street looks somewhat similar to Lower Cuba Street. The design was focusing on the pave design, using the strategy of poking out floor design to differentiate areas.

The whole area was able to develop the pave pattern which seems to be a great approach to the design experiment. Different patterns were able to generate quickly with digital equipment and seems to be a fun process.



By looking at human perspective alone, the design of the floor is not very standing out, as people cannot really see the whole pattern design which then leads them to have less focus on.

How can the design be created to encourage more attention to the ground?

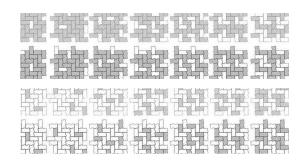
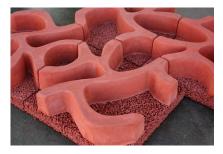




fig.37-40 Pavement and Drainage of the Bulevar Sabana Grande in Caracas, Venezuela



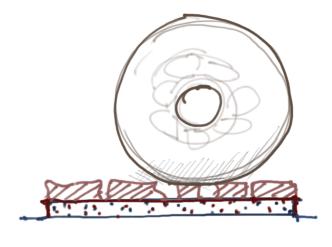


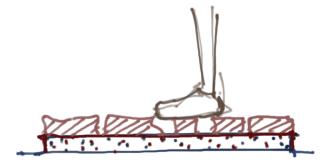


puddle free

fig.41-43 Puddle Free Parking Design

This might seems to be only a product design, but the way this was created was not only achieving the goal of containing water but also its pattern is what interesting here. The gaps between each of the pieces were well considered in order to underlie wheels as well as human feet. It really seems to be not as difficult to walk on.



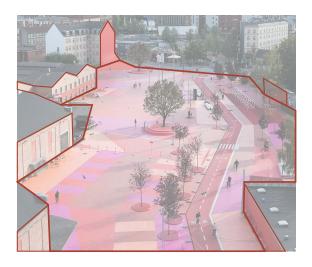


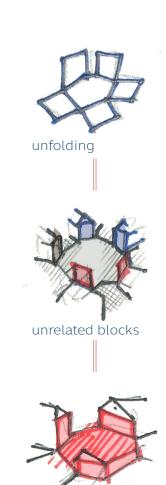
Superkilin

Patch of the surface /

The continuous of the design as well as containing the relationship with surrounded buildings /

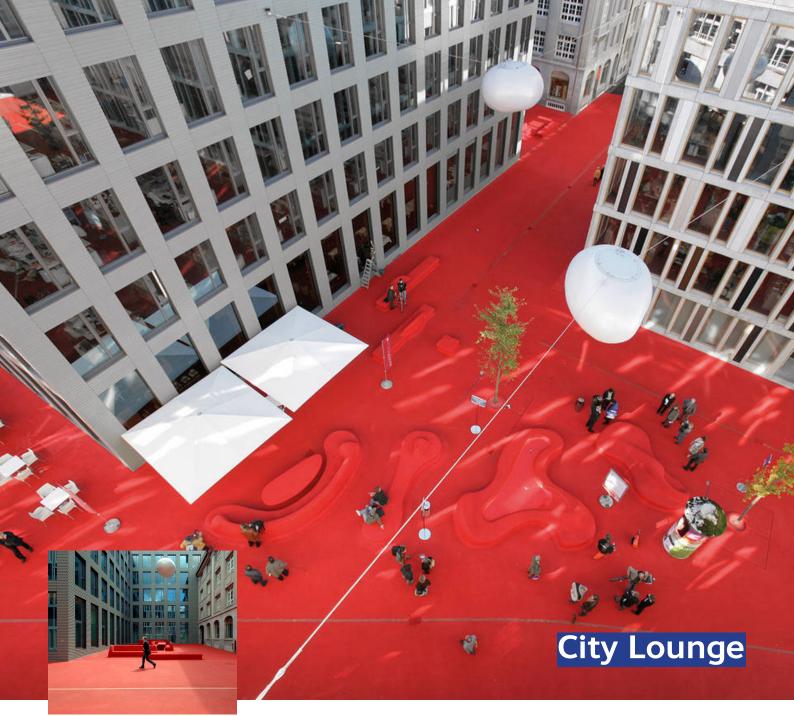
Plug-in





connected





Plaza Roja de / City Lounge - St. Gallen





Urban Living Room -

fig.44-47 City Lounge, St. Gallen The density of population in urban area nowadays influencing most of public space designs. Public-scaled interiors in the extension beyond the boundary of city block can be an idea that we can look further. Why public open space only be considered as the exterior or outdoor landscape design. By bringing the aspect of 'interior' or 'room' to the outside part of the world seems to be adding a lot to the design investigation. If comparing a indoor living room, there are floor, walls and ceiling. We can also adapt that into the way of thinking in outdoor area as we can have our outdoor living room where there are floor, buildings as walls and sky as ceiling. (Joanna)

City Lounge, St. Gallen, is one of the design experiments with this concept and as a result, the key elements of the design are the furniture-like outdoor elements.

Imagine how interesting it could be to get the pavements to 'speak' to the people who use them. The way people respond to them create the conversation between people and the space.





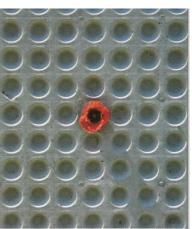
Hundreds of temporary cardboard units appear on the Central Elevated Walkway, Hong Kong. Cardboard boxes are the main materials used for the construction of the units. The area is framed as an urban interior with the shelter provide which allow these gathering to happen. But why would people had to construct these cardboard boxes to support their bodies?, because the surface is too cold and hard to be accommodated for a period of time. This shows how the surface affect the use of the space. (Kwok, E)

fig.48-49 Cardboard units located on the CEW varying in sizes and construction techniques. Photograph: Evelyn Kwok, 2013.

The range of textures in public spaces may not only be focused on ground. Textures seem to have impacts on people's behaviours, and some could be physically seen the response that people speak back to those texture through the way of using and acting to the place.

fig.50-52 Camden Square Adventure Playground, Peckham. Selina Dix-Hamilton, Eger Architexts







prelimenary

design process



fig.53 Bubble paving by Amanda Ruggeri

"a strangely comforting change in texture under my feet"

(Gray, 2019)

Gray, R. (2019). The tricks being played on you by UK roads. Retrieved 4 August 2019, from http://www.bbc.com/future/story/20170206-the-tricks-being-played-on-you-by-uk-roads

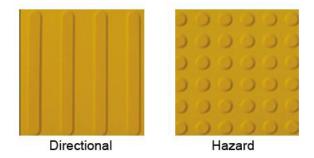
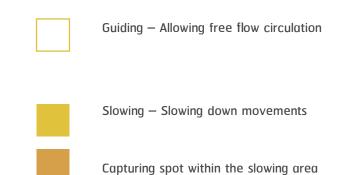


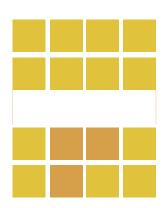
fig.54 Bubble paving by Amanda Ruggeri (IATSS)

An inspiration from Tactical Ground Surface Indicator (TGSI) was tested out in the first iteration as per trying to combine the strong sense of feeling underfoot that the TGSI creates into a concept of the whole site.

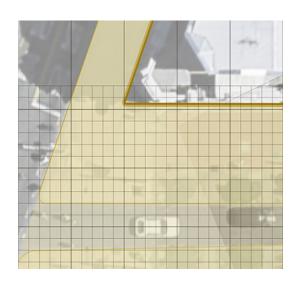
TGSI is made simple and easy to understand. Generally, TGSI consist of two types of blocks (Fig. 54), namely guide blocks to show the direction of travel and warning blocks to show potential hazardous locations or crossroads. (IATSS)

The two different functions of both tiles as called Guiding and Warning blocks were applied to the site by dividing the street surface into two types, one is Guiding and Slowing for another. The guiding blocks area aims to allow the continuous free flows of circulation whereas the slowing ones are aiming to slow down people within the areas and somewhat capturing people into particular spots.

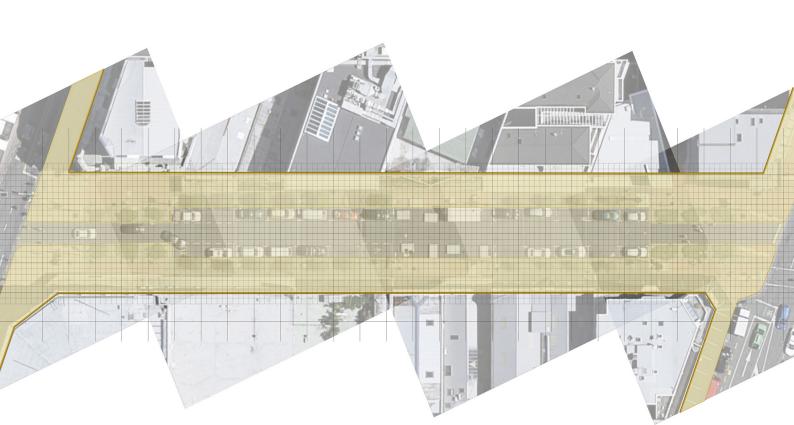


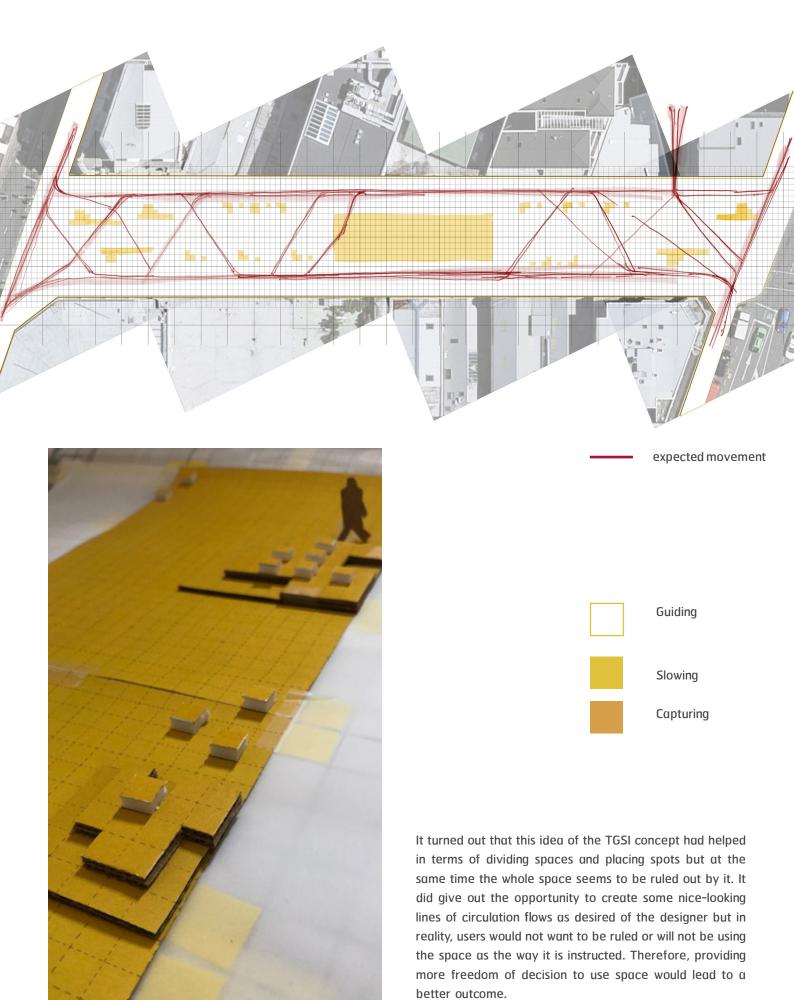


The capturing ares are located within the slowing hazards

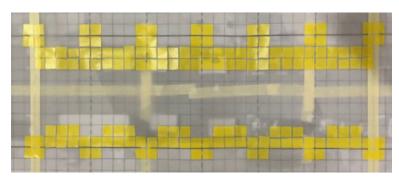


1 x 1 m grids

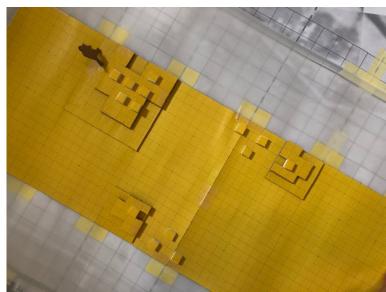


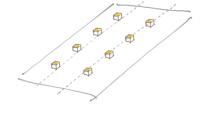


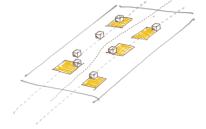




scatters

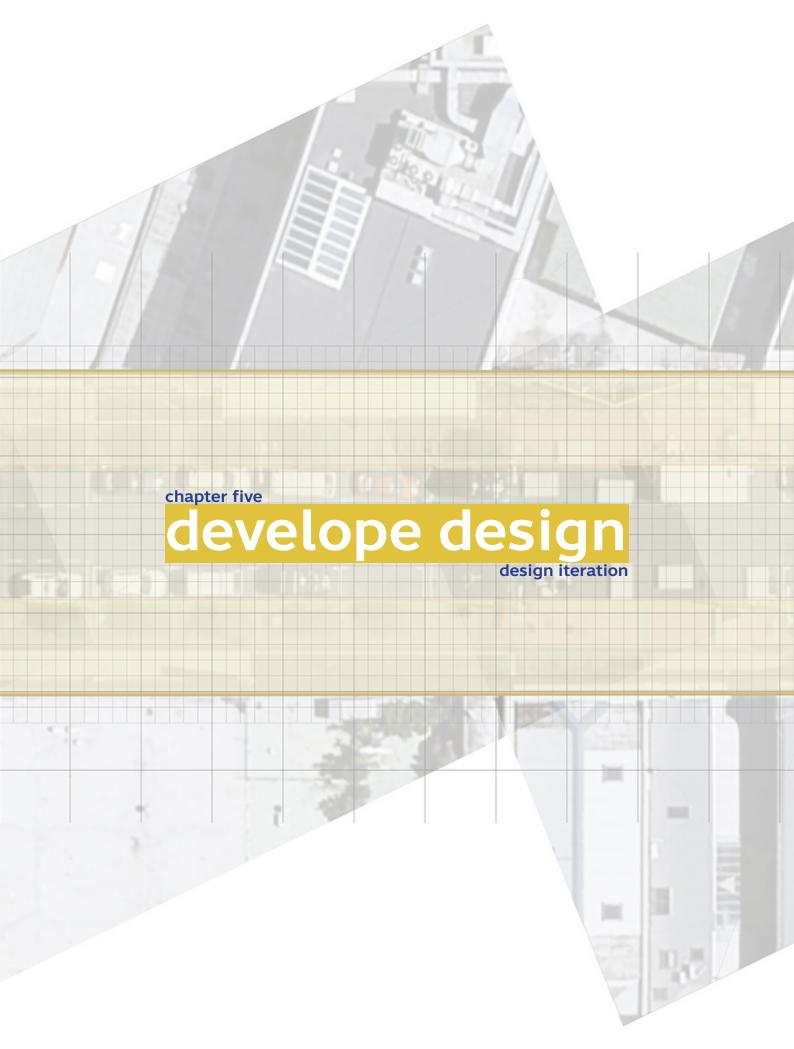


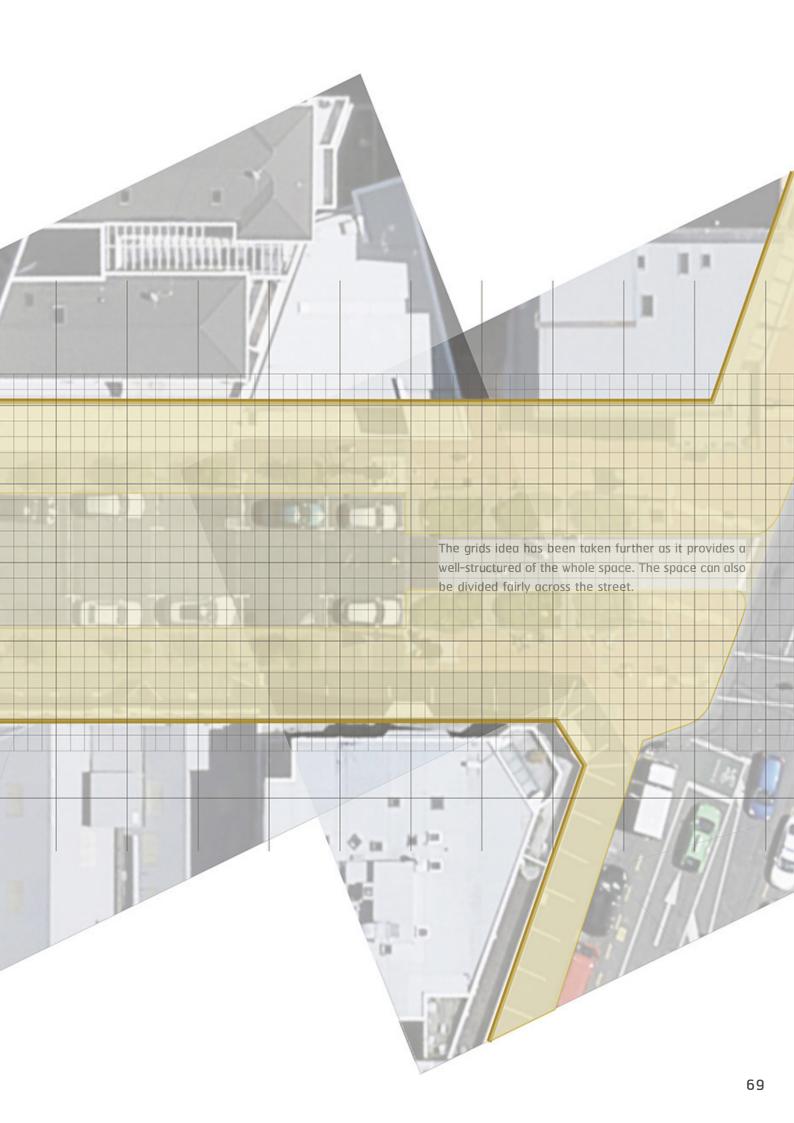


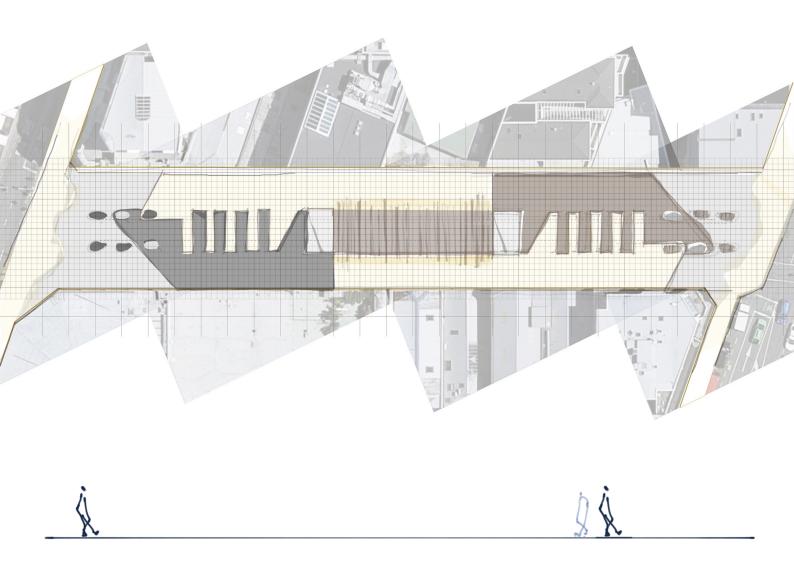




Three iterations have been explored whereby creating scatters of capturing blocks, some groups of capturing area, and a larger capturing space blocking the street.



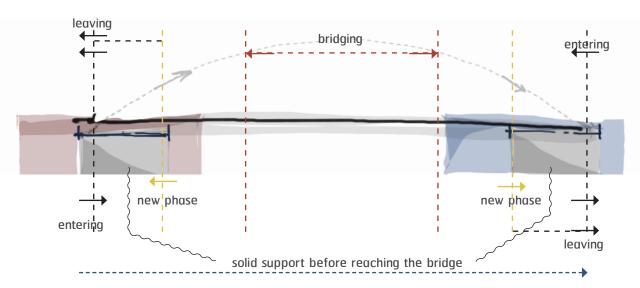




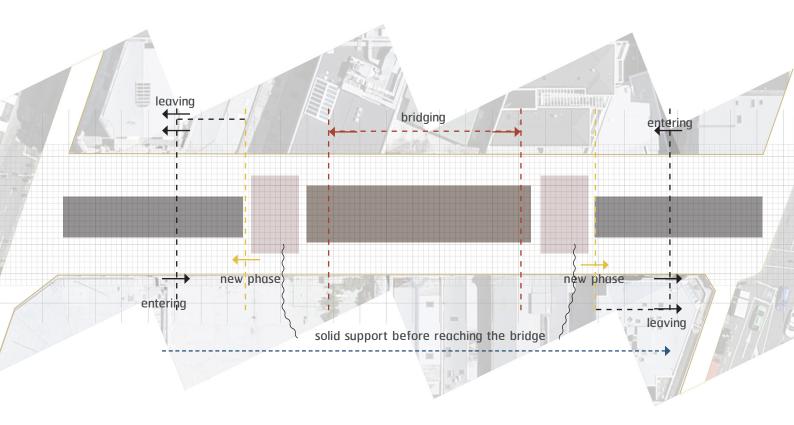
The second concept was explored by trying out several surface materials changes along the whole street in order to provide the changes in experiences from one end to another. The arrangement was done by improvising the idea of going from one place to another with a sense of the existing atmosphere of the street that changing over the journey.

On both sides of the street, one end seems to be approaching towards the harbour guiding the direction to the upper part of wellington, whereas the other end guides downwards/ towards the inner CBD part of the city. This can be felt once making a journey from one end to another. If dividing the whole street into five sections, around the 4th part from both sides is where it starting to provide the feeling of entering a new space. As shown in the diagram, at around the 3rd part from both sides is where it starts to feel that you are being on a different street from where you have entered.

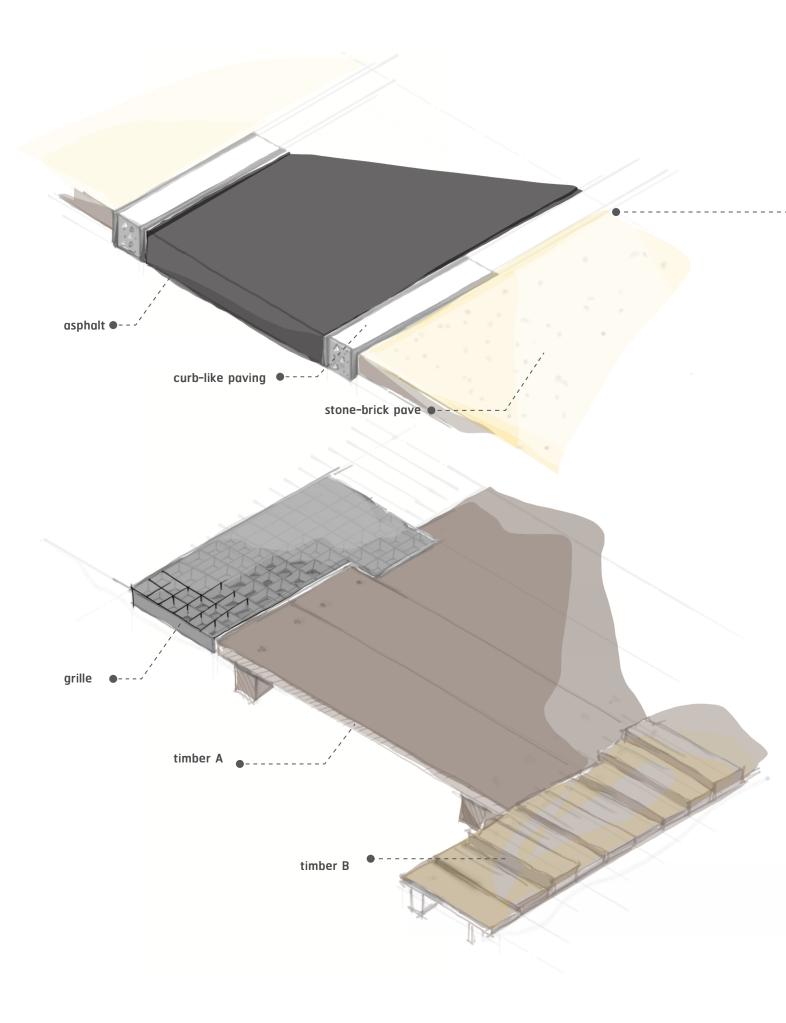
So there are some experiences of entering and crossing over within one journey along the street. What about if applying this to the design concept.

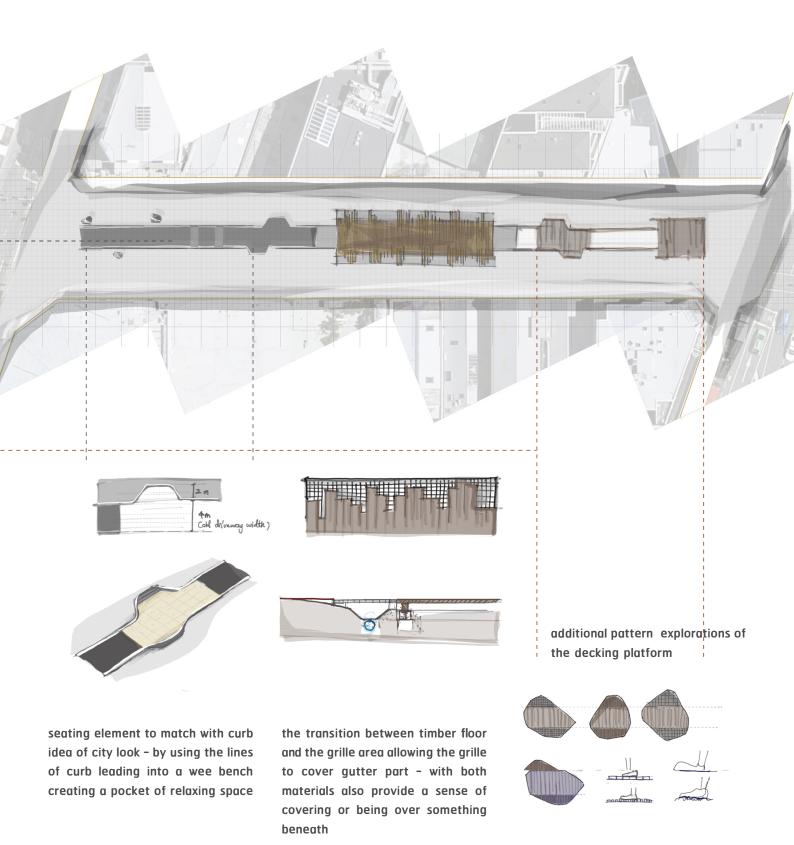


With this idea here, this is aiming to get the experience of going from one aspect to another with a sense of crossing-over through the experience of the ground surface, by giving that the middle section becomes a 'bridging' zone. Bridge, in this case, is through designing the surface that provides the feeling of crossing over one a flat surface.



So the concept of the design will be to adapt the waterfront experiences that have been picked up through analysis and combining them together with the inner city area. As the most powerful finding along the waterfront is the experience on the bridge or the lifted surface over the water, this led to creating the middle area between the 2-4 line(shown on the map) of this street to become a bridging area. Bridging in a sense of crossing over something and not intend to create much depth underneath.





This second iteration was done with an ignorant of any street furniture or any limitation of providing. Keeping the whole street clear plus taking away the existence of trees allows the most opportunity to be paying attention to the surface. By doing this, it gives a large area of open space which allowing the full-on experiment of surface materials. Some furniture aspects were added at parts of the whole area in the end. It appeared to be too large and open where it took the design towards creating a pattern to match the space.



Following up on the previous iteration, this time, let's try to forget about the space being a street. What would happen if we despite the limitation of the existence around the space whether it be the shopfronts, pedestrian surface, gutter, etc.



fig.56 Olafur Eliasson Creates an Indoor Riverbed at Danish Museum

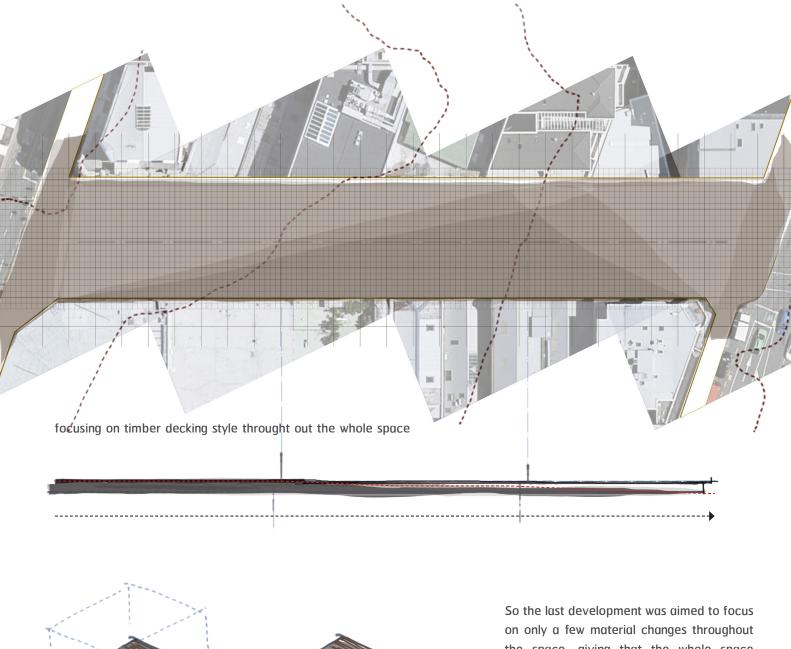


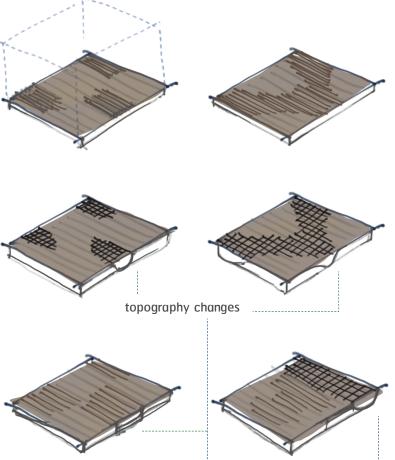
The influence of encouraging to create space that provides more opportunity for people to pay attention to the ground





fig.57 Looking up, Looking down (Austin)





the space, giving that the whole space being a box.

By developing a box into different boxes and experiment with different possibilities of material variations.

The key goal still remains as to achieve the experience across the journey of the street, feeling that going from one city-end to another end of waterfront aspect

The result was better than expected, as it can further be developed into the change of topography alone the journey even though the whole area seems to be relatively flat.



Conclusions and Critical Reflection

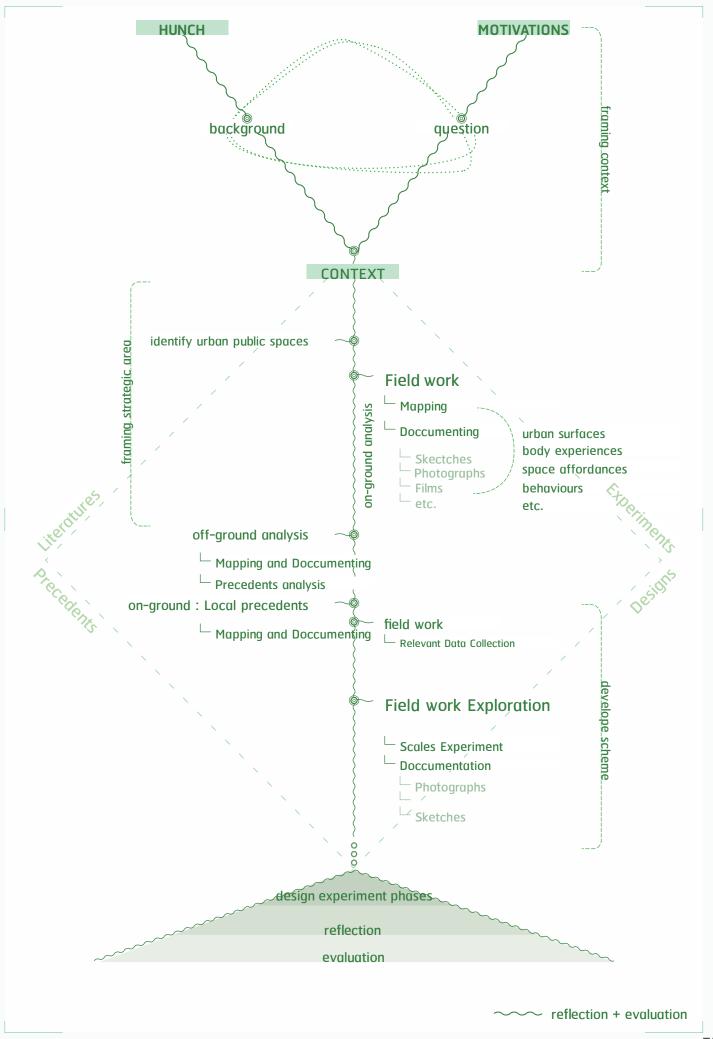
In conclusion of this investigation, the first concept application of the idea from TGSI was giving a constructive pattern of dividing the space into divisions. It then was too limited in terms of the actual surface experiment. Although it led the design into investigating the flooring experience as a sequence of going from one end to another.

The investigation of this thesis was first stepping towards the relationship between surface and human bodily behaviour. It was less of the focus later on when the findings from analysis and studies were leaning towards the relationship between surface and human in relation to the experience underfoot. When focusing on the bodily experiences, it was going towards the way of finding people behave differently in any surfaces, which is a common thing that everyone is doing thing differ from others. The more important part that this thesis should have been focusing more earlier in the process was the aspect of creating the source of experience rather than focusing on the result, as it can be varied. This has been delayed the process quite a lot where it seems to affect the selected site which the result of the later development of the surface design. As a result of that, the first iteration of the design was originally were to be developed further with more physical modeling but as the direction has changed with a time limit, the investigation was unable to achieve the goal of developing the design further through modeling.

Recommendation

The idea of Urban Interior and Outdoor Living-room can be a great approach in further investigation. Some studies and reviews have been touching on it but definitely worth adding more.

Space was once developed in the aspect of being an outdoor room. There were quite a number of limitations that directed the research towards the other aspect. If there happens to be further development to this, this approach will definitely be taken on board.



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Lisr of figures

fig.1 Artificial Grass Installation, National Theatre Southbank, London. Retrieved from Staging urban landscapes: the activation and curation of flexible public spaces. pg.25.

Fig.2 "Limelight." Meyer Studio Land Architects, ms-la.com/limelight-1.

fig.3-4 Villa, Valentina. "Diana, Princess of Wales Memorial Fountain / Gustafson Porter Bowman." ArchDaily, ArchDaily, 1 Feb. 2017, www. archdaily.com/803509/diana-princess-of-wales-memorial-fountain-gustafson-porter-plus-bowm.

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fig.6 Trafalgar Square, London Retrieved from https://commons.wikimedia.org/wiki/File:Trafalgar_Square_Grass_-_May_2007.jpg

fig.7 Different uses when surface conditions changes (Authour, 2020)

fig.8 "Kumutoto." Isthmus, 26 Mar. 2021, isthmus.co.nz/project/kumutoto/.

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fig.10 Expression of tasting water experiences with the different glasses (Author, 2020)

fig.11 "Carte Blanche: à Bordeaux, Le Miroir D'eau Delà." SudOuest. fr, www.sudouest.fr/2017/08/13/carte-blanche-a-bordeaux-le-miroir-d-eau-dela-3691715-4608.php.

fig.12 Kumutoto's slope and interaction, Wellington, New Zealand Photo by Author. 2020

fig.13 Jacob Riis Park bathhouse, promenade, and beach. from book Rethinking urban parks: Public space and cultural diversity. pg. 105

fig.14 Interretation of Surface Accessability (Author. 2020)

fig.15-21 Wellington Carpark Analysis (2020)

fig.22-24 Carpark Analysis (Author. 2020)

fig.25-27 Carpark and social interaction (Author. 2020)

fig.28 Availability of Sidewalk, Courtney Place, Wellington Photo by Author. 2020

fig.29-31 Cuba Street, Wellington (Author. 2020)

fig.32-34 Wellington Harbour Waterfront Wellington (Author. 2020)

fig.35 Expression of material changes around the Watherfront area (Author. 2020)

fig.37–40 Editorial, Equipo. "En Detalle: Pavement and Drainage of the Bulevar Sabana Grande in Caracas." Venezuela. Plataforma Arquitectura, Plataforma Arquitectura, 29 Jan. 2014, www.plataformaarquitectura. cl/cl/02–331412/en-detalle-pavimento-y-drenaje-del-bulevar-sabanagrande-en-caracas-venezuela.

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fig.44-47 Pipilotti Rist & Carlos Martinez -. "City Lounge." Area, 20 Sept. 2017, www.area-arch.it/en/city-lounge/.

fig.48-49 Cardboard units located on the CEW varying in sizes and construction techniques. Photograph: Evelyn Kwok, 2013.

fig.50–52 Camden Square Adventure Playground, Peckham. Selina Dix-Hamilton, Eger Architexts

fig.54 Pembuain, Ardilson, et al. "The Evaluation of Tactile Ground Surface Indicator Condition and Effectiveness on the Sidewalk in Yogyakarta City, Indonesia." IATSS Research, Elsevier, 25 Apr. 2019, www. sciencedirect.com/science/article/pii/S038611121830178X.

fig.55 "James Turrell: The Light Inside (June 8—September 21, 2013)." The Museum of Fine Arts, Houston, www.mfah.org/exhibitions/james-turrell-retrospective/.

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fig.57 Lickwar. "Looking up, Looking Down." Taylor & Francis, www. tandfonline.com/doi/full/10.1080/18626033.2015.968419.

fig.58 Methodology Digram. Produced by Auther

what's on the

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