

Activating the Back-Quarters

STRATEGIES OF ACUPUNCTURE FOR THE
NEGLECTED OPEN SPACES OF DELFT SOUTH

Anees Arnold

University of Cape Town

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Strategies of acupuncture for the neglected open spaces of Delft South

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This dissertation is presented as part fulfillment of the degree of
Master of Architecture (Professional) in the School of
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2016

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Date

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Introduction

With regard to low-income settlements in Cape Town, it has become apparent that the private realm is prioritised over the public realm. It is essential that we regard the public realm as an integral component of the lives of the people who inhabit this environment. Because of the living conditions, large portions of people's lives are conducted outside of this prioritised private realm. It is evident that public spaces within these environments become neglected due to a lack of ownership¹ and management.

1 Spaces within communities which people within the community feels responsible for. The notion of owned space is applicable to all spaces regardless of them being public or private. Owned space is primarily based around perception or feeling, rather than legal ownership.

The intention of this research is to find strategies of enhancing public life through encouraging shared open spaces – the urban commons. This thesis is process driven as opposed to product driven. The objective is to determine a replicable strategy that possesses generic solutions as well as providing strategies to address the specific.

These strategies are explored and hypothetically tested using Delft South, Western Cape, as a site. With regard to the public spaces the present condition of the public spaces are not dissimilar to that in other areas of the same socio-economic condition in South Africa. The public spaces have been neglected and there is limited space to provide additional public spaces within these areas.

Therefore this dissertation explores the possibility of activating existing residual open spaces as well as neglected parks. It aims to use these as opportunities to provide shared public spaces nestled within neighbourhoods to meet the needs of the respective communities.

Ultimately, the objective of this thesis is to develop a series of strategies which can be applied to specific conditions.

This is to be done by interrogating my own design processes with the objective of being able to reorder it in a suitable manner.

Specific to Delft South the areas positioned away from the active Main Road require attention. For the case of this thesis these areas are referred to the back-quarters and I have highlighted it as my interest of concern

An introduction to my interest of adding new life to the public back quarters through enhancing the neglected open spaces.

I will start off by problematising public spaces in low-income suburbs to outline the underlying issues specific to South Africa. This is followed by general

principles that public spaces should embody. A large section, thereafter, will analyse the spatial structure of Delft South and how it is being inhabited. This analysis was done using various exercises to get both a quantitative and qualitative understanding. Using this as a basis, desired outcomes are explained in the chapter following this. All of these aspects are used to inform the architectural interventions.

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A Need for Public Space

Understanding the South African context

In low-income communities, there is often little opportunity for the community to withdraw into the private realm, as their houses and plot sizes are too small to accommodate all of their household needs.² This emphasises the importance of public spaces within these areas, as it is common for people to be dependent on the public realm to support their daily functions.

Following the end of apartheid, the ANC Government delivered approximately two million houses in its first decade of governance. It is evident that the private realm was privileged at the expense of the public realm. The nuclear family housing model was deployed: a single house per plot to house one family.³ Edgar Pieterse explains that a characteristic of the South African urban landscape is that the focus of public investment has been put on the individual house and providing the services with regard to this. Therefore the urban spaces such as the streets, parks and pavements display characteristics of abandonment.⁴

This is used as the point of departure for my study: the public realm needs to be greatly improved in order to improve the living conditions of people within low-income areas. This research serves to outline strategies that I have employed in order to improve a mere portion of the public realm.

Delft is no exception to the previous justifications made. A simple observation can be made that people greatly depend on the spaces outside of their homes. This can be seen in the presence on the street as well other public spaces. The street is clearly a vital component of the public realm. With the insufficient provision of public spaces the street accommodates an array of public functions which other spaces fail to do.

Charles Correa mentions that urban living involves much more than the use of one room. Rather, the room is only one element in a whole system of spaces that is needed by people.⁵ To extend upon this, the house can be viewed in the same manner. The house is a mere component within a large urban network. What is vital to the livelihoods of the community are the other components of this urban network – particularly the public spaces.

Within many of these contexts there is very little open space. The premise of

2 Southworth, B. (2010). Making Public Space in 21st century Cape Town. In E. Pieterse, Counter-Currents. Auckland Park: Jacana Media. p. 103

3 Low, I. (2012). Signs from the Margins: Design as instrument of empowerment in the 'new' South Africa. In G. Bruyns, & A. Graafland, African Perspectives - [South] Africa. City, Society, Literature and Architecture. Rotterdam: 010 Publishers. p. 167

4 Pieterse, E. (2013). Reimagining the City from a Different Viewpoint. In M. L. Rosa, & U. E. Weiland, Handmade Urbanism. Berlin: Jovis. p. 186

5 Correa, C. (1989). The New Landscape - Urbanisation in the Third World. Butterworth Architecture. p. 33

this thesis is to activate smaller neglected open spaces within Delft South to create much needed productive public spaces. Charles Correa explains the value of open-to-sky spaces. He describes that the housing crisis is often reduced by placing as many dwelling units on a particular site without concern for the other spaces which are essential to the system. This attitude fails to acknowledge the importance of open space as a resource. ⁶

6 Correa, C. *The New Landscape - Urbanisation in the Third World*. p. 36

[1] Neglected public park in Delft South



Public Space as a Social Necessity

The lack of public spaces within Delft results in very few public forums to engage with other community members. Public space is essential for increasing social cohesion within communities as it provides platforms for social engagement.⁷ A common space is required for these engagements to occur. An ideal space is a space that the community can take ownership⁸ of to create a safe meeting space. Christopher Alexander mentions that common land has two specific functions: firstly it allows people to feel comfortable outside of their private properties and therefore allows them to feel connected to a larger social system; and secondly, common land acts as an important meeting place for members of the community.⁹

Justin McGuirk, in his book *Radical Cities*, describes social urbanism as both the phenomenon of architecture and public space being used towards social goals, as well as being a type of urban intervention which is defined by a social process.¹⁰ With this being said it is important to establish what these social goals are. The immediate common goal is to acquire a space which can be regarded as an urban commons.¹¹ This space can be informed by social processes.

The notion of sharing is an integral one with regard to creating an urban commons. This idea of “common” signifies something that is shared by people. How this sits within an urban context is to be explored. The upkeep of the space must be driven by the shared desire, amongst the community members, to create and inform their own urban environment.¹² In addition to this, Lefebvre describes the form of social space being the form of “encounter, assembly and simultaneity”. Social space speaks to the notion of assembly at or around a particular point.¹³

This thesis will look at means to achieve these abovementioned characteristics: To create strategies for public spaces which act as social spaces, using methods of social urbanism.

Creating successful public space

The following sub-section looks at various ways to create successful public spaces. Particularly I will elements at the elements of diversity (through both use and time), encouraging participative citizenship, physical comfort and economic viability.

7 Hajer, M., & Reijndorp, A. (2001). *In Search of New Public Domain*. Rotterdam: NAI Publishers. p. 8

8 **Spaces within a community which people feel invested in. This sense of collective authority determines how the space is used.**

9 Alexander, C., Ishikawa, S., & Silverstein, M. (1977). *A Pattern Language*. New York: Oxford University Press. p. 337

10 McGuirk, J. (2014). *Radical Cities*. London: Verso. p. 244

11 **Urban commons**

12 Simone, A. (1998). *Urban Processes and Change in Africa*. Dakar: Codersia. p. 77

13 Lefebvre, H. (1991). *The Production of Space*. London: Basil Blackwell. p. 101

Diversity through use and time

By accommodating various activities, there is opportunity for the space to be used at different times and for different occasions. This adds another dimension to temporality as the uses are able to extend the daily life of the space. This reduces homogeneity through encouraging access to supplementary activities. Public space with a diverse range of activities attracts a range of people. It is also a natural occurrence for people to gravitate towards other people.¹⁴

- 14 Lerner, Jaime. 2014. *Urban Acupuncture*. Island Press, p.47

The utilisation of public spaces are dependent on the time of day as well as the occasion. Ultimately safety is promoted through the presence of others. Therefore, when a space is occupied by more people, the perception is that the space is safer.

Presently, many of the public spaces within Delft South are not utilised entirely, rather they are only utilised at certain times of the day. The idea of temporality and use within public squares is explored by William Whyte in his book as well as his documentary, *The Social Life of Small Urban Spaces*.¹⁵ Ultimately Whyte analyses spaces, through various lenses, in order to understand the manner in which they function. He places particular focus on the physical compositions of these spaces as well as the natural elements which, too, affects the temporality. Using this he attempts to understand what influences people to utilise these spaces in the manner in which they do.

- 15 Whyte, W. (Director). (1988). *The Social Life of Small Urban Spaces* [Motion Picture].

Dave Dewar and Roelof Uytenbogaardt mention that intensity and diversity of activity is a factor of positive urban environments.¹⁶ This view is supported by Richard Sennett who states that the nature of a public square should be to promote the intermixing of people and diverse activities. This diversity results in a complexity of conditions of activities, ultimately resulting in spontaneous interactions to occur.¹⁷ These spontaneous interactions are fundamental in promoting social cohesion. Urban opportunities are created through intense interaction.¹⁸

- 16 Dewar, D., & Uytenbogaardt, R. (1991). *South African Cities: A Manifesto for Change*. Cape Town: University of Cape Town. p. 19

- 17 Sennett, R. (2002 (First published in 1977)). *The Fall of Public Man*. London: Penguin Books. p. 12

- 18 Dewar, D., & Uytenbogaardt, R. *South African Cities: A Manifesto for Change*. p. 19

- 19 Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York: Random House Inc. p. 177

Fundamentally the diversity of use is developed naturally over time as the community will respond to their needs. This complexity that is developed over time should be celebrated as opposed to isolating or separating their elements from one another.¹⁹

Participative citizenship

In his book *Public and Private Spaces of the City*²⁰, Ali Madanipour aims to

- 20 Madanipour, A. (1996). *Design of Urban Space*. Chichester: John Wiley & Sons Ltd.

understand the role that each of the realms plays in society as well as the balance between the two. What can be explored further, in the case of Delft South, is the socio-spatial boundary between the public and private realms. There is a particular ambiguity that exists between the public and private realms within the area. The change of emphasis between public and private space ultimately alters the character of the area.²¹

Madanipour states that the private realm can be regarded as the space in which personal activities takes place, and the public realm as the space in which impersonal activities take place.²² Furthermore, he speaks to the idea of public space and its ability to facilitate interpersonal activities.

Not only does the built intervention have the ability to achieve the above mentioned characteristics, but also, the surface can facilitate interactions. The urban surface should intend to diversify activities in time and allow for flexibility.²³ This speaks to the potential of shaping the open landscape, which the building supports, in order to generate activity.

The intention is to achieve a space where participative citizenship is achieved merely through presence. The urban commons is constituted by people working together towards a particular goal.²⁴ In the case of this study, strategies are created where the common goal of the community is to create a safe gathering space through presence and surveillance.

Physical Comfort

The physical makeup and components of the street contribute to its physical comfortability. With this the composition of the street with regards to the exposure or protection from the elements play a major role. Great streets offer protection from the natural elements, but at the same time acknowledges the surrounding environment.²⁵

Benches offer a resting place on a street. The placement of benches determine specific meeting and resting points along a path. The orientation and placement of them also determine their use. It is common to find that some benches along a street are underutilised. To increase the use of benches they should be orientated towards a view of surrounding activities.²⁶

Pedestrians and vehicular traffic are mutually dependant. They provide a great deal of urban opportunity.²⁷

21 Sennett, R. The Fall of Public Man.p. 32

22 Madanipour, A. Design of Urban Space. p. 96

23 Wall, A. (1999). Programming the urban Surface. In J. Corner, Recovering Landscape: Essays in Contemporary Landscape Architecture. New York: Princeton University Press.p. 233

24 McGuirk, J. (15 June 2015). Urban commons have radical potential - it's not just about community gardens. Retrieved from The Guardian: <http://www.theguardian.com>

25 Jacobs, Allan B. 1993. Great Streets. Cambridge: The MIT Press, p. 275

26 Gehl, J. (2011). Life Between Buildings: Using Public Space. Washington: Island Press. p. 27

27 Alexander, C., Ishikawa, S., & Silverstein, M. A Pattern Language. p. 271

Economic Viability

A major issue with regard to public spaces within South Africa, is the lack of management and funding to maintain them. Therefore, alternative funding models need to be explored to ensure economic sustainability. Public spaces ultimately need to financially sustain themselves with minimum help from the City of Cape Town. Charles Correa mentions that any intervention made on the urban scene should aim to increase economic activity in these areas.²⁸With this in mind the proposed interventions aims to present economic opportunities to members of the community.

28 Correa, C. The New Landscape - Urbanisation in the Third World. p. 21

The following section looks at two existing models of delivering public spaces within Cape Town. This information is then used as a basis for an alternative model.

Dignified Public Places Programme

The Dignified Public Places Programme as well as the Quality Public Spaces Programme were implemented in order to provide adequate public spaces within Cape Town. These spaces were delivered by the City of Cape Town. The spaces needed to be “robust well made public spaces that communicate a sense of permanence.”²⁹ These spaces were inserted into areas without a management system being put in place in order to maintain them. The lack of a management system has ultimately resulted in many these spaces becoming neglected and vandalised.

29 NM & Associates. (2010). Quality Public Spaces: Programme Evaluation. Unpublished. p. 11



[2] Sibanye Square was part of the Dignified Public Places Programme

VPUU

A more feasible model is that of Violence Protection through Urban Upgrading (VPUU). VPUU secures funding from both the city as well as external donors (such as the German Development Bank) in order to fund their Active Boxes and Public Spaces. In addition to this they incorporate a top-down management system which includes members from the VPUU NGO, the City of Cape Town as well as members of the community.³⁰ The incorporation of a caretaker as well as other positions within the organisation presents employment opportunities for members of the community.

Income for the Active Boxes and Public Squares are generated from the Laterite sports field and meeting rooms. These user fees are in line City Sports and Recreation annual tariff guide. Additional income is generated from live work units.³¹

30 VPUU. (2014). Violence Protection through Urban Upgrading: A manual for safety as public good.p. 23

31 Personal correspondence with Nicole Hopkins of VPUU



[3] VPUU Active Box at Mandela Urban Park. The building accommodates functions of gathering as well as serving as the VPUU office.



[4] The live-work units at Harare Square which serve as a source of income for VPUU.

The cost of the maintenance is therefore shared between VPUU and the City of Cape Town. It is clear that the income generated by the sites does not cover the total maintenance cost of the sites. Therefore, in the case of my architectural enquiry, this model can be used as a basis, but more income needs to be generated to ensure economic viability.

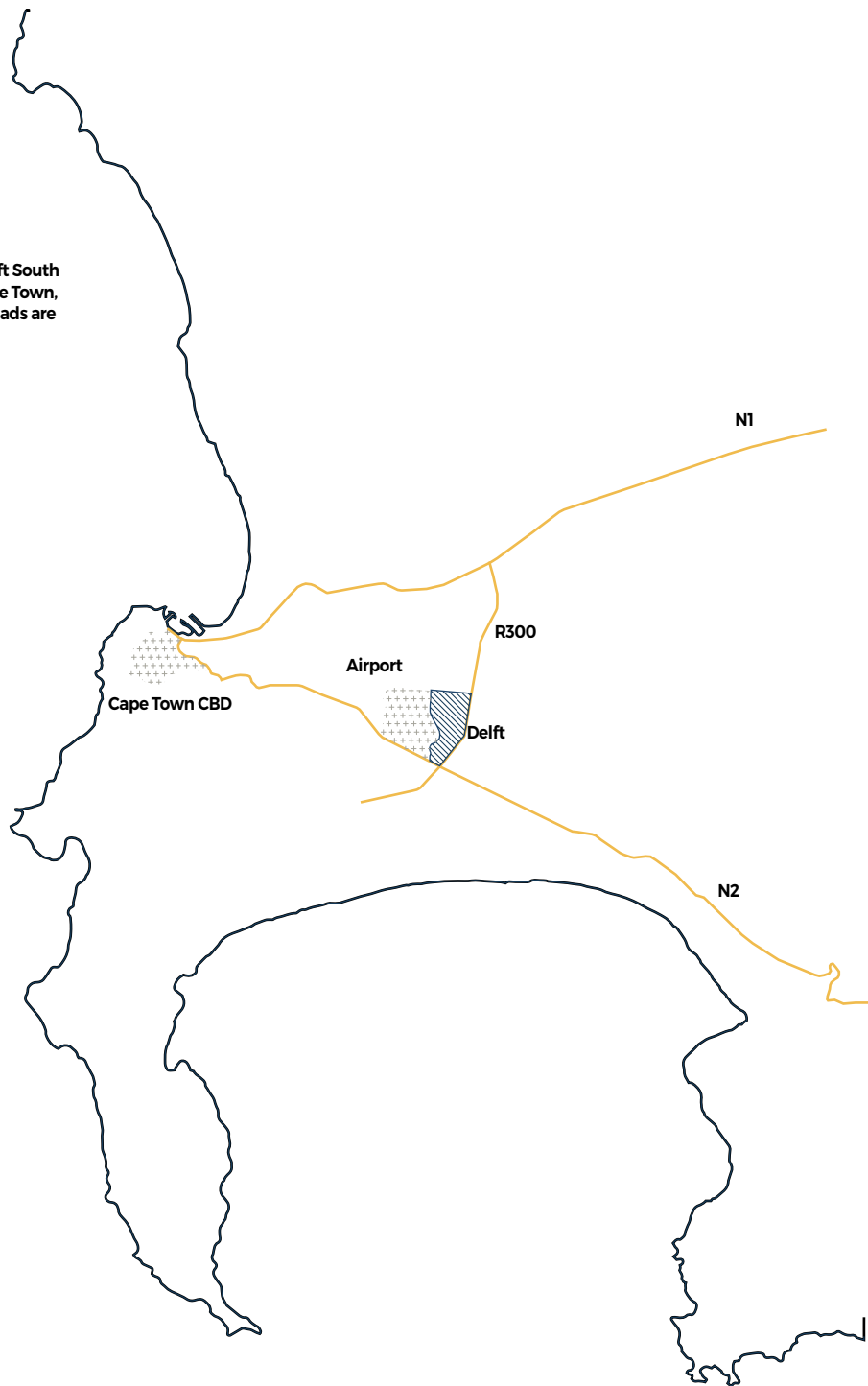
Delft South

Introduction to Delft South

Delft South is a subsidised housing settlement located 34 km from Cape Town's City Centre. It was planned in 1994 as one of the first housing settlements in post-apartheid South Africa. It was funded by the government through the housing department.³² Construction began on Delft South in 1996. It is located adjacent to the airport and the R300, a national highway. These two elements inform its shape. Delft South was constructed after Delft (referred to people as "proper Delft") which was constructed pre-1994. With this in mind the lives of the two areas are completely different. Many of the houses in Delft South are owned by the people who occupy them. This has allowed for the urban fabric to

32 Hutton-Squire, M. (22 February 2016). Delft Planning. Design Research Studio: Space of Good Hope. University of Cape Town.

[5] Map locating Delft South in relation to Cape Town, major national roads are indicated.





be greatly changed since the area's initial construction.

In order to gain an understanding of the area, three primary methods of surfacing information were used. The intention of these methods was surface the way in which the people of the area make use of the urban environment.:

Mapping and Spatial Observations.

As part of a the Design Research Studio, Space of Good Hope, we could surface a lot of information through mapping. This served as a primary form of acquiring relevant information. In addition to this observations were made during times on site. These provide a more nuanced insight into the sight.

Narratives through discussions

Spending time on site allowed myself as well as the group to engage with people from the area. Through discussions we could surface personal stories that pertain to life within the area.

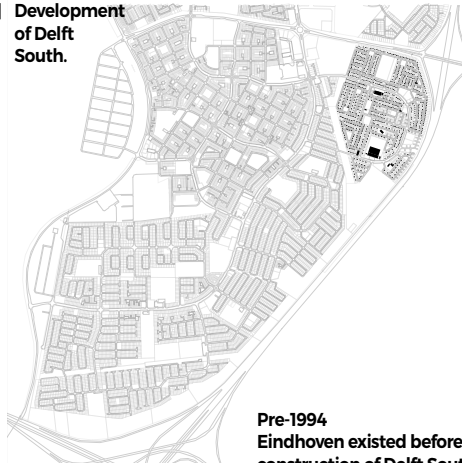
School's Workshop

As a studio we invited children from schools within the area to a workshop. This workshop presented us the opportunity of engaging with children within the area. Personally, I treated this a a design exercise to creatively think of ways of surfacing information. This will be elaborated upon further.

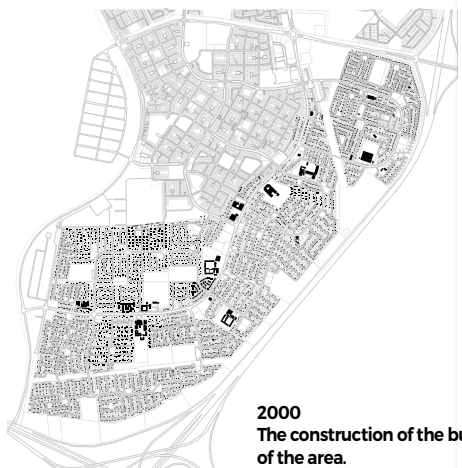
Each of these methods were invaluable for surfacing information in order to create a design proposition.



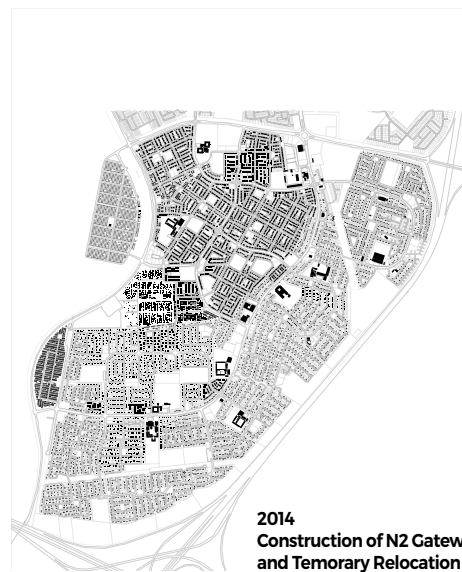
[6] Development of Delft South.



Pre-1994
Eindhoven existed before the construction of Delft South



2000
The construction of the bulk of the area.



2014
Construction of N2 Gateway and Temporary Relocation Areas

Mapping and Spatial Observations

Observations allowed for the urban environment to be viewed passively and to observe the occurrences of the everyday. This enabled me to get an overview of the general life that occurs within the area. This was done through a series of drive-arounds as well as walking in the streets.

Walking through the streets made the community members aware that we were in the area. Although it provides the opportunity of active engagement it must be noted that the awareness of an outside presence by the community in-turn affects the way in which people conduct themselves. Contrary to this the drive-arounds allowed us to observe as complete outsiders having little to no effect on the occurrences which we were observing.

The spatial structure of the area will be analysed in the manner in which it enables as well as constricts the existing community. Because of its planned nature, life and activity has manifested itself within the area as community members respond to both their individual and collective needs through accepting, adapting or capitalising on the spatial structure of the area.

The planning of Delft was unique at the time as it was planned around the principle of the main road. Delft South Main Road is now integral part of the urban fabric. In scale Delft South is comparable with Bonteheuwel - an apartheid planned township which was constructed in the 1960's. Delft South used completely different planning principles to that of Bonteheuwel: Bonteheuwel makes use of a town centre and ring roads, whereas Delft South consists of a Main Road and Loops. Presently Bonteheuwel's town centre has completely failed. The Main Road of Delft is thriving.



[7] Bonteheuwel in 1968, shortly after it's first phase of construction.



[8] Delft South in 2000, shortly after it's first phase of construction.



[9] Planned density vs informal additions.



The public spaces within Delft should be understood as a network, as opposed to isolated elements. They should be understood as a family of spaces, varying in scales.³³

33 Dewar, D., & Uytendogaardt, R. *South African Cities: A Manifesto for Change*. p. 57

[10] Open space network



It is important to note that the intention was to draw a siting strategy from the planned urban structure of Delft South and the manner in which life has manifested itself within.

The following section will attempt to address the nuances of the manner in which life has manifested within the spatial structure and how the components of the spatial structure are used. In particular, I will look at the lack of public spaces within Delft, and the manner in which they operate.

[11] Delft Main Road



Main Road

Both Delft South and Delft North were planned with the idea of the Main road serving as an activity corridor. This intention, however, emphasised in Delft South by means of planning the roads appropriately. (See diagrams below).

As can be seen in the diagrams, Delft South Main Road was inserted at the primary phase of construction, in 1996. A slip way in the form of Symphony Way was only constructed in 2007. This slip way was only fully completed in 2009, thirteen years after the construction of the Main Road. The objective of this was to allow the Main Road to develop into an activity corridor. For a long period the Main Road was the only major route which connected the south of Delft to the north. People had capitalised in the economic opportunity which this presented, by opening up small businesses along the Main Road, resulting in activity being drawn towards it. Despite Symphony Way being constructed, the Main Road still functions successfully as an activity corridor.



[12] Development of Delft South Main Road

1996, prior to Delft South construction



2000, Delft Main Road



2007, Symphony Way constructed



2009, Extension of Symphony Way

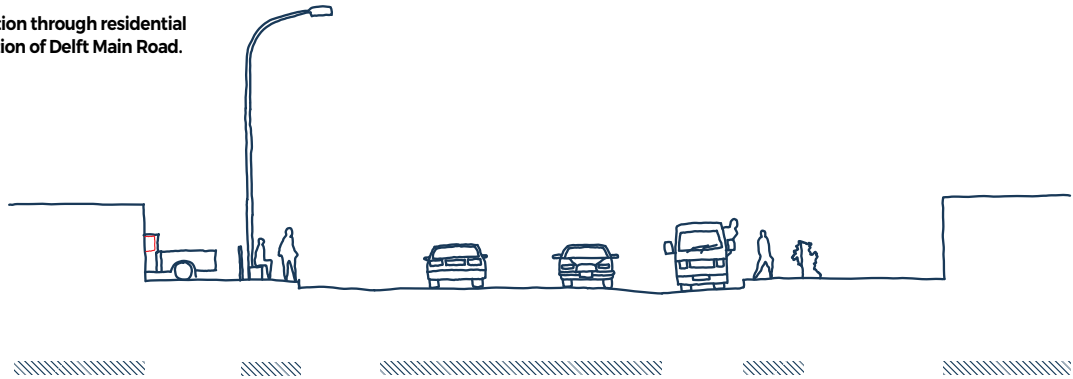
This, however is in contrast to the Main Road in the north of Delft, where the same sense of activity has not been achieved. The main road can be seen as the element which serves to connect the area as a whole. The initial intention was for the main Road to integrate the various neighbourhoods to promote a cohesive community.³⁴

34 Awotona, A., Japha, D., Prinsloo, I., le Grange, L., Huchzermeyer, M., Boberg, D., & Briggs, M. (1995). Townships in Cape Town: case study area profiles. Cape Town: University of Newcastle, University of Cape Town. p.7

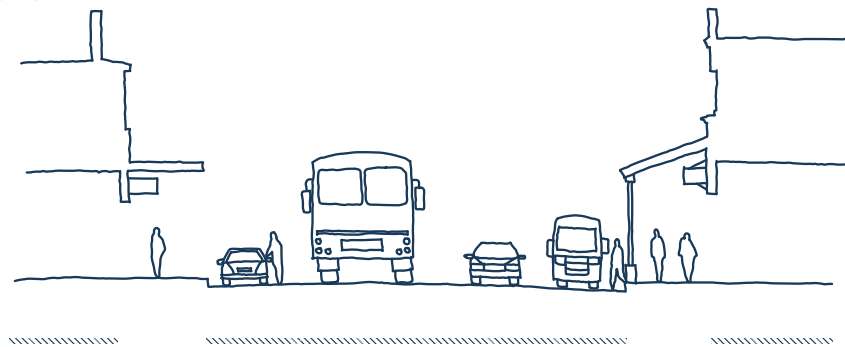
35 Dewar, D., & Uytendogaardt, R. South African Cities: A Manifesto for Change.

Delft Main Road can be seen as an activity spine and, in itself, an essential component of the public space network within the area. Activity as an element which responds directly to the movement flow. This results in a mutually beneficial relationship between movement and human activity.³⁵ With activities occurring along the activity spine, this increases accessibility to these activities. A comparison of Delft main Road can be made with Woodstock Main Road. Where Delft Main Road is currently emerging and responding to the needs of the community, Woodstock Main Road's complexity has been achieved over a long period of time. Both of these roads are activity corridors that serve as major routes for transportation.

[13] Section through residential portion of Delft Main Road.



[14] Section through residential portion of Woodstock Main Road.





[15] Delft Main Road.



[16] Woodstock Main Road
(Victoria Road).

The importance of Delft Main Road can be seen through densification patterns. Patterns indicate that densification often happens closer to the Main Road due to accessibility to amenities, such as transport. In particular retail businesses cluster along the Main Road. This ensures that goods are easily acquired.

[17] Retail activity dispersed throughout Delft South, showing a clustering towards Main Road.



The temporality of Delft Main Road is greatly dependant on the presence of school children. During school hours the pavements are relatively quiet. People make their way to the main road to access shops and necessities. Vehicular traffic is present throughout the course of the day. This however does not entirely contribute to the public life of the street.

The life and activity of the street is most vibrant immediately after the end of a school day. Immediately after school, children take to the streets, many of whom are making their way out of the area via means of public transport. Because the Main Road is vehicular dominated throughout the course of the entire day, the activity occurs on the pavements of the Main Road. The spaces outside spaza shops are popular points of contact.



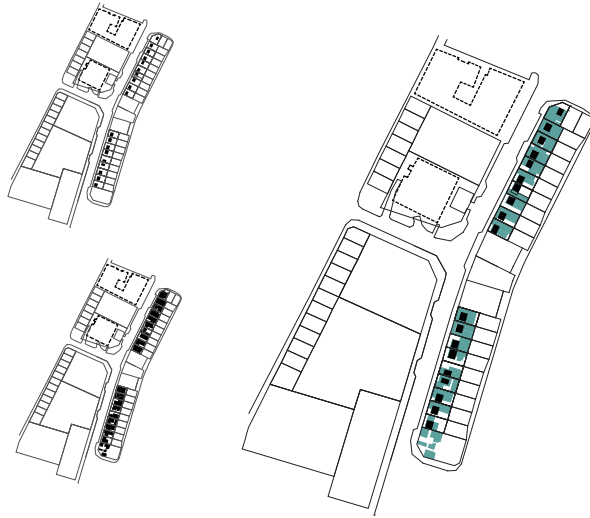
[18] School children form a dominant part of the street-life during after school hours. Children wait for transport on the street or walk home.



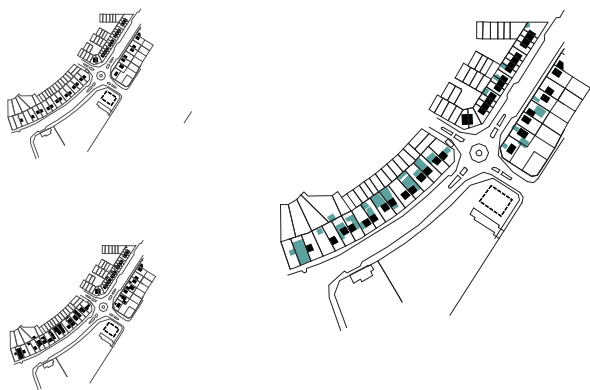
[19] The space in front of houses are popular points of contact.

The presence of housing units is a telling difference between Delft main Road and Woodstock Main Road. Delft Main Road's diversity of use can be attributed to the fact that there is currently a combination of residential units and commercial activity. People who live along the Main Road are beginning to capilise on the oppertunity that their location presents them with. Therefore densification along the Main Road is higher than that of the other roads.

[20] Subsidised housing vs informal extensions along a retail portion of Main Road.



[21] Subsidised housing vs informal extensions along a residential portion of Main Road.





[22] Loop Roads.

Loop Roads

Loop roads within the area serve as devices in which to divide the larger area into neighbourhoods in an attempt to create a sense of community. Connected to the Main Road they serve as secondary transport conduits. In planning, the objective was that the entire area was connected; but at the same town allow for variations to occur at the local scale to ensure that each neighbourhood has its own sense of place.³⁶ Each community possesses its own specificity as well as multiple boundaries. The patterns uncovered by these characteristics are unique yet, are comparable to that of another community.³⁷

The loop roads have become essential for the people to navigate the area both mentally and spatially: Not only do people use the loops to locate themselves, but they also become a part of the identity of the inhabitants. People within the area colloquially refer to the various neighbourhoods by the name of the loop which runs through it. Each neighbourhood has its own characteristics.

Through the use of the loop roads the neighbourhoods can be entered. Christopher Alexander mentions that loop roads should discourage high amounts of vehicular traffic as well as high speeds.³⁸ In the case of the loop roads in Delft South, the width of the roads control these factors: the further away from the main road intersection the road is the narrower the road becomes, shifting the priority from the vehicle to the pedestrian deeper into the neighbourhoods. Towards the back ends of the loops, there is very little pedestrian traffic. This allows for the the pedestrian life on the street to increase.

36 MLH Architects & Planners. (1995). Delft South: An ammendment to the Blue Downs Delft local structure plan. Cape Town. p. 13

37 Simone, A. Urban Processes and Change in Africa.p. 57

38 Alexander, C., Ishikawa, S., & Silverstein, M. A Pattern Language. p. 261

[23] People frequenting the neglected open spaces with their own household activities.



[24] Public life playing out in the rear parts of the Loop Roads.

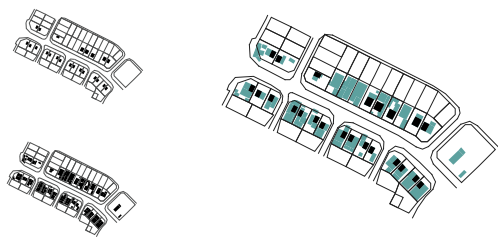
39 Hutton-Squire, M. Delft Planning, Design Research Studio: Space of Good Hope.

The loop roads are often discontinued at the Main Road. This allows for economic activity to be concentrating at these nodes. This illustrates the value of discontinuity which a grid structure does not present.³⁹

With these factors notes, a great disadvantage of the loop roads is that they constrict the movement of the user: freedom of movement is controlled as there are only two access points. This can be seen as a remnant of apartheid spatial planning. Another disadvantage of the loop roads is that they can be disorientating to the outside user. In addition to this, visible vertical landmarks are non-existent, making the area difficult to navigate.



[25] Teenagers activating Loop Roads due to the lack public spaces.



[26] Subsidised housing vs informal extensions along a Loop Road.



[27] Concealed Roads.

Concealed Roads

The concealed roads can be seen as the roads which are embedded within the urban fabric. They are planned in such a manner as to encourage communal interactions and to improve the senses of community.

The concealed streets are particularly narrow. This is done in an attempt to limit the speed of the car on the street. This echoes Richard Sennett's statement that streets' function is to regulate motion.⁴⁰ In addition to this, the narrow width of the street encourages interaction to occur across the street. This condition is unique to the embedded streets within the area. This interaction enforces the notion of intimacy and eyes on the street which increases surveillance. The entire widths of the street is occupied after school hours by children playing.

Sennett, R. *The Fall of Public Man*. p. 14

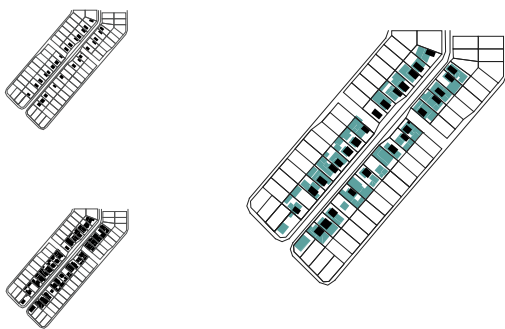


As mentioned by Françoise Choay, the house is not detachable from the city.⁴¹ What determines the intimacy and scale of the neighbourhood streets is the relationship between the built fabric – in this case the house – and the street. The fabric is tightly woven; therefore, neighbours are in close contact with one another. This results in the spaces immediately outside the property becoming natural spaces for people to dwell.⁴²

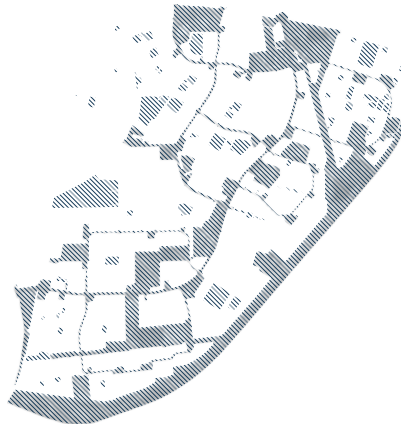


[29] People provide natural surveillance onto the street.

Sennett also states that through the course of history “public behaviour was a matter of observation, of passive participation, of a certain kind of voyeurism.”⁴³ This statement is appropriate when observing the life of the neighbourhood streets. The streets may be occupied through the activities of the children, but this is often supported by onlookers, dwelling in front of their homes as well as at spaza shops. This relationship between the observed and the observer is essential for the safety of the environment.



[30] Subsidised housing vs informal extensions along a Concealed Road.



[31] Open space network.

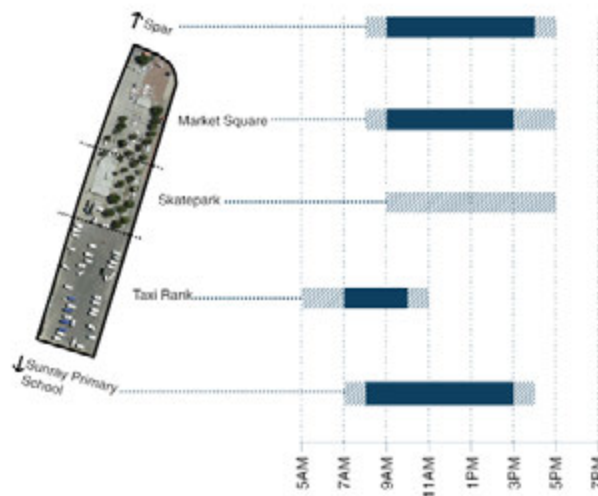
Open Spaces

Public open spaces serve as crucial points of relief within the ever densifying urban fabric. Sibanye Square serves as the central open public space. It is located centrally and can be seen as the *maidan*⁴⁴ of the area. Within Delft South other public open spaces take the form of detention ponds, parks and fields. In addition to this there are neglected open spaces within the various neighbourhoods, which are in a poor condition. These spaces, however are poorly managed and underutilised.

44 Charles Correa the *maidan* as the principle urban which is used by the entire city. It is the central public area. (Correa, C. *The New Landscape - Urbanisation in the Third World.*)



[32] Sibanye Square operates as the *maidan*. Pictured below is a typical Saturday.



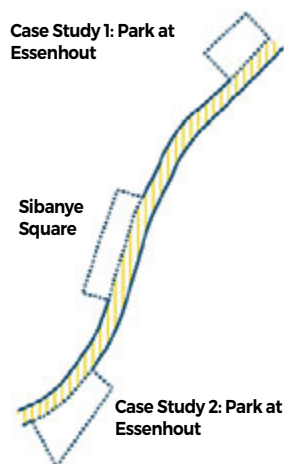
[33] This diagram explains the temporality of the elements of Sibanye Square and its surroundings, during the course of a typical day.

Parks, within the area can be found along the Main Road as well as within the various neighbourhoods. The larger parks are strategically placed along the Main road as they are accessible to larger portions of the community.

The parks nestled within the neighbourhoods are smaller in size, therefore accommodating less people and aim to serve a different purpose. Madanipour states that these shared spaces are intended to provide a space for people to interact, thus creating a sense of community within the various areas.⁴⁵ The different scales of the park serve to aim varying scales of community.

Through observations and discussions it became apparent that the parks have a vital role to play within the community. They are used by creches in the area.

The following section looks at two popular parks along the Main Road. The intention of the exercise is to surface how they are used and the reasoning for them being used in the manner in which they are.



[34] The Main Road serves as an armature which other open spaces attach onto.

Case Study 1: Park at Welwitschia

ECD teachers often bring the children to the park as the many of the early childhood development centres have limited outdoor space. The teachers we spoke to at the park mentioned that they try to bring the children to the park at least once a week or when the weather is suitable. They did however, mention that not all the parks were suitable for children; therefore, some classes have to walk a fair distance to this particular park.

It is a popular park which is located along the Main Road and is fenced, separating the children from the vehicular traffic. The park has a grass surface as opposed to some of the other parks which are gravel. The playing equipment is positioned towards the back of the park further distancing people from the street edge. When we were present the park was accommodating two separated classes from two different ECD's within the area.

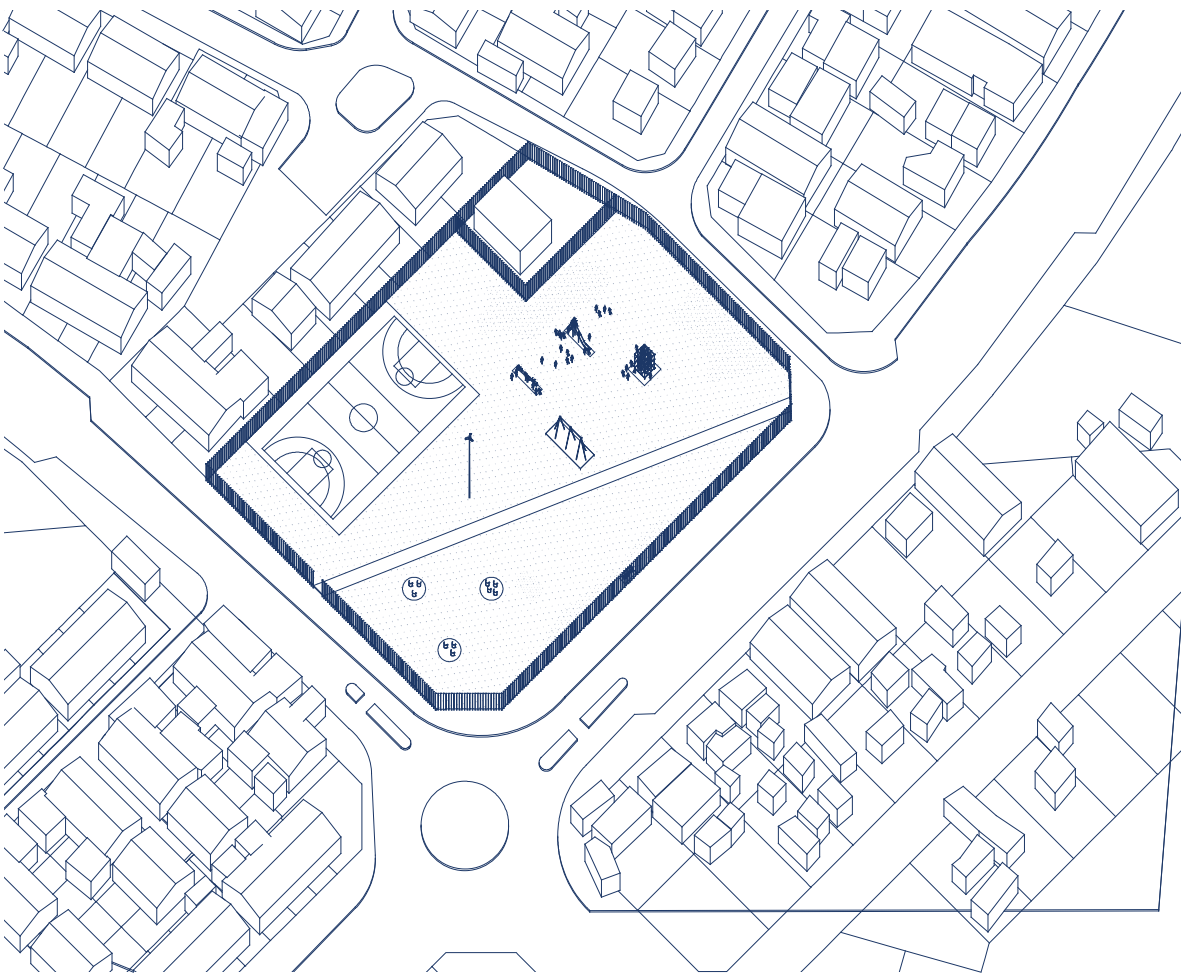
[35] ECD teachers bring children to play at the park on a weekly basis.



[36] Children make full use of the play equipment.



[37] The park is fenced and play equipment is positioned away from the street. Despite being safe, there is a disconnection between the park and the life on the street.



Case Study 1: Park at Essenhout

This park has supporting functions to it which contribute to its surrounds. Rainbow Art centre is located on the site which attracts users. In addition to this there is a permanent fruit vendor located on the site which provides additional surveillance.

The life of the parks is also dependant on the school children. Through the workshop activity we found that children up to grade 7 utilise the parks after school, whereas the older children did not. The playing equipment as well as the courts and fields are well used and it is common for the boys to play soccer on the courts and the girls to play netball.

Unlike the previous example, this park is not fence. Therefore, it is not commonly used by ECD teachers.

[38] Neglected play equipment.

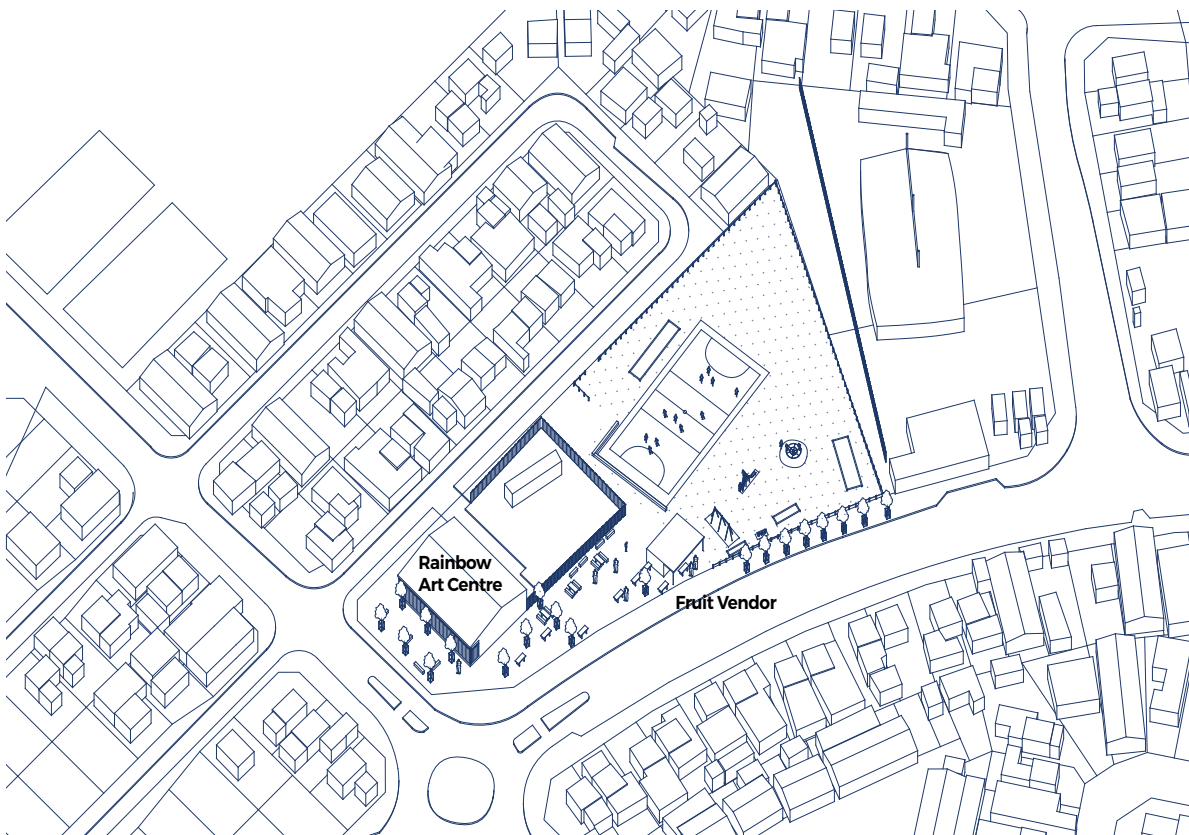


[39] Fruit vendor provides surveillance on the outskirts of the park.



[39] This park caters to older children.

[40] This park is not fenced and therefore has more connection the street, but ECD teachers don't feel safe bringing children here.



In conclusion, the planning principles of Delft South are simple: the Main Road, serves as an activity corridor, the loop roads serve to divide the area into smaller neighbourhoods and, within this structure, open spaces are provided as point of relief to the various neighbourhoods.

Narratives from Delft South

Discussion allowed for specific happenings to be uncovered. Discussions were held with community leaders, community members as well as children within the area. Not only were general stories listened to but this allowed for particular questions to be asked with regard to what a possible architectural intervention would be required to achieve.

Matthew and Joshua

*names have been changed

I spoke to two boys who were playing in the park: Matthew and Joshua. They were 11 and 12 years old respectively. I used this as an opportunity to understand how they spend their time after school as well as how they make use of their urban environments. In addition to this I wanted to establish how daily routines may differ from one person to the next.

Matthew lives in Delft South and goes to school in The Hague (Delft North). He is picked up by school transport. After school he gets dropped off at home when he eats and gets changed. Thereafter he plays at the park (on Essenhout Street) with his friends. He leaves the park at 16:30 and is looked after by his grandmother.

Joshua lives behind the park (on Essenhout Street). He attends Sunray Primary School which is a short distance away. He walks to school. Immediately after school he goes straight to the park where he plays. He then returns home to eat and get changed. Thereafter he plays in the street and the park with his friends until five o'clock.

This discussion was helpful in that it highlighted the independence of the children. It also indicated that although these two boys partook in similar activities after school, their routines differ.

Talk with Community Policing Forum Member

Together with another student I spoke to a Member of the Delft South Community Policing Forum. She spoke to in both the capacity of a CPF leader as well as in her personal capacity as a resident of Delft South.

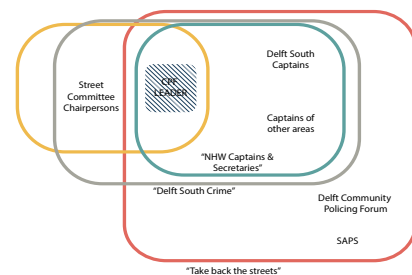
The Delft South CPF is a very active group within the area. We used this discussion as an opportunity to find out both how the CPF operates as well as issues regarding crime and safety.

There are 200 members of the Delft South CPF in entire Delft. Each member is either nominated by an existing CPF member or elected by South African Police Service (SAPS). The CPF serve as a facilitator between the community and the police. However she mentioned that the Delft CPF does not get the required support from SAPS, and are therefore forced to act independently.

The CPF run the neighbourhood watch in the area. Despite being promised reflective jackets and torches by SAPS they are required to support themselves with regard to supplying of adequate equipment. The neighbourhood watch patrol in groups of about ten people between the hours of 8pm and 4am. Each group patrols within the different area. Essentially, the spatial structure in the form of the Main and loop roads are used as self-ordering devices. At times the neighbourhood watch also required to provide security for schools within the area.

The CPF leader also mentioned that they used WhatsApp as a primary source of communication. She was kind enough to inform us about the different WhatsApp groups that she is a part of. This allowed us insight into the hierarchy of the various security systems that are in place.

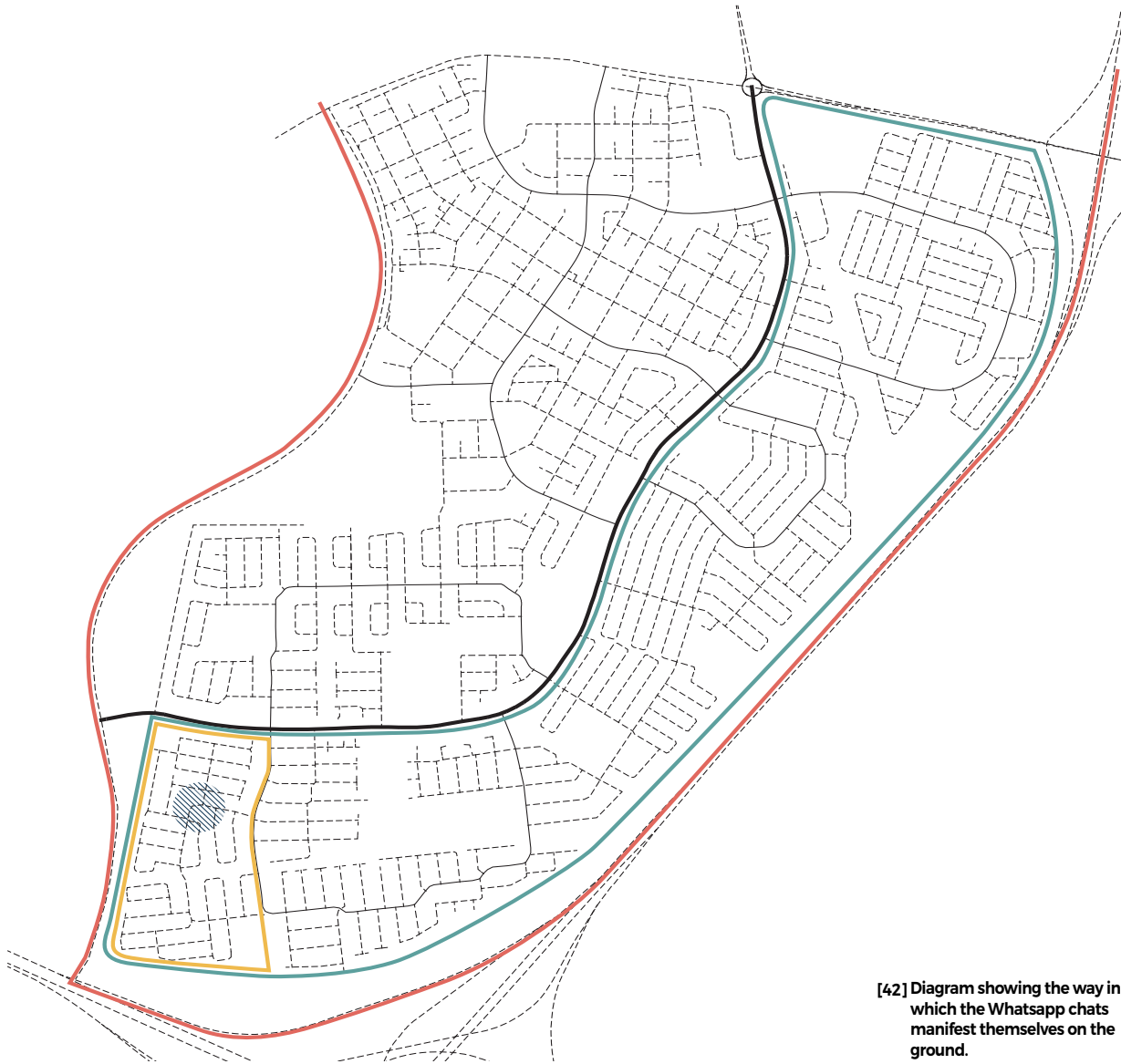
[41] Diagram representing the WhatsApp groups of the CPF leader. This represents an interesting way to surface information on heirarchical systems.



In her personal capacity she fosters six children. She mentioned that she does not allow them to play outside due to issues such as gangsterism and safety. They are confined to the private property after school hours. The subdivision of plots enables children to be kept off the street and confined to their private properties within particular boundaries.⁴⁶ This results in the assured safety of the children at the expense of occupying the urban environment.

46 Alexander, C., Ishikawa, S., & Silverstein, M. A Pattern Language. p.343

The discussion was extremely valuable as it highlighted issues of security and existing measures which are put in place to counter this. It also signified the spatial structure as a device which allows the CPF and neighbourhood watch groups to order themselves.



[42] Diagram showing the way in which the Whatsapp chats manifest themselves on the ground.

Workshop Findings

As the Space of Goodhope Design Research Studio we hosted a workshop at the Delft South Library. We invited children from schools within the area to partake in the workshop for one afternoon after school. The children that participated in the workshop ranged from ages eleven to sixteen. This gave us a target group from both primary and high schools. The workshop gave us the opportunity to interact with the children who inhabit the urban environment every day.

In order for the workshop to be both beneficial for us as a studio as well as entertaining for the children, we decided to design activities for the children to partake in. These activities also had the objective of surfacing information about the area and the lives of the children. The workshop exercises allowed for specific issues and happenings to be teased out. These exercises needed to be designed with a specific objective in mind.



[43] Children engage with workshop exercises.

I decided to utilise the workshop to probe my research question: How do people occupy the public spaces within Delft South?

With this research question in mind we set about designing a task that would tease out the relevant information. We designed an exercise for the children to partake in which would see them map out their activities through the course of the day, as well as on weekends. We created magnetic icons for various activities as well as locations. The participants were tasked to place these icons along a daily timeline. For every activity icon that was placed the participants were

required to place a location icon. This indicated the location at which the various common activities takes place.

Although the task was simple it was a game that the children enjoyed and surfaced relevant information. In addition to completing the task, they were required to speak about the activities which they partake in.



[44] Students complete the task of mapping out their day.

[45] Product of the mapping activity.



Schools do not often offer extra-mural activities. Therefore, many children leave school immediately. The children are then forced to occupy themselves immediately after school. A key conclusion drawn from the task is that children within the area do not occupy one space during the course of the afternoon. Rather their afternoons are filled with various activities across various locations. Not only does this highlight the importance of larger open space network, but it also signifies the key role that children play within the urban environment. The life of the area is greatly dependent on the activities of the children. This also indicates that the children are active agents within the urban environment.

We found that children either walked through the area or made use of public transport. The freedom to roam the streets and movement results in the children being independent. This independence results in them being aware of the environment which they occupy.

Through discussions with the children we found that they were very aware of the gangsterism and crime that they were exposed to. Many of them have developed their own means of avoiding potentially dangerous occurrences. Often this is avoiding certain areas or roads. It is clear that a lot of the time spent by children are out of the supervision of adults leaving them vulnerable to the crime which occurs in the area.

Because there were both boys and girls from various age groups we could draw conclusions as to which activities were popular amongst which groups. It was evident that the primary school children made use of the parks whereas the high school children didn't. The older children either partook in organised club sports, roamed the streets or went home to either play with their cell phones, play video games or watch television. Technology is an important part of the after school life of high school children within the area.

The workshop was an excellent opportunity to engage with the youth of the area. It allowed for us to get a valuable feedback to understand how the urban environment is used in reality. These engagements and findings also had clear design implications which are to be incorporated in my proposal.

An observation that is important to note is that the school children often do not occupy a single space after school hours. Rather, they make their way between various locations in groups, thus making the public space within the area very dynamic.

This notion was uncovered through the workshop as well as through observations. Initially we noted that the activity within various parks fluctuated through the course of the afternoon. The workshop surfaced that children find many ways to occupy themselves after school. They move from one location to the next and do not occupy a single location for an extended period of time. This highlights the importance of observing the open spaces as network. This movement after school hours is often contrasted by the quietness of these very same streets during school hours



[47] Children make use of every-day urban elements.

Conclusion

The life of the street is also greatly dependant on pedestrian movement. Children within the area play a major role in the public life of the street. The notion of the public space as a network is emphasised through the use of children.

47 The notion of enclave as explored by David Grahame Shane in his book, Recombinant Urbanism (2005)

This movement after school hours is often contrasted by the quietness of these very same streets during school hours. Within Delft South not only does the street perform the role of the conduit between these aforementioned enclaves⁴⁷, but the streets, themselves, become essential to the public life of Delft South. Where the park should fulfil the role of a neighbourhood meeting place, the streets adopt this role due to the conditions of the parks.

Through this constant movement the street has an increased importance. The provided open spaces are often in poor conditions which results in the street accommodating many activities. The neighbourhood parks, because of their conditions, fail to provide meeting spaces for their respective communities. The street accommodates this activity.

48 Dewar, D., & Uytendogaardt, R. South African Cities: A Manifesto for Change.p. 30

The dominance between the pedestrians and the vehicular traffic alters throughout the course of the day. This complexity cannot be designed, but rather the pre-conditions to allow its emergence can be.⁴⁸ This relationship is one that has been formulated through the life of these streets.

An exercise which help understand the spatial framework was to use Charles Correa's diagram of hierarchical system of spaces. He prescribes the requirement of four different space that are necessary in an urban environment. I used this diagram to o locate the spaces of Delft within. This highlighted the importance of the street.

Section Three

Existing Building Methods

Charles Correa points out the value of vernacular building methods. He mentions that the socio-economic processes and production thereof are appropriate to the situation.⁴⁹ It is evident in Delft South that there is a huge self-build industry, where people make use of the available material to either extend their homes or build structures⁵⁰ in their backyard. The following section looks at the available materials as well as existing building methods to understand the reasons for why people build the way they do.

The aspiration within the area is often to build houses with bricks or concrete blocks. However, many inexpensive lightweight materials are used as temporary solutions instead.

49 Correa, C. *The New Landscape - Urbanisation in the Third World*. p. 42

50 People within the area refer to free-standing self-built dwellings as "structures". These are often built using timber frames, corrugated iron or recycled materials.

Available Building Materials

To support the self-build building industry, there are many building suppliers throughout the area. Timber and concrete blocks can be found at the local hardware shops. There are also building suppliers who supply cement, building sand, aggregate and concrete blocks.

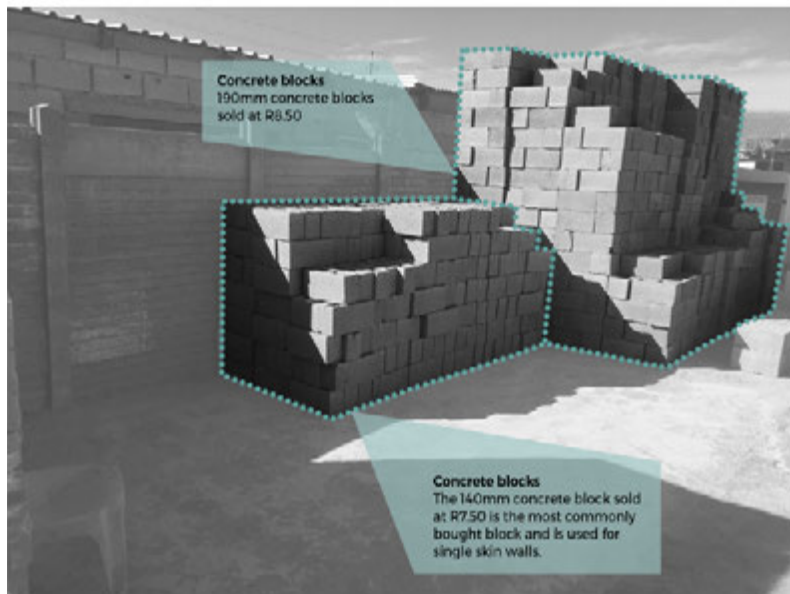
A group of us visited one of these suppliers to find out more about the building industry. The owner of the business mentioned that 90% of his business is within Delft and only about 10% outside. This indicates the huge demand for building supplies within the area. He stocked three kinds of blocks: 90mm at R6,50, 140mm at R7,50 and 190mm at R8,50. The 140mm is the most common bought block and it was mentioned that people within the area build with this to create a single skin wall.

Presently, it is more viable for his business to receive blocks from an external factory and resell them in the area. He did however show us that he pressed his own concrete blocks at a separate location. He mentioned that it is presently not viable because of security reasons. His current blocks are currently stored in the back of a property and they are often stolen. He does however intend to increase this operation to be able to sell more of his own blocks.

[48] Storage yard for construction materials.



[49] Concrete blocks for sale.

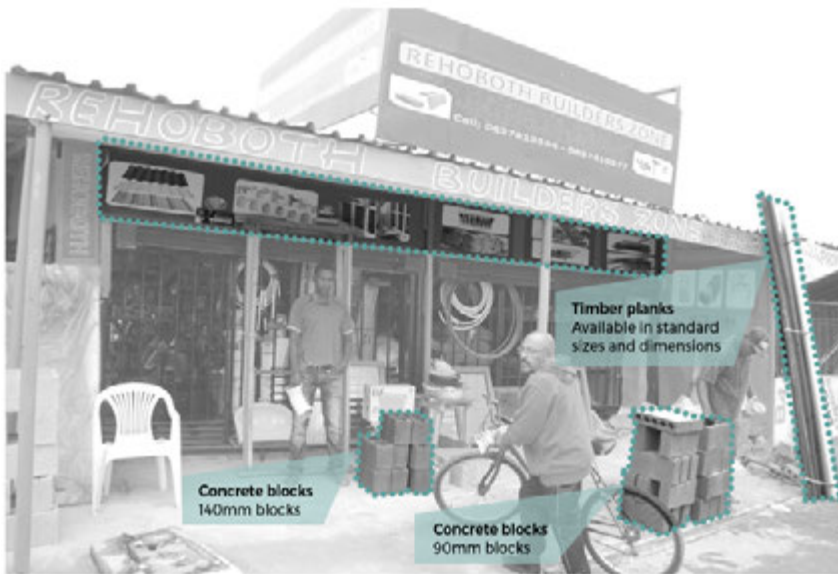


[50] Concrete block hand-press used to produce 6 blocks at a time, a total of 1000 blocks can be produced in a day.



He provides the service of supplying building supplies and transport these supplies to the requested location. He does, however, not do the building itself.

Timber is another readily available material and can be purchased from hardware stores or timber suppliers within the area. This is commonly used to erect frame structures or carports.

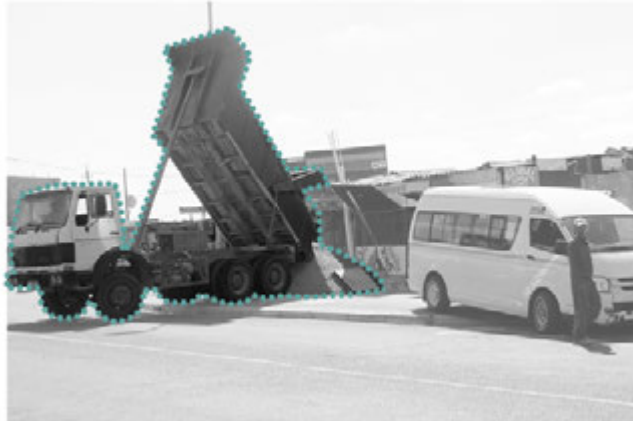


[51] Hardware store selling various building materials on Delft Main Road.



[52] Timber planks available from the hardware store.

[53] Building truck delivering sand to a hardware store on the Mian Road.



Prefabricated corrugated panels are also commonly available. These panels are sold prefabricated with a timber frame and fixed corrugated sheets. They can be bought in standard sizes or customised sizes can be requested. These panels are supplied with punctures for windows and doors and are relatively easy to erect on site.

[54] Prefabricated corrugated sheeting panels for sale.



[55] Panels can be manufactured to standard or custom sizes upon request.

A common industry within the area is that of light manufacturing. There is a large demand for metal products such as gates and burglar bars. This demand is met by the light manufacturing industry. This presents the skillset of further metalwork and welding. This opportunity, however has not been capitalised on.

There are many small scale-suppliers within the area which generates income to these community members. A Cashbuild is going to be located in the new community shopping centre which is currently being constructed. This will make more building materials readily available. With this being said, there's a possibility of it negatively impacting the small scale building suppliers and service providers.

Case Studies

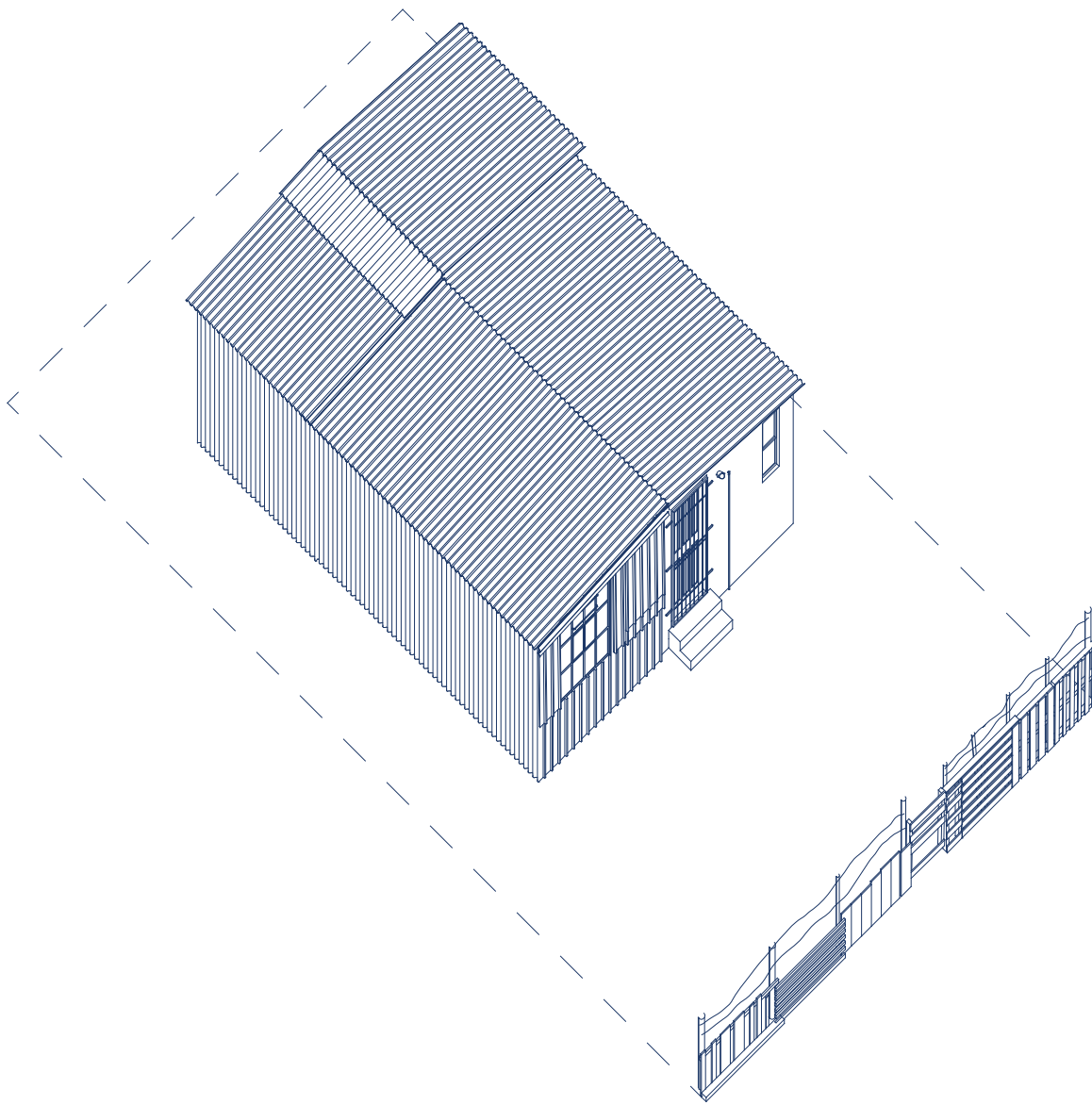
The next section looks at existing built projects in the environment. The exercise aims to surface a developing vernacular within the area. The objective is to foreground this vernacular and ascribe value to it. This will be done by utilising and extending the existing building methods in my proposal.

Case Study 1: Single Story

Presumably, the plot was never occupied by an RDP house. The inhabitants set up their structures towards the rear end of the plot to be able to build a permanent block house in the front. Concrete block is a very common building material within the area.

This presents the opportunity for the inhabitants to occupy the site whilst the house is being built. The structures are built out of recycled materials such as corrugated iron.



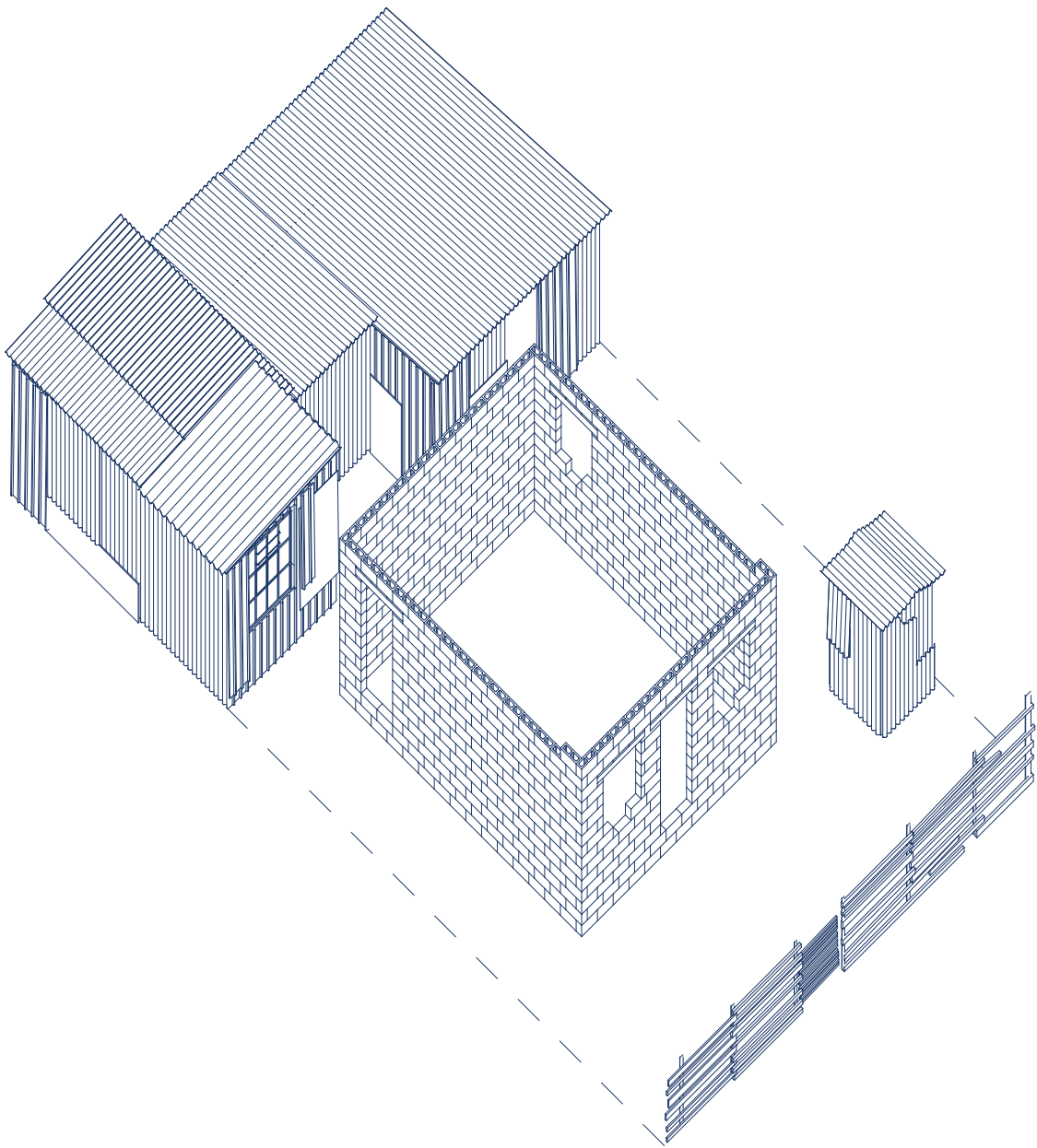


Case Study 2: Single Story RDP Extension

This indicates a common method of extending a common Block RDP house. The one side wall of the block house was built with an asbestos panel. This allows for extension as the panel can be easily removed.

A common way of extending on this side is with the use of a lightweight frame and recycled materials such as corrugated iron. Many of the block RDP houses within the area have been extended in this manner. In some cases people also extend on this side using concrete blocks or bricks.





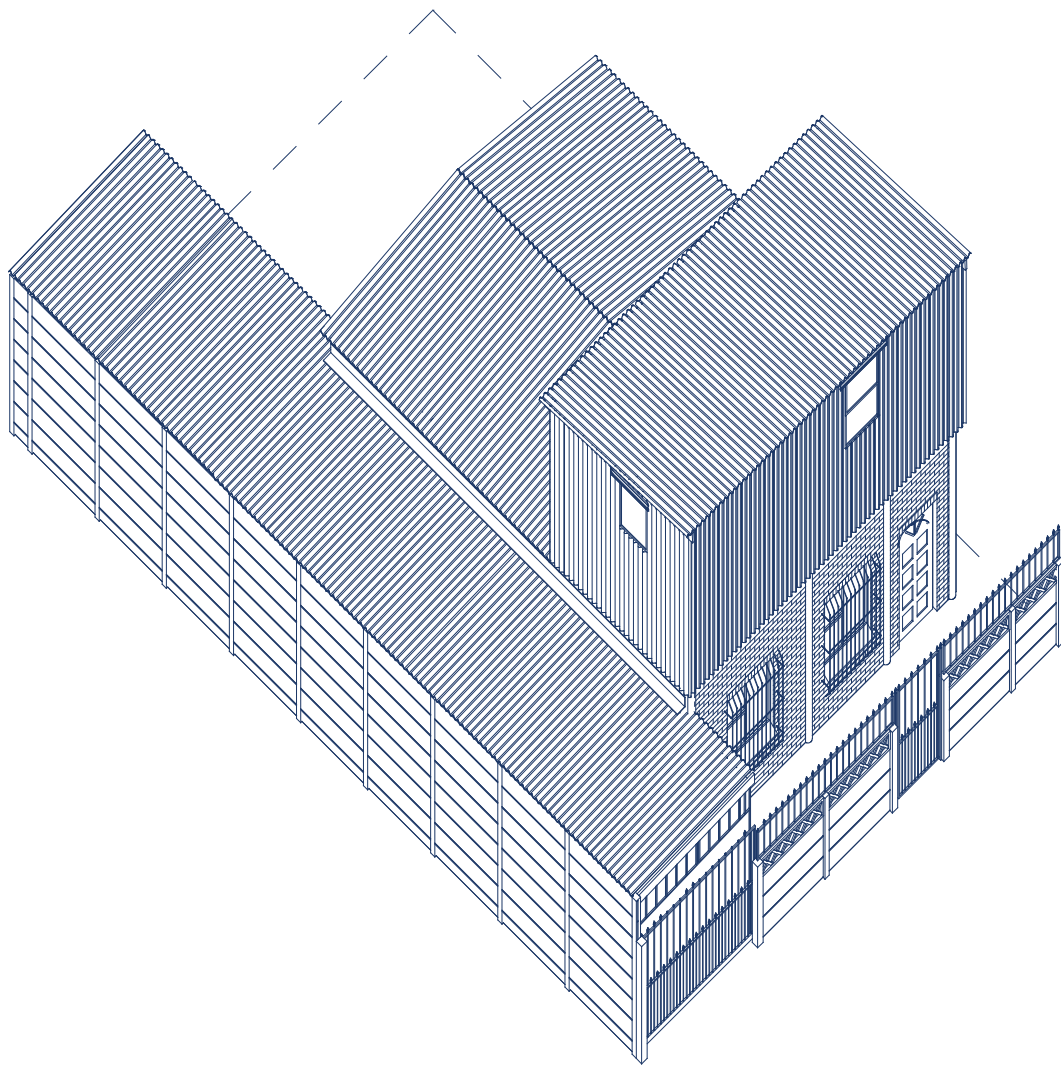
Case Study 3: Double Story

There are very few double story houses within the area. This results in there the built landscape being very flat, with no vertical landmarks. Double story houses are mostly built in one of two ways: 1. Demolish the existing RDP house and build a double story house from scratch with bricks or concrete blocks, or 2. to extend upwards using lightweight materials.

Extending upwards is deemed expensive, therefor many of the plots are fully covered to gain floor area and accommodate higher densities.

The example, however look at a lightweight extension above an existing house. This can be seen as a local vernacular. As mentioned previously the lop floor is constructed with lightweight materials. The house itself, can be seen as a landmark within the area.





Precedent

The Training for Self-Reliance Project (TSRP) in Lesotho can be seen as a successful model which is didactic in its construction. The project, commonly, referred to as “Lesotho Schools” was initiated by the World Bank in early 1970’s with the intention upgrading to upgrade education throughout the Kingdom of Lesotho.⁵¹ The architectural component of the programme involved upgrading and adding to existing schools as well as constructing some new schools. South African architect Iain Low co-ordinated the architectural component of the programme from 1982-1987.⁵²

- 51 Low, I. (1998). **Building and Self-Reliance**. In H. Judin, & I. Vladislavic, blank Architecture, apartheid and after. Rotterdam : NAI Publishers.

- 52 Wolff, I. (31 August 2013). **Maseru Architectural Open House: Iain Low 1982-1987**. Retrieved from oh architecture: http://www.wolffarchitects.co.za/wp-content/uploads/2013/09/OH15_pocketguide_lowres.pdf

- 53 Low, I. **Building and Self-Reliance**. In H. Judin, & I. Vladislavic, blank Architecture, apartheid and after.

- 54 Wolff, I. **Maseru Architectural Open House: Iain Low 1982-1987**.

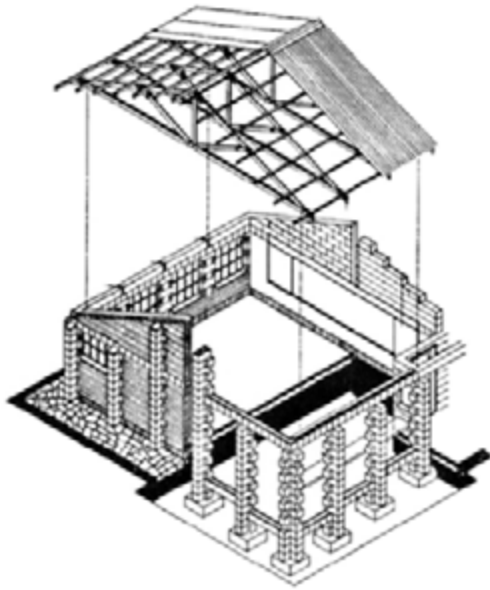
- 55 Low, I. (9 May 2013). **OH 15 Iain Low Lesotho Work**. Retrieved from https://www.youtube.com/watch?v=i_8lieMmslk

The project aimed to promote national independence through training and work. Therefore, the project largely incorporated participative design and local construction. The project drew upon shared knowledge of materials and construction methods. Through built experiments a building system was established which could respond to many conditions.⁵³ Under the co-ordination of Iain Low 200-300 schools were constructed.⁵⁴

The system incorporated a new didactic construction method. A ring beam is constructed on ground level to establish a datum. It joins the stub columns and saves costs on undersurface masonry. The columns are constructed out concrete blocks which are then reinforced and filled with concrete. These blocks can be produced on site. The manner in which these blocks are laid can accommodate many infill panels: from blockwork to stone masonry. Iain Low mentions that this gives the opportunity for the building to express the vernacular of the area in which it is located.⁵⁵

The columns of the building are pronounced which makes the construction technique evident to the viewer. This allows people to access new construction methods. The columns are also distanced at door or window’s width apart which ensure easy assembly.

A true measure of the project’s success is that the system still continues to be implemented throughout the Kingdom of Lesotho. This speaks to the fact that new skills were acquired during the programme which are still being utilised today.

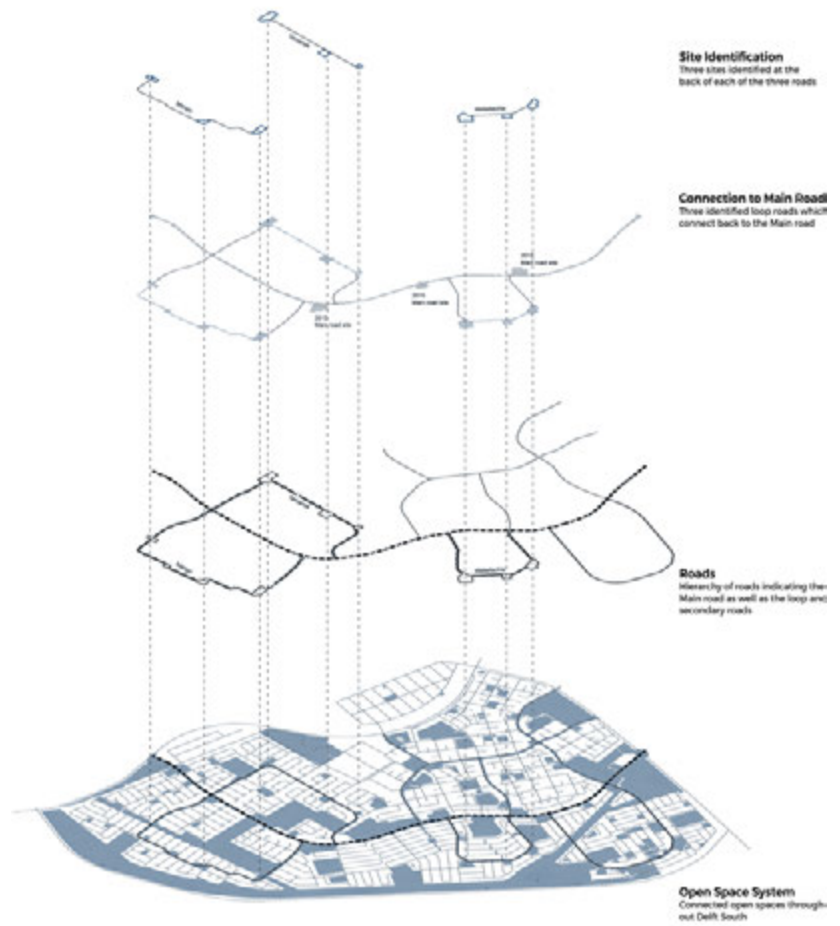


[56] Isometric drawing explaining the didactic building methods of the Lesotho Schools



[57] A Lesotho School in construction.

[58] Types of public open spaces around the Loop Roads.



Siting

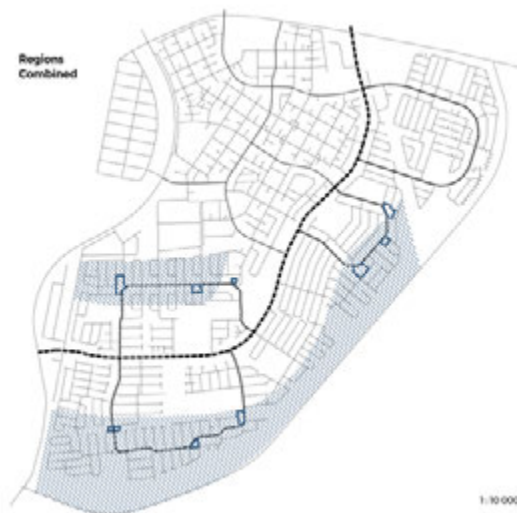
Defining the Back-quarters

As mentioned, densification commonly takes place within a close proximity to the Main Road, due to the accessibility to transport and other amenities. Private forces has activated the Main Road which has resulted in higher values. Many business are located along the Main Road.

The Main Road attracts the majority of activity within the area. As an activity corridor it is successful. It provides the necessary amenities to the people of the area. This supports the increasing density of people along Main Road.

With this being said the properties further from the Main Road are also increasing in density. However there are not as many amenities to support these properties. Facilities and amenities need to be provided to support these properties.

The Back-quarter can be defined as the spaces which are not in close proximity to the Main Road, which require additional amenities to support the densification. In addition to this the back-quarters need to support the existing activities which it currently accommodates as well as encouraging additional activity. the image below and to the left highlight the areas of concren, and the areas which I have decided to address.



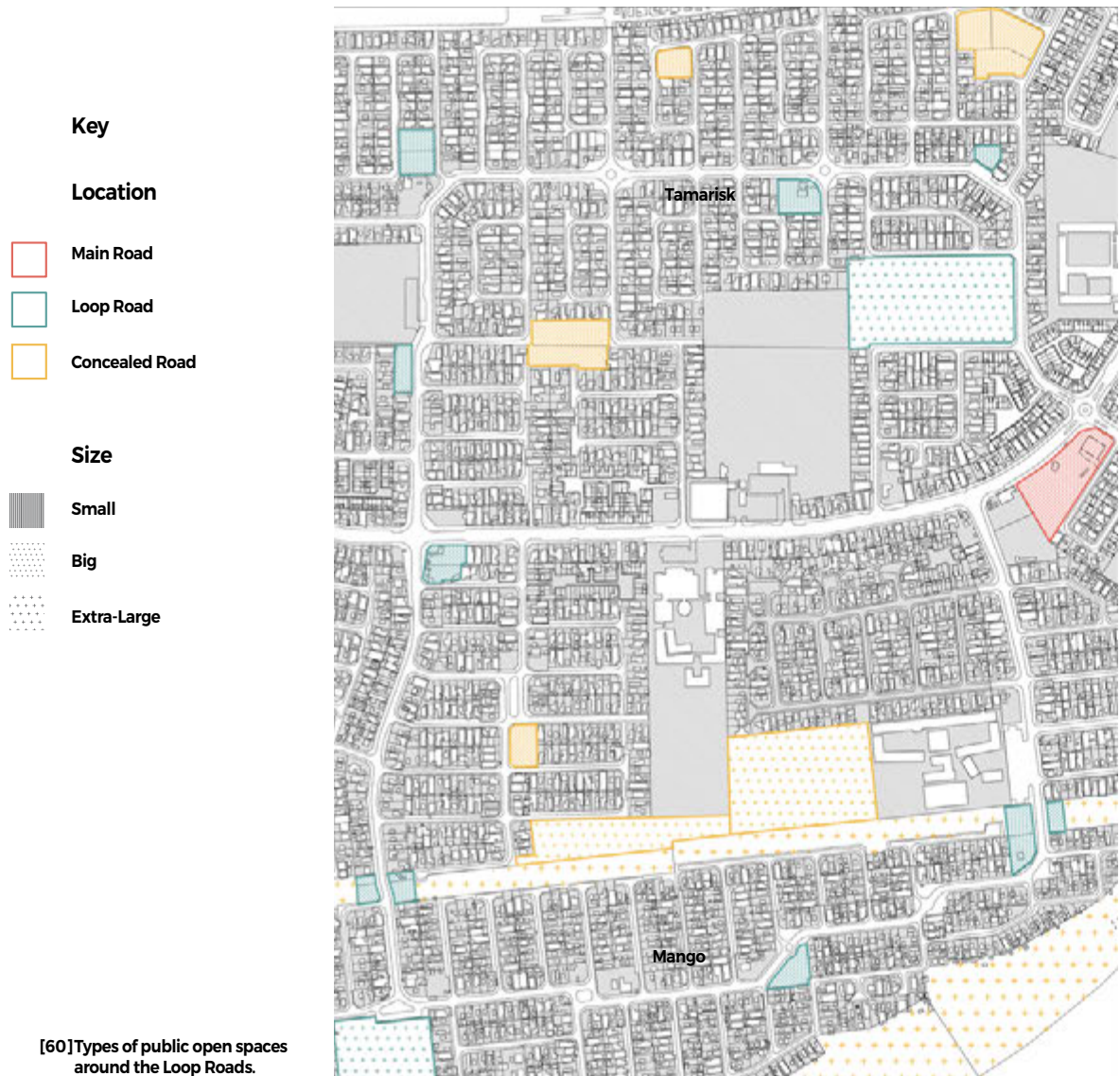
[59] Types of public open spaces around the Loop Roads.

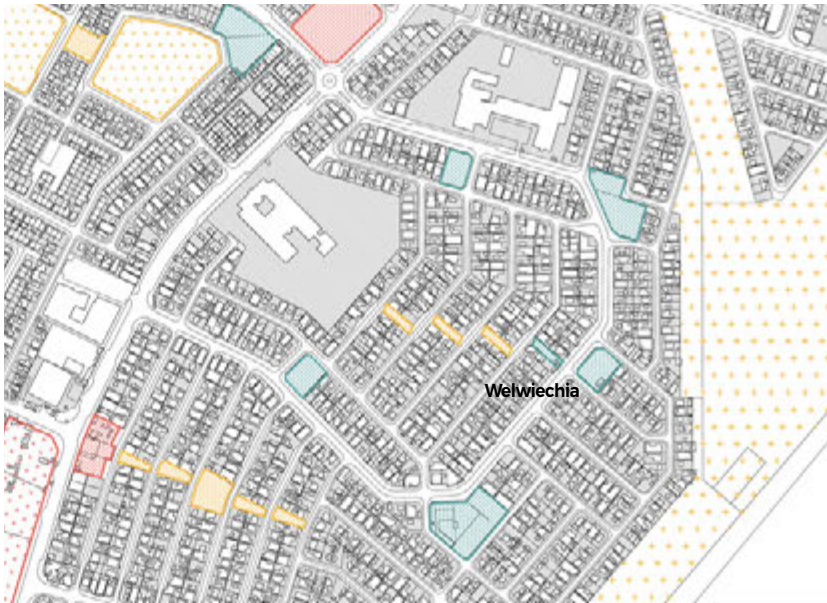
Siting Strategies

Having identified the public back quarters as an area of concern, I decided to categorise the various open spaces within the public back-quarters. This was done in an attempt to site architectural interventions. In order to impact the urban environment it was decided that there needs to be multiple interventions with a clear strategy of intervening.

The open spaces were classified with regard to size as well as location. This aimed to formulate a cohesive strategy with regard to siting.

Using the loops as a spatial indication, I decided to look at the open spaces



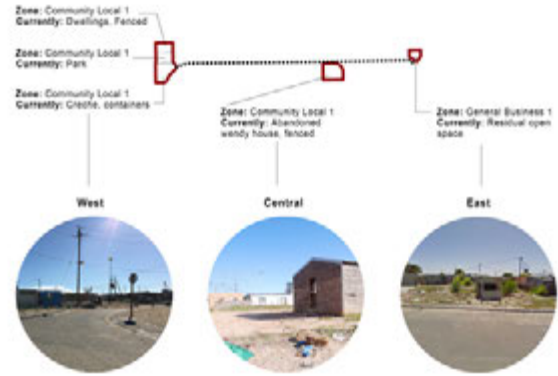


within and around each of the neighbourhoods and categorise them.

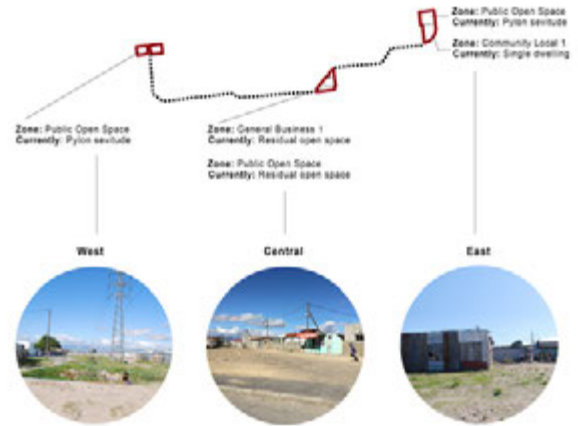
The smaller neglected open spaces along the loop roads were chosen. The back portion of each of the loops contains open spaces which are located at walkable distances from each other. They also respond to the need of activating the public back-quarter.

Looking at the conditions of existing residual spaces and the manner in which

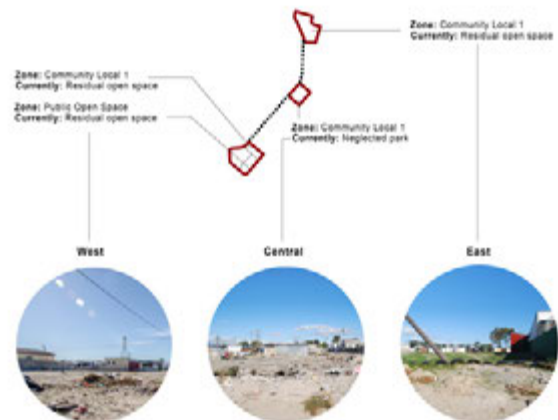
[61] Site identification



Mango



Welwitschia





[62] Existing conditions of identified sites.

Tamarisk



Mango



Welwiechia

they are used.

By activating the selected spaces, this network can be strengthened, allowing each of the sites to be used for specific purposes. Activities can be distributed between the three sites, emphasising the notion of the network.

Through the activation of the sites, the properties on the street also have the opportunity to capitalise on the activity that is generated. As a starting point these networks were looked at to determine the current condition of them with regard to open spaces, amenities as well as landmarks. It is evident that these spaces are utilised but are neglected.

In choosing a network to focus on, I then analysed the nine different sites to uncover differences and similarities. These sites were analysed in terms of access, supports, desire lines and visibility from Main Road.

Because of the many sites I then chose one network to focus on. This decision was informed by the means that each of 3 sites along the Welwitschia network display characteristics of at least one of the other six sites.

The sites along three sites along Welwitschia road is as follows:

56 An islamic school that accommodates children and adults after school hours.

1. Vacant land positioned in between a crèche and a future church. There is also a madrassah⁵⁶ nearby. This displays the characteristic of being supported by institutional functions.
2. A small plot positioned in the centre of the network. This particular plot is a neglected park.
3. A site with a shop. This vacant land has a shop opening up onto it. This condition is found at one other site.

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Section Five

Architectural Investigation

As was described I have identified a total of nine sites which to address. With this in mind I intention is to find replicable solutions and strategies which can be applied. The below mentioned considerations are generic in that they are elements which should be incorporated across all site. With this in mind these attitudes and strategies are to be applied will address the specificities of each of the sites.

Programme

Because I am dealing with 9 sites the intention is to find replicable solutions and strategies that can address all 9 sites. Programmes have been established through observations made on site. The interventions aims to accomodate these programme whilst creating a safe shared space.

The everyday programmes that were surfaced are as follows:

Church-choir singing on the streets (weekend)

Protests

People washing their cars

General socialising and conversing

Children cycling / go-karts

Children Playing

Homework / Reading

Grandparents supervising the young

A neighbourhood gathering

People hanging their washing

People doing their laundry

In addition to this each of the sites should accommodate an agent which supervises the everyday activity. This ensures safety:

Shopkeeper

Laundry Operator

Car Wash operator

Caretaker

Neighbourhood Watch Member

Hairdresser / Barber / Salon

Many of these above mentioned programmes have the opportunity to generate an income for the upkeep of the interventions. This will allow for a more financially sustainable model, as opposed to the space being an entire expense.

In addition to this rentable office space and apartments will be letted out. Fundamentally, however is that all components are incorporated to support public function.

Application of Economic Viability

Having mentioned the financial models of VPUU and DPPP I decided to incorporate programmes which can generate financial income. These programmes include office rental, live work units, shops, a carwash, a laundromat, and an occupiable retail area on the ground floor. In addition to this, the kick-about field can be rented after 7 o'clock in the evening.

A billboard is also introduced on top of the building which would also be a source of income. Additionally this will provide a landmark in the landscape, as well as having the potential for the building to gain an identity.

The intention is for the income generated from these sources to first maintain the built footprints of the buildings. This ensures that the buildings will remain in good condition throughout. The outdoor areas can then be maintained in partnership with the City of Cape Town, making use of departments such as City Parks and the Expanded Public Works Programme to maintain these areas. The three buildings along the loop road are to be managed and maintained as a network. Therefore some of the interventions will generate more income than others. This is based on the location and requirements of the individual sites.



Communal



Neighbourhood Watch



Communal Gather



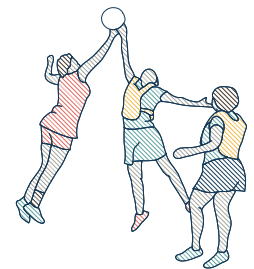
Amenities



Manual Wash



Water Collection



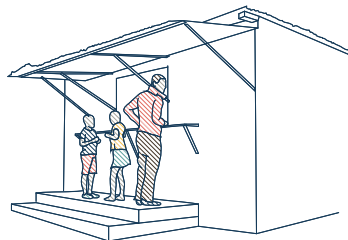
After school/ recreation



Homework



Organised Sport



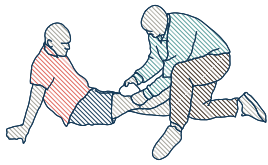
Business Oppertunities



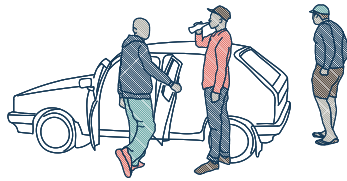
Spaza Shop



Carwash



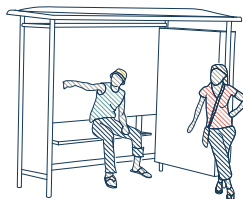
First Aid



Celebratory Gather



Clothing Dry



Bus stop



WiFi Hotspot



Spontaneous Play



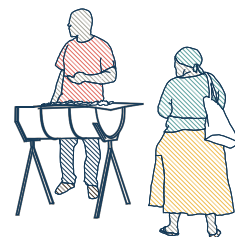
Read



Service



Laundromat



Tshisha Nyama

Urban Considerations



Mobility

As mentioned the spatial structure is dynamically used. Dominant modes of transport are walking as well as public transport. This was surfaced through the workshop activity. Through the siting of the architectural intervention, the intention is to improve the network that responds to these aspects of mobility.

With regard to public transport, it was decided that the neglected sites that are to be activated needs to be located along public transport. The Loop roads accommodate public transport. This will allow easy access to the various amenities. By being located along a public transport route, it also allows the site to be activated through its accessibility. This also presents the opportunities for these sites to be public transport collection points.

A recent initiative that has been launched in the Western Cape is the Walking Bus initiative. It aims to create a safe and supervised route for learners to get to school in the morning and home in the afternoon. Children walk together supervised by adult volunteers. The initiative has been supported by neighbourhood watches, community policing forums and the schools within the specific areas.⁵⁷

57 MEC Dan Plato launches Bonteheuwel Walking Bus initiative, 9 Sept. (8 September 2016). Retrieved from South African Government: <http://www.gov.za/speeches/walking-bus-initiative-8-sep-2016-0000>

This initiative hopes to further improve mobility within the area and create the opportunity a free safe means of transport. The activated sites can serve as a meeting point for the walking bus initiative providing a safe waiting space for groups of students.

It is evident that children as well as other members of the community roam the streets, besides the conditions not being ideal to do so. As was pointed out by the Community Policing Forum Member, it is often the case that children are not allowed outside of their private properties after school hours. This is as a result

of the suburban model which the spatial structure of Delft South conforms to. The subdivision of plots enables children to be kept off the street and confined to their private properties within particular boundaries.⁵⁸

58 Alexander, C., Ishikawa, S., & Silverstein, M. A *Pattern Language*. p. 343

Christopher Alexander mentions that if children are not able to explore the whole of the adult world around them, they would not be able to become adults. He also, however notes that urban environments are too dangerous to allow children to explore freely.⁵⁹

59 Alexander, C., Ishikawa, S., & Silverstein, M. A *Pattern Language*. p. 294

This is most certainly the condition within Delft South. Children, when allowed outside are exposed to certain elements of danger. It is clear that this needs to be changed in the area, working towards an urban environment which is safer to inhabit. Mobility can be improved through an increase in public activity and thus an increase in presence. Presence will allow for people to feel safer within their urban environments which will in turn allow for free movement of community members.



Surveillance

An important aspect in improving safety within neighbourhoods is surveillance. What was evident within the area is that there is presence on the street during certain times of the day. The challenge remains of how increase this presence for longer periods of the day which will result in passive surveillance, and thus the perception of safety being increased.

The perception of safety is a huge contribution to whether urban spaces are used. People occupy spaces in which they feel safe. With this being said the perception of safety can change throughout the course of the day. As people vacate a space or its surrounds, the eyes on that respective space decrease, which naturally results in the users of the space feeling unsafe. Having personally observed this transition it interested me. Particularly the manner in which the “daytime” identity will inevitably differ from the “night-time” identity of the

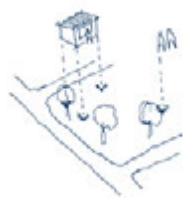
same specific street. This condition is common amongst all spaces in urban environments. The objective should be for these spaces to be perceived as safe throughout the course of the day and night.

If one is within sight of many other people on a street the perception of safety is increased. Therefore, having houses facing onto a particular space greatly improves the perception of safety. When speaking to a resident who lives opposite the park along main Road, she mentioned that she enjoyed the location of her house facing onto the park. This between the houses and the park greatly contribute to the life of the park. The relationship between the houses and the park is mutually beneficial.

Therefore, when activating the neglected open spaces it is important to encourage the houses that face onto it to provide surveillance onto the space. These spaces are located along the back lengths of the Loop roads which are narrower. This width allows there to be a direct relationship between the spaces in question and the houses opposite.

This increase in surveillance will also encourage other houses within the area to contribute to the perception of safety. These houses will respond to the condition which manifests by also providing eyes onto the street and occupying the spaces immediately outside of their homes.

Through the activation of a neglected space the surrounding houses will respond to this. The intention is for this to catalyse a change around the respective nodes as well as along the street. This increase in safe will allow for people to feel more comfortable in the space as well as its surrounds. For this to be successful however the spaces itself needs to be activated through programme which attracts people towards it.



Programmatic Activation

Programmatic activation has a huge role to play with regard to mobility as well as surveillance. As was mentioned in the two previous sub-sections, through programmatic activation surveillance passive surveillance will result and the locations will serve as checkpoints within a network – thus contributing to mobility.

Programmes are informed by existing activities which occur within the area which were surfaced through discussions, observations as well as the workshop. This is then supported by alternative programmes. The intention is for the programmes to benefit each other.

Diversity of user is encouraged through the diversity of programme. Each of the selected Loop roads contain three sites along it which are to be activated. Ideally each of the three site will have an identity of it's through the assigned programmes.

Each of the individual sites will accommodate various programmes. This will result in various users occupying the same space. The diversity of a space encourages diverse users who ultimately contribute to the life of the space. This allows for each of sites to be a lot more dynamic as well as extending the life of the space.

There is also the opportunity for some of the site to accommodate rental housing units and offices. Both of these will be able to generate a substantial income. The housing units will also allow for 24/7 surveillance.

It needs to be acknowledged that the interventions cannot be over-prescriptive with regard to programme. It should allow diversity of use to manifest organically over time. In the future, this will allow each the sites to have an enriched identity which the community are responsible for. This incremental growth and change

60 **Jacobs, J. The Death and Life
of Great American Cities.
p.177**

encourages diversity. The users and occupiers of the interventions will inevitably change. This diversity that can be developed incrementally over time should be celebrated instead of attempts being made to separate and isolate their components from one another.⁶⁰ The preconditions for to allow this incremental change can be set up through spatial devices.



Network

As mentioned the open spaces within Delft South can be regarded as a network. What has been discussed previously is ways in which this network can be positively intervened upon using methods of programmatic activation, surveillance and mobility. Increasing the safety within components of this network will allow for it to be more comfortably frequented.

The term 'social urbanism' was coined by Karl Brunner, who was an Austrian urban planner who worked in Bogota in the 1930's. He spoke to an urbanism which opposed cities to be designed from scratch, but rather establish practices which recognised what was already existing.⁶¹ What exists in Delft South is an active open space network that needs to be enhanced at strategic points.

61 McGuirk, J. Radical Cities. p. 243-244

By addressing the back portion of the loop roads, this creates a strong sub-network within the larger urban network. This sub-network is created through the activation of the three respective neglected sites. The distances between each of the three sites is walkable creating sites which can be easily accessed and a stronger network.

Through the identification of the three sites this allows programme to be dispersed across the three. Not only does this enforce the notion of a network, but it allows for each of the three sites to have their own identity. Madanipour mentions that a place becomes a moment in the network of ever changing social relations. Therefore that the identity of a place is a particular mix of social relations.⁶² The intervention intend to encourage social interactions and relations to promote social cohesion.

62 Madanipour, A. Design of Urban Space. p. 23

Disaggregating the programme allows for each site to be centred on one specific function and have programme which supports this. This gives each of the sites a distinct identity. This disaggregation speaks to the idea of the urban environment being used as a network. As mentioned, children move from place

to place. Having these safe nodes along this network forces people to actively move between the sites.

63 Madanipour, A. Design of Urban Space. p. 73

Madanipour also mentions that urban environments are understood in three components: through mental mapping and urban socio-semiotic analysis, the patterns of behaviour in public places, and the sense of community and its associated social networks.⁶³

Architectural Considerations

Through the sketch design process the attempt was to understand which are generic components of all of the buildings. The initial stages of sketch design were conducted across all nine sites to ascertain generic forms.

The process of sketch design is to establish a kit of parts. This is done through designing each of the buildings both individually and collectively. The Welwitschia network is used to test strategies. Once the parts have been established they can be assembled on each of the other sites. The manner in which they are chosen and assembled should be site specific.

The following section discusses generic strategies which should be incorporated in each of the sites.



Consolidate Open Space

Adopting Charles Correa's view of regarding space as a resource the intention is to maintain the majority of the open space of the identified sites. As was pointed out there are very few suitable open public spaces within the area. This speaks to the need of consolidating the existing neglected open spaces.

These spaces can be consolidated through the use of a small building footprint. The building's primary function is to support the open space and the small footprint facilities this. In addition, the smaller footprint is easier to manage with regard to surveillance on site.

The positioning of the building on site is essential. The position aims to edge portions of the site and utilise street access. The orientation of the site is also considered. North light on the open spaces is prioritised. Therefore the building should not shade the site.

The intention is for the building to address the edges of the sites. Currently the surrounding houses backs onto the site creating a harsh boundary. The footprint of the building aims to address this edges. The portions of the building along these edges are required to mediate between the single story houses and the tall intervention.



Improve Legibility

Although the buildings are located on small sites there is an opportunity for them to improve legibility within the area. Currently the urban landscape of Delft South is extremely flat. There are only a few buildings within the area which are taller than a single story. The only vertical landmarks that exist is that of the electrical pylons. This results in a monotonous urban landscape.

The interventions have the opportunity of providing vertical landmarks within the area. This will allow people to navigate around the area, and especially the loops. Currently, the loops are disorientating to the outsider. There are little landmarks which one can identify.

Introducing vertical landmarks will greatly assist the legibility of the area.

The idea of the billboard was mentioned previously. Not only is this an opportunity to generate income, but also serves as an opportunity for the billboard to become an iconic landmark in the landscape. This will allow people to easily identify the site which have billboards. In addition to this it also allows the billboard to be illuminated at night, thus serving as a beacon.

The intention is for the taller component of each of the buildings to sit on the street edge, or corner if possible. This is then easily visible from a distance, as well as the upper floors of the tower having the possibility of looking out.

An exercise was undertaken to explore the consequences regarding the architectural and urban consideration. Model making presented the opportunity to explore the potential forms of the building

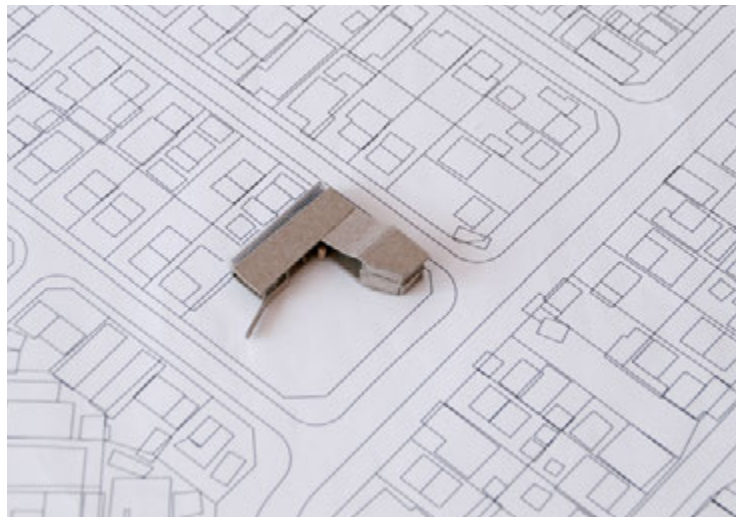


[57] Model building exercise of all 9 sites to establish form of buildings.

[58] Welwiechia testing edges.

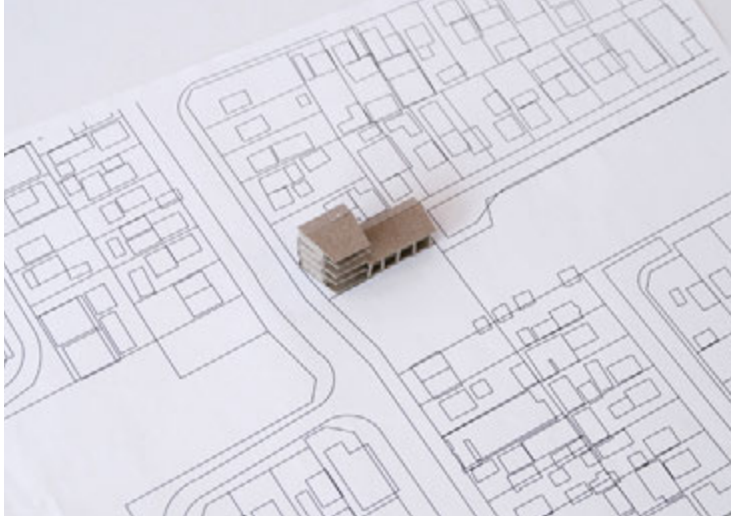


[59] Welwiechia smaller intervention.



[60] Welwiechia site of gathering.

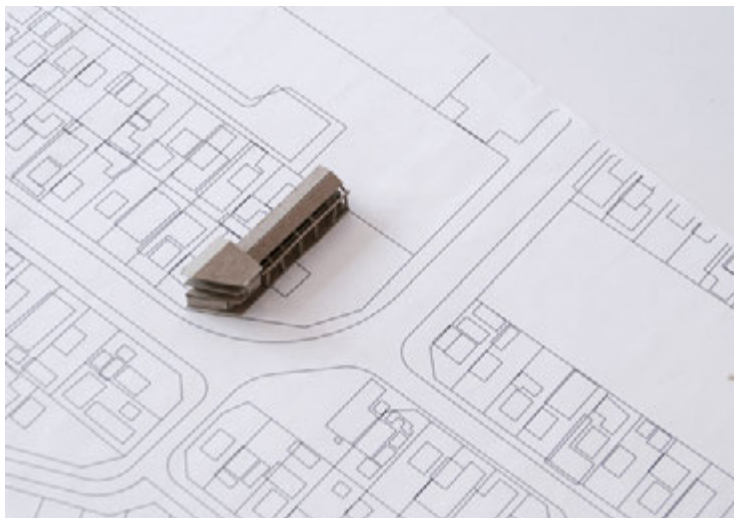




[61] Mango neighbourhood watch tower.



[62] Mango living component.

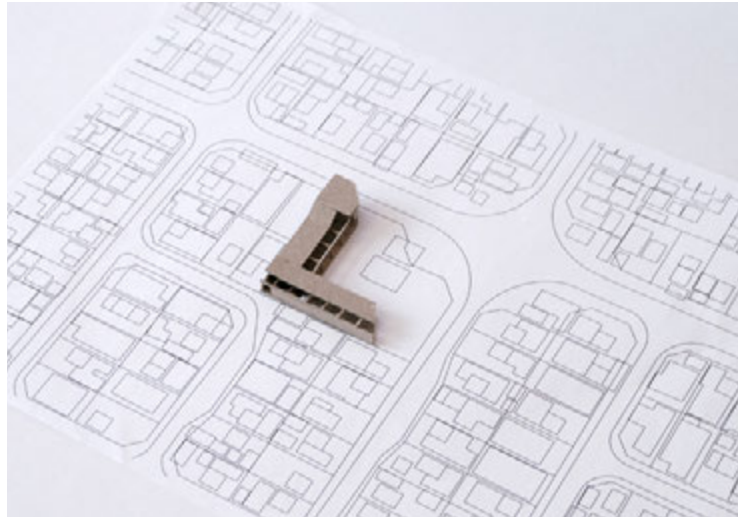


[63] Mango sport and gathering centre.

[64] Tamarisk neighbourhood
watch headquarters.



[65] Tamarisk smaller
intervention.



[66] Tamarisk sports and
recreation centre.



Inserting Programme

Programme is allocated to each of the sites based on its needs. Each of the three networks are to contain at least one site which is centred on sport and one site is centred on play. The third site becomes flexible depending on the needs of that specific site as well as the specific area.

In some cases the location or size of the site determines the programmes that it accommodates. For example, because a five-a-side soccer field has a fixed dimensions there are only some sites which can accommodate this. Another example of this is that a neighbourhood watch office is located on the sites which sit on the border of two neighbourhood watch zones. This allows the space to be access by both groups and can be utilised as a shared resource.

Most importantly a spatial implication is how the various programmes are positioned within the building. At Mansell Road designed by Rodney Harber the design and location if the central bathhouse incorporates a corner store, further enhancing this integrative approach; the store-keeper pays rent to the local authority, but the lease obliges him to operate the ablutions block.⁶⁴

This displayed an intelligent way of using the shopkeeper as means of managing elements of the building.

Adopting a similar strategy, the agent which manages the site needs to be located in a position they can look over important components of the site. The shopkeeper can be used as a means to keep tog bags and personal belongings with a locker system. Similar to those at the front of supermarket. If this is charged service then this can also be used as means to generate a small income.

64 Low, I. *Signs from the Margins: Design as instrument of empowerment in the 'new' South Africa*. In C. Bruyns, & A. Graafland, *African Perspectives - [South] Africa. City, Society, Literature and Architecture*. p.174



[67] Disaggregating activity across Welwiechia loop.



The diagram shows the programme distribution across the Welwitschia site. Each site is geared around one specific function.

Because the sites are close together it allows for an easy disaggregation of programme. Each of the sites have very specific conditions.

Supporting programme is inserted to compliment the primary programme



[68] Disagregating activity across Tamarisk loop.



[69] Disagregating activity across Mango loop.



Towards an Architectural Tectonic

The material palette of public buildings constructed in post-apartheid South Africa. Brick, plaster and concrete are often materials of choice, these materials are seldom used in creative ways. Thus creating monotonous architecture. The methods below discuss an alternative approach to developing an architectural language for site specific buildings.

Primary Architectural Elements

Plinth

The idea of a plinth, I feel, is essential to public buildings. Because the building is accessible to the general public it needs to assert itself on the ground plane. A plinth elevate the building above the ground plane denoting that the building is of a different order.

The plinth allows a primary element of the building to become part of the urban surface. Alex Wall states that the urban surface should intend to diversify activities in time and allow for flexibility.⁶⁵ This notion can be achieved in conjunction with the activities which occur inside the building.

Additionally the plinth is an element which can continue into the open space. It allows elements of the building to define the space outside of it. At a certain height it also has the ability to become urban elements such as a low wall or seating.

65 Wall, A. Programming the urban Surface. In J. Corner, *Recovering Landscape: Essays in Contemporary Landscape Architecture*. p. 233

Concrete Block Pier

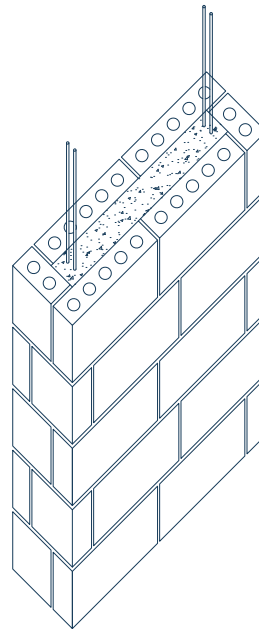
If deep enough the depth of a column presents interesting opportunities. The intention id for this depth to become habitable through different uses. I explored this idea through an exercise where this depth can be used for this such a small shop, a bus stop, or storage by groups who want to make use of indoor spaces.

With this in mind the initial intention was to use concrete because of its robustness. This also presented the opportunity of utilising various infills in between the columns.

This idea was then developed upon. Through an understanding of available materials from Delft South, it was decided to create a concrete block pier. Not only does this eliminate the cost of shuttering, but the construction may be didactic in itself. As was discussed earlier the density is reaching its ceiling. This is as a result of people within the area not constructing upward.

This concrete block pier construction represents a simple solution of constructing taller buildings. The method utilises readily available concrete blocks and be constructed in various sizes as needed A method which the community could possibly continue. This method adopts the intention of Iain Low's Lesotho Schools as was discussed previously.

[70] Brick pier.



[71] En-loge exercise testing what can happen in the depth of a column.

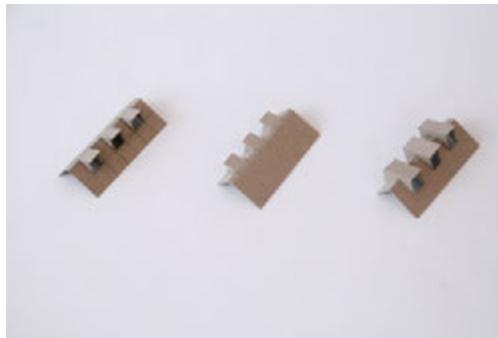


The interventions aim to be environmentally sustainable through passive means. This is done through the construction of the building, the roof in particular and the general orientation of the building.

The images below show explorations of various roof types. The intention of the exploration is to understand which roof type provides the most environmental opportunity. Essentially, the roof aims to both collect rain water as well as accommodate solar geyser (and or photovoltaic panels in the future).

With this in mind, the roof has to slope facing north if possible, as well as gather water at a point which is easily accessible from rainwater tanks.

Walls



[72] Roof shapes testing climatic conditions.

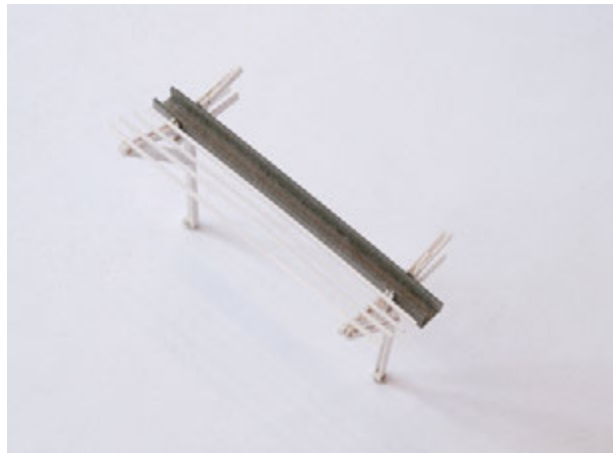


[73] Prioritising collecting water.



[74] Prioritising collecting water.

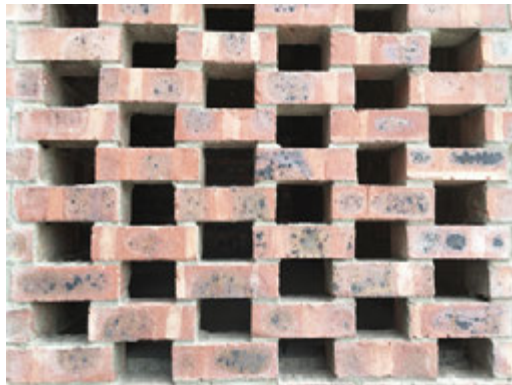
[76] Timber roof structure and roof system to collect water.



The walls present an opportunity for the use of various material. The walls can be seen as infill panels in between the concrete block piers. They can be constructed of various materials utilising various crafts within the area.

Commonly they can be constructed with regular clay brick. Although clay brick is not a common choice of material in Delft. They also have the ability to be laid in creative ways creating perforations which result in semi transparency. This can be utilised where privacy needs to be achieved, but also where public surveillance is required.

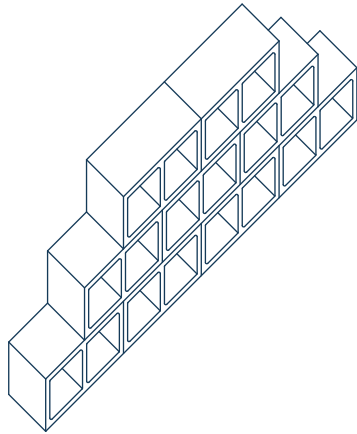
As mentioned a common construction material is concrete blocks. Within Delft



[77] Perforated brickwork at the Tramway House in Woodstock.

South they are only laid in one way. They, do however, have the ability to be laid on their sides to create breeze blocks. This, too can be used for transparency and ventilation, but also possesses the quality of being secure.

Another option for the skin in between the piers is lightweight timber



[78] Concrete blocks laid in an alternative way to allow for ventilation.

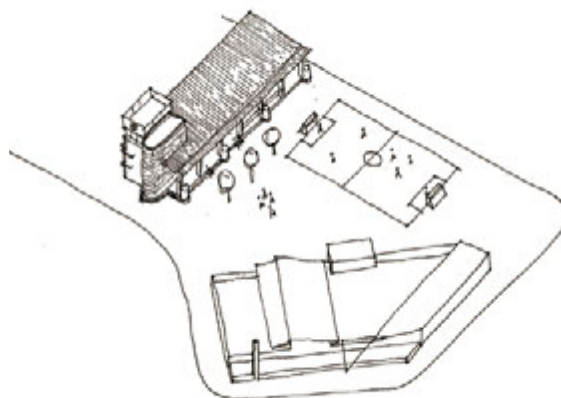
construction. As discussed this a common building method in the area. Timber construction is also easy to cut to size on site, and can accommodate various panel finishes.

The craft of light fabrication can also be utilised. Panels can be fabricated off site by local welders. This presents the opportunity for local employment. Panels can be permeable as well as being secure. It has the possibility of extending the light fabrication industry in the area.

Language

Using these elements as a bases my intention was to develop an identifiable language. The interventions should possess a similar language to create a collective identity. As was described in the previous section a distinct vernacular is being developed within the Delft South community. This is the vernacular of a solid base and a lightweight first floor. (See case study 3) The intention of the architectural language is to foreground as well as ascribe value to this vernacular.

[79] Sketches to explore and establish architectural language based on prior information and decisions.



Concluding Thoughts

In conclusion, it is evident that the public open spaces within low-income environments need to be improved. In many of these environments, the spaces of the public realm cannot accommodate the necessary requirements of individuals and communities.

Improving the public realm has great potential with regards to benefitting the lives of many people. Because these spaces are integral, there is an opportunity to propose solutions which will promote social cohesion. The provision of shared open spaces also has the possibility of promoting economic exchange.

Each of the environments that needs addressing with regard to public space, should be approached strategically with clear social objectives. When dealing with such large scale issues we need to establish strategic and pragmatic solutions. It is my ambition, through this dissertation to begin to find an approach to dealing with these issues.

My architectural outcome aims to outline objectives with the goal of establishing strategies by which to achieve these objectives. The architectural interventions aim to test these aforementioned strategies whilst simultaneously informing them.

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Figures 48, 49, 50, 51, 52, 53, 54, 55

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Figures 7, 8, 12

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Figures 17, 18, 19, 20, 21, 26, 30, 32, 38, 39, 43, 44, 45, 47

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Figures 56, 57

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