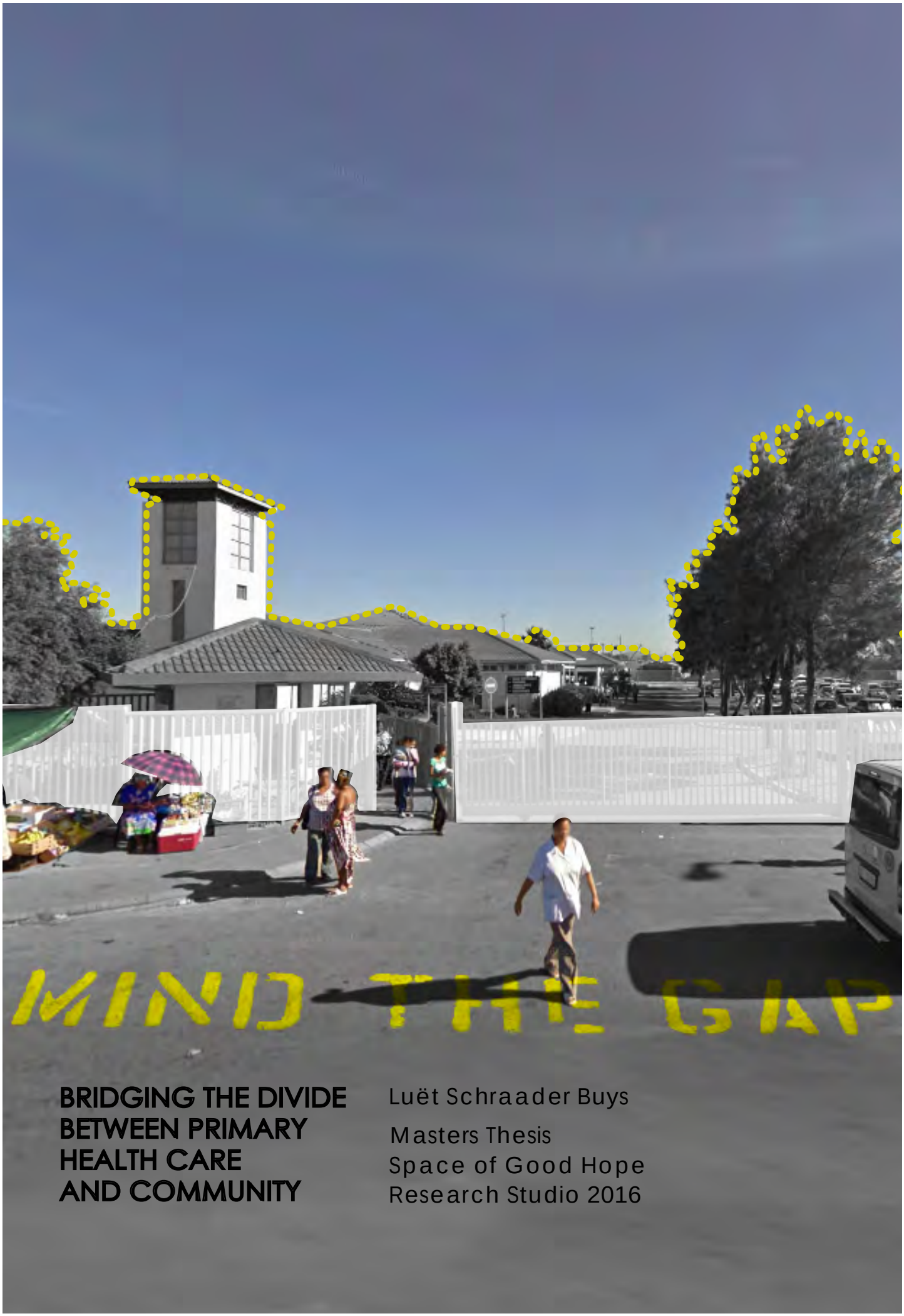

BRIDGING THE DIVIDE BETWEEN PRIMARY HEALTH CARE AND COMMUNITY

Luët Schraader Buys

Masters Thesis
Space of Good Hope
Research Studio 2016

The boundaries which divide Life from Death are at best shadowy and vague. Who shall say where the one ends, and where the other begins?
Edgar Allan Poe

Healing is a matter of time, but it is sometimes also a matter of opportunity.
Hippocrates

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Luët Schraader Buys

As part of the Space of Good Hope
Research Studio 2016

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This dissertation is presented as part fulfilment of the degree of Master of Architecture (Professional) in the School of Architecture, Planning and Geomatics, University of Cape Town

November 2016

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ABSTRACT

South African cities have a complex social and physical post-Apartheid layering. The historical legacy, referring here specifically to the inadequate roll-out of public facilities in areas and uprooting as well as separating of communities, have resulted in under serviced environments that can lack social cohesion and often struggle with poverty.

Public institutions play a catalytic role within a community. To this end, health care portrays the government in a legible 'provider' role and is, in some ways, an obvious way to make citizens feel valued in comparison with other public institutions. Health care institutions impact the community in a unique way due to the combination of specificity of service and the emotive way it is experienced by the individual.

This dissertation aims to research, define (and ultimately) test a strategy that aims to stitch together the fissure between community and institutions, by rethinking the urban interface of generic primary health care facilities.

This research is structured around themes of theory, policy, the continuum of care and physical environments; each in order to better understand what and how the 'gap' between health care institution and community is constructed. Programmatic and/or spatial ideas that inform the architectural design.

This dissertation asserts that providing 'traditional' generic institutions sustains rather than improves the life of the community. The research suggests that existing health care facilities can be more effective as public spaces by introducing new programmes, disaggregating the formal interface, redefining and activating a new urban threshold and providing meaningful open space. The design ultimately aims to act as a new skin or threshold through which institutions relate to the community.

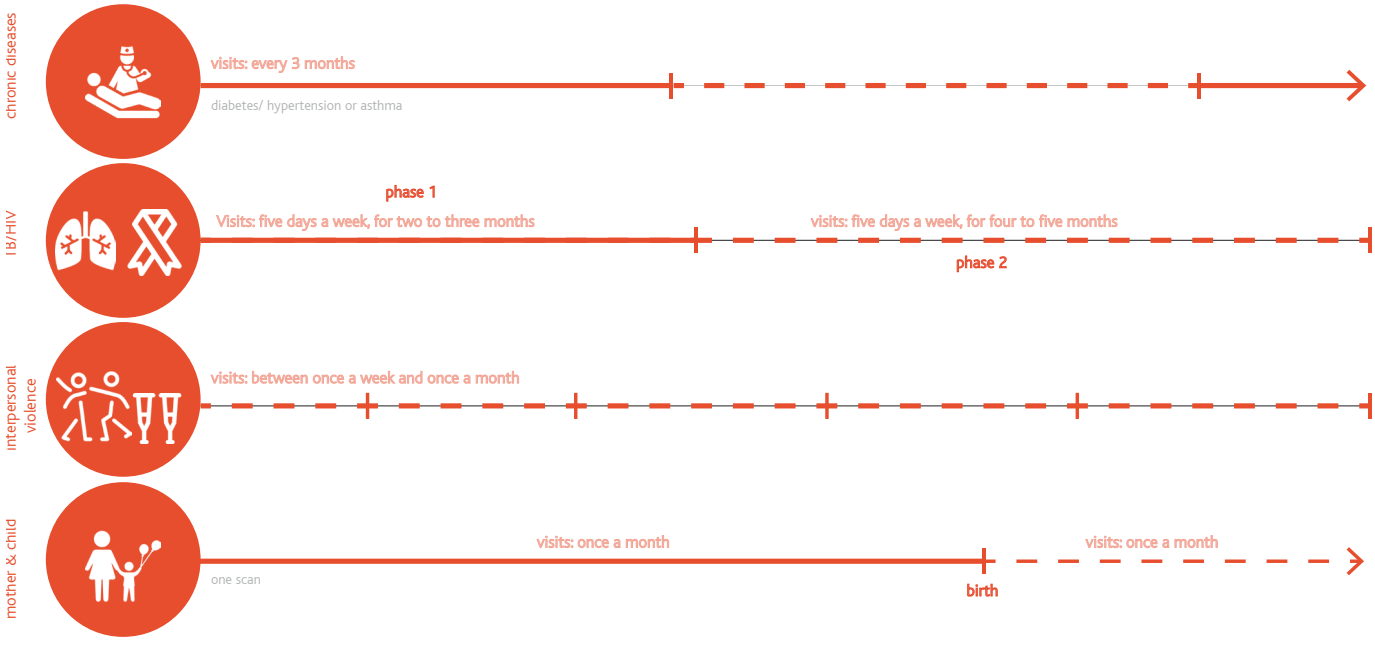


FIGURE 1. Graphic showing the intervals or regularity of visits for the four largest pressures on the South African health care system as per South African Department of Health. Illustrating the persistent nature of relying on public health care.

00 PREFACE

This research is the culmination of research that was inspired by two of my experiences in *Delft 2015* during groundwork which focussed on the daily realities and configurations of household members that stayed in or around home during the day.

I first encountered a family of eleven who shared an asbestos house of thirty square meters. Their eldest member, the grandmother, was suffering from stomach ulcers. Having no formal employment she spent her days looking after young children from the neighbouring houses. Once a month she had to collect her medication from the Day Hospital. She spoke about how she walked from her house in Delft South with the children in tow, arriving early and subsequently waiting for hours in the unsheltered parking lot before being helped.

The image of this frail old lady and troupe of small children waiting in the sun between the cars has haunted me.

The second experience solidified my interest in health care architecture. On a rainy morning, I drove past the Delft Day Hospital and witnessed how patients and their family members huddled under umbrellas and bits of plastic on the entrance ramp. I thought that surely an institution that saved lives could be more generously designed, bearing the reality of the patient in mind.

Personally, the emotive quality of the interaction between the community and health care institutions is an especially poignant aspect of the wider conversation of how public facilities relate to the people they serve. There is merit in researching other public institutions, for example police stations, libraries, sports facilities or art galleries, but primary health care and Delft are very close to my heart.

CONTENT

SECTION 01: INTRODUCTION 01

The aim of this dissertation is:

To rethink the urban interface/threshold of generic primary health care facilities: imagining a new interface between institutions and community.

The catalytic role that public institutions play within a community (White, 2009) has been underestimated and often ineffectively capitalised on in the creation of public space and social cohesion. In South Africa, the historical legacy (referring here specifically to the inadequate roll-out of public facilities in areas and uprooting and separating of communities) has resulted in under serviced environments that can lack social cohesion and often struggle with poverty.

I propose that '*traditional*' generic institutional organisation and architecture *sustains* the current *status quo* rather than *improve* the life of the community. This dissertation aims to research, define (and ultimately) test a strategy that could more effectively stitch together the fissure between community and institutions. By focussing on health care institutions, this dissertation aims to creatively rethink and redefine the urban interface of generic community facilities.

Communities are notoriously mistrusting of the system (Ras personal communication 2016, March 29) and therefore delay visiting clinics until much later than they should. The interaction between communities and institutions of health care is an especially important because it portrays the government in a legible 'provider' role and is, in some ways, an obvious way to make citizens feel valued in comparison with other institutions. It is also in the best interest of all parties that patients seek health care early and are encouraged and educated on wellness to alleviate the pressure on facilities and extend life spans.

Subsequently health care institutions, impact the community in a unique way due to the combination of specificity of service and the emotive way it is experienced by the individual.

The connection between the quality of health care and its perceived value within society is much more nuanced and emotional than the actual provision of effective

medical treatment and how the individual relates to the institution can be enhanced through architecture (Nemschoff, 2014).

Although architecture is an obvious strategy to tackle dignified health care; there are higher level institutional issues that are outside the scope of this dissertation. Examples of these are that public facilities face shortages of resources and staff, poor management and lack of the proper medical treatment equipment. Issues like these cannot be solved through architectural intervention.

Evidence-based design is the focus of many health care dissertations. Although evidence based principles are implicit in this dissertation I have chosen to focus on or address social issues institutional alienation and the stigmatisation of seeking medical care. Health sensitive, evidence-based construction should ideally be applied to all buildings, especially health care facilities but a social lens is more important in South Africa within the broader context of transformation.

" At a critical moment in the history of South Africa, architecture can play an important part in redressing the problems inherited from the past and in reflecting the paradigms and changing value systems of a transforming society." (Marschall & Kearney, 2000)

This dissertation aims to research, define and test a strategy that can stitch together the fissure between community and primary health care. The research is structured around themes, each in order to better understand how the connection or *disconnection* between health care institution and community is constructed. Sections on theory, policy, the continuum of care and physical environments each surface programmatic and/or spatial ideas that inform the architectural design. These will be presented in sections 2 to 5 as follows:

Section 2, is an investigation into the relationship between the **health care institution and society**, using precedent studies to identify how communities are divided from institutions but also how they have been connected;

Section 3, a study of **health care policy** and institutional framework, in order to establish how the gap manifests within the greater public health care system;

Section 4, explores the **continuum of health care** in South Africa and where the community lacks support from health care facilities.

Lastly, section 5 delves into **physical environment**: both in terms of typical facilities in Cape Town; but also specifically Delft Day Hospital as the site of inquiry.

Section 6 is composed of case studies that endeavour to better understand spaces of threshold between institutional spaces and community spaces in terms of regulation and spatial presence.

Section 7 is intended to consolidate the spatial, organisational and programmatic strategies uncovered throughout the dissertation which form the basis of the design .

The appendices are intended to be read as support to the main line of inquiry. They are referred to in the text where they are applicable.

Premise of work (assumptions)

Even though programmatic and spatial queues are surfaced throughout this dissertation, I would like to introduce the essential premises that influence the design and illustrate the spirit of my work.

1. Primary health care: more than a place where sick people go.

Programmes should be mixed on health care sites to normalise the illness in the eyes of the community. This will be shown in section one through precedent study of historical relationships between health care and society. Section two identifies that insufficient community involvement on top of the apartheid legacy breeds mistrust of institutional structures, but health care in particular.

Theses could be mitigated by mixing health care with institutional programmes that have a more friendly or daily use (library, community hall etc.).

2. Community organisations: the missing middle

Policy has been formulated to bridge the gap between formal health care and the community but has not found its way to Department Public Works' schedule of services documentation issued.

This intention is illegible because there are no spaces dedicated to making that link. Public health care facilities consist only of space of the clinic and the community is relegated to urban social spaces like the street. Section three looks at the institutional landscape which community organisations must navigate and the workings of community organisations within facilities.

3. Health care is more than spot appraisal.

Services provided at health care facilities are reduced to a couple of minutes of interaction with a healthcare professional. Foucault (1967 & 1973) described this institutional approach to health care as "the medical gaze" whereby people are reduced to a collection of organs rather than complex social beings. Community organisations are useful in bridging the divide between spot appraisals and longer term care. Currently community organisations work in differing capacities across the scales of health care, especially interesting is organisations running step-down facilities that support main stream health care. Section four will show that even though step-down facilities are normally associated with metro scale facilities there is a need for after care on a community level.

4. Architectural language that separates rather than includes

The gap extends to architecture. The majority of health care facilities in Cape Town and South Africa look and act like suburban residential buildings. This is because of the *'suburban residential'* method of construction (which is cheaper than more commercial or monumental architecture) and its' *'suburban residential'* attitude towards the street. The dominant typology of primary health care is buildings buffered from the street by parking. This further removes the institution from the everyday life of the community.

Furthermore the institutions are notoriously confusing places to be in, long stretches of corridors make for rather bleak internal scenes. This is exacerbated by medical programmes not being arranged by opening times. This results in long passages of doors with gates on each door that have to be locked individually to keep those spaces safe when deeper spaces are open late at night.

Lastly maintenance is genuinely an issue across all public institutions which exacerbates bleak institutional landscapes.

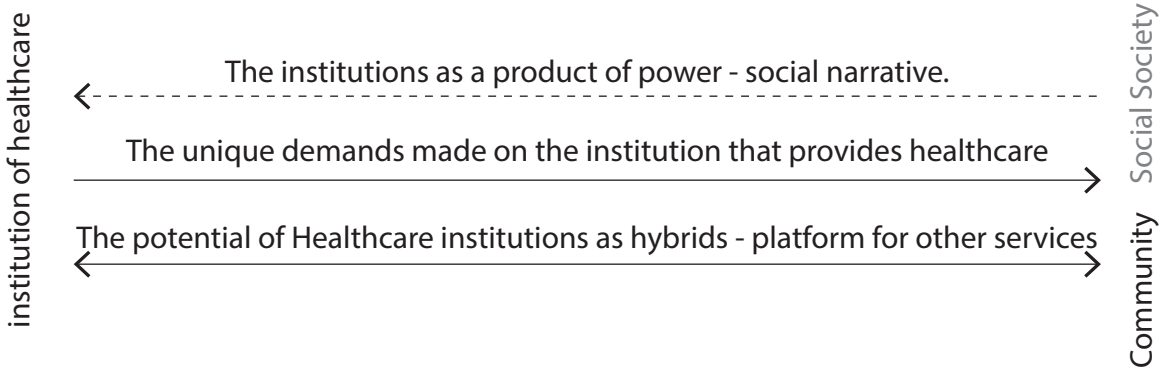


FIGURE 2. Graphic showing the direction of influence of each category of interaction between institution and society.

SECTION 02:
HEALTH CARE AND SOCIETY

02

The idea of extending the clinic into the community was the basis of my thoughts from the very beginning. As the work progressed the physical concept of a localised community expanded into more of an abstract idea of society intended to refer to the Zeitgeist of the times, read against the relevant political (policy) and socio-economic backdrop. Therefore definition of society that is valid for this thesis is as follows;

"a highly structured system of human organization for large-scale community living that normally furnishes protection, continuity, security, and a national identity for its members." (Dictionary.com, n.d)

In line with the aim of this dissertation, which is to research, define and test a strategy that can stitch together the divide between community and institution; the following three aspects need to be considered in defining a possible strategy.

- The institution as a product of society (society> institution);
- The unique demands made on the institution that provides health care (institution>community);
- The institution as platform for other services (society<>community).

In the aspects defined above one must consider the direction of impact/influence. In the first category we refer to the impact society has on the institution. The second refers to the reverse, where the institution, and in particular health care institutions, impact the community in unique ways due to the combination of specificity service and the emotive way it is experienced by individuals. Lastly, is that the institution and the individual are intrinsically linked and the space of negotiation (the interface) provides an opportunity for services/activities that supplement health care.

The institutions as a product of society

Historically, buildings in general but institutions especially, are products of the society they serve. Thomas Markus (1993) proposes buildings are, at their core, 'social narratives', 'social practices', 'texts' (policy and socio-cultural context of the time) and 'subjects' (users of architecture); together they are the creators of space through which the story takes shape.

Furthermore, Holden, Horden & Pastore (2007) posited the evolution of society and the evolution of health care have a special intrinsic link that differentiates them from normal institutions. This special link is evident in how the once narrow and specialised discourse of medicinal history, previously only including the development of diagnosis and the practical treatment thereof, has evolved into a complex tapestry of science, sociology, and anthropology (Burnham, 2005). This is the most basic and abstract way that society and health care institutions interact.

I would argue that although society has historically been the creator of institutions, the sensitive nature of health care requires a closer look at what the community needs from this particular institution. As proven in the following case studies there has been a disconnect between what individuals want and how society and institutions have been reacting to it. Institutions are run on the letter of government policy (comparable to Markus's 'texts') and sometimes policy is removed from everyday reality. This often results in ineffective bureaucracy that hampers the interaction between institution and community.

The unique demands made on the institution that provides health care

The institution and in particular health care institutions impacts community in a unique way due to the combination of specificity, service and the emotive way it is experienced by the individual.

In order to deliver a specialised service such as medicine, the facility needs to work and act in a certain way. Over time the case studies I will present, show how health care architecture has been dictated by the requirements of providing the health care

systems of the time and appear to be insensitive to the community and therefore contributes the alienation of the individual by the institution.

It is clear that the interaction of the health care institution with society is complex. Architectural briefs for clinics are written by medical doctors and not public policy experts or architects. This results in an obvious bias to the scientific requirements of health care space at the expense of the experience of the individual or collective society.

The potential of health care institutions as hybrids - platform for other services

Mosaz (2011) suggests the contemporary use of typology should focus on types of social rather than formal, functional or stylistic considerations. He further suggests that public buildings are either social condensers or hybrids by nature. Social condensers as described by Mosaz (2011) are buildings that encourage relations amongst members of closed communities.

This is typically done by making some private functions take place in common capacities, providing the minimum private space per person (Mosaz, Fernandez Per & Arpa, 2011).

The case studies of Browne's Infirmary and Zonnestraal Sanatorium are examples of this. Clinics of today are social condensers, providing services only to the closed community of patients. More recently, centres like the Ubuntu Centre in Port Elizabeth typify hybrid designs in which public programmes are gathered together but are open for use by the city (Mosaz, Fernandez Per & Arpa, 2011).

A possible strategy could be to hybridise clinics in order to ameliorate the exclusionary, institutional interface with the community.

Relevant current and historical facilities - case studies

The research method used is an appraisal of current and historical health care facilities. This in an attempt to identify themes and strategies that can be taken forward or avoided. The above mentioned interdependent facets of influence between community/individual and health care/institution will form the lens through which the case studies are discussed.

After compiling a time-line of seminal health architecture (see appendix A) I chose examples that corresponded with interesting intersections of health care and society.

Browne's Infirmary, originally built in 1485, is the first study. Even though cause of illness was badly understood in this period, interesting ideas about arrangement and spirituality emerge.

The second study is Zonnestraal Sanatorium, built in 1925 and designed by John Duiker and Bernard Bijvoet. A prime example of modernism at its best, Zonnestraal characterises ideas about light and relationship to nature.

Lastly Ubuntu Centre in Port Elizabeth (2014) is a more recent example of what should the 'ideal' in South Africa. Built and paid for by an NGO the model is the very opposite to the standard public health care model. Ideas about spatiality and thresholds as well as programming arise.

The results of the historical overview brought to light different architectural concepts and design queues.

FIGURE 3. Browne's Infirmary. Inner courtyard view on service buildings. Photograph credit: Tom Dorrington 2015

FIGURE 4. Zonnestraal Sanatorium: View of main entrance to main building. Photograph credit: S. Voeten M. Kievits

FIGURE 5. Ubuntu Centre: View facing a southerly direction from Qeqe Street Photograph credit: Jonathan Riordan

FIGURE 6. Browne's Infirmary: Image from courtyard toward dormitory and chapel. The tower over the chapel is clear on the left of the image. Image credit: Tom Dorrington 2015

Case Study 1 - Browne's Infirmary \ 600-1650 Middle Ages

Browne's infirmary was built in 1475 by wealthy merchant William Browne in Stamford, England.

The institution as a product of society

During the middle ages religion was the major framework within which society propagated itself (Kruft, 1994: 16). Scholars of the time were driven by the belief that art was handed down from God (Kruft 1994:39) and as a result architecture was intended to manifest the Christian faith, especially through ideas derived from antiquity. There was no form of governmental regulation or cooperation, therefore facilities were established in isolation from one another, funded by wealthy God-fearing patrons. Admission was regulated and sometimes forced by higher-ups in religious circles (politicians, patrons and managing staff). Reading medical history from this time, patients are called 'inmates'. The term 'inmates' demonstrates the power relationship between institution and society then.

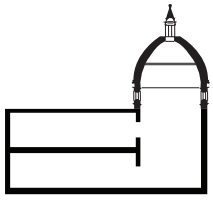
The cause of illness was badly understood. Illness and ill fortune were seen as a moral defects rather than physical ones. It was for this reason that religious institutions had the moral imperative to care for the 'undesirables' in society. 'Undesirable' could have meant anyone who suffered from illness, madness, poverty, disability, alcoholism or gambling addictions. Hence, the criteria for admission were as likely to be socio-economic as much as physical illness. The notion of spirituality and charity is evident both in the management structure of institutions as well as the architectural form of the institution.

Attending chapel multiple times a day was an important ritual in most medieval infirmaries, in this way the religious focus of society had a direct effect on the daily routine of 'inmates'.

Architecturally two ideas stand out: the process (or procession) of entrance; and the prominence of chapel in the scheme. The entrance staircase and passage of Browne's Infirmary give a sense of ceremony of arrival. New 'inmates' would be struck with the gravity of the institution and the power of the 'treatment' conducted inside. The notion of the importance of liturgy is clear on plan because of the organisational position of

FIGURE 7. Browne's Infirmary: Plan (see scale bar) showing general layout highlighting the main double storey portion of the scheme that celebrates the chapel on it's own axis.

the chapel which is directly accessible from the dormitories on axis. The highlighted portion shown on FIG 7 indicates the only 2.5 storey height section of which the chapel is the full height with an ornamental roof over.



The unique demands made on the institution that provides health care;

Facilities could not offer any treatment more complex than an indoor sleeping place, warm meals and access to religious instruction. The infirmary housed men and women (20 in total) who suffered from only 'mild ailments,' (Burnham, 2005) such as homelessness or infirmity. Inmates were provided with food and board under supervision of a priest, who was also responsible for their religious salvation (Burnham, 2005).

The result of this is the inclusion of housing, which was provided in a dormitory fashion, with small (2.5m wide) alcoves for each patient in a long hall. It was imperative that the hall be directly attached to the chapel. As well as the separation of staff from undesirables.

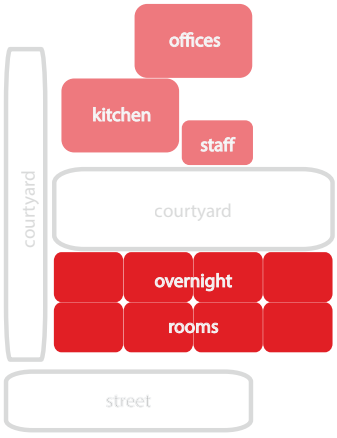


FIGURE 8. ABOVE: Browne's Infirmary: Diagrammatic section showing relationship between patient spaces (dormitory and mess hall) to 2.5 volume chapel.

FIGURE 9. BELOW: Browne's Infirmary: Diagram showing spatial arrangement. Red indicating 'inmate' spaces, pink indicating staff spaces and grey showing general circulation.

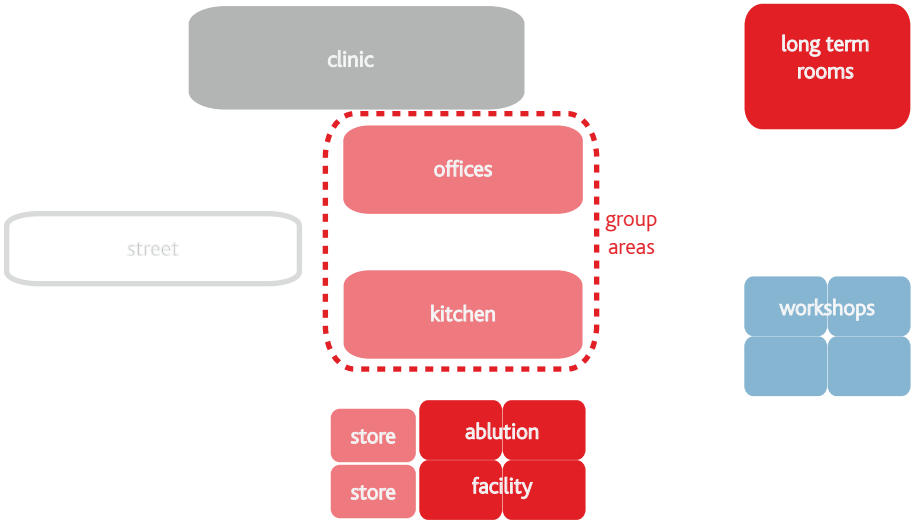


FIGURE 10. Zonnestraal Sanatorium: Diagram showing spatial arrangement. Red indicating patient spaces, pink indicating staff spaces and outline grey showing general circulation, solid grey medical spaces.

FIGURE 11. Zonnestraal Sanatorium: Image of main building through driveway. Dining hall on the first floor, ablutions on ground level on the left and staff areas to the right. Image credit: M. Kievits

Institution as a platform

In the case of Browne's Infirmary, the courtyard acts as a platform for ambiguity and negotiation. It does not clearly belong to any one group, nor is its function as clearly determined as in the case of the chapel. The courtyard regulates or pivots circulation in a temporal manner completely opposite to the authoritarian passage that links the front 'inmate' space and back staff space.

Case Study 2 - Zonnestraal Sanatorium: 1850-1930 Industrialisation, Modernism

Zonnestraal Sanatorium was designed by two young architects, John Duiker and Bernard Bijvoet who were funded by a newly formed Diamond Workers trade union. Completed in 1925, in the Netherlands at the time when the fear of Tuberculosis (TB) touched all individuals, exacerbated because its causes were not understood and its treatment consisted of months of socially isolated rest (Meurs & van Thoor, 2010).

The institution as a product of society

The salient idea surfaced by Zonnestraal is its isolation from urban life as a reaction to society is social responsibility. Architecture was then considered a social duty, one to provide clean and healthy living spaces for citizens from all different socio-economic status groups. Modern architecture had an instrumental role in ideas of equal living and modern welfare (Güney, 2007). New concepts of clean spaces free from dust and filled with sunlight, negating the legacies of the nineteenth century (Güney, 2007).

Zonnestraal is considered the canon of Dutch architecture of the Modern Movement. The modern ideas of machine-like efficiency were very influential both in terms of organisation and structure. Not only was redundancy avoided in space and structure, but also with the use of new materials and architectural details (Meurs & van Thoor, 2010).

Considering the modernist project and le Corbusier's project *Une Ville Contemporaine* (le Corbusier, 1922) Zonnestraal is an interesting example of a dense building in a green landscape, although Zonnestraal is not in an urban context. The theme of connection

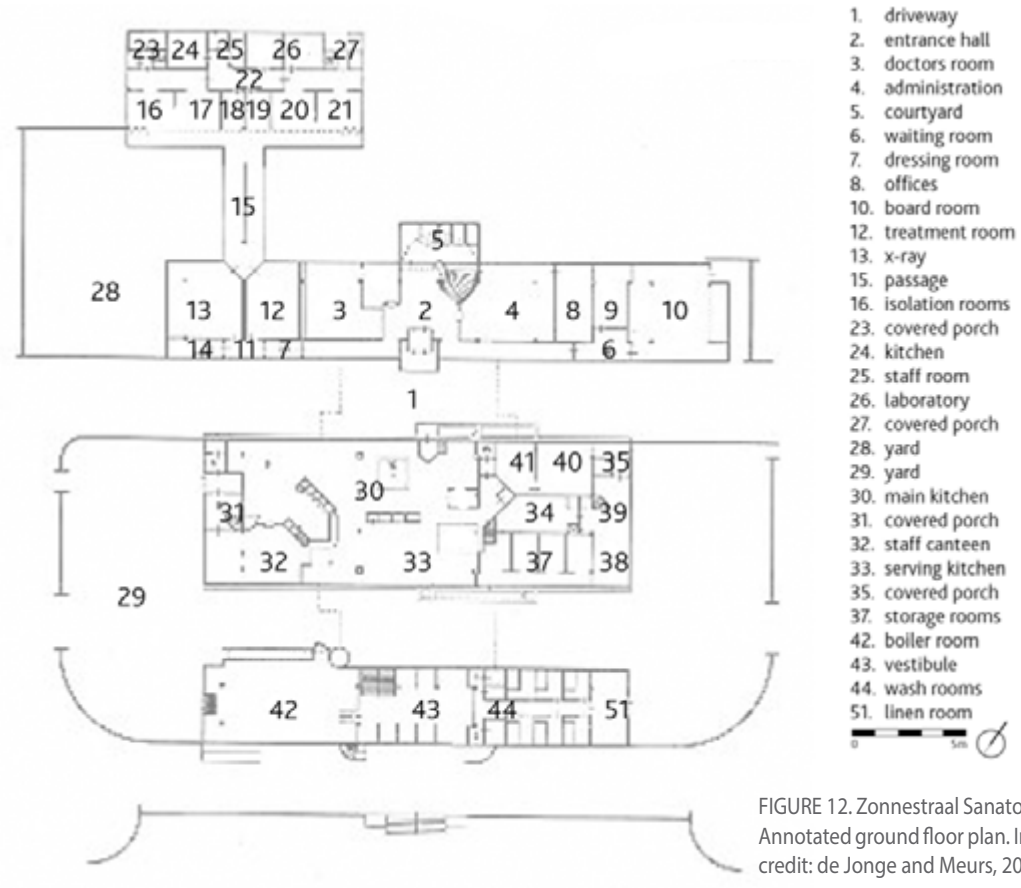


FIGURE 12. Zonnestraal Sanatorium: Annotated ground floor plan. Image credit: de Jonge and Meurs, 2010.

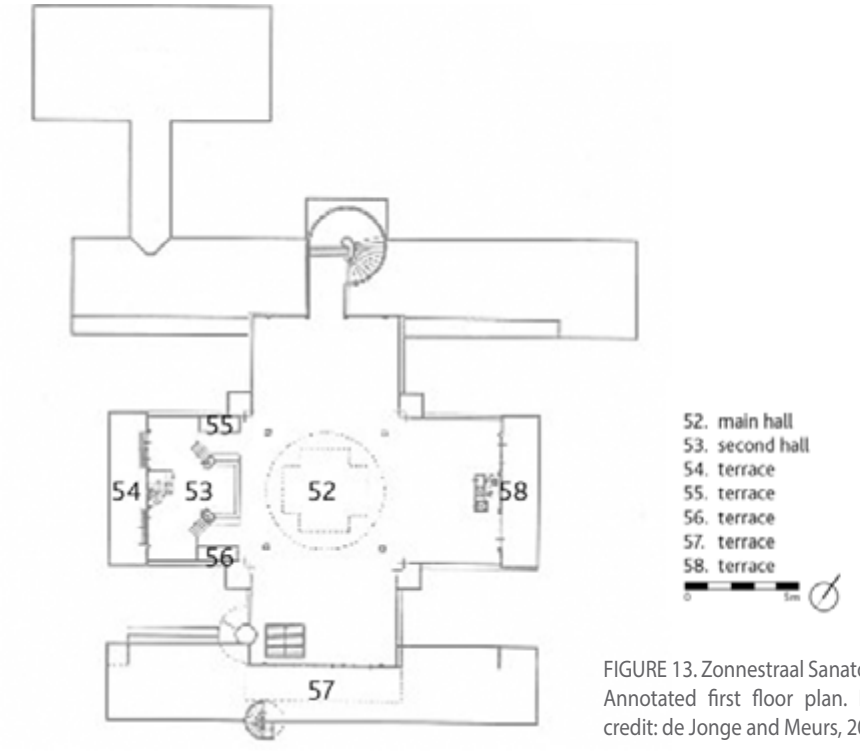


FIGURE 13. Zonnestraal Sanatorium: Annotated first floor plan. Image credit: de Jonge and Meurs, 2010.

to nature is surfaced by this project and is executed through separating pavilions in order to move people around the landscape.

The unique demands made on the institution that provides health care

A rapid rise in understanding of medicine affected health care facilities in many small ways but most interesting in terms of architecture was the discovery of germs, radically changing the understanding of the causes of infection and disease transmission. The healing qualities of natural light and ventilation advocated by Florence Nightingale and Dr Tenon were finally understood. This resulted firstly in the separation of patients with different diseases. Zonnestraal is an extreme example of separation intended to be solely for the recovery of TB. Concurrently natural light and air as treatment was widely adopted. These ideas led to the pavilion typology: Multiple narrow buildings linked with perpendicular corridors. This form has dominated the formal typology of health care until today (Costeira, 2014) and is still used today because the narrow floor plates encouraged cross-ventilation and allowed light to penetrate deep into the spaces.

Noteworthy here is that even though the pavilion typology had been built in neoclassical styles before, Zonnestraal was met with disappointment by the users. This was due to the perception that grand neoclassical buildings were for the rich and when viewed concurrently with the advent of unions, modern hospitals were initially viewed badly. Institutional architecture was expected, something that more resembled a palace or a citadel.

Institution as platform

Zonnestraal was an estate made up of many ancillary functions intended to facilitate recovery from TB and the return to society to 'healthier' jobs as well as occupational therapy and work spaces. To this end five workshops were designed (de Jonge and Meurs, 2010). Workshops for carpentry, furniture making, and a forge were situated some way from the main buildings. So the sanatorium become a platform for developing as members of society and not only the repair broken bodies.

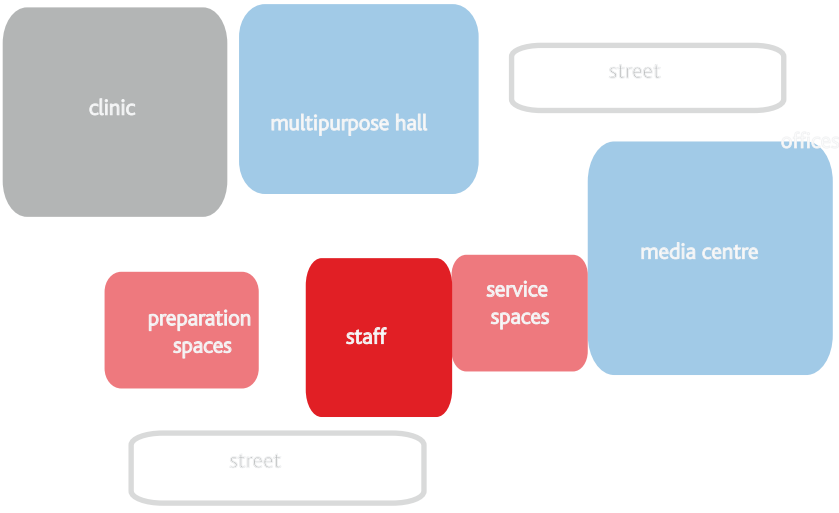


FIGURE 14. Ubuntu Centre: Diagram showing spatial arrangement. Red indicating staff spaces, pink indicating service spaces and grey showing medical spaces and blue indicating civic functions.

FIGURE 15. Ubuntu Centre: View facing a southerly direction from Qeqe Street. Image credit: Stringio.

Case study 3 - Ubuntu Centre: 1990-2020 Contemporary South Africa

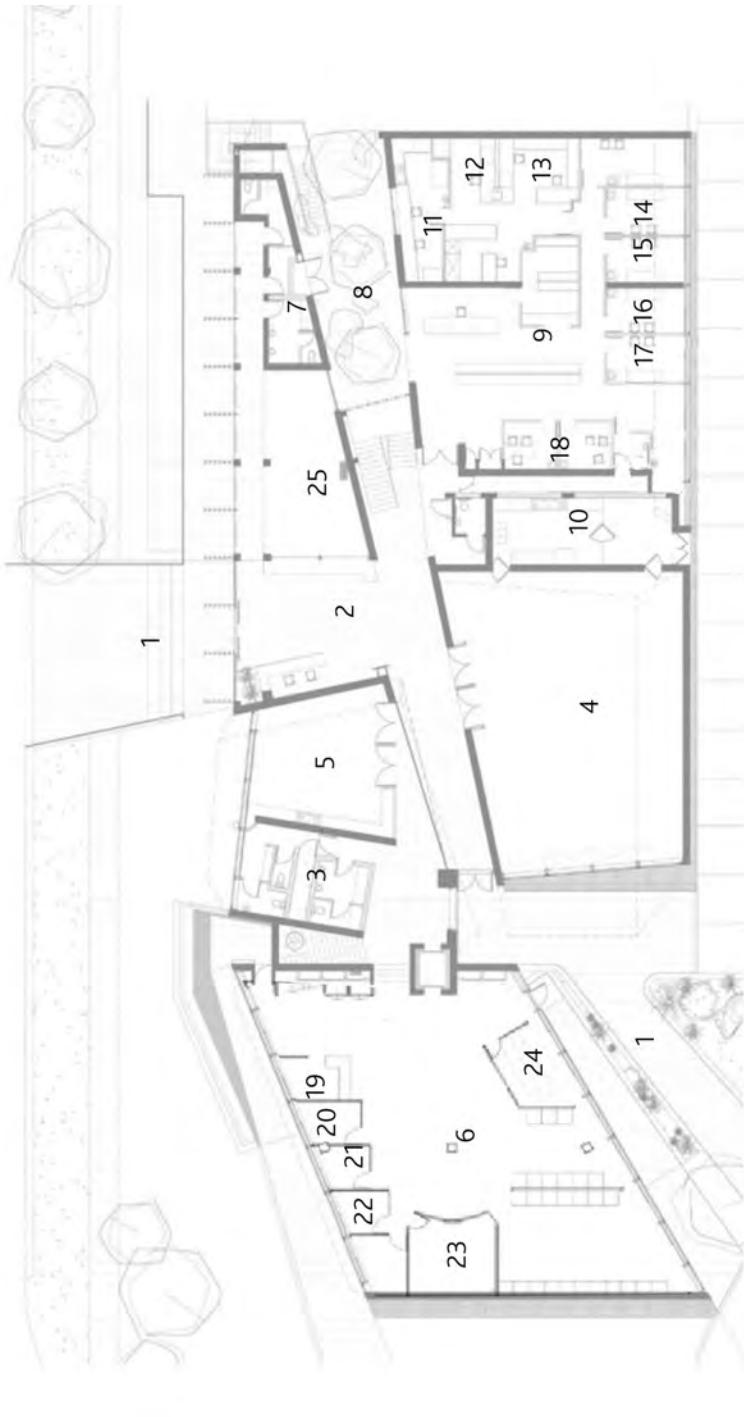
The Ubuntu centre was designed by Field Architects in 2011 and was funded by international NGO Ubuntu Trust and by local community representatives. It functions as a community centre and HIV/TB clinic. Although it does include an HIV and TB clinic, programmes include knowledge commons, a multi-purpose hall and a rooftop garden in order to normalise the process of seeking treatment. The idea that anyone can and should be able to enter is radically different from a public health care facility. Not because it is not freely accessible but because it is actively inviting both the healthy and the sick inside. The attitude of the NGO is also different from the 'stateliness' of a facility provided by the government. It is only by comparing Ubuntu to the other clinics that shows time and time again how public facilities set themselves 'above' the community rather than in it.

Another way that Ubuntu integrates itself into the community is physiologically. A post office, that was perceived as symbol of Apartheid, was demolished to make way for the project and because the community was actively involved during the design process they felt a sense of ownership (Findley, 2011).

The institution as a product of society

Ubuntu raises an interesting point with regards to institution and society. The lack of architectural clarity and community estrangement in a vast number of public clinics is avoidable through clever architecture. Increasingly complex socio-cultural structures in combination with exponential medical advancement have often resulted in health care facilities lacking architectural clarity (Costeira, 2014) and social identity therefore lacking acceptance.

This is not the case with the Ubuntu Centre. It demonstrates rare architectural legibility as well as a culturally sensitive stylistic approach that moulds well to the socio-cultural custom of our time. In order to aid legibility, functional spaces are articulated through two storey high in-situ concrete forms that are glazed on the open ends. The architect stated that the openness was intended to make the structure feel "welcome to all" and that the faces were a metaphor for people caring for each other because the plates support one another (Findley. 2011). The glazing is protected from harm and from the



2. main circulation
3. restrooms
4. community thea
multipurpose ha
5. staff room
6. group study
7. computer labs
8. courtyard
9. waiting area
10. kitchen
11. consulting room
19. reception
20. quiet rooms
25. waiting area

FIGURE 16. Ubuntu Centre: Annotated ground floor plan. Image credit: Field Architects.

sun by locally sourced gum-pole “Izibonda” that was intended to help it to identify culturally to the community. Glass façades are often very vulnerable and the "Izibonda" screens are an elegant solution.

The unique demands made on the institution that provides health care

At the Ubuntu Centre HIV and Tuberculosis have been the focus of the clinical offerings. Patients arrive at the centre without having made an appointment and the treatment does not facilitate “hospitalisation“. Serious cases are referred to the closest government clinic. Treatment is meant to take less than an hour and the waiting area overlooks the courtyard in which the children that have come along play.

Institution as platform

What is interesting about the Ubuntu centre is that it breaks the mould of what a facility that provides health care services could be supported by. Although it is important to remember that the agency of NGO was the major cause of this shift, the effect of combining services should be considered regardless of managing agency.

The function of the building reflects the programmes that the fund offer: prenatal and child health care, HIV testing, counselling, treatment for mothers, along with initiatives such as after-school programmes, exam-study sessions, university scholarships and an array of other counselling services and a multi-purpose space and library. Broadening the view of a health centre from a place that treats illness to one that educates, promotes health and enlivens the civic experience. A garden sits a top the entrance mass and its fruit and vegetables are used to complement feeding schemes for school children in the area.

Upon arrival the effect of the agency and combination of services is most evident in how circulation has been conceptualised. The entrances are strategically placed so that people can access from both streets, this creates a different, freer mediation to the public sphere. A singular central wide passage leads to all the programmes - instead of a generic waiting room or a courtyard - this in some ways makes it a more subtle way to regulate access to each of the functions.

Rather than being fenced in or secluded this design tries to sit on the site with only its own edges to protect itself. The main waiting area surveys the street from behind fold up shutters - depending on the time of day the shutters are often completely raised, opening the entire face to the public. This form of peer surveillance is very effective and acts as a social contract which is easier to enforce.

Management have a space to themselves situated toward the front of the building. In comparison to their other stations that man the main entrance - this one subtly surveys the main circulation area because it means staff will have to pass through and not because they have direct sight lines.

Conclusion

It has been acknowledged that the individual is vulnerable when dealing with an institution - acutely so when an emotive issue such as health and well-being collides with the specificities of scientific medical treatment. The notion that societies unsatisfactorily impact on the institution and the resulting health care are in some ways ameliorated by the case studies in the following ways.

In the case of Browne's, spirituality reconnects the institution with the individual. Which in some ways is similar to the vast majority of health care centres in South Africa today (and indeed the world), turning its back on its surroundings. Creating a microcosm in which the cause of problems are not properly understood, but treatment is doled out to the best of our ability.

Zonnestraal included ancillary functions in order to rehabilitate and facilitate patients rejoining society.

Lastly the Ubuntu Centre integrates itself physically into the fabric of the community through including a wider variety of programmes.

My design strategy

-Facilitate hybridism like Zonnestraal which provides programmes that previously were not associated with recovery within the same vicinity.

-Embody hybridism through which the user field is undefined, and including programmes that draw a varying clientele, like the Ubuntu Centre. This positively affects the public perception of health care and promotes an inclusive community.

FIGURE 17. Community meeting to discuss National Health Insurance 20 February 2016. Image credit: Peoples Health Movement.

SECTION 03: HEALTH CARE POLICY IN SOUTH AFRICA

03

So far, this dissertation has explored one approach to define a conceptual strategy that aims to stitch together the divide between institution and community. This approach was theoretical (section 2).

This section focuses on an analogous fissure (that separates institution and community) which health care policy in South Africa presents. This section is made up of two parts. The first part will discuss the mainstream types of health care, namely private and public. Thereafter the tiered structure of public health care will be examined more closely, with an emphasis on primary health care.

Mainstream health care in South Africa

The impact of society on institutions

Private health care

Post 1994 the structure of the South African health system has consisted of a private health sector and public health sector. The private sector is made up of '*generalist*' or 'specialist' practitioners, supported through a network of private hospitals (Gilson L & McIntyre D, 2007) and commercial pharmacies. The sector is funded primarily through medical aid and out-of pocket payments. Traditional healers are theoretically included in the private sphere but work in less institutionalised spaces and rely nearly completely on out-of-pocket payments (Gilson L & McIntyre D, 2007).

Public health care

The public sector is made up of a three-tier system involving national, provincial and local government and is mainly "*funded from national taxes, with a small contribution from local government revenue and user fees*" (Gilson L & McIntyre D, 2007). The South African Department of Health is responsible for setting and evaluating norms and standards that stipulate the minimum baseline of care (Department of Health [DoH], 2001). Whereas provincial and local governments are responsible for the roll-out and management of facilities in conjunction with the Department for Public Works (DoH, 2011). This takes the form of District Health Service (DHS) in the Western Cape (Government of the Western Cape[GWC],2006).

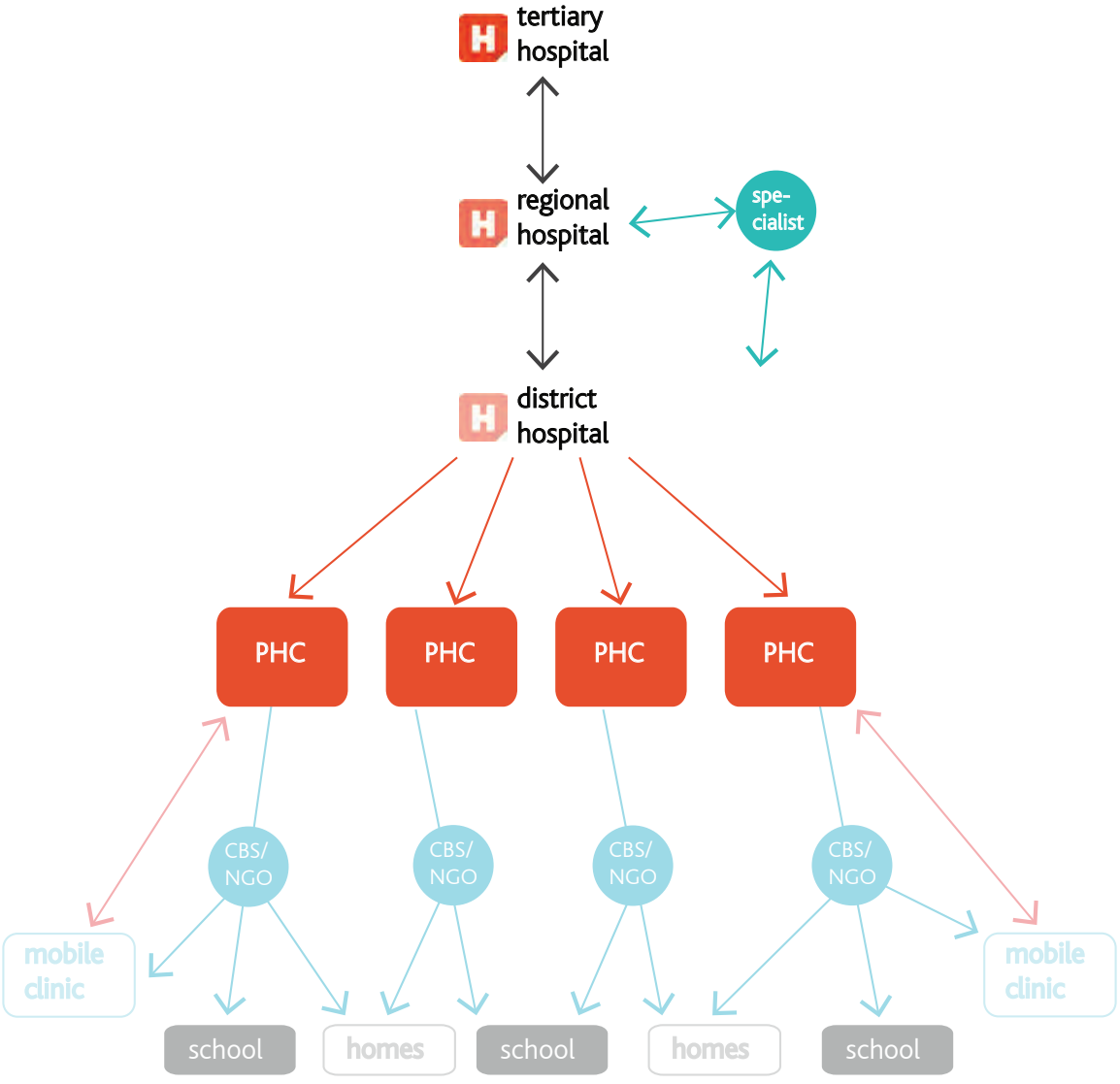


FIGURE 18. Diagram showing hierarchical structure of South African health care with arrows indicating relationships. The referral system works from bottom to top, patients required to start from the bottom (PHC: Primary Health Centres).

Tertiary

Tertiary care works at a metro or even provincial scale. Tertiary hospitals are central, large complex institutions staffed by highly skilled and specialised individuals. They tend to be the centres of high level research and are therefore linked to teaching and academia. Patients travel long distances to receive specialised care at tertiary facilities. In Cape Town these are Groote Schuur Hospital (Observatory), Red Cross War Memorial Children's Hospital (Rondebosch) and Tygerberg Hospital (Parow).

Secondary

Secondary institutions function on a district scale. Secondary hospitals are smaller than tertiary care centres and include smaller if not fewer departments (Torrey, 2016). According to the Western Cape Department of Health, secondary hospitals include both specialised hospitals like Valkenberg Hospital (Pinelands) and district hospitals like Mitchell's Plain.

Primary

Primary health care is delivered within the auspices of provincial government. Primary health care focuses on basic care, with a strong focus on wellness and prevention. (London L, Dudley L & Vallabhjee K, 2013), and (Bam, Marcus, Hugo, Kinkel, 2013). In conjunction with preventative measures primary health care acts as first ports of call for new symptoms and up to mid level trauma cases as well as to coordinate the continued care of chronic patients (Torrey, 2016). Practitioners tend to be generalised although there are some primary care specialities like maternity and obstetrics, paediatrics and infectious diseases.

Clinics and CHC's rarely include 24 hour Emergency Units and therefore operate only between the hours of 8am and 4pm. On the other hand it is common for Day Hospitals to have 24 hour Emergency Units as well as other services, such as pharmacies, which often stay open until 9pm. On the whole the remainder of the Day Hospital will be closed overnight.

I chose to focus my dissertation on primary health care because it functions at a community scale.

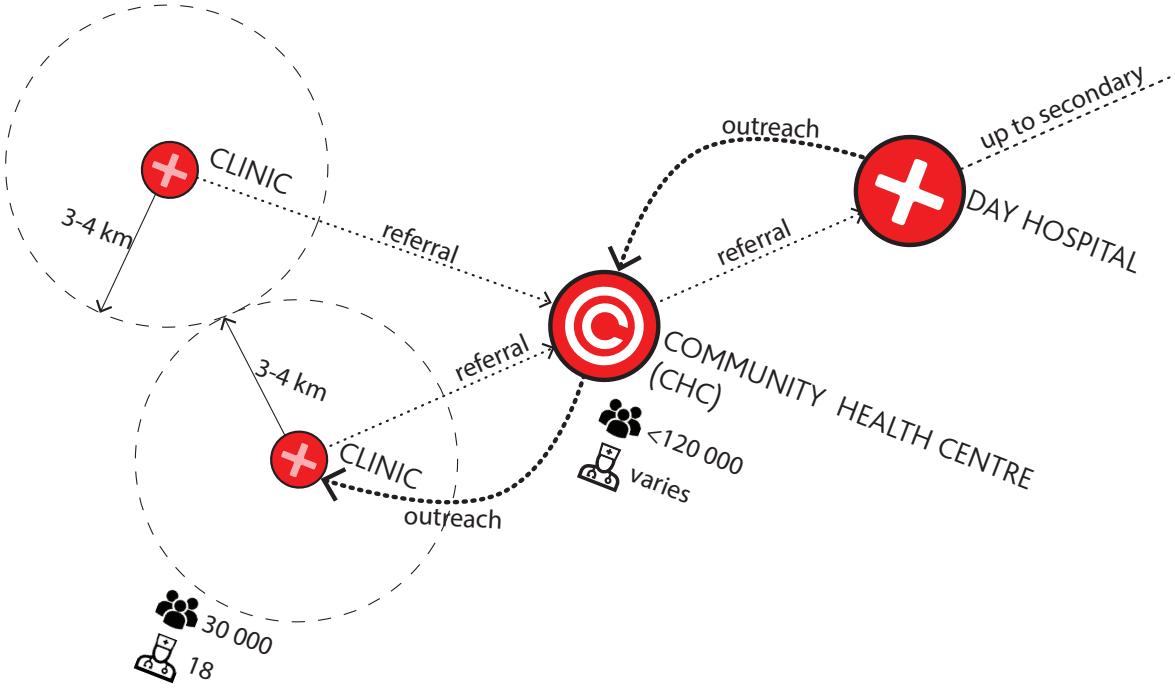


FIGURE 19. Within the primary health care system there is a facility hierarchy. Clinics are the most embedded into communities, intended to serve populations of around thirty thousand (30 000) (GWC,2006:8). Policy states clinics be within walking distance (three to four kilometres) from any given point, although this has not become a reality. To ensure a continuum of care and a referral ladder, up to four clinics are linked to a Community Health Centre (CHC) which is in turn linked to a day hospital.(GWC,2006:8)

Support to mainstream health care in South Africa

Unique demands of health care on the institution

Norms and Standards set out in 2001 by the National Department of Health stipulated fourteen strategies to deliver efficient and equitable primary health care (London L, Dudley L & Vallabhjee K, 2013). Requirements were linked to:

1. Medical care

Specifically equipment, medicines & supply, competence of health staff and referral;

2. Operational management

These are records, leadership and planning, staff, finance, evaluation, transport and communication.

Most importantly, in terms of my dissertation, is the focus on

3. Community involvement

Community involvement comprises of aspects of *general support*, *patient education*, *community & home based activity*, *collaboration*)

The community involvement aspect of effective health care delivery is undertaken by non-profit organisations (NPO), non-government organisations (NGO), community based organisations (CBO) or community based services (CBS). For the purposes of this dissertation it will be called "*community organisation*". As stated above, community involvement includes general support, patient education, community & home based activity and collaboration (London L, Dudley L & Vallabhjee K, 2013). How these services manifest can differ according to the area or the ailment of focus.

HIV/AIDS
-Staff help in meeting needs of the individual and family - preventing problems assisting in care and knowing when and where to seek assistance.
-Staff inform and train family and community groups in home-based care.
-Staff seek to de-stigmatise HIV disease in community through education.
-Staff assist in integrating home based care services from industry, traditional organisations, church, NGO and welfare.
ischaemic heart disease
homicide violence
stroke
tuberculosis
-Active case finding is done on all chronic cough patients & TB contacts through home visits.
-In exceptional cases some MDR cases are allowed recieve guaranteed intensive care treatment by DOT at community level.
-Staff assist in integrating home based care services from industry, traditional organisations, church, NGO and welfare.
communicable diseases
-Staff collaborate with other departments like Environmental health, Education and other sections within health like MCHW and Health Promotion.
general support
education
collaboration
community & home based activity
sexual health
-Staff Liaise with traditional healers about the care of STDs.
-Staff collaborate with different departments such as schools, churches, traditional healers and community organisations implementing health promotion activities leading to the prevention of STD.
emergency & trauma
-The clinic staff collaborate with the Police & Social Welfare Departments.
dentistry & oral health
-School oral health programmes consist of oral health education, tooth brushing and fluoride mouth rinsing and ART.
respiratory disease
-Conduct educational campaigns in school and community during pollen grain seasons
-Staff collaborate with other departments like Environmental health, Education and other sectors to educate and support sufferers and their caretakers.
women's reproductive health
-Staff conduct regular home visits using a home visit checklist.
-Clinic staff collaborate with clinic health committee, the civic organisations and workplaces in the catchment area to enhance health promotion.
chronic diseases and geriatrics
-Staff work with any district NGO and CBS dealing with chronic conditions.
-After analysis of the chronic disease register attempts are made to provide education in the community on modifiable risk factors, healthy food plans, less salt (iodised), weight control, sport and exercise, substance abuse especially alcohol, smoke (tobacco, smoke in houses), UV protection for albinos, early recognition of symptoms and periodic check-ups.
youth health
-Clinic staff collaborate with social workers, NGOs, CBOs, creches and other sectors to improve child health.
lifestyle diseases
immunisation
-Communities participate in campaigns and national health days.
rehabilitation
-Refer patients to community monitoring programmes, mobilise community support, where indicated by the patients' social circumstances to ensure compliance with treatment.
-Home visits on patients to gain insight into their social situation.
-Devise home based rehabilitation programmes for people requiring extended rehabilitation, in collaboration with the disabled person, his family, and/or community.

FIGURE 20 depicts the interdisciplinary relationships between the four aspects of community involvement, and how they endeavour to supplement primary health care challenges. The treatment groups are listed in the '*Primary Health care Package for South Africa*' (Pietersen, 2001) and are included as such on the left in grey.

For example;


HIV and Aids

Intervention would include the following;


General Support;

"Staff help in meeting needs of the individual and family [affected by HIV/Aids] - preventing problems assisting in care and knowing when and where to seek assistance"


Patient Education;

"Staff seek to de-stigmatise HIV disease in community through education"


Community & Home Based Activity;

"Staff inform and train family and community groups in home-based care."


As well as Collaboration

"Staff assist in integrating home based care services from industry, traditional organisations, church, NGO and welfare"

FIGURE 20. Diagram showing how involved the major primary health care aspects of care are with the four principles of community involvement. Some details regarding specific roles for primary health care themes is included. The circles at the top show the six major causes of death. Of the bottom row the smallest circles denote routine care, often more preventative than curative whereas the medium size indicates the conditions are more life threatening. (GWC,2006)

FIGURE 21. Symphony Way Community Health Centre (CHC). This CHC boasts large gathering spaces as well as large meeting rooms where events such as church services or plays are held. But because Symphony Way CHC lacks office space for community organisations, they only come in for events and have no permanent presence on site. This limits the efficacy and continuity of the services rendered.

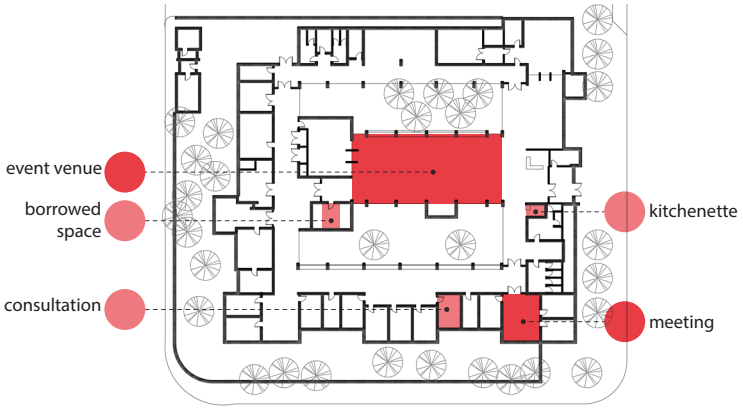


FIGURE 22. Shows Grassy Park Clinic. There are currently five community organisations working with this clinic. As shown on the plan, these community organisations inhabit some spaces permanently: the kitchenette close to the entrance (offering coffee and information as patients arrive); and a filing cabinet in the main administration office. Community organisations hold events in the courtyard and in the meeting rooms.

Even though policy dictates that all types of primary health care facilities have a strong link with the community, civic organisations, schools and workplaces in the catchment area, (Department of Health [DoH], 2001) this has proved difficult to implement and maintain on the ground. According to Dr. Ras, former family physician at Delft Day Hospital, there are many institutional reasons why interdisciplinary teams have been ineffective in the past, of which the most pivotal reason is the insufficient space for Community Organisations in clinics to set themselves up properly (personal communication 2016, March 29).

I would like to refer to FIGURE 20, FIGURE 21 and FIGURE 23, that show to what limited extent community organisations have been able to inhabit existing primary health care facilities.

FIGURE 23 shows Delft Day Hospital which is the site of my dissertation. Three community organisations work from here, namely:

Mothers 2 Mothers, counsel new mothers, and keep track of those who miss appointments. Mothers 2 Mothers currently inhabits six square metre room without a window between the Neonatal rooms and Maternity and Obstetrics suite.

TASK is a research organisation that inhabits a temporary structure behind the day hospital. TASK sees a group of patients on a regular basis in order to research TB in the area. Their spaces include both consultation rooms and administrative spaces. My contact with TASK as well as security guards brought to light that they found security to be an issue: being so far away from the main entrance means that "people can get up to no good". This highlights both the problem of separating points of access at the expense of security and the missed opportunity for passive surveillance.

FIGURE 24. Afrika Tikkun gazebo set up outside of the Delft South Library in September 2016. Offering free blood pressure readings and BMI calculations.

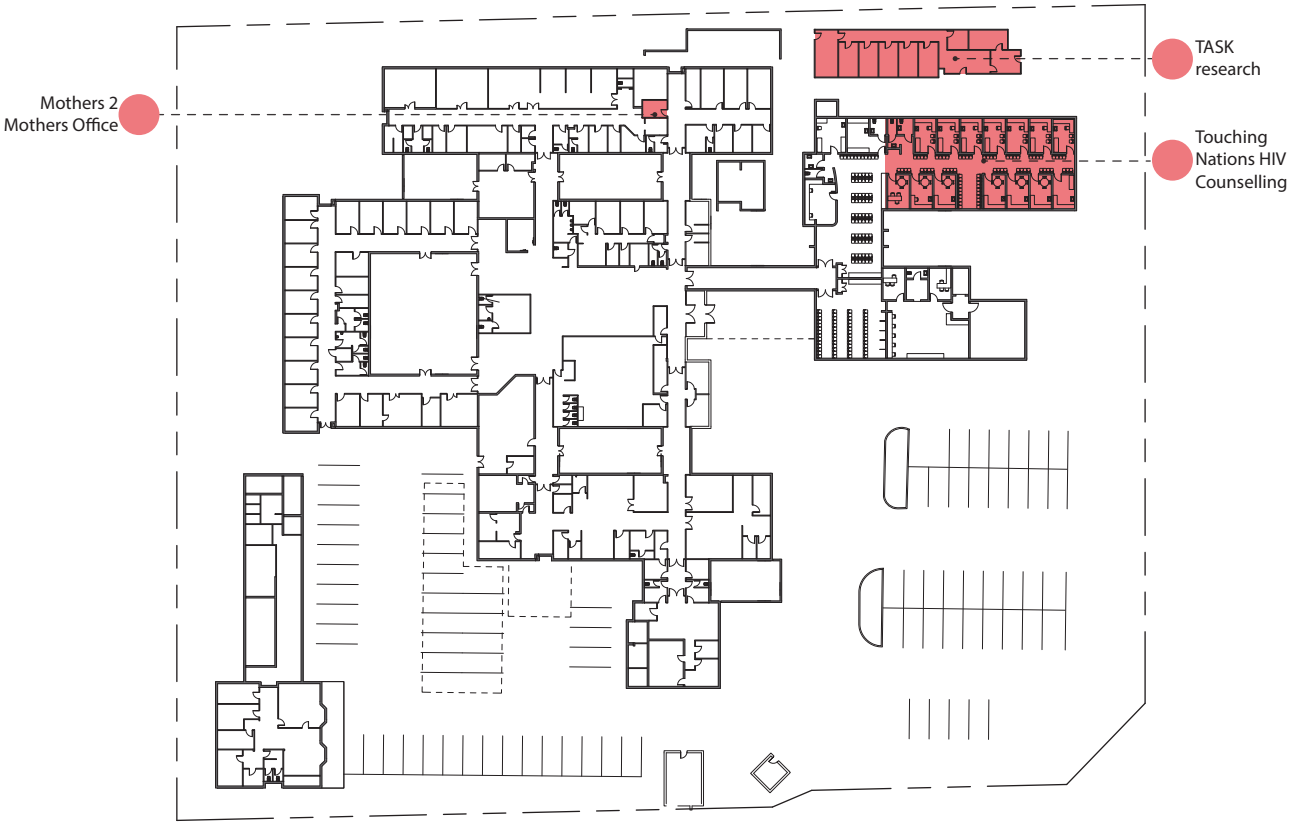


FIGURE 23. Ground floor plan of Delft Day Hospital indicating the areas in which permanent community organisations work from.

Touching Nations currently runs all of Delft Day Hospitals' HIV testing and counselling out of the new communicable disease suite.

Dr. Ras, former family physician at Delft Day Hospital, expressed a wish to work with more community organisations (personal communication 2016, March 29), but due to lack of space thought that it would be impossible to do so on a permanent basis. This reduces contact time with other specialised community organisations to an event basis, space for which Delft Day Hospital also lacks.

Without accessible and legible space for community organisations, patients are rarely able to take advantage of their services. One finds that instead of community organisations facilitating the connection between clinic and community, they instead inhabit left over spaces in existing clinics; or share offices with medical staff; or, erect containers in leftover spaces outside of the clinic. Exacerbating issues rather than fostering mutual benefit.

It would seem that spaces for community involvement have not been provided for in Department of Public works programme briefs (schedule of services) for new clinics and this phenomenon is more prevalent in clinics that pre-date 1994.

The lack of architectural and spatial clarity in housing community organisations negates the potential of stitching the fissure between institution and community in a very physical sense. It makes it nearly impossible to fulfil the connecting aspirations of policy and exacerbates poor interdisciplinary cooperation.

Creating a more meaningful interface between community and health care institution is the primary goal of this dissertation and illustrates the need and potential to presence Community Organisations spatially as a mediator between community and the health care institution.

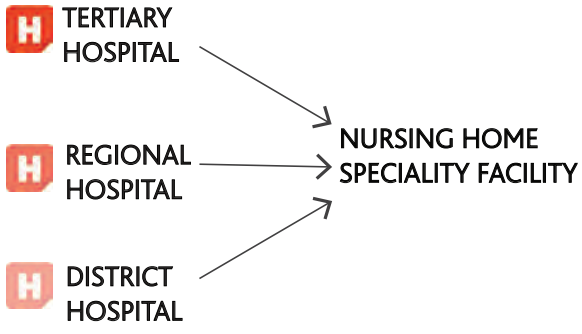


FIGURE 25. Diagram showing the after care facilities available to patients at higher tiers of health care.

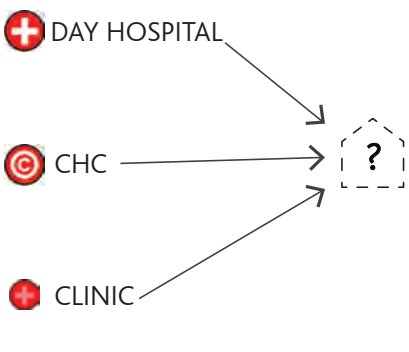


FIGURE 26. Diagram showing the after care facilities available to patients at primary health care facilities.

SECTION 04:
CONTINUUM OF CARE

04

So far, this dissertation has explored two approaches to define a conceptual strategy that aims to stitch together the divide between institution and community. These approaches are theoretical (section 2); and policy (section 3).

This section focuses on an analogous fissure (that separates institution and community) which the continuum of health care presents.

There are various facilities that endeavour to create a holistic network of health services outside of the institutional hierarchy of public health care.

Metro scale public health care is supplemented by step-down facilities, like rehabilitation centres, hospices and old age homes, which are commonly run by NGOs or businesses.

Step-down facilities support secondary or tertiary level public institutions through providing after-care and accommodation to patients before they are ready to go home. These facilities are important because they are cheaper to build, maintain and run. Another reason for their importance is because secondary and tertiary facilities operate at a metro or even provincial scale; patients have often travelled long distances to receive highly specialised medical care at a tertiary facility and require medically competent supervision during the initial stages of recovery that would otherwise be incredibly expensive if it were to be provided at the treating facility.

Although step-down NGOs are similar to community organisations in that their funding comes both from the government and private investment/charity, they do differ in scale at which they operate namely that community organisations (as the name suggests) function at primary health care level.

Because primary health care functions at a community scale and does not provide highly specialised medical care, it is logical that the home has been conceptualised as the 'step-down' facility for primary care. In affluent areas this is generally accepted as good practice as patients recover well in their own environments surrounded by a family support structure (Visage & Schneider, 2014).

Delft housing studies

The examples show two housing types that are most common in the area and were compiled in 2015 from actual visits.

Block Housing

N2 Gateway Housing

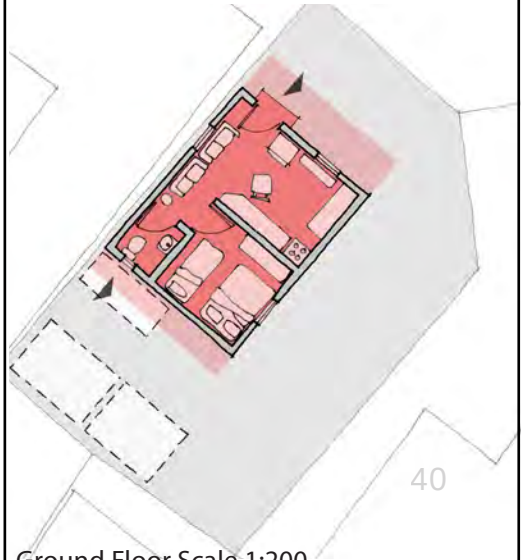
Overview

Houses made from cement *'blocks'* were amongst the earliest typologies of housing established in Delft in the 80's and consisted of one room, 4.7m x 5.9m (27.7m^2) in size, with a toilet and a water point directly in front of the front door. Any and all internal partitions have been erected by the owner.

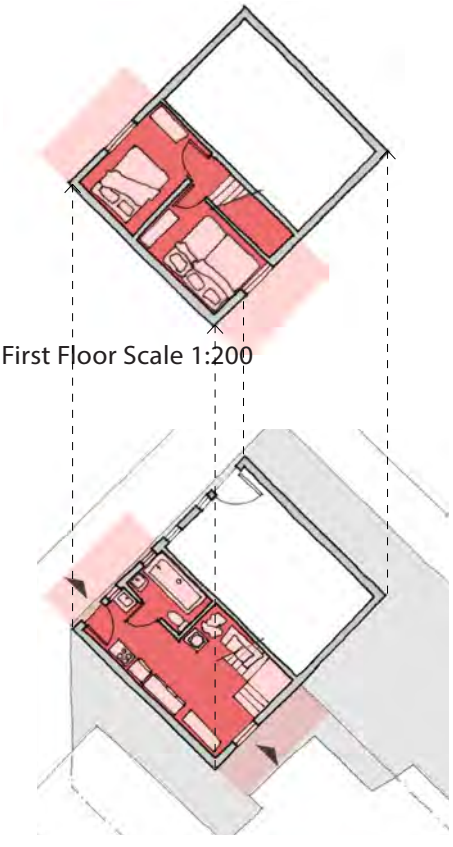
The N2 Gateway housing project broke ground in Delft in 2005. A typical example of this typology is the double storey duplex units. Each unit measures 3.2m x 6m (38.5m^2) and was originally provided with a fully fitted bathroom and two separated bedrooms.

Plans

Considering the plans in conjunction with family sizes, it becomes illustrates in what close quarters families live in Delft.



Ground Floor Scale 1:200



First Floor Scale 1:200

Ground Floor Scale 1:200

FIGURE 27. Housing Studies: Block House and N2 Gateway, assorted images and drawings. Image Credit: Delft Studio 2015.

Block Houses have an under roof structure height of 2.75m.

Floor to ceiling heights of N2 Gateway houses measure up to 2.9m.

Section

Internal spaces have low ceiling heights which exacerbate the lack of ventilation

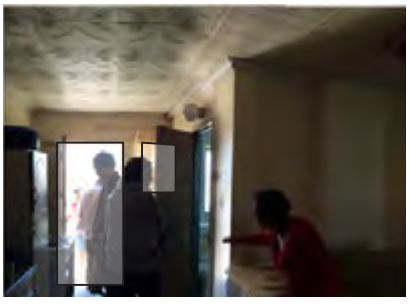
Peter is a security guard and lives with his wife and 4 kids, who are all school going. Peter and wife also run a backyard chicken business and Peter's wife looks after a neighbour's child during the day.

Thembela lives in a two bedroom N2 gateway house. She shares one room with her child and sister and the other room is rented by a woman and her child.

Family Support Structure

Many families in Delft are not nuclear or constant. Although this puts pressure on the spaces families share, there are psychological advantages to having an established support structure

This image illustrates the lack of roof insulation as well as how small window openings are. Safety precautions also often block windows and obstruct ventilation.



This image illustrates how cost saving measures that restricted size and number of windows (one per room) result in dark poorly ventilated spaces.

This image illustrates how homes are used as an economic generators, sometimes at the expense of health. In this case raising chickens and ducks for sale. Close quarters with animals is not conducive to recovery from TB specifically but could also cause an assortment of infections (Sjøgren, 2012).

This image shows how small and steep the internal stairway is in this unit, this would impair someone who was injured or physically disabled.

Internal Quality of Space

Considering the plans in conjunction with family sizes it becomes illustrates in what close quarters families live in Delft.

As part of the Space of Good Hope research studio I looked to Delft to contextualise what recovering at home might be like.

The following excerpt of our research that formed part of Honours Delft (2015) shows that home in areas like Delft are not conducive to recovery, even though households in Delft do not lack family structure to create a supportive network, homes are small, poorly insulated, ventilated and serviced.

The research provided above with regards to housing aims to substantiate my claim that homes cannot always facilitate recovery. Even though, step-down facilities are established practice on tertiary and secondary levels but these facilities are unheard of at primary health care level. I argue that including a step-down facility at this lowest level of health care will be beneficial for the following reasons:

Firstly it facilitates continuity of treatment at the clinic by fulfilling the gap between treatment and recovery, which is another way that my dissertation could stitch together the fissure between the institution and community.

Secondly, it would complement and strengthen the 24 hour presence that the day hospital already has.

Thirdly, it would be an asset to the community organisations and its use could be negotiated and flexible in terms of management structure, length of stays and whether family members could join the patient.

This makes concrete the idea to hybridise and mediate the experience of institution, although different from the definition of social hybrid proposed in section 2, including a step down facility that would further hybridise programming, by including both treatment on a daily basis as well as long term.

Strategy: step-down facility

This section unpacks what the typology of step-down facility entails.

Within the discourse of "After-Care" or "Step-Down" facilities there are two major streams (Regnier, 1994:vii). Namely, Nursing homes (that are more medicalised) and Assisted Living Facilities (which are more residential in nature). This dissertation proposes that medicalised nursing homes are already present and better suited at secondary or tertiary levels of health care. The residential (often longer term) model of *"Assisted Living"* which is run and overseen by nurses is more appropriate at a primary health care level.

The difference between nursing homes and assisted living

At its heart Assisted Living encourages independence and more resembles residential typologies, that optimizes the physical and psychological independence in residents. Rather than institutional typologies (Regnier, 1994:vii).

Although Assisted Living Facilities encompasses a medical framework, the philosophy is one of personal self-management, seeking ways to allow the person or his or her family to manage a diverse range of health care service on an occasional or ongoing basis.

> "As a housing type [assisted living] fits between congregate housing and skilled nursing care" (Regnier, 1994:1)

The *nursing home* is modelled physically and operationally around the hospital. Its building codes specify wide doors to units and wide corridors for the exiting of patients in beds. Fire safety considerations narrow the range of acceptable wall, floor and ceiling materials and fire detection and monitoring equipment force many decisions that compromise appearance and privacy for the sake of safety. Regulations that specify staff levels are tied to numbers of beds served and the locations of the nurses stations

used to monitor those beds. Efficiency, driven by the desire to minimise required staff, dictates highly centralised plans. Distance maximums of 90 feet from the nurse's station to each resident's entry door require dense double loaded corridor configurations with relatively narrow widths.

A few adjustments to the medical model cannot overcome its appearance as an institution. Residential Assisted Living models recognise that through their design, the size, scale and configuration as a building, creates the feeling of a homelike environment. In these models, residential housing forms the precedent rather than the hospital.

In summary, the character, organisation, and management philosophy of Assisted Living must reinforce its identity as a housing type and not an institutional building type. When Assisted Living is no more than a decorated nursing home, it loses its promise as a viable alternative to institutionalisation. Under these conditions, management's desire to control efficiency and maximise convenience subverts the resident's individual need for privacy, autonomy and independence.(Regnier, 1994:5)

for fewer than 60 residents:

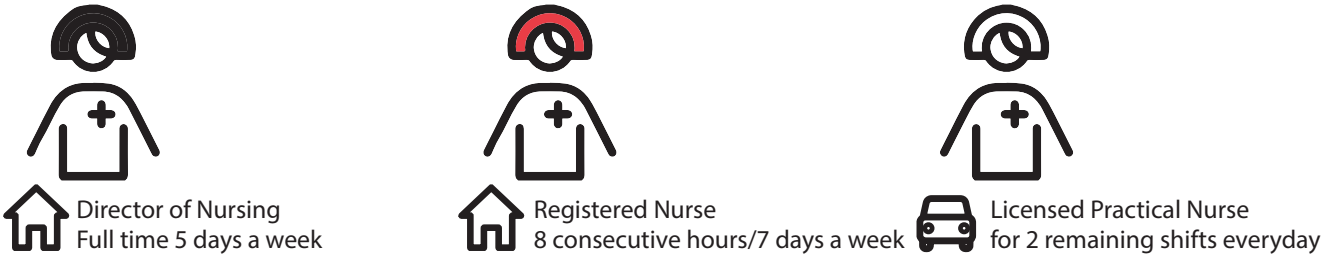


FIGURE 28. Diagram visualising the type, number, hours, living and arrangements of nursing staff required at an assisted living facility with fewer than 60 patients.

Organisational logic

Even though the focus of Assisted Living is to downplay the medical institution there still need to be trained staff on hand in order to handle emergencies. South Africa currently has no standards dictating Assisted Living staff requirements but a search of American and European Standards has identified that there should be at least two trained nurses on call 24 hours a day. Two are live-in and are on call two nights and off two nights. The remaining shifts are filled with staff who live off premises.

Regneir (1994) suggests that patients be grouped in sixes or tens, in single or double flats (ratio 1:1), because smaller groups encourage social interaction. Units can be grouped around shared entrances or living rooms.

Although the composition of living units depends on design, I have decided to follow the "Rosewood" Model whereby 'single' flats tend to act more as bachelors flats and double flats are one bedroom flats that can be shared by a patient and a family member. I reached this decision for two reasons: first, having spent hours at clinics I noticed that it is extremely rare for anyone to be unaccompanied and secondly based on our housing studies family units are extremely close knit. These two points in combination with an interview with a maternity nurse at Delft Day Hospital, who said that it takes a village to raise a child but it also takes a village to recover from a complicated delivery or from interpersonal violence. In some ways this echoes the ideas of linking the community to the institution through support and education about health.

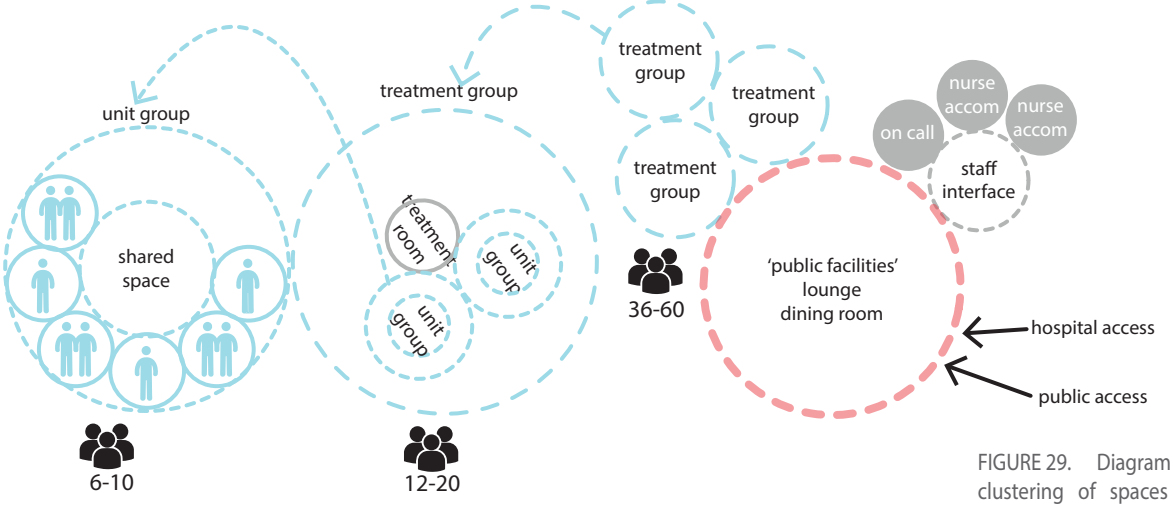


FIGURE 29. Diagram depicting clustering of spaces within the assisted living organisation. Note that blue denotes private to semi private patient spaces, whereas pink denotes public patient space and grey staff space.

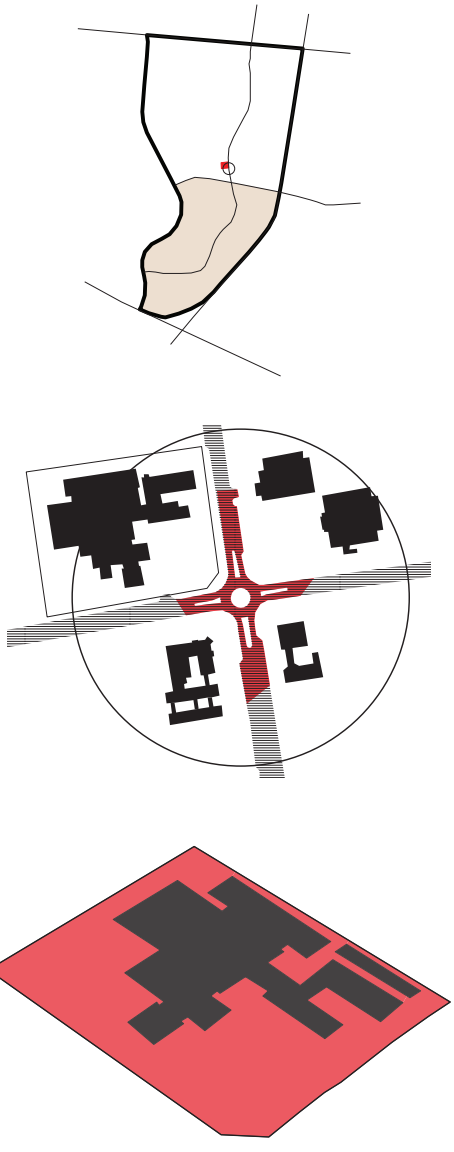


FIGURE 30. Diagrams depicting each of the three reasons to chose Delft Day Hospital. Special note to the transition from macro scale to micro scale.

SECTION 05: PHYSICAL ENVIRONMENT 05

So far, this dissertation has explored three approaches to define a conceptual strategy that aims to stitch together the divide between institution and community. These approaches are theoretical (section 2); policy (section 3); and continuum of care (section 4).

This section focuses on an analogous fissure (that separates institution and community) which the physical site presents.

Site of inquiry: Delft Day Hospital

Delft Day Hospital was chosen for 3 major reasons:

1. The Space of Good Hope Research Studio focusses on Delft South. The Delft Day Hospital is situated less than a kilometre north of Delft South. I can therefore draw on a rich body of research to inform my work.

2. Delft Day Hospital forms part of an established civic node along a vibrant urban armature, namely Main Road.

3. Delft Day Hospital is a prime example of what 'legacy' facilities experience every day in Cape Town, in that similarities in urban and systematic issues can be drawn across the majority of primary health care facilities in Cape Town. I therefore feel that it is representative of the wider context of the health care institutions in the Western Cape.

I would like to discuss and situate Delft Day Hospital on three scales. The first is a macro scale in terms of health care in Cape Town. How Delft and Delft Day Hospital relate to other health care institutions and its similarities to facilities across Delft and the city. The second discussion takes place on an area scale using evidence from the findings of the *Space of Good Hope Research Studio* conducted at UCT in 2016 and *Delft Studio 2015*. This with the aim of situating the civic institution in the life of a community. Lastly Delft Day hospital as a facility will be introduced through a discussion of the problems it faces and subsequent strategies that I would like to take forward.

Delft in terms of health care in Cape Town

In the recent years an effort to make high level care more accessible to wider portions of the population has been undertaken by the Western Cape Health Directive and the Department of Public Works.

Cape Town has two tertiary hospitals, Groote Schuur and Tygerberg, both of which are in historically more affluent areas. Mitchell's Plain Secondary Hospital was built recently and serves the southern districts of Cape Town like Philipi, Gugulethu and Delft.

Delft Day Hospital is part of the Tygerberg sub-district and within 5 minutes on the R300 to Mitchells Plain Secondary Hospital.

Emergency units of differing levels of capacity are spread around the district and ambulances decide where to take patients on a case by case basis. Only non-surgical emergencies can be directed to Delft Day Hospital.

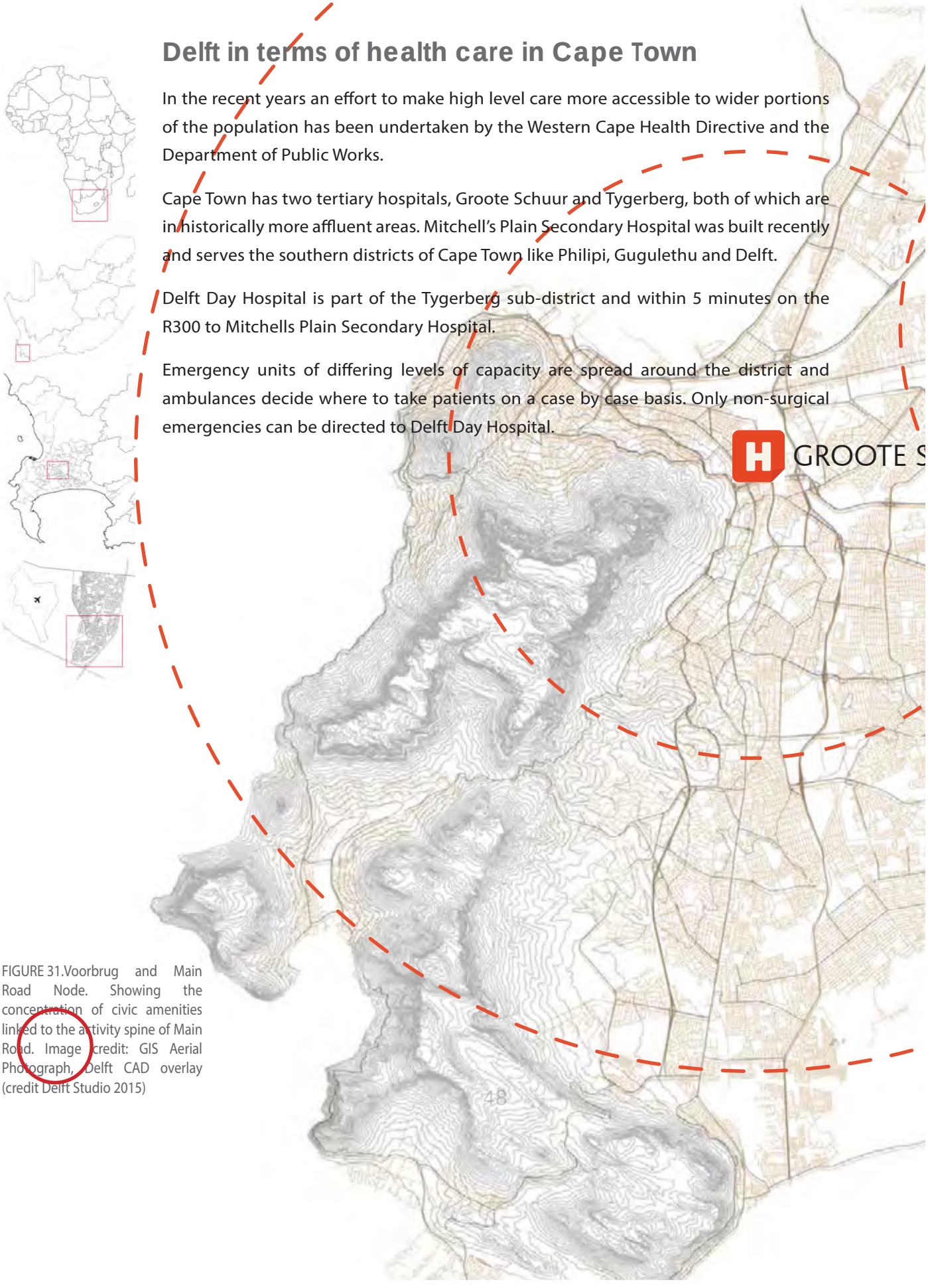
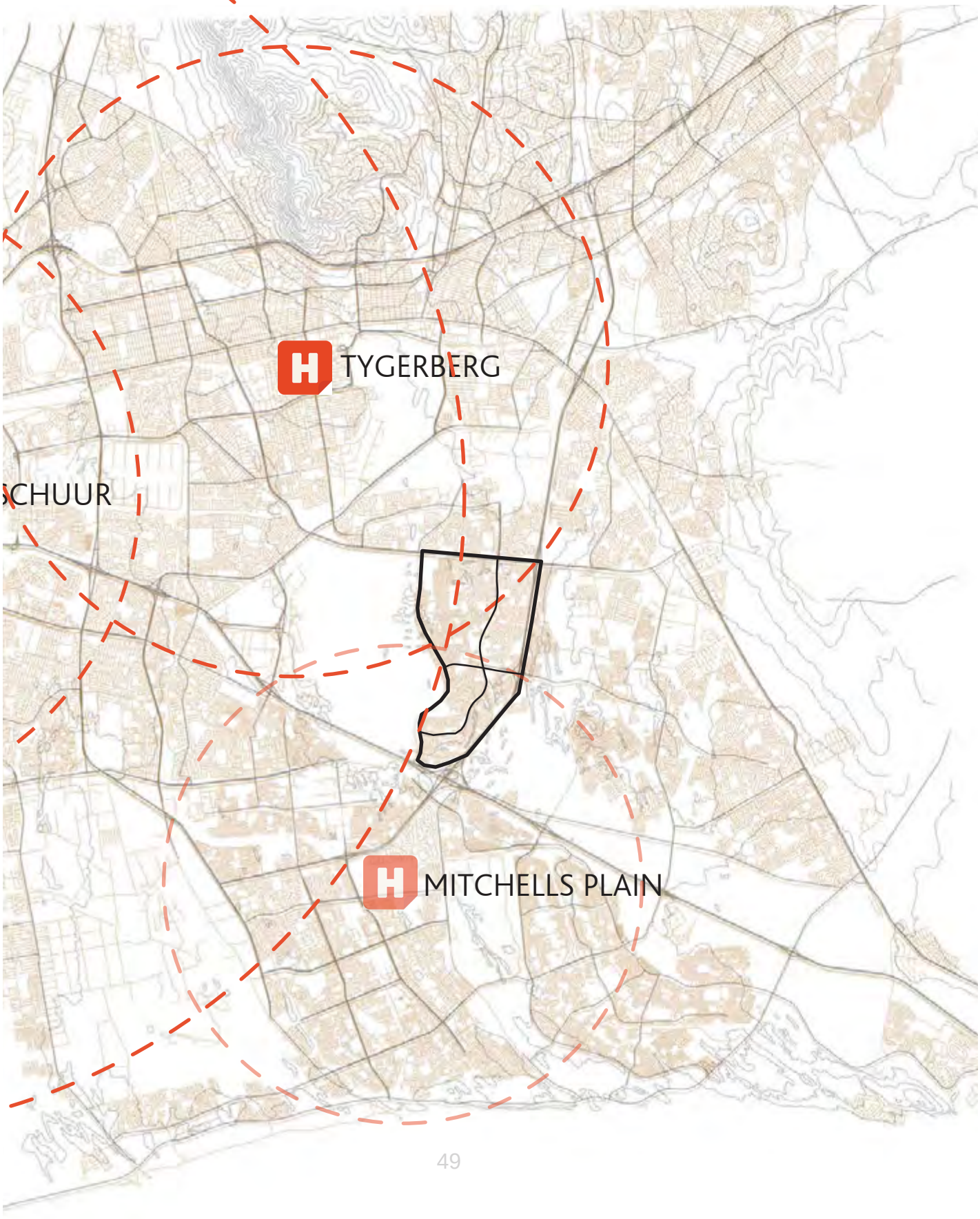


FIGURE 31.Voorbrug and Main Road Node. Showing the concentration of civic amenities linked to the activity spine of Main Road. Image credit: GIS Aerial Photograph, Delft CAD overlay (credit Delft Studio 2015)


TYGERBERG
CHUUR
MITCHELLS PLAIN

It is clear from the diagram that the idealistic aim to space clinics every 6-8km (GWC,2006:8) has clearly not been achieved.

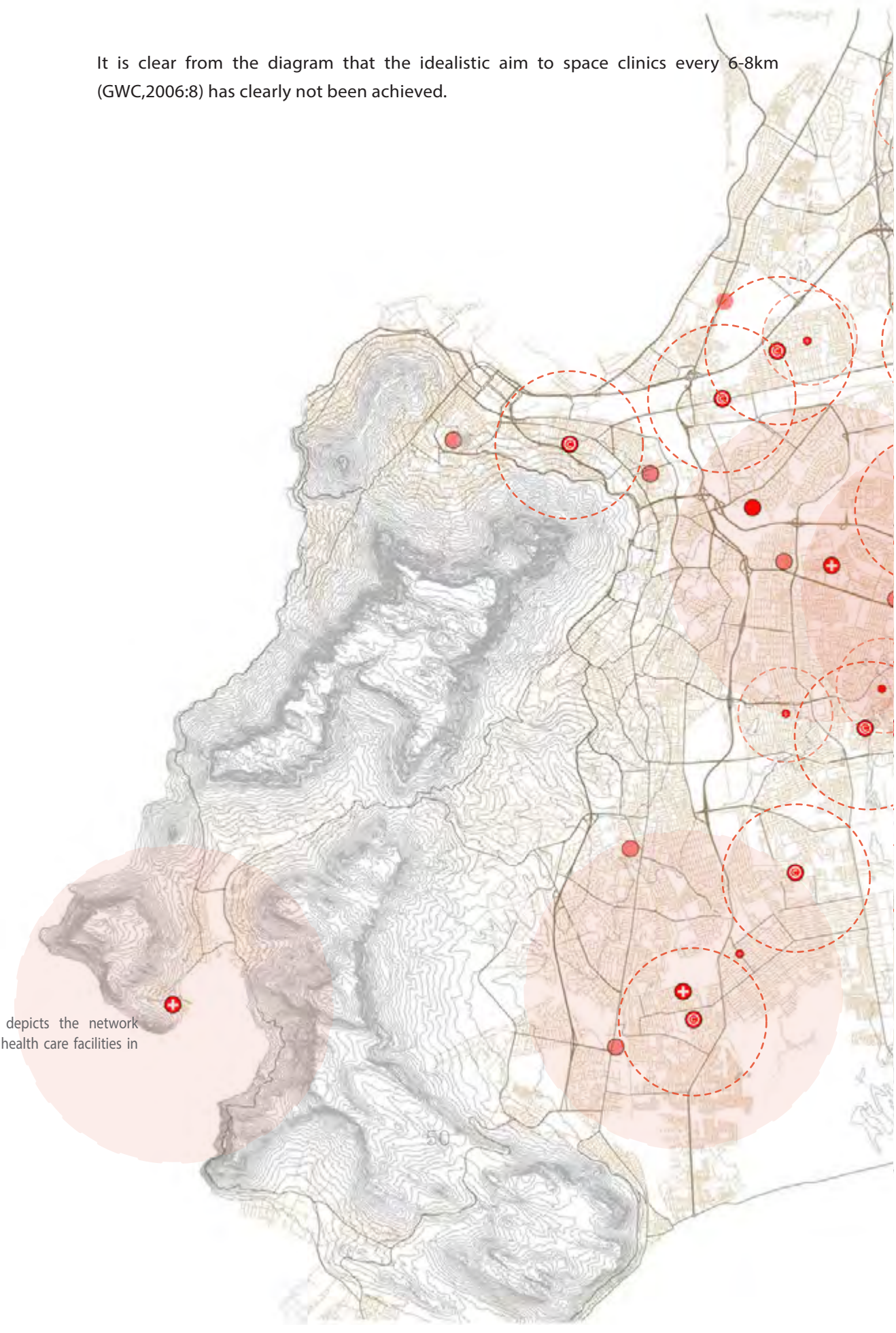
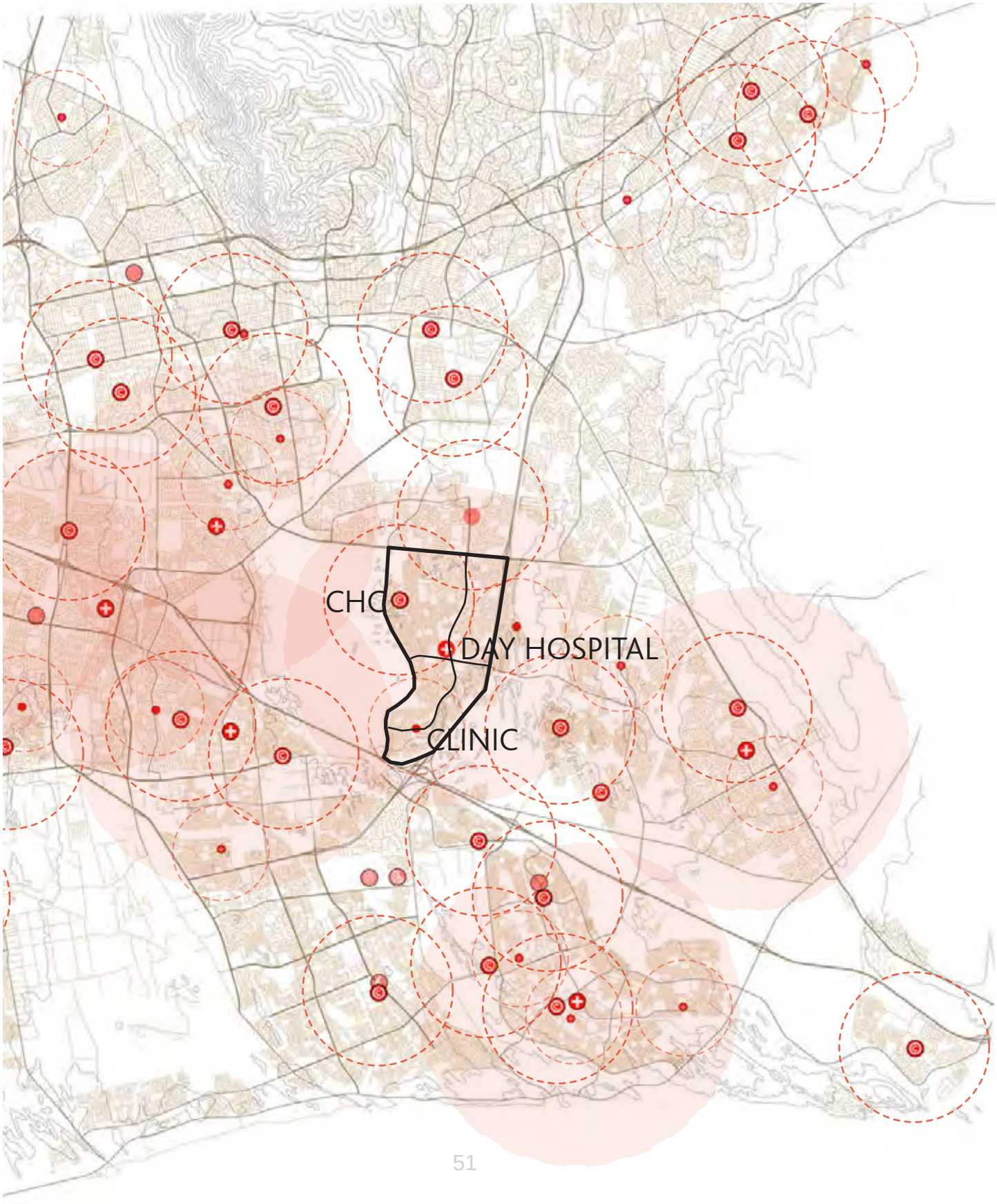
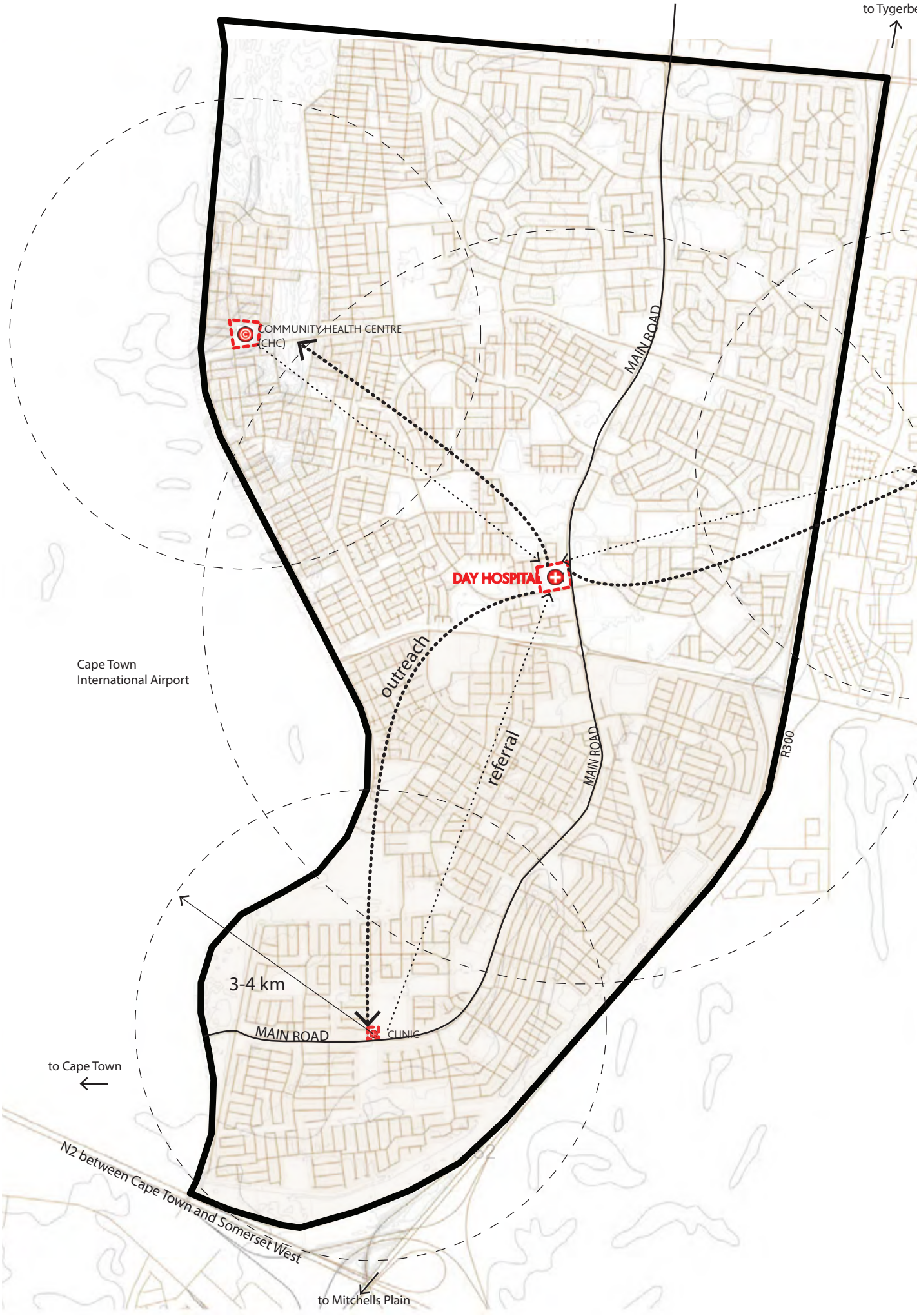


FIGURE 32. depicts the network of primary health care facilities in Cape Town.


CHC
DAY HOSPITAL
CLINIC


to Tygerbe
COMMUNITY HEALTH CENTRE (CHC)
MAIN ROAD
DAY HOSPITAL
Cape Town International Airport
outreach
referral
MAIN ROAD
R300
3-4 km
MAIN ROAD
CLINIC
to Cape Town
N2 between Cape Town and Somerset West
to Mitchells Plain

Delft Day Hospital (DDH) is the highest level primary health care facility in the area, and it therefore has to cope with referrals from Symphony Way CHC, Delft South Clinic and the Wesbank Clinic.

Delft and Delft Day Hospital in terms of Space of Good Hope Research

"Blue Downs - Delft" was originally planned in 1967 by MLH Architects and Planners. Even though the plan was amended to include more detail (specifically for Delft South) in 1995 by the same company, the forming concepts have largely remained the same over time.

Delft Main Road, running North (from the Stellenbosch Arterial) to South (joining Symphony Way), was conceptualised as an activity spine (MLH Architects and Planners, 1967) and has largely come to fruition when compared to peripheral areas in Delft, albeit differently from what the designers imagined (Hutton Squire,2016).

Main Road as a public space is made important though the concentration of **public services**: public transport (buses); shopping; housing; and civic institutions; as well as **informal life**: taxis; backyard housing and informal shopping. The most successful places within Delft have are where both public and private sectors are present, having negotiated an equilibrium where both benefit.

This section will use research from the *Space of Good Hope 2016* and *Delft Studio 2015* to show specifically how civic institutions contribute and build Main Road and by extension the public realm. I will do this first, by outlining Main Road as an armature for macro services such as transport and public institutions. Secondly I will investigate the relationship between institution and the public realm by comparing two nodes (as panned by MLH 1967) in terms of distribution of institutions and their physical interface and these effects on public life; especially through informal shopping and housing.

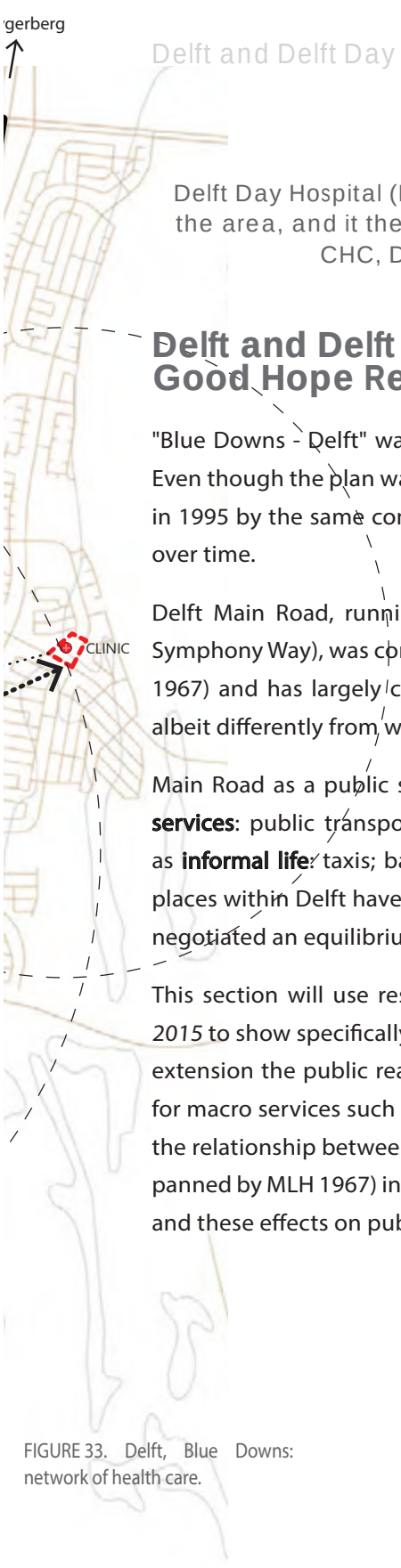


FIGURE 33. Delft, Blue Downs: network of health care.

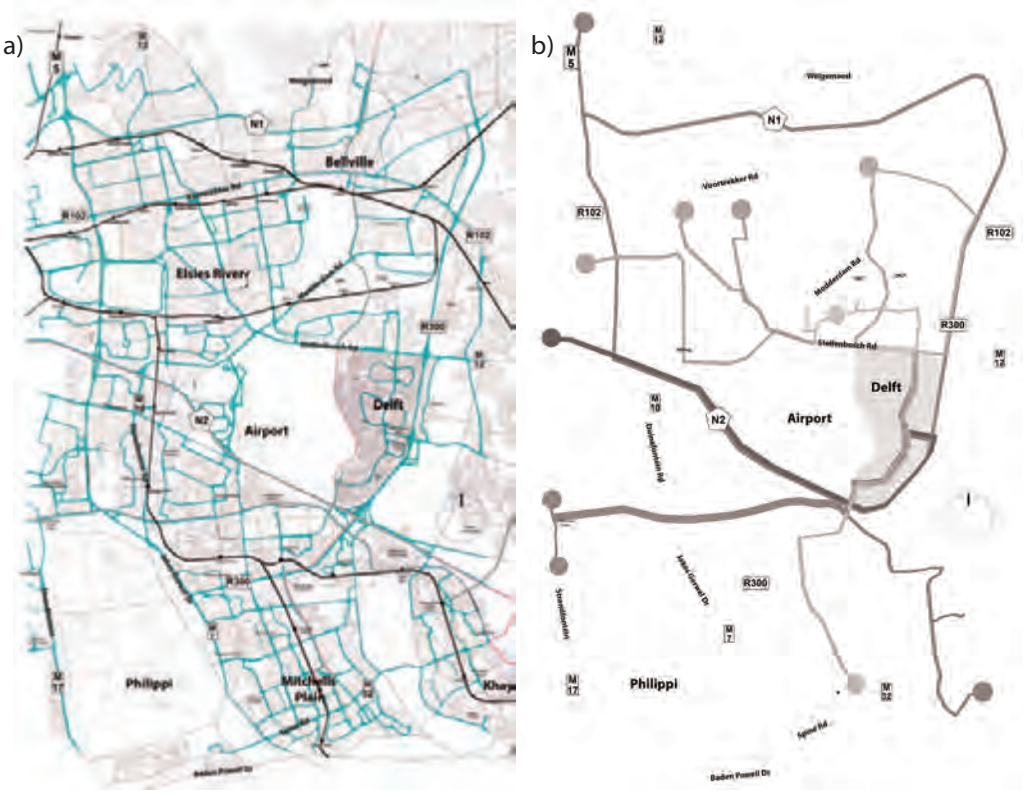


FIGURE 34. a & b References: Graphics and Research Compiled by Stephanie Terwin as part of the Space of Good Hope Research Studio 2016. Information has been collected from the 'Sustainable Livelihoods Foundation' Research done in 2010 and 2015, as well as unpublished field notes sent by Rory Liedeman - Sustainable Livelihoods Foundation

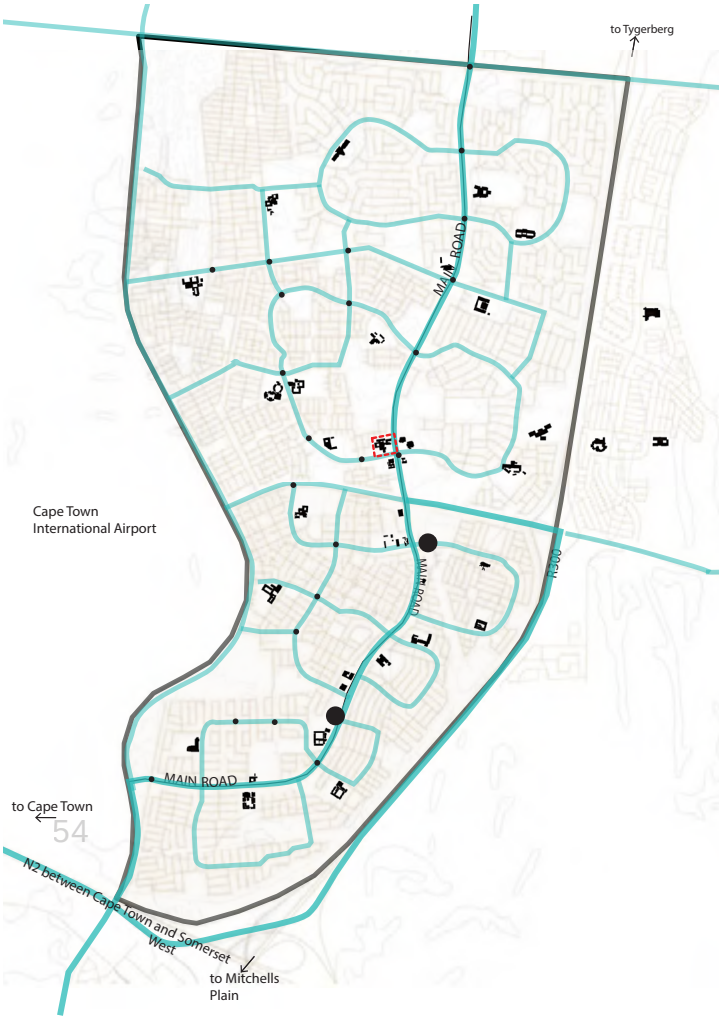


FIGURE 35. References: Graphics and Research Compiled by Stephanie Terwin as part of the Space of Good Hope Research Studio 2016. Information has been collected from the 'Sustainable Livelihoods Foundation' Research done in 2010 and 2015, as well as unpublished field notes sent by Rory Liedeman - Sustainable Livelihoods Foundation

Public service and informal life

Main Road: transport

Main Road owes some of its success to the fact that it is the means by which the rest of the city is accessed. FIGURE 34 *a and b* show how Main Road functions as the major route out of Delft, where FIGURE 34 a, shows the '*formal*' transport system in the form of Golden Arrow bus routes (blue) and the MY CITI bus routes, and FIGURE 34 b shows the peak routes of the '*informal*' taxis travel out of Delft.

The combination of formal and informal modes of transport service places as close by as the Airport, Bellville, Blackheath; but can stretch as far as Cape Town, Claremont, Elsies River, Epping Industrial, Hanover Park, Koeberg Station, Mowbray and Panorama. This illustrates how Delft Main Road functions as a connector to the rest of the city and explains why Delft Main Road is so busy.

FIGURE 35 shows the Taxi routes through Delft as a whole. Even though there are two established ranks in Delft South most traffic circles function as informal pick up and drop off points.

Main Road: public institutions

FIGURE 35 shows the actual distribution of public facilities (in black) and from this it is clear that the majority of facilities are on Main Road, barring schools that are embedded into the neighbourhoods.

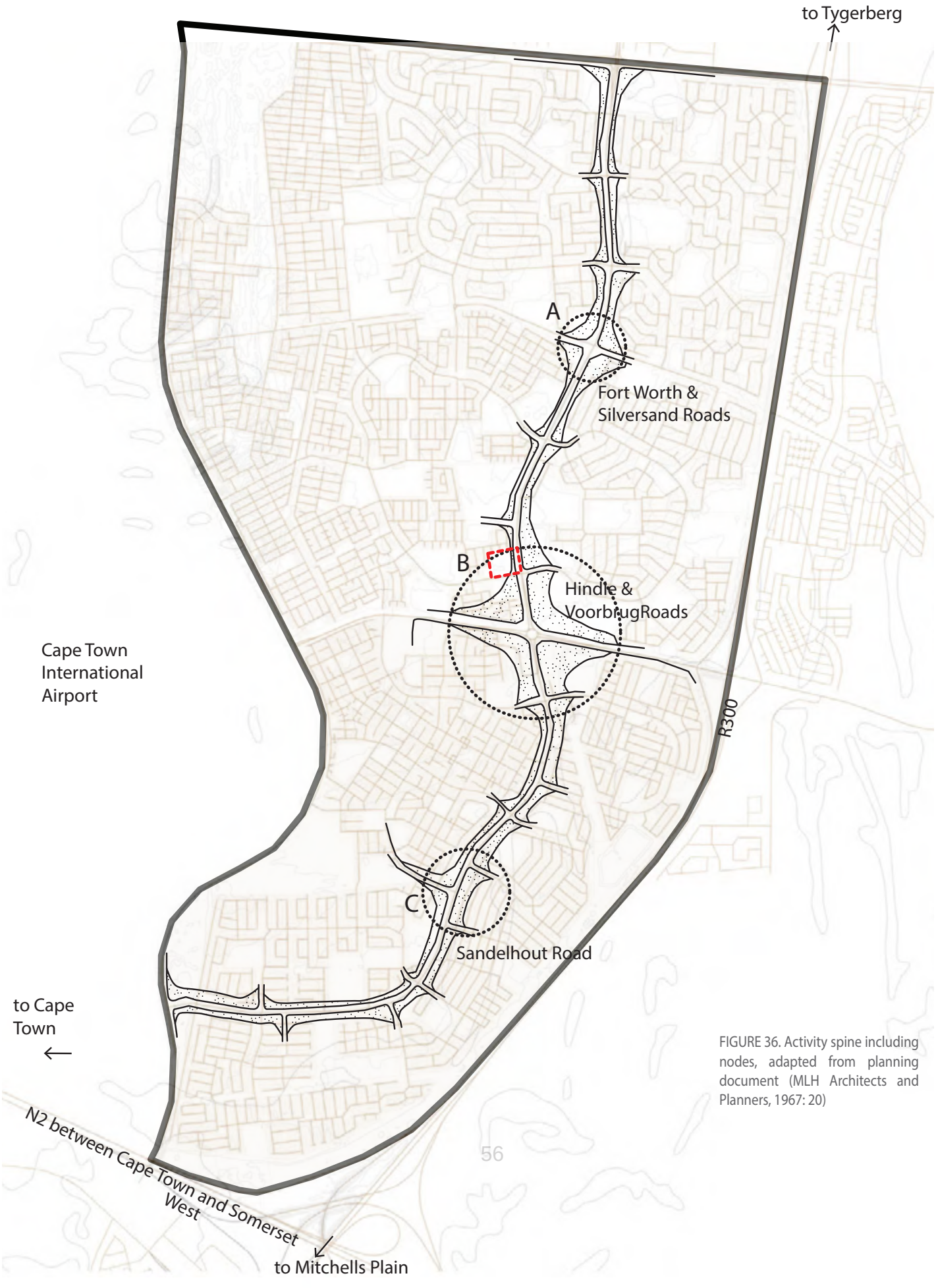


FIGURE 36. Activity spine including nodes, adapted from planning document (MLH Architects and Planners, 1967: 20)

FIGURE 36 shows how Main Road was intended to be punctuated by three main civic nodes, one in the North (corner of Forth Worth and Silversand Roads with Main Road), one to the South (corner of Sandelhout Road with Main Road) and a primary node in the centre where Hindle Road enters from the R300. FIGURE 37 are drawings extracted from the original planning document (MLH Architects and Planners, 1967) and show how civic/institutional functions were intended to be grouped around these nodes to effectively activate the length of the spine.

In reality, although nodes B and C exist, the research has shown that they have had differing amounts of success in *"activating"* the spine. I propose that the differences in success can be attributed to the nature and concentration of civic functions at the nodes. By comparing Hindle and Sandelhout Nodes I will illustrate the importance of civic, especially in relation to commercial spaces, in the holding of public space and *'informal'* life.

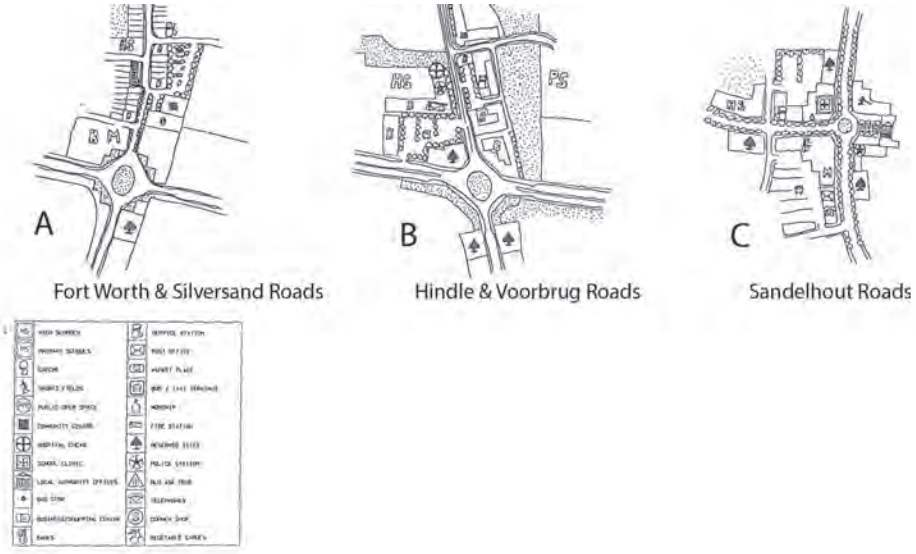
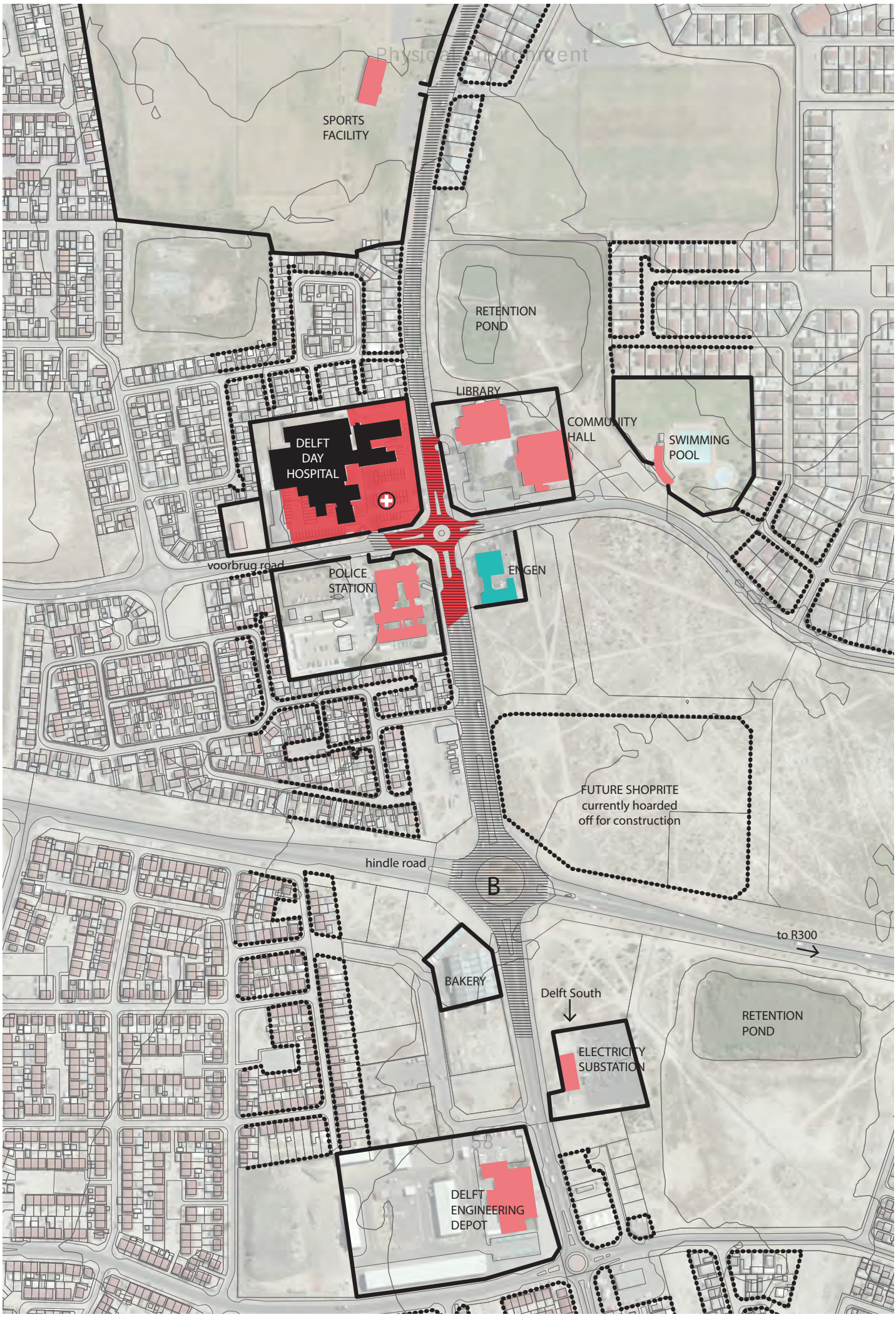


FIGURE 37. Node Plans, excerpt from planning document (MLH Architects and Planners, 1967: 20)


SPORTS FACILITY
RETENTION POND
LIBRARY
COMMUNITY HALL
SWIMMING POOL
DELFT DAY HOSPITAL
voorbrug road
POLICE STATION
ENGEN
FUTURE SHOPRITE currently hoarded off for construction
hindle road
B
to R300
BAKERY
Delft South
RETENTION POND
ELECTRICITY SUBSTATION
DELFT ENGINEERING DEPOT

Node B: Main and Hindle Roads

As the '*primary*' node in Delft (MLH, 1967), the '*Hindle Node*' spreads over three intersections of Main Road. The farthest north comprises of civic amenities: Day Hospital, library, community hall, police station and a little further afield, sports facilities. The central circle at Hindle Road (the major route of access from the R300) is zoned for commercial use. This has largely not taken off, but construction on the Shoprite has commenced and this could encourage development around the circle in the future. The southern circle comprises of services: Delft Engineering Depot and Electricity sub-station but is otherwise largely residential.

What is noticeable in FIGURE 34 are the large expanses of fence around the tightly clustered civic amenities. This has resulted in a very underused pedestrian landscape. Even though there is always traffic in this area and the Engen is wildly popular, the low number of informal shops indicates that this node is more of a vehicular landscape than a vibrant public space.

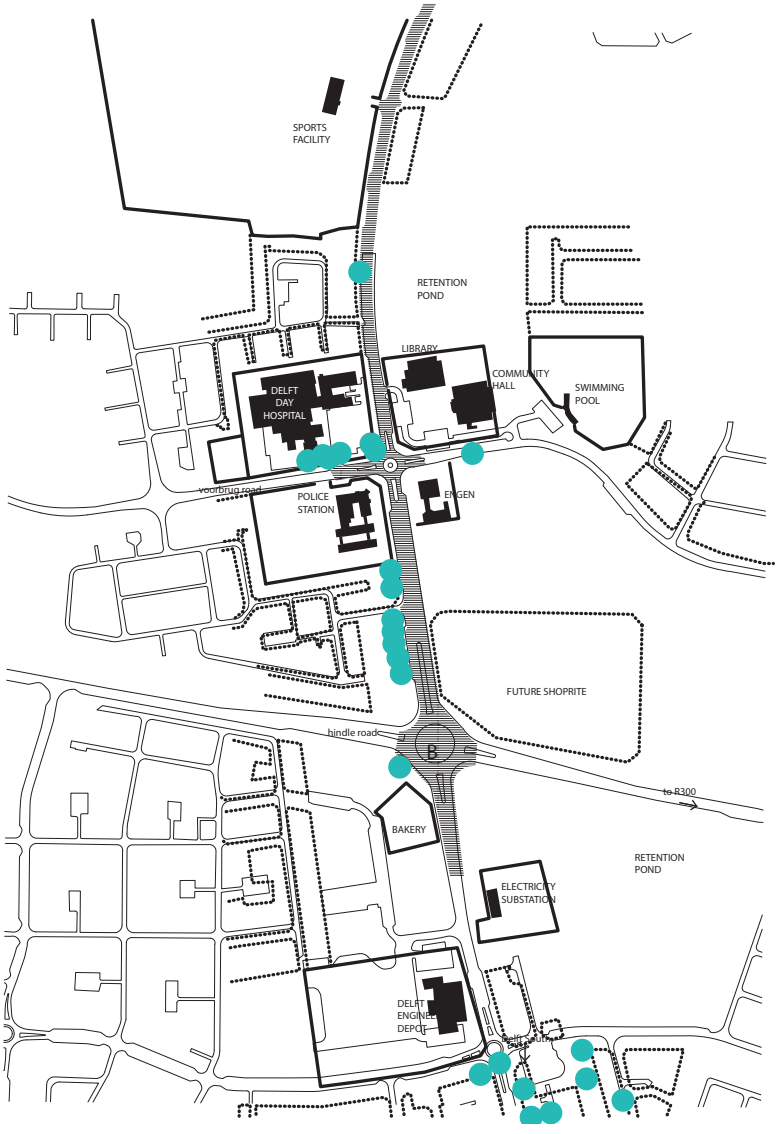
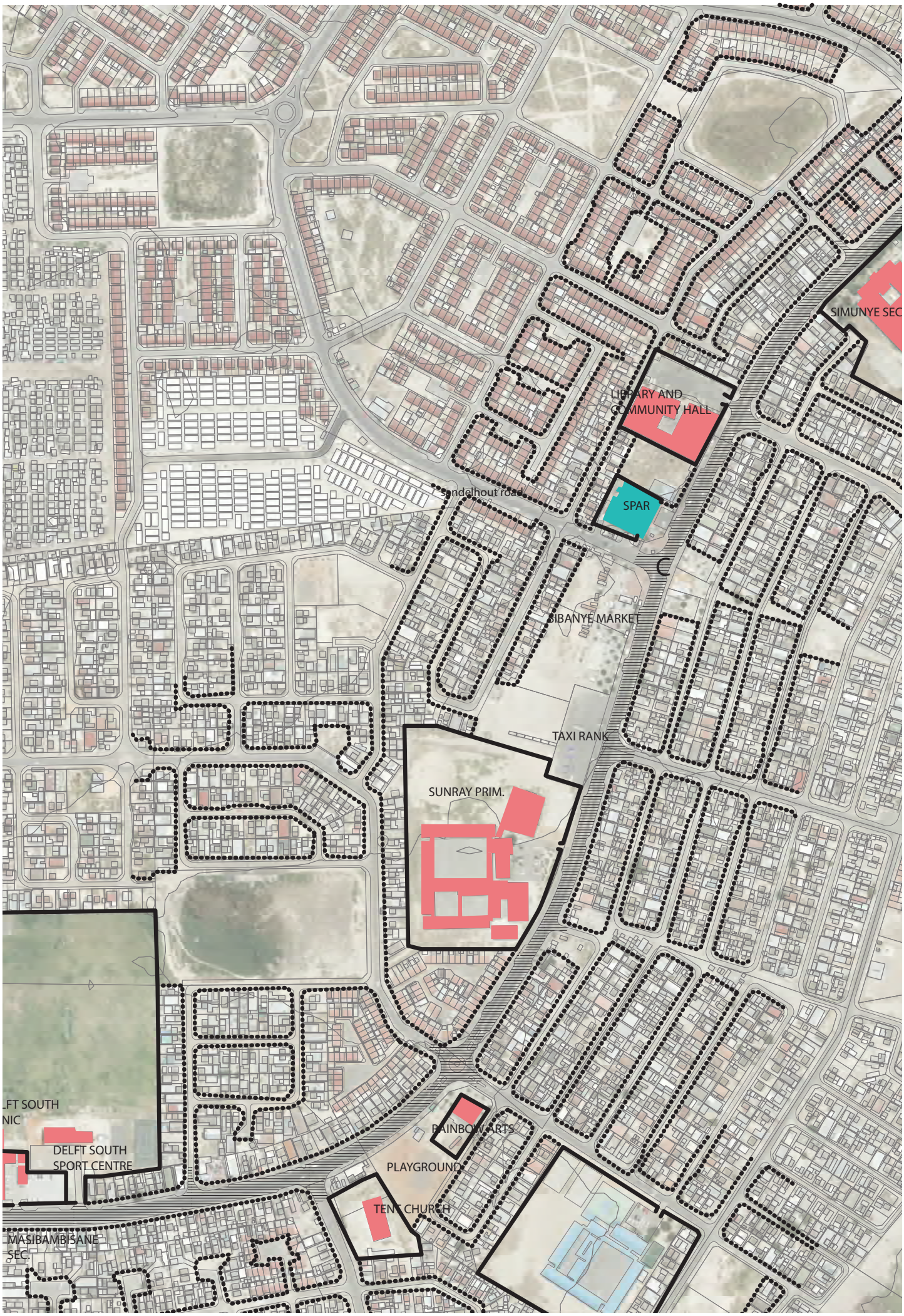


FIGURE 38. LEFT: Google earth image of the Hindle Road node overlaid with institutional infrastructure and lines denoting edge conditions. 'Dead' fences are shown with solid lines and changing residential frontages are shown as dashed lines.

FIGURE 39. RIGHT: Line drawing of Hindle Node, showing distribution of informal shops. Information credit: (Space of Good Hope Research Studio. 2016)


SIMUNYE SEC
LIBRARY AND
COMMUNITY HALL
Sondelhout road
SPAR
SIBANYE MARKET
TAXI RANK
SUNRAY PRIM.
LFT SOUTH
NIC
DELFT SOUTH
SPORT CENTRE
RAINBOW ARTS
PLAYGROUND
TENT CHURCH
MASIBAMBISANE
SEC.

Node C: Main and Sandelhout Roads

As a 'secondary node' (MLH, 1967), the *'Sandelhout Node'* has a higher prevalence of schools than Hindle Node because was considered to be more local than regional. Interestingly, and I think where this area's success lies, is that civic amenities, commercial and residential zoning are more mixed and less compartmentalised. Along this part of Main Road there are: two secondary schools; one primary school; a clinic; a sports facility; a library and community hall centre; an arts centre; a taxi rank; a market square and a Spar. Around this an incredibly vibrant informal shopping scene has developed as shown in FIGURE 41 Sandelhout Road which connects (eventually) to Symphony Way is particularly busy.

In contrast with Hindle Node, there are also few fewer expanses of dead fence and more generous open space (Sibanye Market Square). I propose that the major reason why Sandelhout Node is so much more successful than Hindle Node is that public facilities at Hindle Node are too clustered, creating an uninviting, inactive centre. Rather than in Delft South were amenities have been placed at distances that create tension: close enough to still be within walking distance (increasing the number of pedestrians) and far enough apart to allow for active street edges in between.

FIGURE 40. LEFT: Google earth image of the Sandelhout Road node overlaid with institutional infrastructure and lines denoting edge conditions. 'Dead' fences are shown with solid lines and changing residential frontages are shown as dashed lines.

FIGURE 41. RIGHT: Line drawing of Sandelhout Node, showing distribution of informal shops. Information credit: (Space of Good Hope Research Studio. 2016)

Nodes: Housing density

The housing research of *Delft Studio 2015* focussed on the different types of governmental housing supplied and whether these types affected the prevalence of extensions or demolitions. Although we found that a link between type of house and addition was inconclusive the study did yield results related to the position of the house. We calculated and compared the densities of informal backyard rental units in comparison with sites were the original structure had demolished and new more elaborate houses built.

As FIGURE 42 shows, the density of backyard rental housing (in 2014) was highest along Main Road, except for the N2 Gateway housing, which was constructed most recently (2005). This is interesting considering that the North part of Delft South (Eindhoven) was the oldest and most established. This led us to speculate that Main Road was causing development to happen evenly around it regardless of age of the area or house type. People are rather attracted to the proximity of the economic opportunities and transport services that Main Road entails.

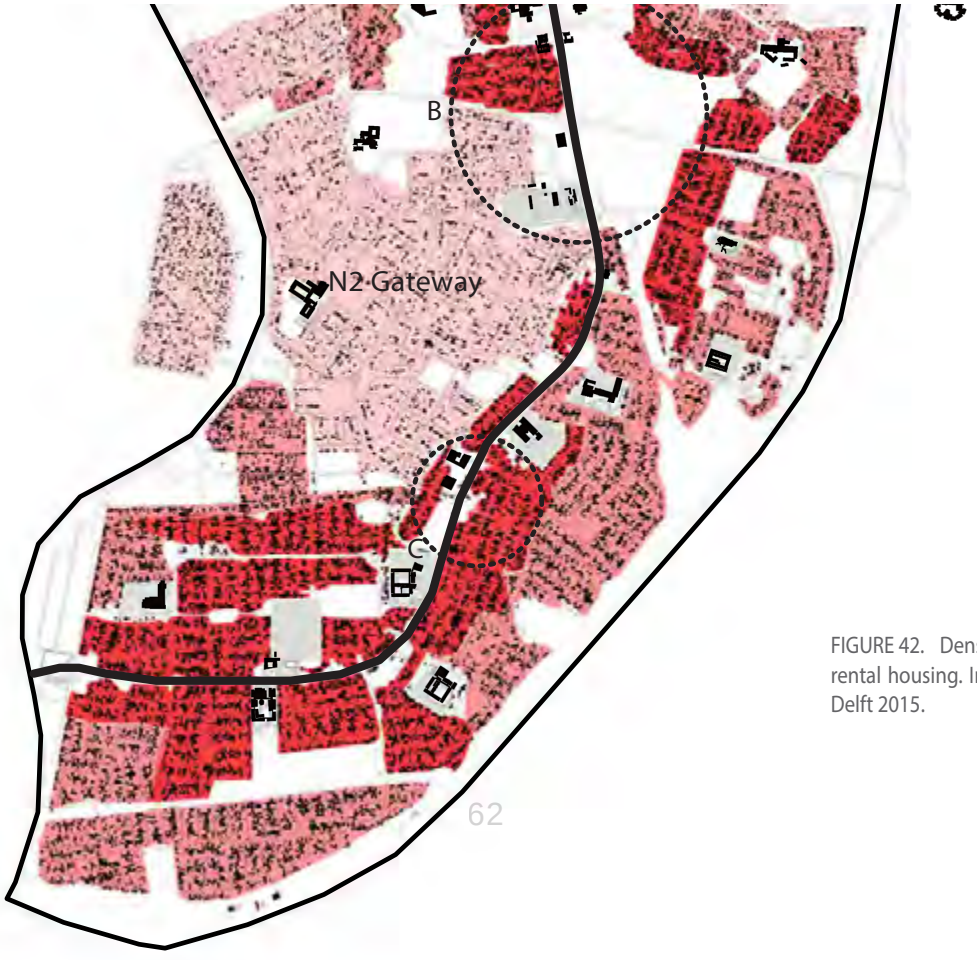


FIGURE 42. Density of backyard rental housing. Information credit: Delft 2015.

On the other hand, we mapped the density of new built housing in 2014. We observed that the highest concentration of new builds occur where civic buildings are in close proximity to one another, this is obvious in areas of Delft South around Sandelhout Node where there is a cluster of schools, the market and a library. This led us to hypothesise that concentration of civic investment encourages a greater and more permanent private investment. Also from the interviews we conducted it became clear that the owners of the newly built houses were, more often than not, not the original housing grant recipients.

Comparing Hindle and Sandelhout Nodes it is clear that even though the new build hypothesis holds true for Delft south, this phenomena is not true for Hindle Node. The reason for this could be similar to that of the distribution of commercial activity that the separation of zones and the tight clustering of public facilities is stifling the informal life of the street.

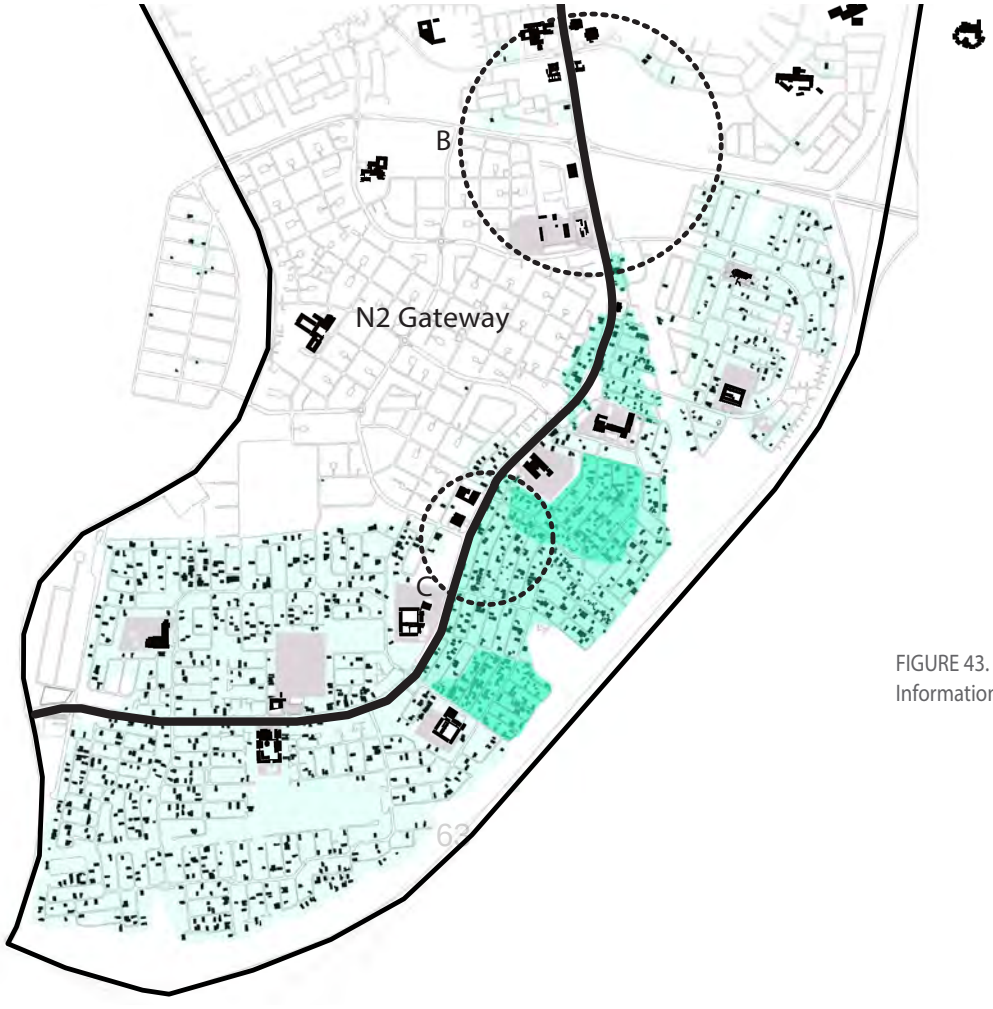


FIGURE 43. Density of new housing. Information credit: Delft 2015.


Renoster St
Wooder St
Lomond Ct
Voorbrug Rd
Delft Day Hospital
Delft Police Station
24 H


Delft Public Library
Delft Commu
Hour Engen
Voorbrug Rd
65
Voorbrug Rd

Delft Day Hospital as a facility

Through my research, observation and interviews I would like to introduce Delft Day Hospital in terms of problems I have identified and propose strategies to tackle them.

This section presents Delft Day Hospital in terms of the issues that physically and structurally separate the institution from community. As the discussion will show the two main contributing issues revolve around legibility and lack of interface.

Issue 1 | Lack of legibility

1.1 Irreverent additions and alterations

The original Delft Community Health Centre (CHC) was designed by Jordaan, Hartwig, Steyn, Le Roux Architects in 1995 and construction was completed by 1997. It was only after the construction of the new Symphony Way CHC in 2011 that the facility's status was upgraded to Day Hospital.

The architecture of the day hospital is residential in nature. The intention was to make the structures as easy to maintain as possible but the result is architecture that does not reflect the civic importance of the building.

Over the next two decades various extensions and temporary containers were added. Temporary structures were added because the existing building lacked space for community organisations and research groups that worked from the premises. Although additions alleviated the immediate need of space, the nature of additions dilute the overarching architectural concept and render facilities difficult to read and navigate.

FIGURE 44. PREVIOUS PAGE: Birds eye view of Voorbrug and Main Road civic node.

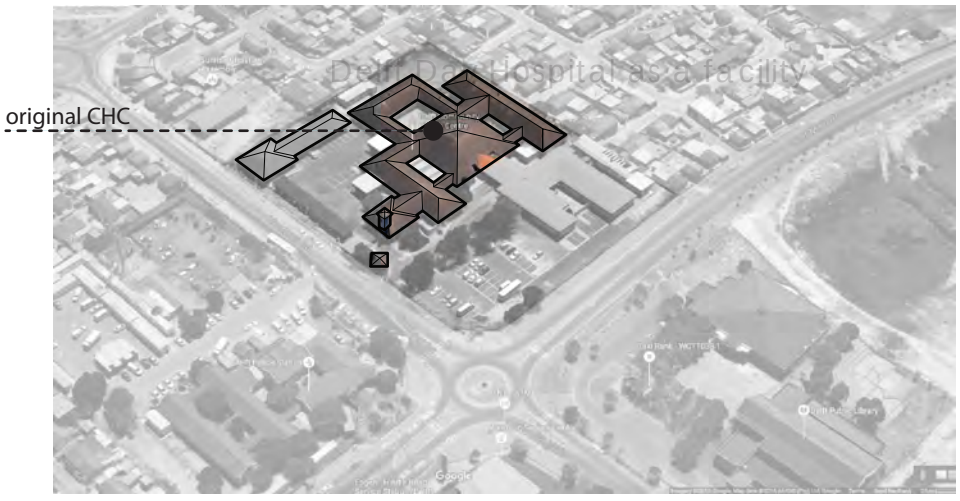


FIGURE 45. The original Delft Day Hospital. Image Credit Google Maps

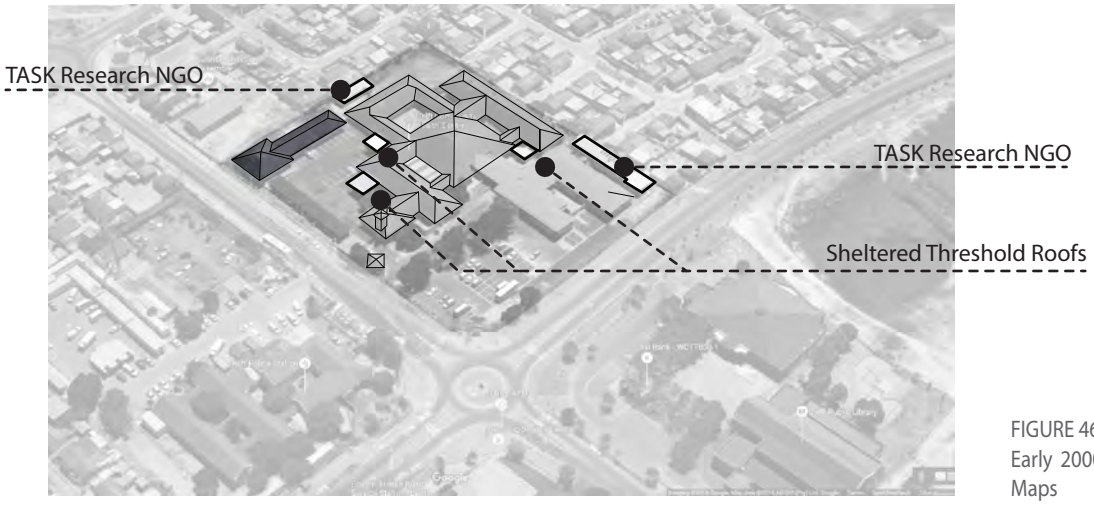


FIGURE 46. First wave of additions: Early 2000's. Image Credit Google Maps

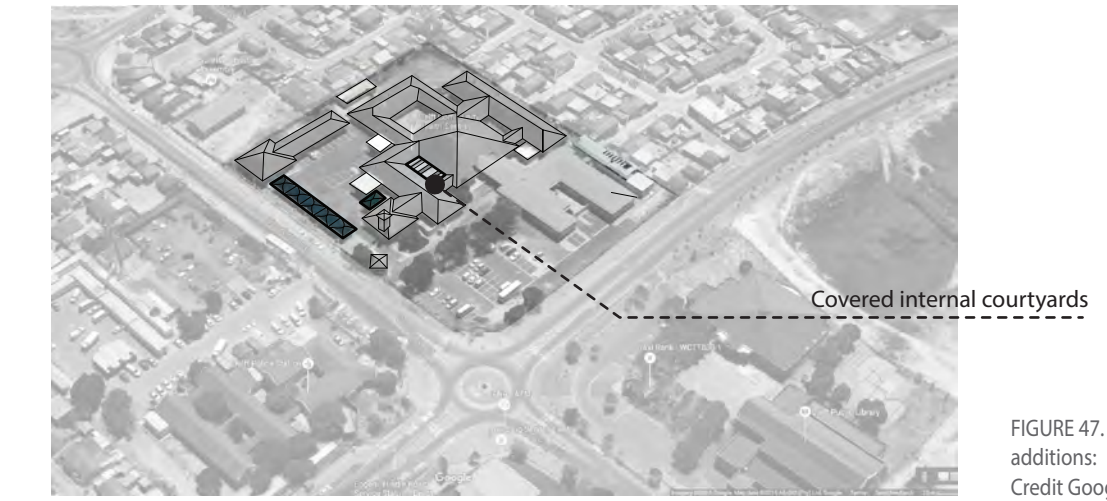


FIGURE 47. Second wave of additions: Late 2000's. Image Credit Google Maps

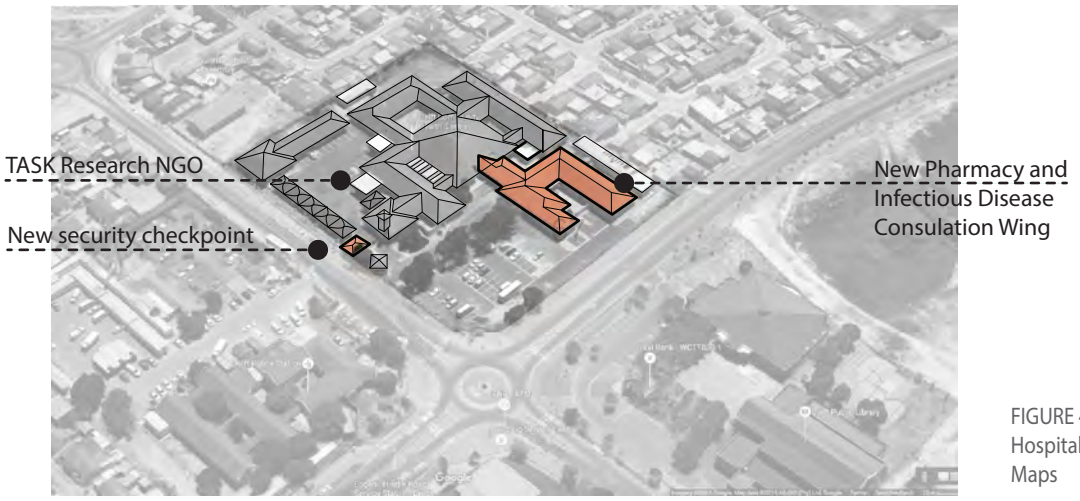


FIGURE 48. Existing Delft Day Hospital. Image Credit Google Maps

1.2 Security

The poor lay-out is exacerbated by sections operating for different hours.

Delft Day Hospital has some programmes that run over 24 hours and others that operate only during normal business hours. This causes a security risk that diminishes the indoor clarity of the space because every door needs its own steel security gate. These security gates also pose managerial issues because they require a large amount of coordination to lock and open up. Legibility is further compromised by trying to navigate the facility by night.

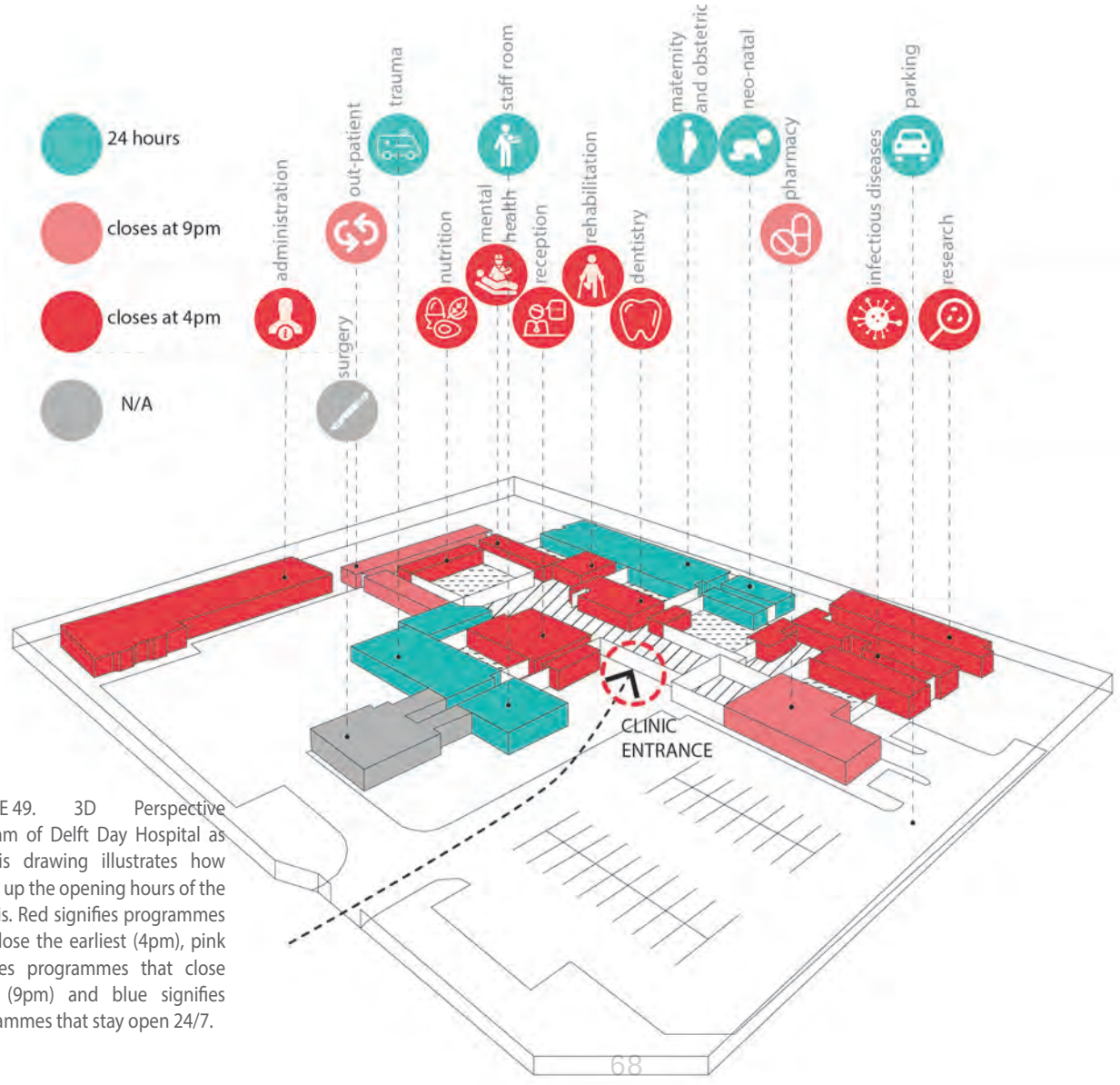


FIGURE 49. 3D Perspective Diagram of Delft Day Hospital as is. This drawing illustrates how mixed up the opening hours of the clinic is. Red signifies programmes that close the earliest (4pm), pink signifies programmes that close latest (9pm) and blue signifies programmes that stay open 24/7.

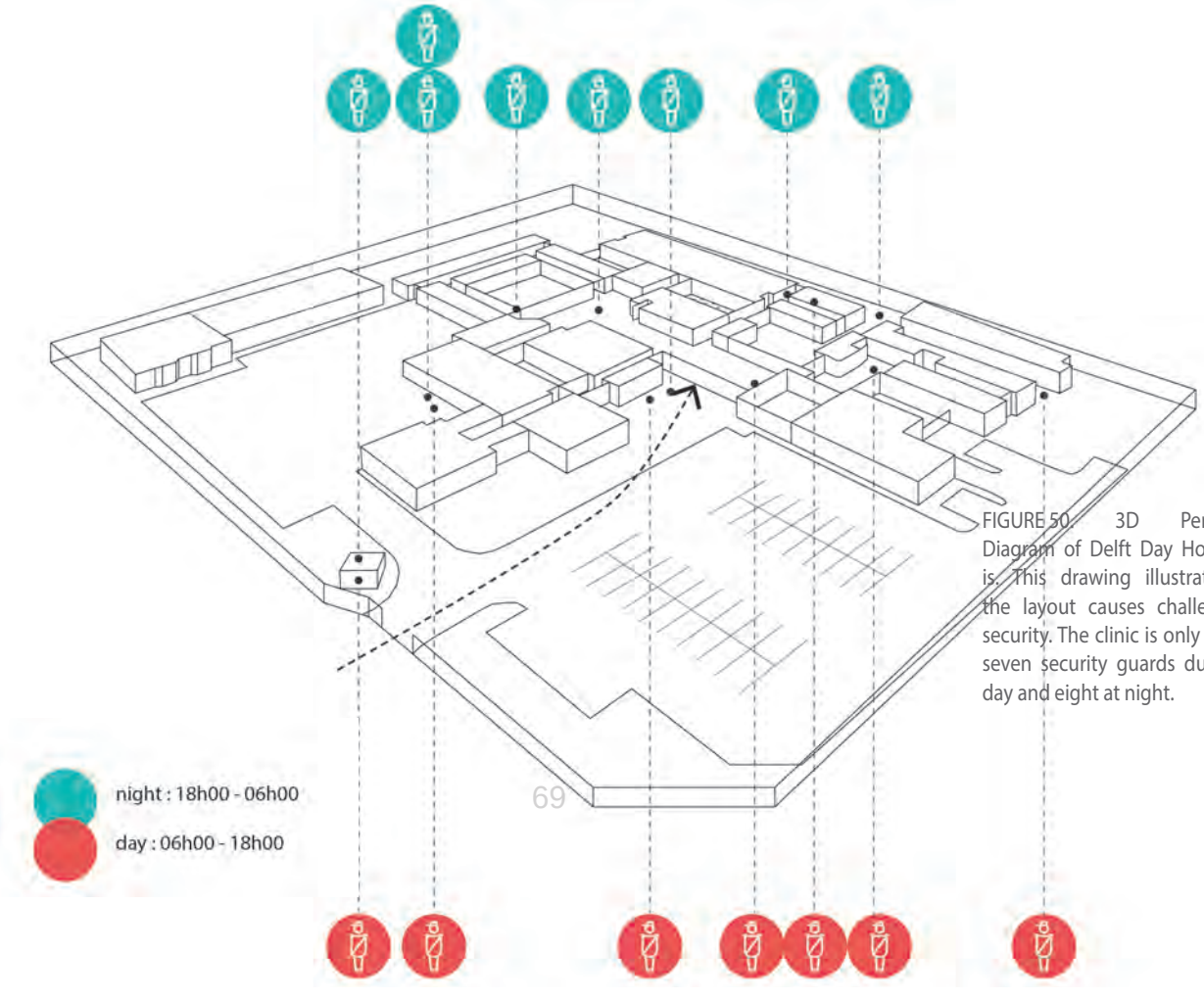


FIGURE 50 3D Perspective Diagram of Delft Day Hospital as is. This drawing illustrates how the layout causes challenges to security. The clinic is only afforded seven security guards during the day and eight at night.

Strategy to tackle issue 1

My strategy to tackle legibility will be to re-organise programmes according to operating hours therefore reducing security points and alleviating pressure on security guards. I propose that this logic be maintained in future additions, including in this my proposed addition.

Keeping a strategy of the bigger picture in mind could affect policy regarding how future clinics should be designed. I propose that primary facilities could be re-imagined to conceptually function as parallel 'spines' that house programmes with similar operating hours. I propose that the parallel spines be connected by a main spine through which access is regulated and ultimately is the main point of access to the public and the public realm.

Considering the disruption moving programmes will cause I endeavoured to achieve clarity in the layout with as few moves as possible. At Delft Day Hospital this can be achieved in three simple steps.

1. Swap *outpatients* and *infectious diseases*. The spaces required for each are similar both spatially (both only require generic consultation rooms) and require a similar amount of square metres.

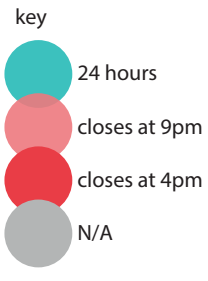
2. Switch around the access point of the *Maternity and Obstetrics Unit (MOU)* from the 4pm spine to the 24 hour spine. This improves the connection of the *MOU* to the *Neo Natal unit* at the same time.

3. Rotate the direction that reception serves to face the entrance so that it has a better relationship with outside and offers an opportunity to extend the internal waiting space.

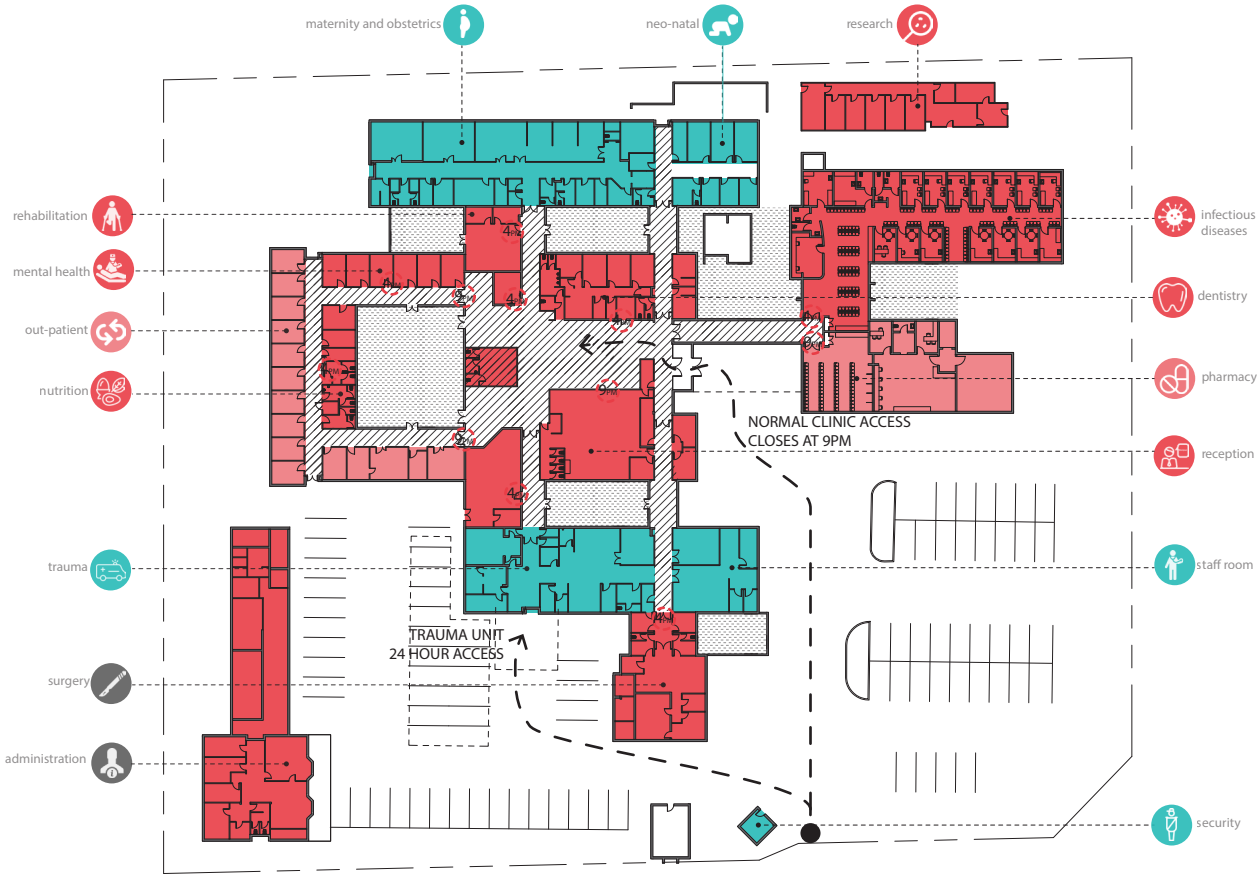
I propose that the above strategy will help to mediate the gap between institutions, particularly Delft Day Hospital, and the community that legibility causes.

FIGURE 51. Existing plan of Delft Day Hospital showing detailed floor layout as well as colour overlays relating to the closure time of each programme. Circulation space is shown with diagonal hatch, courtyards are (breathing spaces) shown with horizontal dash lined hatch. Scale 1:1000.

FIGURE 52. Proposed new plan of Delft Day Hospital showing proposed changes with colour overlays relating to the closure time of each programme. Scale 1:1000.



Delft Day Hospital as a facility



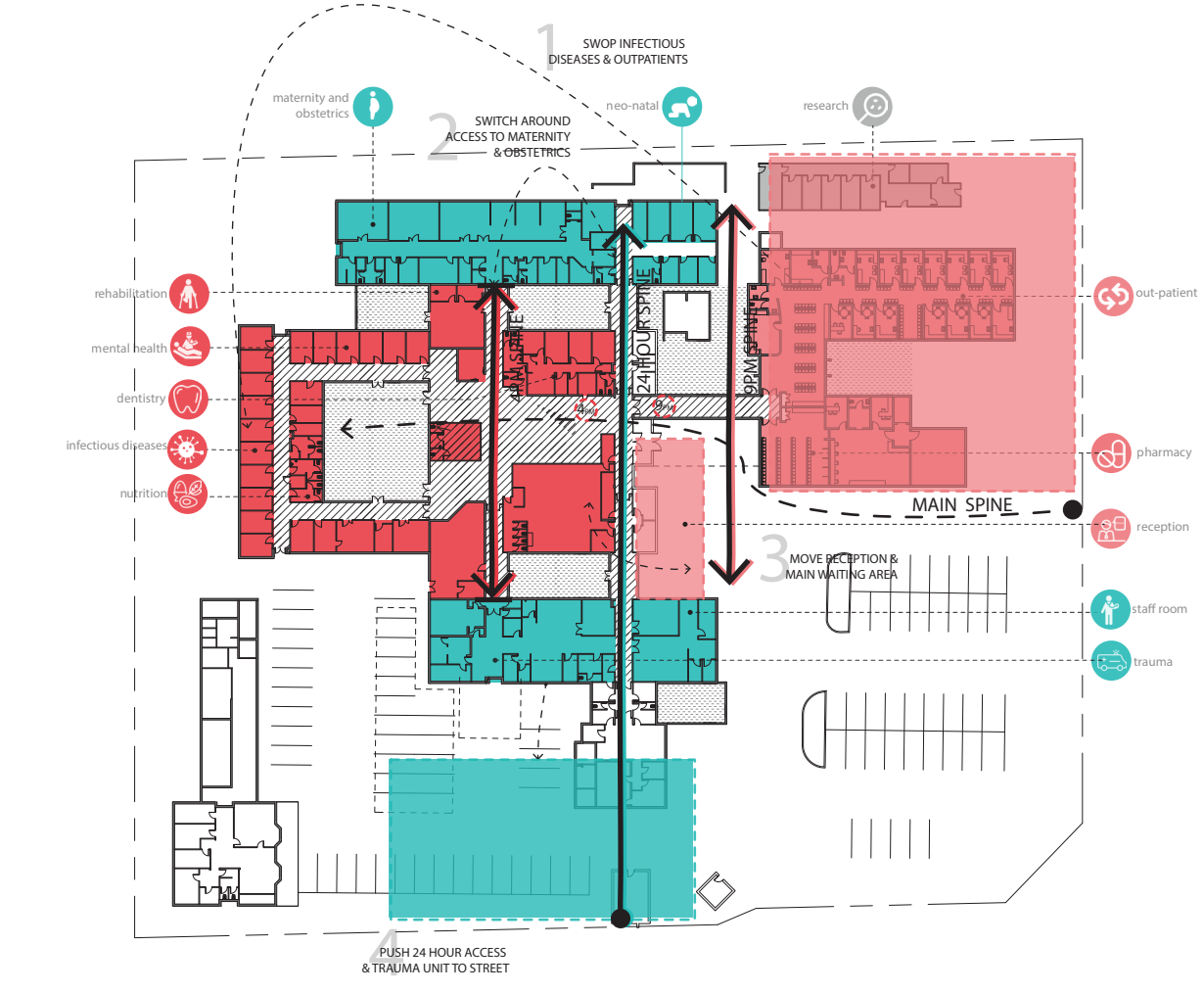


FIGURE 53 and FIGURE 54 explain my strategy in more detail. FIGURE 53 shows the existing space syntax of Delft Day Hospital. As before, icons in blue denote programmes that run over 24 hours and red icons symbolise operation hours between 7am and 4pm.

FIGURE 53. Diagram showing existing hospital logic. This diagram shows how deeply set programmes that are open later are into the space syntax. Blue denotes 24 hour.

FIGURE 54 shows the proposed space syntax by applying my strategy to clarify the institution. The advantage of my plan is that locks are reduced to two points and that therefore gates on individual room doors can be removed and fewer security guards would be necessary.

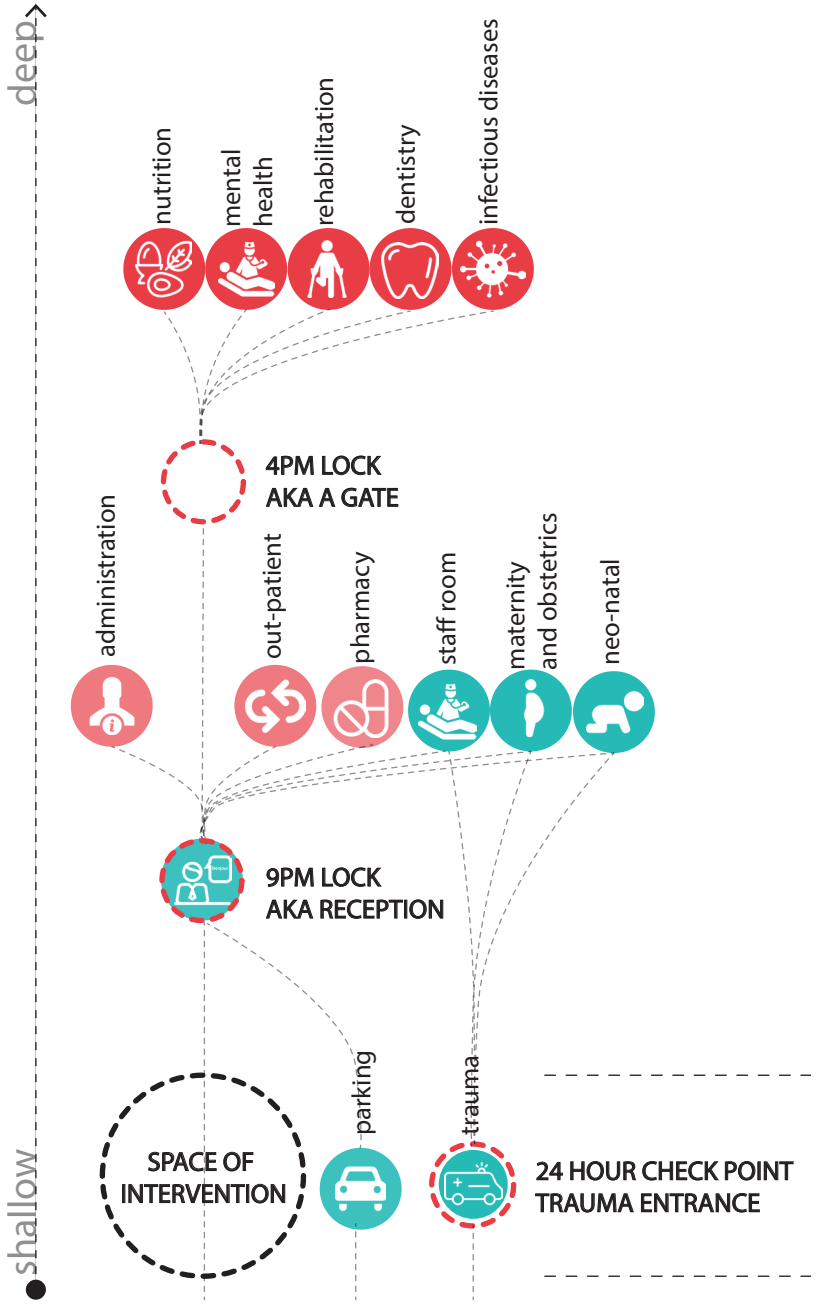


FIGURE 54. Diagram showing proposed new hospital logic. Illustrating the reduction and clarifying of 'locks' throughout the depth of plan. Graphic by Luët Buys.

2. Issue | lack of meaningful interface with urban environment

The gap between institution and community manifests spatially as well as conceptually. A major issue with facilities in Cape Town is their physical lack of connection to the life of the street. The research of *Space of Good Hope 2016* and *Delft Studio 2015* showed that the street is a vibrant public realm and in this way the street is analogous to community. Physically bridging the divide between the facility and the street will be vital in order to reconnect the institution with the community.

This problem is true for Delft Day Hospital and is endemic to the vast majority of health care facilities. The physical gap presents itself in the following four scenarios:

1. Street edges are most often large expanses of bland fences.
2. Institutions employ various divisive architectural mechanisms.
3. Pedestrian entry is ambiguous and shared with vehicles.
4. Lack of spillover waiting space.

Delft Day Hospital is surrounded by a fence on both street sides and is buffered from the street by a large parking area. Pedestrian access is shared with vehicular access and lacks architectural importance. Lastly, on extremely busy days queues have been known to stretch as far as onto the street and around the corner.

FIGURE 55 shows how the above issues manifest at Delft Day Hospital and the following section aims to investigate each point in order to surface strategies to take forward or mistakes to avoid.

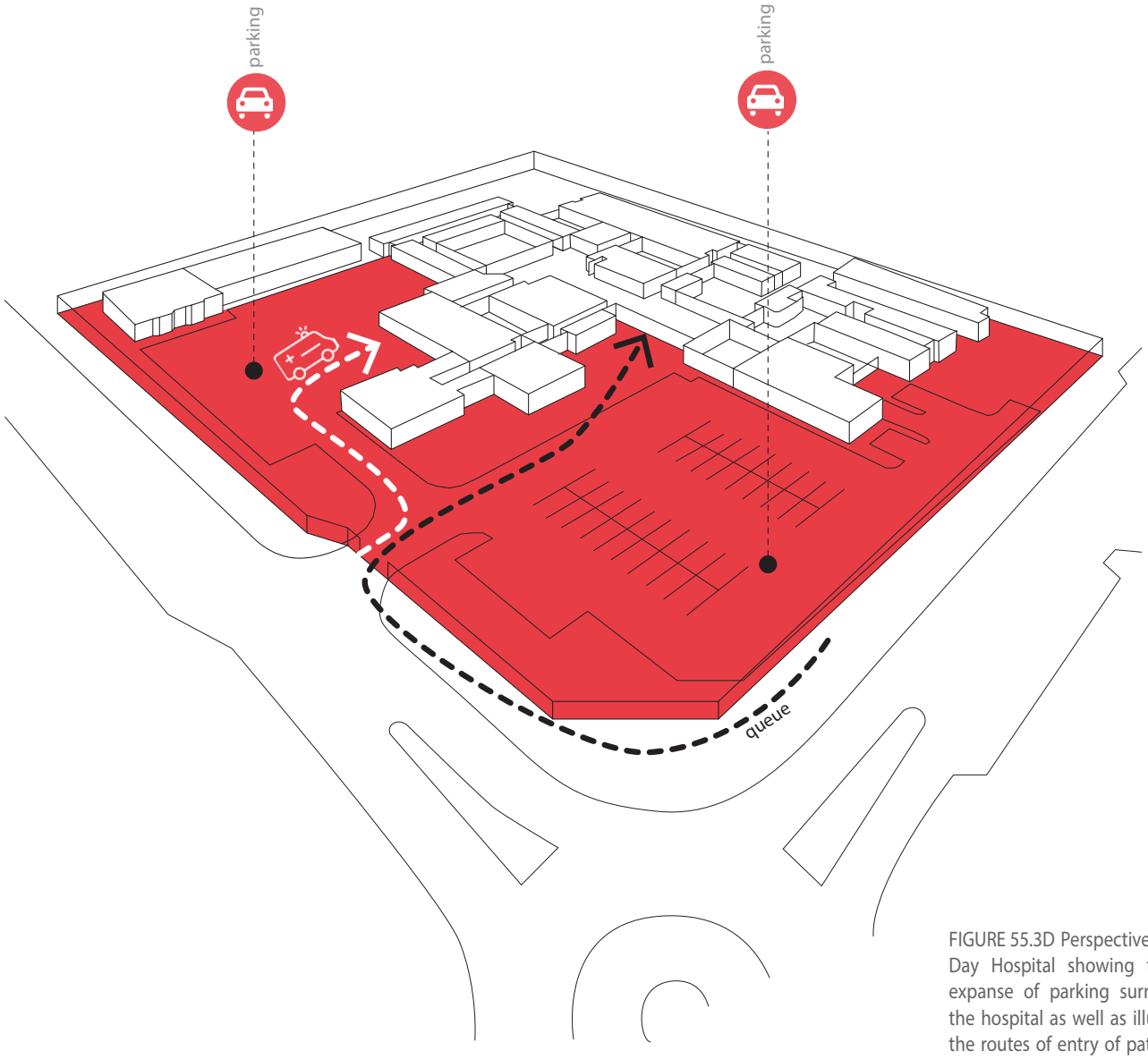


FIGURE 55.3D Perspective of Delft Day Hospital showing the vast expanse of parking surrounding the hospital as well as illustrating the routes of entry of patients on foot vs. ambulances.

1. Street edges are most often large expanses of bland fences.

A fence does nothing but divide, it does not activate or interact.

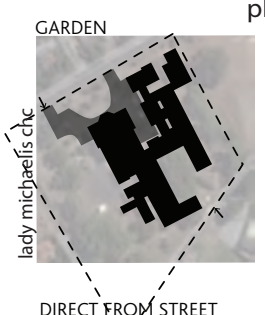
This point leads on from the groundwork conducted by the Space of Good Hope research Studio and comparing nodes B and C. It was clear from that research that the extensive areas of inert fences around the tightly clustered facilities did not encourage public life to take hold.

FIGURE 56. Google street view of Delft Day Hospital. From Voorbrug Road (on the far right) showing the main entrance and small stalls to Main Road (on the far left) showing the long stretch of steel palisade fencing and few pedestrians.

2. Institutions employ various divisive architectural mechanisms.

Where a facility is placed on site and what is between it and the fence plays a large role in how institution is perceived by the community. With the aim of identifying positive mechanisms, I have conducted a survey of primary care facilities across Cape Town. This study was conducted via Google maps and street view and what follows is a summary of my findings.

I have identified five architectural mechanisms through which existing facilities physically isolate themselves.

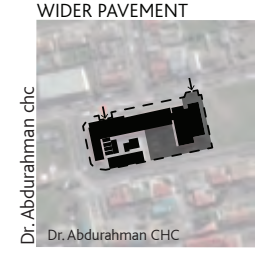


Garden

Facilities such as Lady Michaelis are set back behind a garden. Even though a garden is a pleasant environment to combine with health care, positioning it between the institution and a fence effectively isolates the facility because it obscures the building from view. This isolation is exacerbated because the gardens are often unused. The ideal would be use garden as spillover space but this is rarely the case.

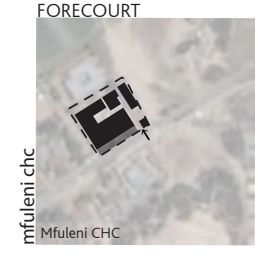
Direct from the street

Although at first this strategy seemed to be the best, it is important to remember that threshold spaces are important to health care facilities both for ease of use and security reasons . This is illustrated by Grassy Park Clinic where an extra fence has been erected outside in order to protect the front door from the street. This space delineates a special area to wait that is different from the sidewalk while still allowing a dedicated pedestrian sidewalk that can function as spillover waiting space.



Wider pavement

Dr Abdurahman CHC is an example of a facility that has cordoned off paved space between the building and the fence. This leaves less than a metre of pavement for pedestrians to walk between the fence and parked cars. The lack of generous pedestrian area alienates the human body against the backdrop of the institution.



Forecourt

The Mfuleni Clinic provides for parking against the building, allowing access along the side of the site. This results in a forecourt that is dedicated to patients. Although this approach is more sensitive than others the civic importance of the entrance is ignored which compounds institutional illegibility.

Parking lot

This mechanism is most prolific in Cape Town because staff members prefer off street parking and positioning it between the facility and the fence allows for passive surveillance. Parking areas as a mechanism completely lack sensitivity to the human body in the space and conveys the message that the community is peripheral to the workings of the institution.

GARDEN

lady michaelis chc

DIRECT FROM STREET

grassy park clinic

WIDER PAVEMENT

Dr. Abdurahman chc

FORECOURT

mfuleni chc

PARKING LOT

delft day hospital

FIGURE 58. PREVIOUS PAGE: small site plans of each of the case studies. Each showing how the facility is sited, point of entry, expanse of parking and boundary lines.

FIGURE 59. Google maps street view of each case study showing hard boundaries in red and space of negotiation in blue.

3. Pedestrian entry is ambiguous and shared with vehicles.

This is experienced differently by each facility and is influenced by the level of pressure that each facility experiences. Entrances at strained facilities are often combined so that fewer security staff are required to control access. This could be mediated by taking advantage of different forms of passive surveillance instead of one point of active surveillance at the street.

At Delft Day Hospital, the main entrance on Voorbrug Road is flanked by a guard house that surveys a combined entrance. I observed on site that while the system works the arrival of an ambulance causes chaos.

FIGURE 60. Street view of Delft Day Hospital's main entrance, showing the blank fence as well as the singular entrance via sliding gate. Image credit: Google Street View Accessed September 2016.

I have conducted a study of the entrance strategies at four major health care facilities with the aims of identifying strategies to take forward into my design.

Main access

Even though security is not explicitly standardised, the reality of institutional spaces means that multiple layers of access are employed to try to regulate or control access and reduce the risk of vandalism and break ins. The example studies showed that there are two important factors about the entrance.

1. Creating a 'forecourt'

Creating a space or a presence on the sidewalk is important not only for the sake of the street but as an important transitional change in mindset. The strategies of defining a forecourt are; level change, cover, seating and material.

Level change

Symphony and Hermanus use level changes to define the subtle shift in mindset moving from street toward the clinic. Symphony has three steps up from ground level, one step higher than Hermanus, but feels more inclusive because the focus is on universally accessible means of changing that level. Ramps draw everyone in equally. Hermanus has employed wider steps though - this makes the change much more subtle.

Cover

Both Hermanus and Grassy Park have employed cover to create a presence on the street. Grassy Park's canopy is not effective in Cape Town's weather and is more of a stylistic gesture. Hermanus is better in this regard because the roof over the pre-waiting space is much more generous and is lower and therefore more effective against the weather making the gesture more believable.

Seating

Grassy Park used seating to try to define a presence, this has worked in some respects because it gives a visible place for people to sit while waiting.

Plan 1:500

Photograph

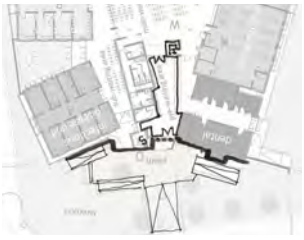


FIGURE 61.View of main access of Symphony Way CDC.

FIGURE 62. View of Internal courtyards at Hermanus CDC: main access. Image credit: Henk Lourens

FIGURE 63.View of Internal courtyards at Hermanus CDC: main gate. Image credit: Henk Lourens

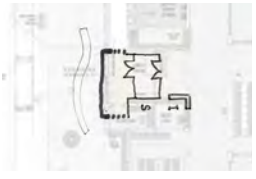


FIGURE 64.View of new steel enclosure at Grassy Park clinic.

FIGURE 65.View from within the entrance enclosure. Image credit: Jonathan Riordan

Material

Ubuntu is the most direct of all of the studies. There is a slightly upwardly slanted slate path to the building. The simple threshold comes across as honest and forthright and is a direct consequence of the concept of the building: to extend the urban through the building.

2. Protecting the front door

Vandalism and breaking and entering are real issues that everyone must contend with, especially in areas where the population is poor. For this reason public egress is generally limited to one door which ends up being very vulnerable. Two strategies have been identified and again Ubuntu combines both in an innovative way.

Separated

Hermanus is the most generous study in terms of pre-waiting and public spaces. Not only is there a generous sidewalk and a covered pre-waiting space that is accessible 24/7, a pre-waiting courtyard is inserted between a gate and the front door, effectively creating spaces and edges on the street without risking the front door. Hermanus has purposefully designed what Grassy Park added after the fact.

Grassy Park originally only had two layers of glass doors accessible directly off of the street. This proved too dangerous and was enclosed by a steel fence.

Combined

Symphony has used a roller screen to protect the glass front doors. Although it is effective in protecting the front door it has forced the controlled pre-waiting space into the building and requires another set of glass doors internally to separate the pre-waiting from the main waiting.

Ubuntu is unique because even though there is one major front door, the entire facade can open to the public. Fold up screens along the main street facade are placed over three meters away from the glass sliding doors of the building. This creates a shaded promenade.

Ubuntu is also the only study that uses the main waiting area and circulation of the building as a pre-space for the clinic's special waiting space. The only drawback of this is that management needs to be doubled as there is the information and security desk at the main entrance and then again at the clinic.

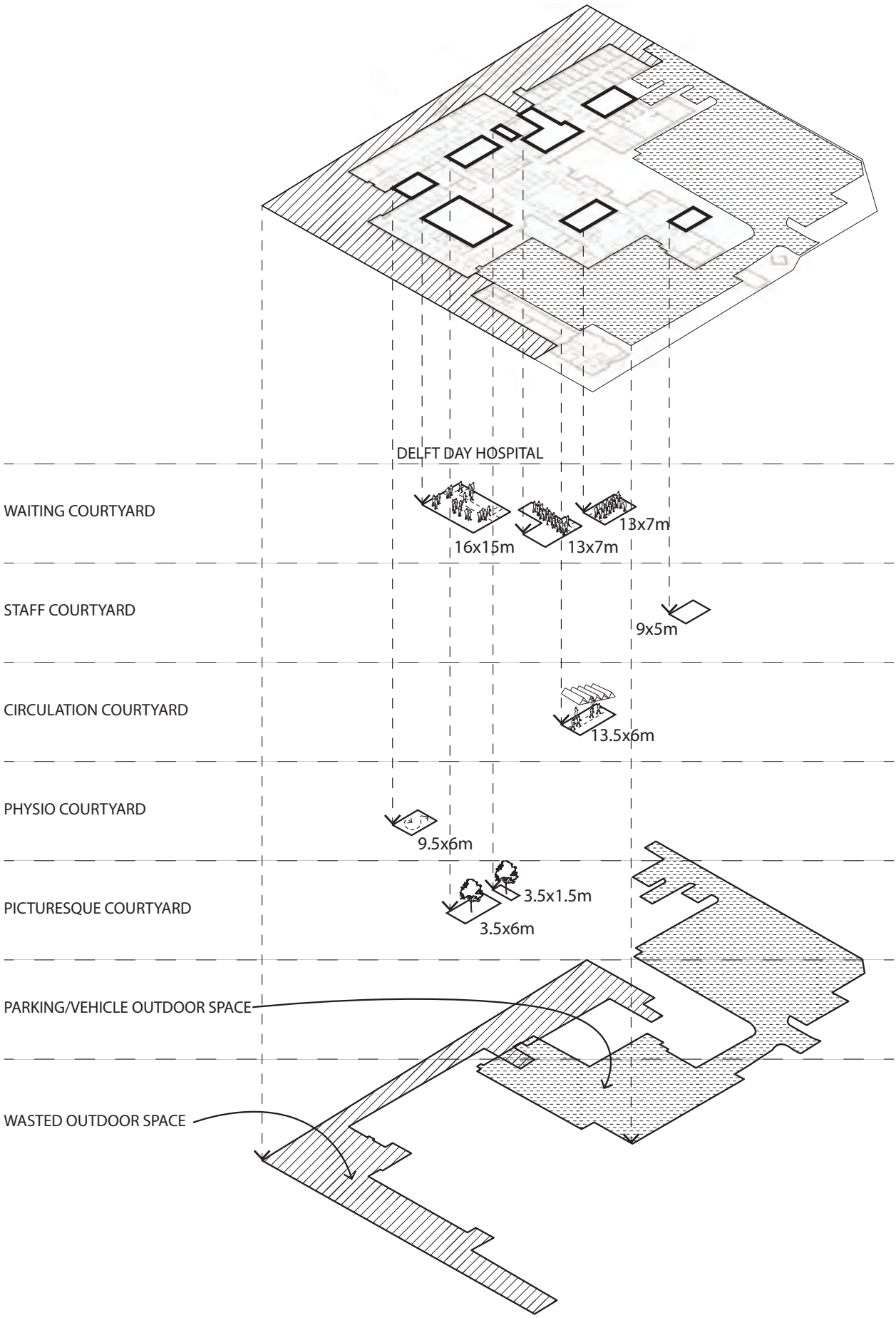
4. Lack of spillover waiting space.

Health care facilities in particular are notoriously overloaded and Delft Day Hospital is no exception. Although waiting areas are designed to cope with maximum capacity, facilities are often stretched beyond that limit. This results in large groups of people waiting through-out facilities putting strain on the internal waiting areas and spillover into outside spaces. On extremely busy days queues at Delft Day Hospital have been known to stretch as far as onto the street and around the corner.

Within the process of seeking care, waiting spaces form the interface between clinical and non clinical spaces. In this way waiting spaces can be understood to be the last space before the individual enters truly institutional spaces and therefore are vital to tackle to ameliorate the gap between the individual and the institution.

A study of waiting spaces at Delft Day Hospital follows that takes special note of the nature (indoor/outdoor), size and use pattern of each space.

FIGURE 66. Study of external spaces at Delft Day Hospital. The diagram shows the use of each of the spaces as well as an overall indication of their sizing. Where applicable figures have been included to indicate patterns of use. The conclusion of this study was the vast amount of space lost around the edges that are more of a safety hazard than valuable land.


DELFT DAY HOSPITAL
WAITING COURTYARD
16x15m
13x7m
13x7m
STAFF COURTYARD
9x5m
CIRCULATION COURTYARD
13.5x6m
PHYSIO COURTYARD
9.5x6m
PICTURESQUE COURTYARD
3.5x1.5m
3.5x6m
PARKING/VEHICLE OUTDOOR SPACE
WASTED OUTDOOR SPACE

Strategy to tackle issue 2 | three point edge strategy

Going forward I have defined three strategies that I think can help to bridge the lack of interface that facilities in general but Delft Day Hospital in particular faces. These points are: define and activate street edge which directly responds to issues 2.1 and 2.2; clarify and activate access which responds to issue 2.3; and provide dignified spillover waiting space.

These strategies can be applied to any facility so that the gap between institution and community can be ameliorated but here will be explained in terms of Delft Day Hospital.

Define activate street

This point is in reaction specifically to the inert fences that currently surround public buildings.

Considering the high value of land around Main Road in Delft, because it facilitates access to transport, public services and economic opportunity, and how the cluster of facilities takes up much of that high value street frontage: it is important for clustered facilities to take advantage of the property and actively contribute to the public realm. It would be impossible and expensive to try to retroactively move amenities further apart to try to encourage the public realm and therefore I propose that the mixed use and active street that Sandelhout Node achieved should be added to existing facilities.

Another advantage of this would be that it would effectively include the fence in the buildings cost.

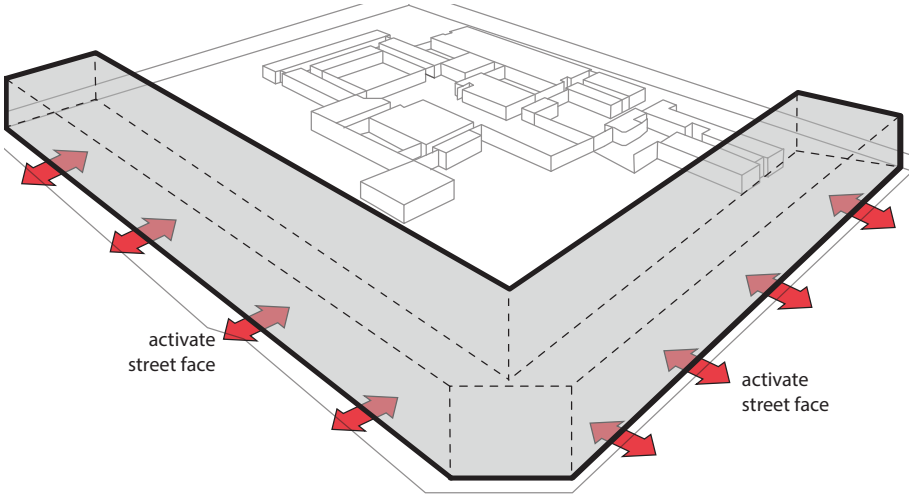


FIGURE 67. 3D perspective diagram showing the spatial concept of activating the entire street edge.

Clarify and activate access

Currently access is problematic and underplays the value of the amenity to the community. Franceso Orsini said in a presentation about Medellin that high quality design and architecture in the poorest areas change the way in which people relate to institutions, that a new architecture would convey a social meaning as well as a physical meaning and I think this is a very important concept when designing for the "less fortunate". The audience of the architecture should not ever be perceived to deserve a lower standard of architecture.

I propose that two clear points of access (one on each street facing edge) that speak to the access of the amenities across the street would create a recognisable point of connection between the institution and community.

It is also important to activate the process of entry onto the site by allowing for space of negotiation to the public realm. Not only does this allow for the mixing that the clustering of facilities have negated but it could also go a long way to alleviate pressures on security. Institutions are under heavy strain to protect clientele as well as assets. This is largely why access to institutional facilities feels authoritarian. The stress of security could be supported (and rendered less authoritarian) by creating a layer of programming that could allow for passive surveillance of the space.

Public open space

The research has shown that there is a general lack of defined and safe outdoor public space especially at Hindle Node. Providing this space freely accessible to the street can serve the facility on a daily basis by providing for dignified spillover waiting space.

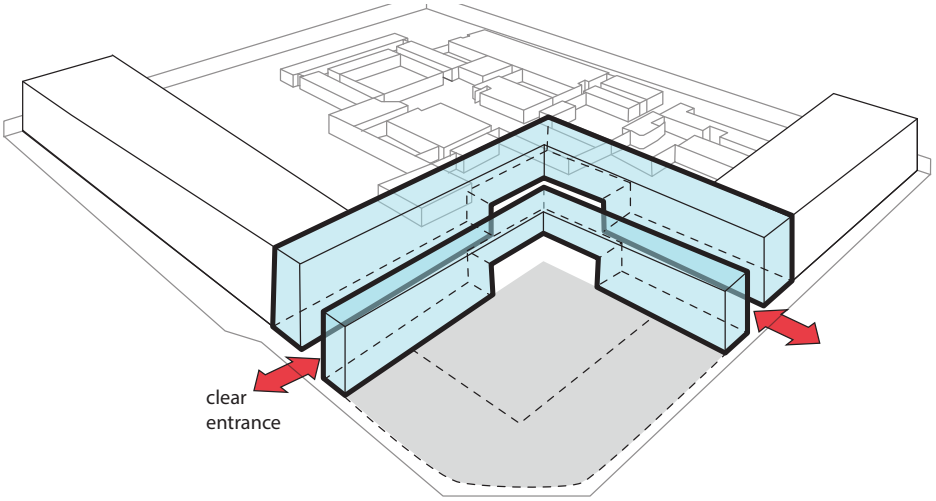


FIGURE 68. 3D perspective diagram showing the spatial concept of defining two clear points of entry, illustrating that the access route needs to be legible with a clear destination as well as having programme active it in different ways.

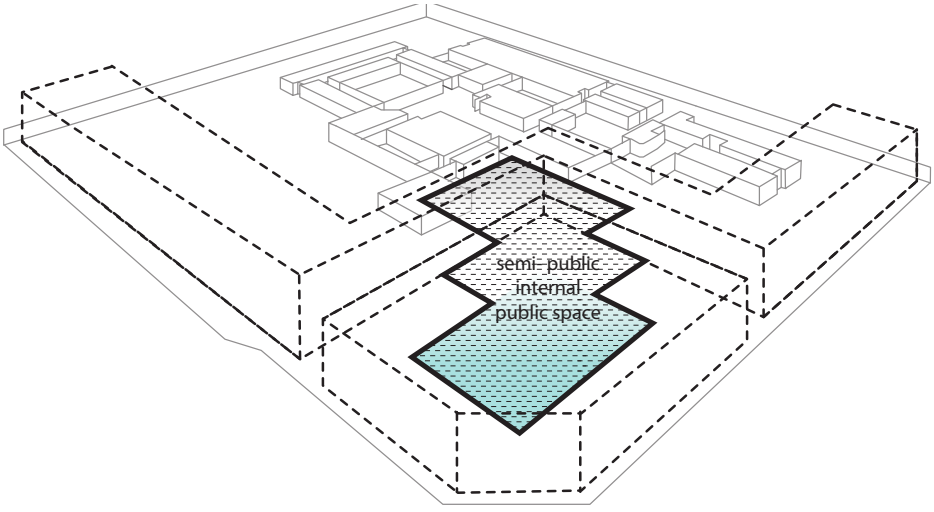


FIGURE 69. 3D perspective diagram showing the idea of internal public space, protected from the street and activated by programming. This also shows how the space can be the link into the facility, rather than formal corridors.

SECTION 06:
TECHNICAL INQUIRY
ARCHITECTURAL EXPRESSIONS OF THRESHOLDS TO CLINICAL SPACES

06

This section intends to identify technical strategies that can inform similar circumstances in my design. The aim of my design and dissertation is to stitch together the fissure between the institution and community and the study of precedent can inform how this aim can be expressed in a technological sense.

As stated before the institution and in particular health care institutions have a unique impact on society due to the combination of specificity of service and the emotive way it is experienced by society. In order to deliver a specialised service such as medicine - the facility needs to work and act in a certain way.

As higher order institutions, places of medical care need to adhere to certain standards in order to be able to function effectively. Health facilities are complex solutions that combine and adhere to both specialist clinical and practical pressures. Specialist clinical needs include hygiene and contamination-control requirements over and above the normal SANS standards whereas practical pressures include issues such a security. Currently the CSIR, Provincial Departments of Health and Public Works (IUSS N&S Task Group C, 2014) are in the process of drafting a set of 'Health Facility Guides' for South Africa which stipulate specific conditions for treatment spaces.

These scientific requirements could appear to be insensitive to the emotions of the patient and this causes the individual to feel alienated by the institution.

It is important to remember though, that a health facility encompasses varying constituent parts that fall all along the spectrum of clinical to non-clinical spaces, and it is non-clinical spaces that offer potential to ameliorate the institutional alienation of the individual. Non-clinical spaces form the threshold between the community and highly specialised services. It is for this reason that non-clinical spaces fall under a 'no-man's land' with regard to specifications. For example; waiting rooms are not explicitly stipulated to adhere to the same standards as consultation rooms (IUSS N&S Task Group C, 2014). But minimum standards of light, ventilation and material are assumed so that clinical spaces are not jeopardised.

FIGURE 71. Street view of Hermanus CDC. Image credit: GLA

FIGURE 72. Street view of Symphony Way CDC. Photograph Credit CS Studio

FIGURE 73.Street view of the Grassy Park Clinic. Image credit: Anesa + Barbosa

FIGURE 74. Street view of the Ubuntu Centre. Image credit: Jess Field found at ArchDaily.

If one accepts that minimum standards need to be upheld due to the institutional nature of health care, a sensitive architectural technological design strategy should be formulated. This section does not serve as a definitive list of norms and standards with regards to clinical spaces, but rather seeks to identify how policy has found architectural presence in non-clinical environments, and where architectural precedent can inform sensitive practical design.

This section includes precedent studies of new primary health care facilities in South Africa. The precedent studies were undertaken through an appraisal of the available drawings, site visits (where possible in the Cape Town area) and interviews with users. The case studies are: Hermanus Community Day Centre, Delft Symphony Community Health Centre, Grassy Park Clinic and Ubuntu Centre.

The scope of the research does not include specialist clinical needs that apply to treatment spaces but only in so far as the technical standards extend into non-clinical spaces are their attributes relevant.

Light, ventilation and material regulations

This document makes use of four precedents to show how clinical policy, standards and regulation have found architectural presence in non clinical spaces. In particular the aim is to show how regulations impact light, ventilation and material choices and how these have been combined to create architectural presence specifically with regard to waiting areas because they are the threshold between non clinical and clinical spaces.

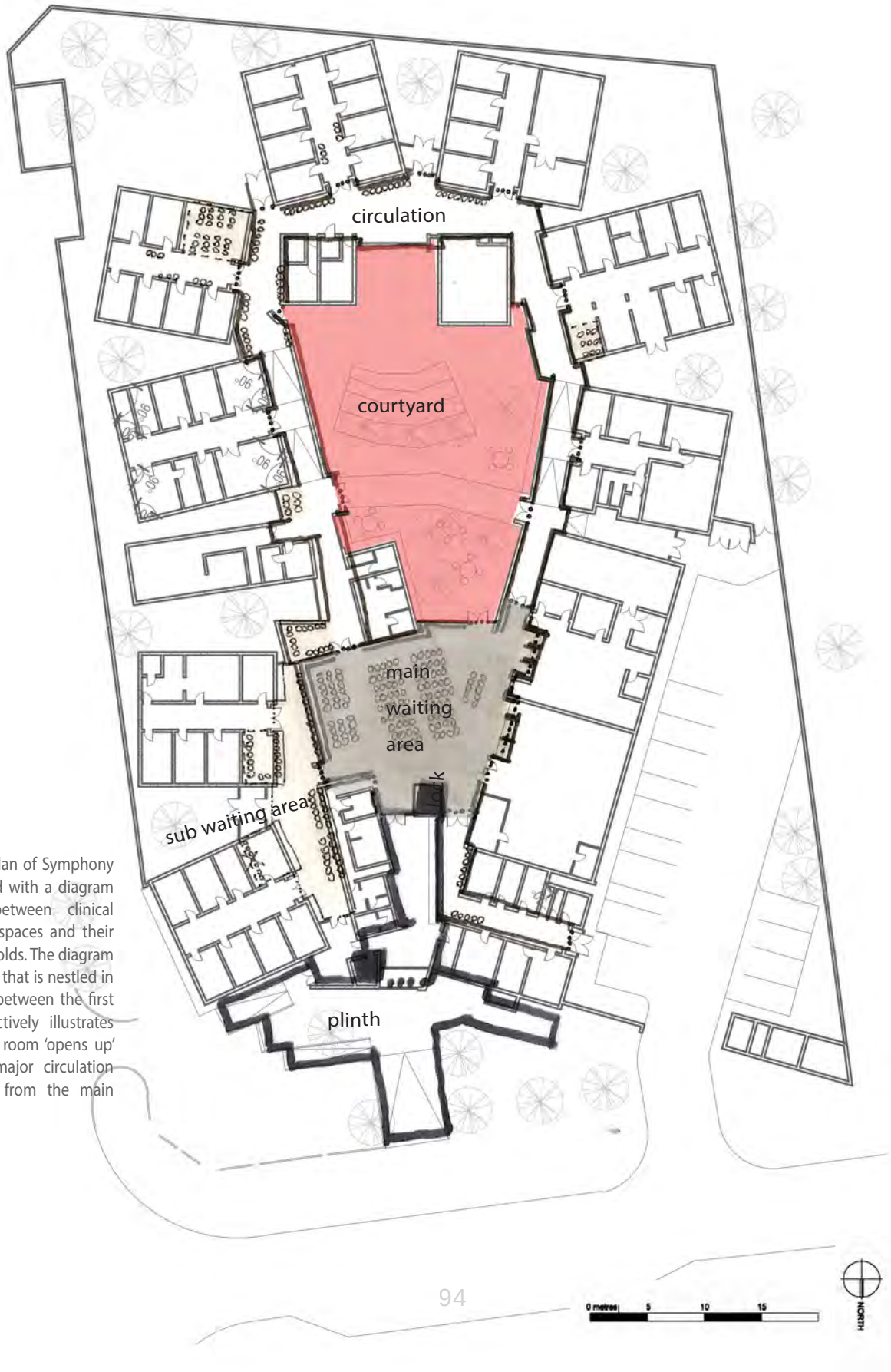


FIGURE 75. The plan of Symphony way CHC overlaid with a diagram differentiating between clinical and non-clinical spaces and their respective thresholds. The diagram surfaces the 'lock' that is nestled in the small space between the first blocks and effectively illustrates how the waiting room 'opens up' thereafter. The major circulation runs in a loop from the main waiting area.

Precedent Study 1 - Delft Symphony CHC

Designed by CS Studio

The provincially managed Community Health Centre (CHC) is a typical Carin Smuts design comprising of *"different blocks, scattered around the whole site in order to make up one interesting structure"*(Sitwebile, 2014a). The site is currently situated amongst many empty plots and is intended to be a landmark around which the area can develop (Equity Studio, 2011). The *'blocks'* each house a different clinical use and form a courtyard that is an extension to the waiting area as well as for community events. The concept was to create a *"Health Village"* (Equity Studio, 2011) using interactive spaces facilitating family visiting with their sick.

Mediating the risk of cross infection in the large waiting areas is vital (Department of Public Works, n.d.). The main waiting area at the Symphony Way CHC is a prime example of how many engineering and practical functions have been combined into meaningful architecture.

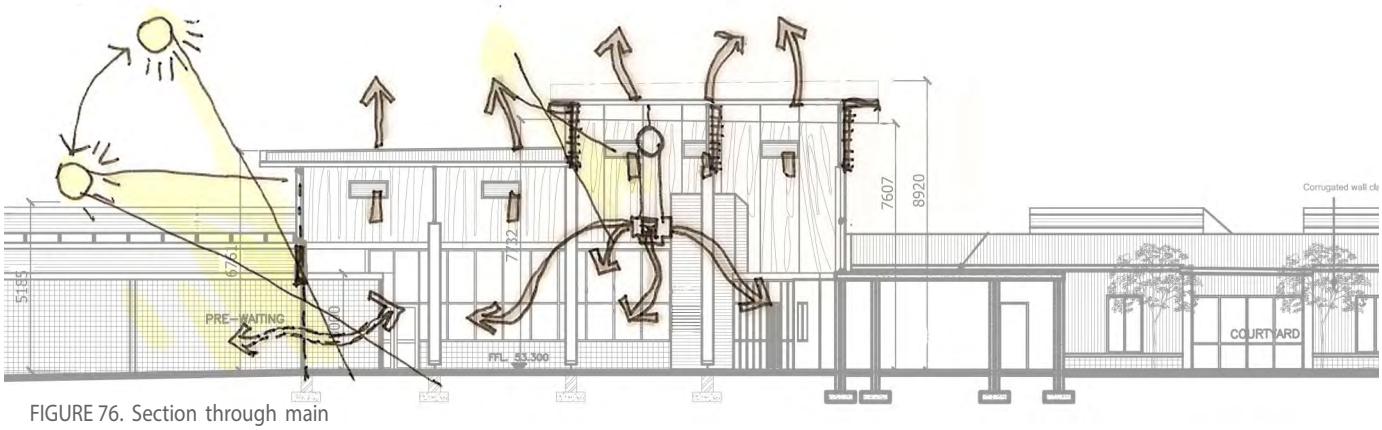


FIGURE 76. Section through main waiting room of the Symphony way clinic. Original Image Credit: CS Studio.

FIGURE 77. View of Main Waiting area with overlay. Image credit: Archi Geek.

Light is brought in both from roof level and with windows at a human scale as shown in FIGURE 76. The mono pitched roofs have a height difference of 1.2m (the same height as the steel truss that spans the space) and therefore allow opportunity for a clerestory window in the roof cutting through the centre of the space. This means that light is more evenly distributed as opposed to only coming in at the walls. The roofs are pitched in the same direction and therefore run water perpendicularly away from the troublesome joint between two roofs and clerestory.

The roof generously overhangs on the northern sides in order to protect the internal spaces from harsh and heating summer sun. On the south sides the roof overhang is reduced in order to allow for consistent/un-glaring light to enter.

At Symphony reliable air changes have been ensured by keeping open-able sections to a minimum and relying on mechanical ventilation.

Conditioned air is introduced through sculptural circular ducting that is hung from the ceiling between the supporting rafters as shown in FIGURE 77 (in the same direction as the rafters). These circular ducts have vertical drops so that the cold air can be released closer to the ground. As the roof is at its highest at 7.6m, the large volume of air requires fewer air changes as per regulations (IUSS N&S Task Group C:03, 2014) and only one air-conditioning duct running in the middle of the space suffices.

Extraction vents are placed high on the external walls on the supporting ends of the roof, in order to extract the hot air in the ceiling space linking to the plant area on the roof adjacent.

Materials have been carefully chosen by the architect in an effort to make the space culturally more identifiable. Because tactile materials are not encouraged, even in non-clinical spaces as the regulations say with more natural materials have been used sparingly as accents to create effect, and mitigating serious health risks.

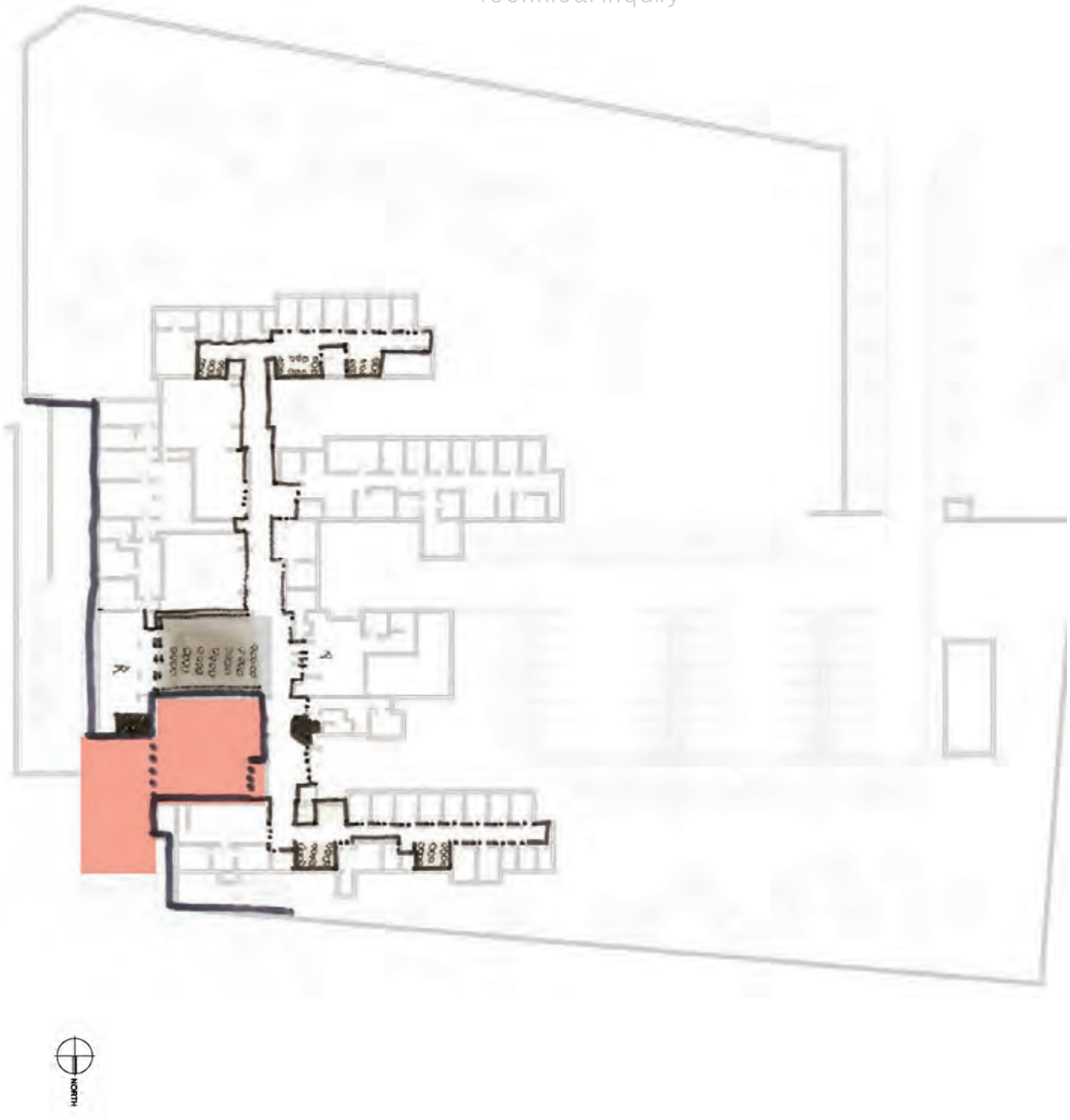


FIGURE 78. Plan of Hermanus CDC,
Scale 1:500. Image credit GLA.

Precedent study 2 - Hermanus CDC

Designed by GLA

Designed on a main road which is a feeder to R43 (the main route into Hermanus proper) the facility forms a public space by complementing an informal market across the street. The building itself edges the majority of the street interface, eliminating the need for a fence. (Leading Architecture & Design, 2015). Internally it is arranged around a series of courtyards (each progressively more private) and a main street that structures access to courtyards and medical wings.

The main waiting and sub waiting areas at Hermanus CDC use roof monitors in order to accomplish both lighting requirements as well as ventilation standards as shown in FIGURE 81.

Within the medical wings, the double pitch of the roof is pulled into an asymmetrical line in order to line monitors up with sub-waiting areas located on the southern edges. The roof trusses span from wall to wall on the narrow section of the medical wings. But when a roof monitor is introduced the profile of the trusses change and span from wall, to roof monitor box and then to the wall again as seen in FIGURE 82.

The roof monitors face south in order to stop direct sunlight as per regulation (IUSS N&S Task Group C, 2014). This means that a gentle continuous light permeates through the space.

The timber truss roof structure has been manipulated in order to create beautiful light wells that also act as ventilation stacks. The extra space created in the sculptural light scoops reduces the pressure on number of air changes per hour IUSS N&S Task Group C (2014) and effectively mitigates cross infection by pulling fresh air through the building. It does this by creating pressure differentials in adjacent areas which have traditional open-able windows.

The height of the bottom of the roof monitors are at nearly double this height and create phenomenal updraughts as well as space that feels open and fresh.

FIGURE 79. View from courtyard of roof monitor at Hermanus CDC. Image Credit: GLA.

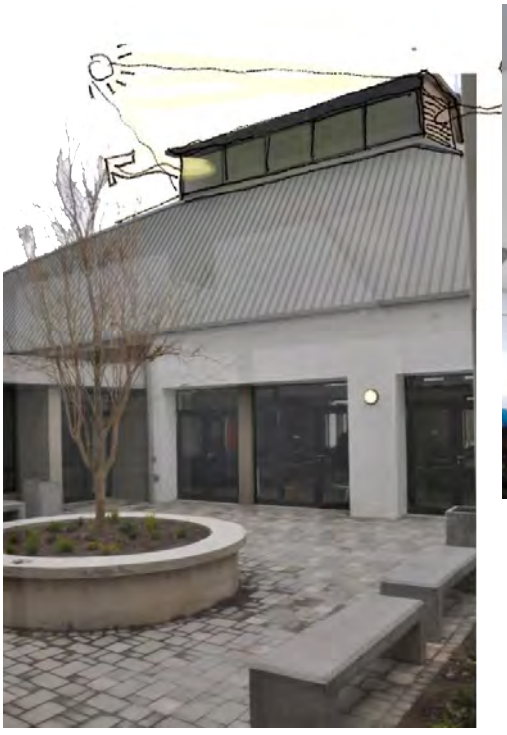


FIGURE 80.View of Main Waiting area at Hermanus CDC. Image credit: GLA

FIGURE 81.Diagram showing position of roof monitors in relation to waiting areas. Image credit: GLA (original)

FIGURE 82. Diagram showing roof monitor structure.

Even though the main strategy is to employ natural ventilation, back up air extraction is installed in the updraught portions of the ceiling, so that a pressure differential can still be achieved regardless of the wind, or lack thereof.

Ventilation panels are placed on the east and west ends of each roof monitor - this means that the air flow is in the same direction as the corridors which run along the medical wings. This effectively encourages ventilation throughout the facility.

Materials have been carefully chosen by the architect in an effort to make the space cheerful and fresh. Most internals walls are painted white, as are the ceilings. The accent colours of choice are yellows and oranges. Tactile materials are entirely avoided in interior finishes.

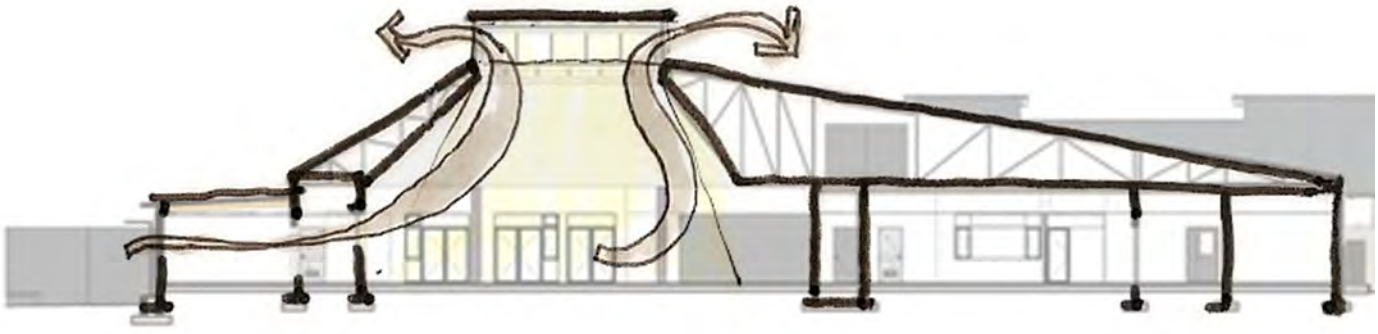


FIGURE 83. Section through Main Waiting area at Hermanus CDC. Image Credit: GLA.

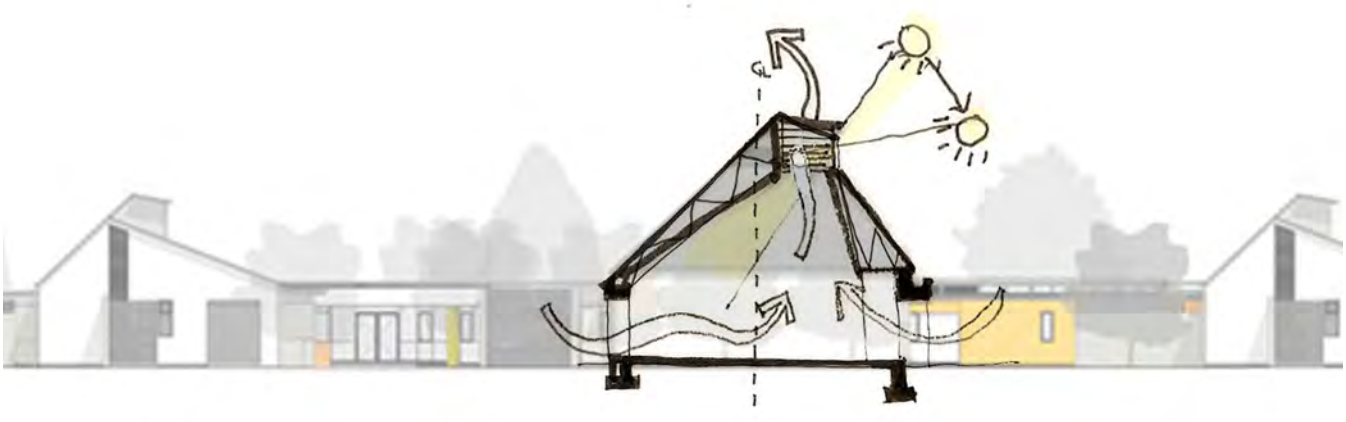


FIGURE 84. Section through Sub-Waiting area at Hermanus CDC. Image Credit: GLA.

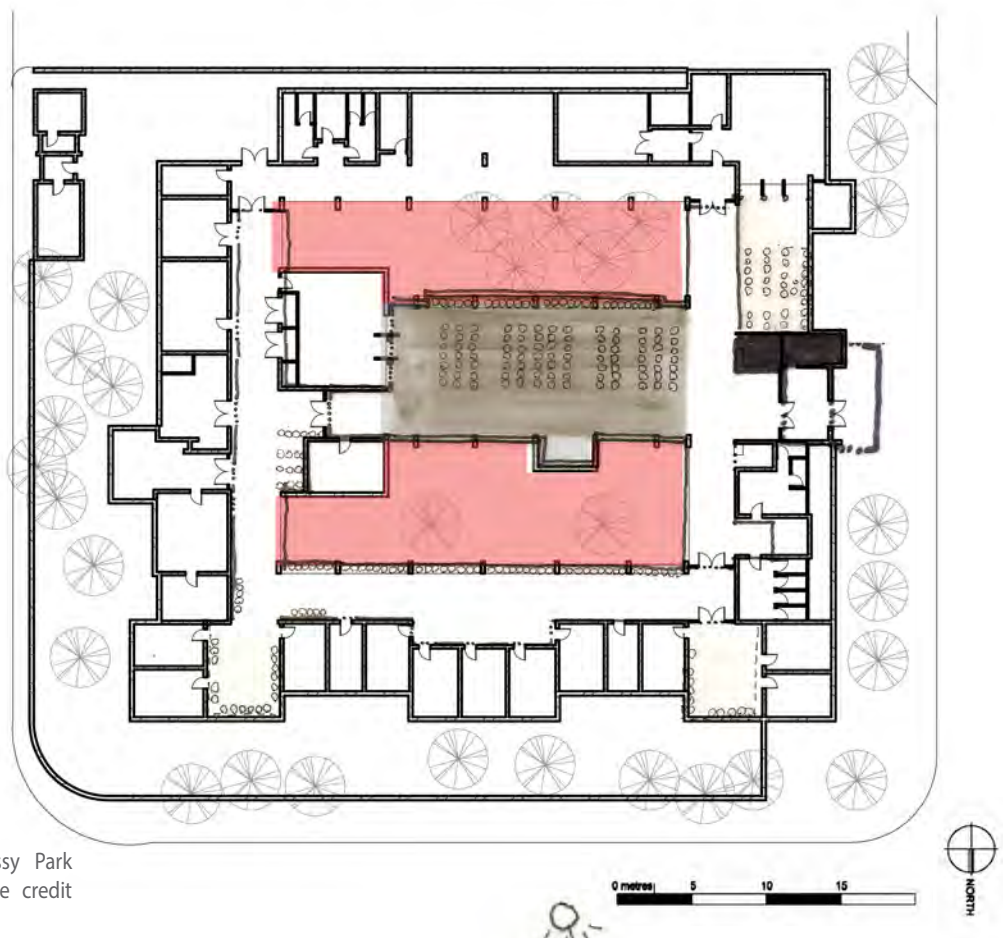


FIGURE 85. Plan of Grassy Park Clinic, Scale 1:500. Image credit Amanda Katz Architects.

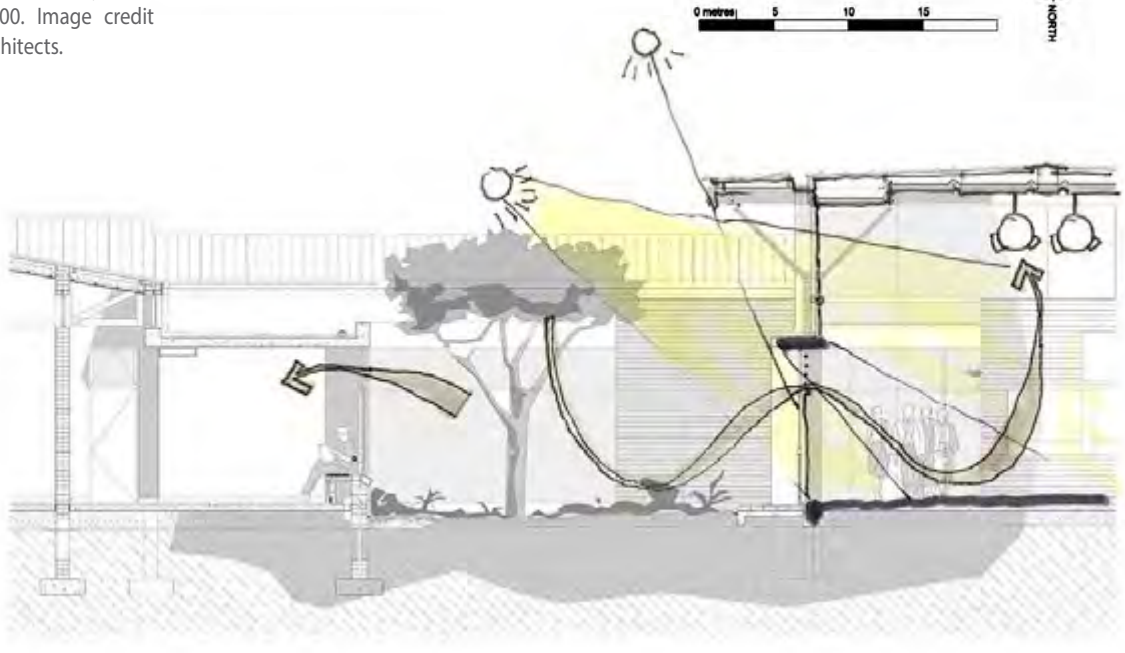


FIGURE 86. Section through Courtyard at Grassy Park Clinic. Image credit: Amanda Katz Architects.

Precedent study 3 - Grassy Park

Designed by a+b Architects with Amanda Katz Architects.

Department of Transport and Public Works - Health commissioned the New Grassy Park clinic to be finished in November 2011. The original day hospital that the new clinic shares a site with was built in 1960 and still serves the Grassy Park and Phillipi farm areas (Magubane, 2012). The site that the original day hospital occupied was large enough for the new clinic to be built on unused land without disrupting service to the community. Programme includes pharmacy, treatment rooms, a baby clinic, consulting and counselling rooms with waiting and service areas with sub-waiting areas related to each. (Katz, 2011)

The entire clinic is arranged around a *filled* courtyard concept. In effect the 1.5 volume main waiting area occupies the centre of the courtyard and is a sort of internal courtyard within a larger courtyard. This results in smaller 'courtyard' or planted spaces on either side of the waiting room, one of which is used by patients (accessed from main waiting area); and the other used by the staff. The courtyard is surrounded by cloister type single loaded corridor from which all the clinical services are accessed and effectively act as sub waiting areas.

The main waiting area and cloister corridors are the architecturally interesting part of the Grassy Park Clinic. Both lighting and ventilation standards are satisfied and the structure is cleverly manipulated to include seating within its structural depth.

Both the main waiting area and the corridors employ mixed ventilation methods in order to achieve the correct number of air changes. Within the main waiting area circular air-conditioning ducts run along the length at the apex of the roof which allows it to extract warm air from the highest point as shown in FIGURE 86. This strategy pulls fresh air in through windows that are at a humanly accessible height.

As shown in FIGURE 87 to FIGURE 89 the roof structure of the main waiting area is made of a combination of robust wooden beams running across the narrow section, onto which steel roof purlins are fixed. Between the purlins a rough acoustic panelling renders a textured flush finish that mediates the otherwise acoustically harsh materials in the space. The concealed gutter of the roof over the main waiting area is in line

FIGURE 87. View of Main Waiting space at Grassy Park Clinic with ventilation overlay. Image credit: Anesa + Barbosa.

FIGURE 88. External view of Roof Structure at Grassy Park Clinic. Image credit: Anesa + Barbosa

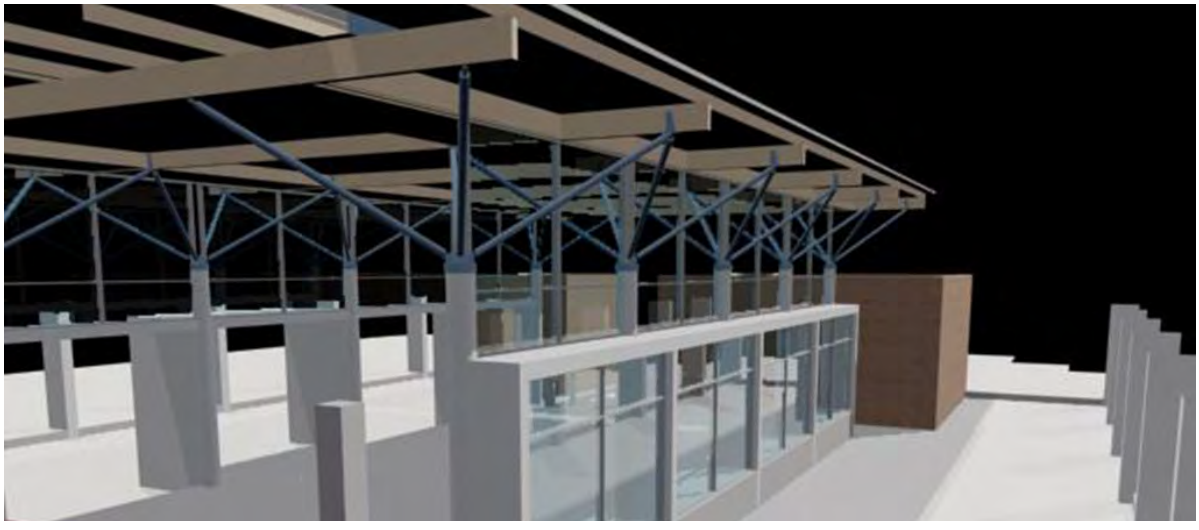


FIGURE 89. 3D representation of the main roof at Gassy Park Clinic. Image credit: Amanda Katz Architects.

with the outside of the structure and the rainwater downpipes are at the ends so that rainwater is moved onto the flat roofs of the circulation.

Structurally, the normal wall is articulated with a concrete frame, the vertical members extend past the normal lintel height but stop short of the fly over roof. From these beautiful steel 'spider' joints support the timber laminate beams of the roof that allow the glazing to run the full ribbon around the top 1m making the roof appear weightless.

The roof has a large overhang all around so that the glass is protected from high harsh summer sun but allows sunlight in winter.

The circulation and medical spaces are articulated with different roofs. The circulation is roofed by a flat roof that effectively acts as a gutter for water to fall from the mono-pitch over the external medical spaces.

Above the junction between mono-pitch and flat roof is articulated with a clerestory window that brings light deeper into the space, lighting from above both the wider spaces of circulation and otherwise into the rooms.

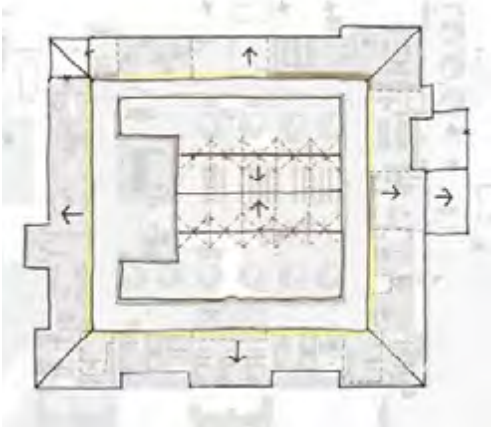


FIGURE 90. Diagram of Grassy Park Roof Plan.

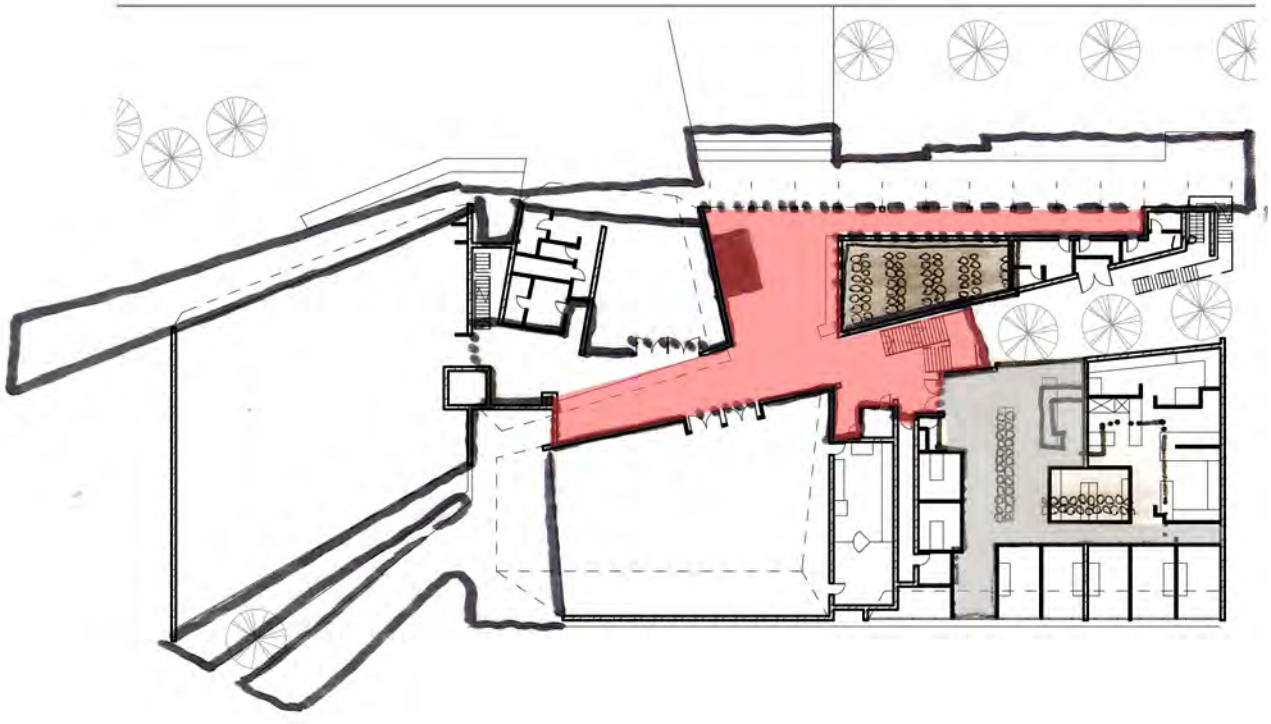


FIGURE 91.Plan of Ubuntu Centre, Scale 1:500. Image credit Field Architects.

Precedent study 4 - Ubuntu Centre

Designed by Field Architects

Ubuntu was designed for and funded by an NGO with a special interest in Port Elizabeth. The design revolves around a public passage, that surfaces the desire-lines on the site, that is encased in glass into which large concrete shapes connect and house each of the programmes shown in FIGURE 91.

Conceptually, a hierarchy of spaces or programmes is purposefully not established through using the same architectural timber screens on each facade regardless of internal programme.

Light has been used in the same way in all the spaces, but is the most effective and most dramatic in the triple volume multi-purpose space. The design of the concrete structure with fill-in façades of curtain wall means that two faces are solid with no openings while the other is a giant aperture. The timber "Izibonda" (gum poles) mediate how much light enters. The timber Izibonda are fixed so cannot be truly responsive to light conditions.

The concrete structures also extend further over the north and the west façades in

FIGURE 92. Street view of the Ubuntu Centre . Image credit : Jess Field.

FIGURE 93. Section through Multi-Purpose Space of Ubuntu Centre. Image credit : Field Architects.

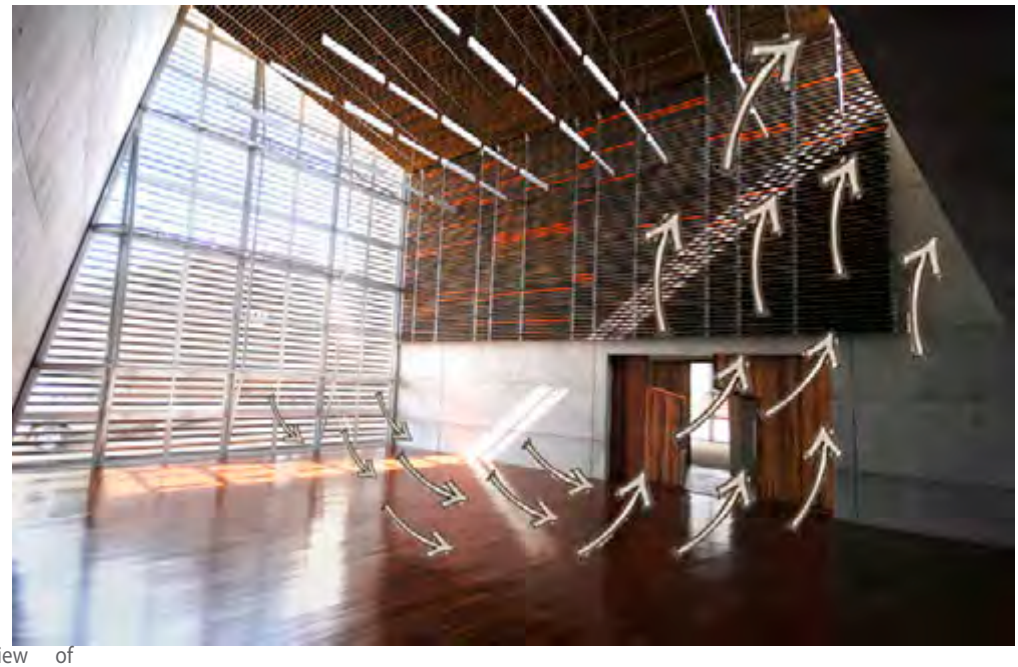


FIGURE 94. Internal view of Multi-purpose space showing ventilation. Image credit : Jess Field.

order to create a 'hood' like shading effect seen in FIGURE 92. These hoods are both horizontal over the top as well vertical on the sides and are particularly effective in shading large parts of the glass.

The curtain walls on the main street façade face North West, this means that during the middle of the day in summer the sun is prevented from entering the spaces by the hoods, whereas in winter when the sun is lower they allow warming light in (Guenther & Vittori, 2013). What this system does not account for though is that the setting sun will bake these façades (as shown in FIGURE 92) which will likely result in a thermal flywheel effect, radiating warmth in later hours.

Natural ventilation is completely relied upon in the public spaces. This is different to the mixed system of ventilation applied in the clinic waiting room. This is an obvious example about how clinical spaces affect non-clinical spaces just because of their physical proximity. The mixed ventilation in the clinic is all hidden away in the ceiling voids over the clinic area.

Within the public spaces the glazing fills the entire facade, yet, the openings are at human scale - so that the occupants can control the airflow as shown in as shown in FIGURE 93 and FIGURE 94.

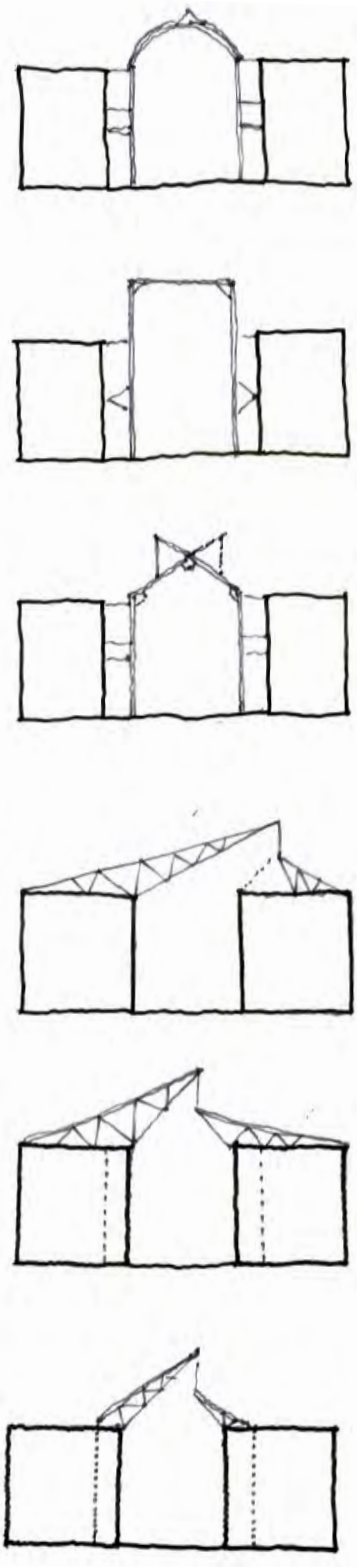


FIGURE 95. Early design diagrams exploring the access passage-ways and how the roof could be designed to allow for both sun light and natural ventilation.

Conclusion

Considering that the aim of my design and dissertation is to stitch together the fissure between the institution and community, the precedent studies focussed on architecturally successful thresholds between clinical and non-clinical spaces, i.e. main or sub waiting spaces. These studies showed that careful design can ameliorate the stressful nature of the individual in clinical environments as well as comply with stricter clinical building guidelines.

To this end the following specific strategies were shown to be successful:

A high roof structure with exposed ventilation systems reduces loads on mechanical ventilation and creates architectural presence within the space.

South light is best for consistent anti-glare light. North facing windows should be strategically shaded in order to protect the windows from the sun in summer and to warm the space in winter.

Natural materials should be used strategically to accent and soften regulation hygienic materials.

From sections 02 to 05, three separate but overlapping spheres of programming have come to light.

1. Health care Institution

Medical services such as *Emergency Unit, Out-Patient care* or *Pharmacy.*

2. Community Organisation

The spaces that make up the "missing middle". Generic spaces that can be used for the purposes of *teaching, research* and *accommodation.*

3. Community

Civic or *commercial functions* such as libraries or rental spaces for small businesses.

These are the spheres that interact during the proposed process of health care delivery. I intend to leverage the interdisciplinary nature that has surfaced throughout this dissertation in order to reprogramme and reinvigorate the urban edge of health care facilities.

Because I have chosen to work on sites with existing facilities new programming won't explicitly include new 'health care institution' programmes but in the process of re-arranging the facility existing health care programmes may move or be re-imagined spatially.

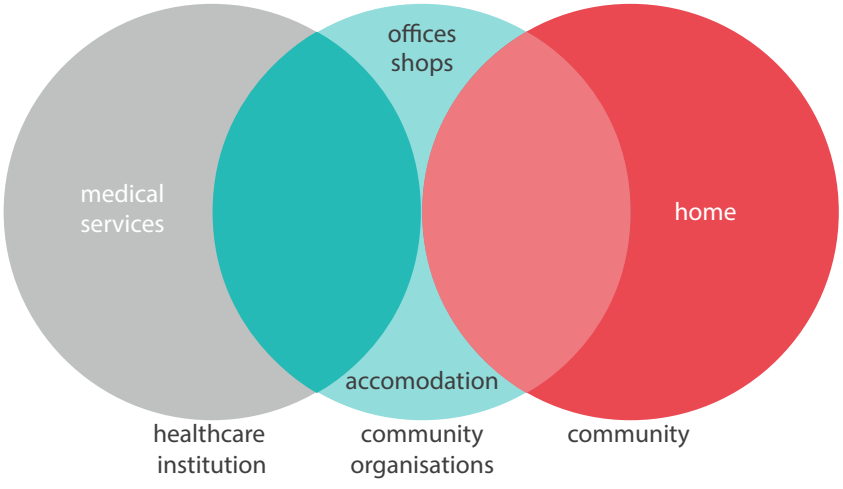


FIGURE 96. Diagram notionally illustrating how I intend for the programmes to overlap and for community organisations to form the threshold.

Development

Each facet of programming will be discussed in detail in this section, but with the aim to introduce and orientate the reader I would like to begin with a summary of the major shifts that have shaped what programmes this dissertation proposes. FIGURE 97 and FIGURE 98 show the development of programme through the project thus far.

Although it was not my intention to design medical spaces, as explained in section 5, some existing programmes need to be shifted around and in the case of the Emergency Unit completely rebuilt. Outpatient Care and Pharmacy only require small additions in order to satisfy the requirements of my scheme.

As in FIGURE 97 I intended for the civic function (as suggested in section 2 - Ubuntu Case Study) to act as a mediator between the street and the institution. This was intended to normalise the facility so that it became a place that contributes to the urban as a whole and not only to patients of the institution. Early on I excluded the

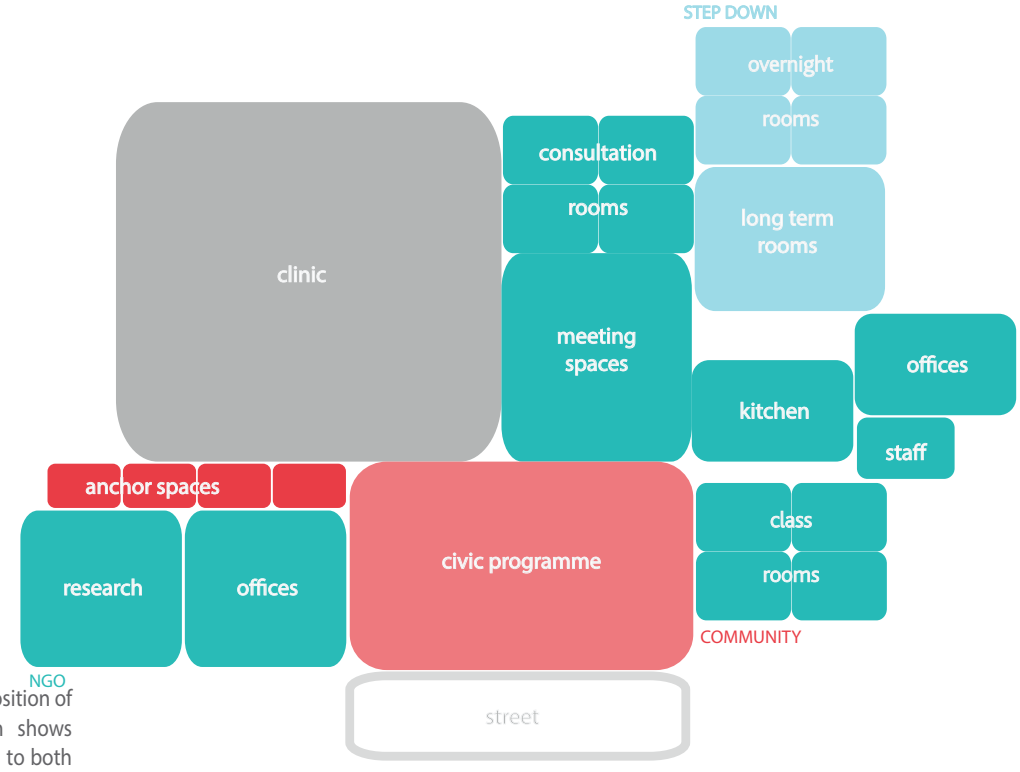


FIGURE 97. Original composition of programme. Organisation shows each programmes relation to both the street and each other. Colours denote type of programme: NGO, community etc.

civic function because there seemed to be so many disparate programmes that were difficult to reconcile both conceptually and spatially. But as the research and design continued to include and revolve around an *off-street space of negotiation* that new, connecting programmes activate in different ways, was the civic program reintroduced to strengthen the link of the space to the street and by extension urban life. The 'space of negotiation' (aka. a courtyard) has been conceptualised as the fulcrum around which programmes work.

In order to pull the life of the street deeper into the plan the concept of commercial spaces lining the courtyard and the street were introduced. These could adapt to use by either a shop-keeper or an NGOs.

Another salient point during the development of programme was refining the type of step-down that would be necessary at primary health care level. The process behind excluding overnight-critical care in lieu of medium term assisted living units will be discussed in greater detail later in the section.

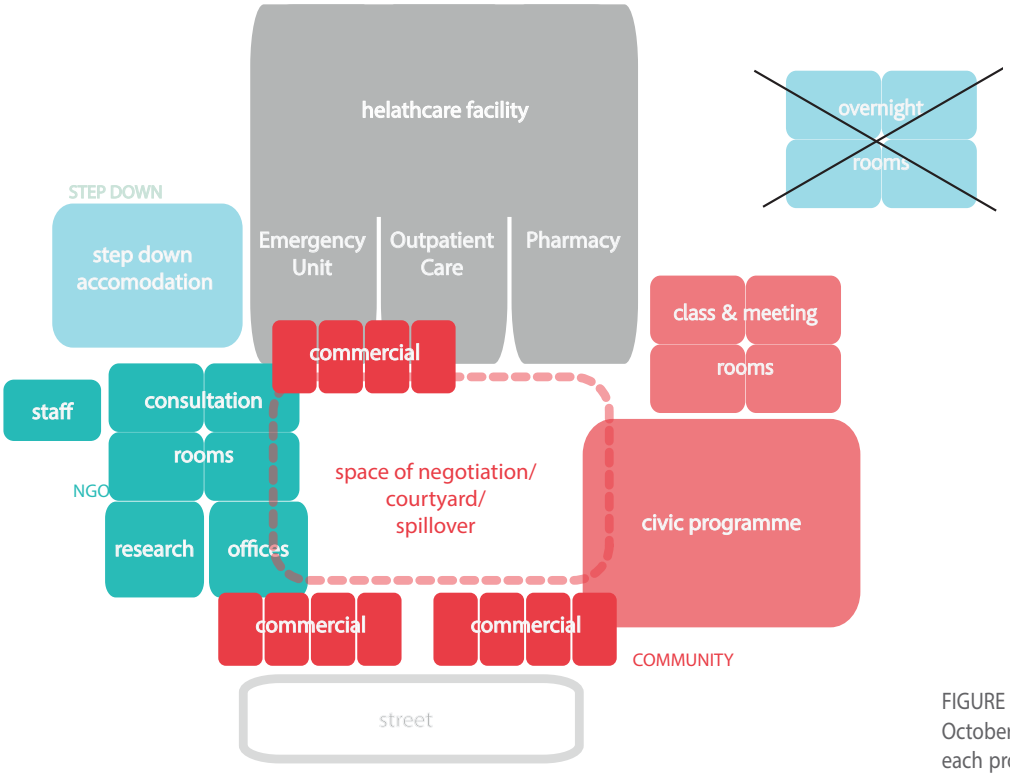


FIGURE 98. Programme as of October 2016. Organisation shows each programmes relation to both the street and each other. Colours denote type of programme: NGO, community etc.

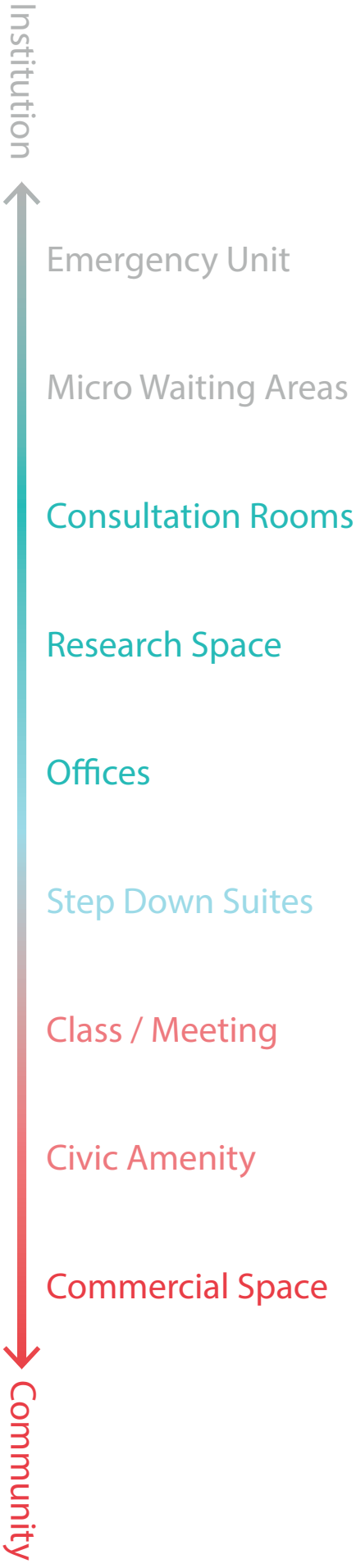


FIGURE 99. Diagram showing each programme on a spectrum between clinical and community. Red indicating programmes most to do with the community and grey indicating the most clinical.

Leading on from FIGURE 96 to FIGURE 98 on the previous pages, this section will discuss the details of each of the programmes proposed by this dissertation. This section discussed each programme in order from most institutional to most 'communal'. Namely Emergency Unit (existing under dire stress and lack of maintenance); Micro Waiting Areas (separating waiting areas and entrances into smaller ones to mediate the institutional interface); Consultation rooms, Research Spaces, offices and class/meeting spaces for Community Organisations; Step Down Facility; Civic Amenity (computer lab) and Commercial space. This order is illustrated by FIGURE 99 below.

According to my interviews with staff at Delft Day Hospital (23 June 2016, who prefer not to be named) Delft Day Hospital sees between 1300 and 2500 patients each day (depending on the time of year), which roughly works out to 160 to 310 patients per hour per day. This indicates a turn-around of four to six patients per consultation room (53 in total - excluding treatment areas) per hour.

The above are the figures that will be used give a rough indication of appropriate number and size of each programme.

Emergency unit

Current problems

The Emergency unit at Delft Day Hospital currently consists only of one large square room for both major and minor injuries, which is especially uncomfortable because patients are positioned around the outside edges of the room and look directly at each other. Another problem is that the reception and nurses stations are combined with little space for records.

Proposed logic

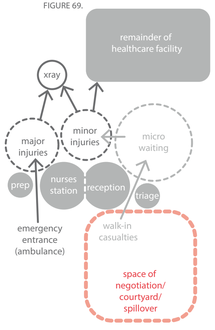
I propose an entirely new Emergency Unit, as shown in FIGURE 69. There are two noteworthy changes in logic that I would like to emphasise. Firstly, walking casualty entrance from the courtyard rather than inside the clinic, this allows for micro waiting space. Secondly is the separation of major and minor injuries into their own spaces, both of which are overlooked by the nurses station which will alleviate a lot of social anxiety of the original combined space.

Considering that Emergency Units are under strain regardless of their occupancy rating, it is often unrealistic to expect these areas to stick to the allocated curtained off areas to fit patients in. A simple strategy to improve privacy in an already high stress situation is to narrow the spaces so that patients sit side by side instead of all the way around a square room looking at each other.

The focus of this dissertation is not to design clinical spaces, but rather to stitch the clinical spaces to the social. Therefore the design will notionally design the flow of the Emergency Unit in relation to its interface with the street and the courtyard.

FIGURE 68.

FIGURE 69.



Macro and micro waiting areas

Existing logic

Currently, the internal logic of Delft Day Hospital, like most institutional facilities, works on the idea of one main entrance. This entrance is both the main point of security as well as the threshold to the largest waiting space in the entire facility. Although this is very efficient in terms of keeping the facility secure as well as regulating and directing access to the various clinical programmes it results in an incredibly impersonal experience for the patient.

Excessively large waiting areas are not only more likely to cause cross-infection but can also have negative effects on the psychology of patients (Ulrich, R. 1991). In addition to the problems of one central waiting area is that once a patient is directed to the correct department they are confronted with yet another set of waiting spaces and reception procedures. This results in the facility feeling like a continuous set of hoops that patients have to jump through in an encounter with an institution.

Proposed logic

My proposal to activate the street edge around an active courtyard offers an alternative to the main point of access and main waiting room typology. Each individual department already has their own internal micro waiting space as well as reception and records areas that currently benefit from the umbrella security of the main entrance. If the threshold to the street is activated and secured it means that some of the larger or 'daily' departments may be able to move to 'before' the main entrance. Effectively breaking up the monolith i.e. institution into smaller more personal units as shown in FIGURE 71.

Size

Traditionally waiting space is sized according to the current and projected pressures on the clinic. Although, this is a quantitative method that tries to ensure that a space can cope with a maximum occupancy it is important to remember bodies in the space in a qualitative way. In continuation with this dissertations' focus on the social, and taking ideas about material comfort for granted, I would like to introduce "Social Distance" as conceptualised by the anthropologist Edward T. Hall (1966). Shown in FIGURE 72 Hall proposes that there is an ideal distance at which the individual is most comfortable in relation to others considering where on the spectrum between public and private it falls.

Main waiting areas are likely to fall into either the "public zone-far" or "public zone-close" whereas micro waiting spaces would be "social zones".

Layout

Some layout strategies: (Nemschoff, 2014)

Create natural divisions.

In a study conducted by Herman Miller in 2012, it was shown that two seats isolated from the rest proved to be of the most popular and indicates how valuable privacy is in these sensitive health care environments. This could also be accommodated by providing more rows with fewer seats. Creating natural boundaries can also assist with way-finding.

Face seats toward the check-in area.

According to research conducted by Nemschoff in 2014, unconscious mistrust of the institutional process manifests in waiting spaces by patients being concerned that they may be forgotten. This can be alleviated by positioning the majority of the seating to face the reception desk.

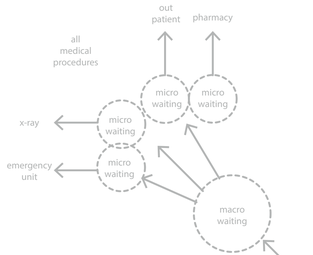


FIGURE 70.

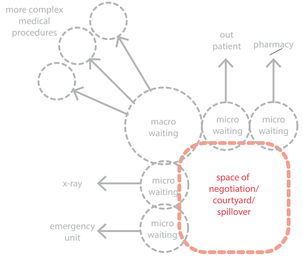
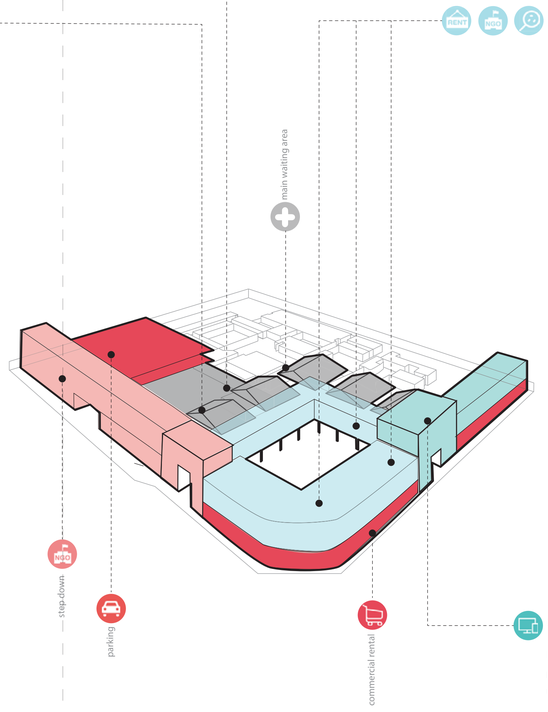


FIGURE 71.



Office, consult, research

I have chosen to combine offices, consultation rooms, research spaces, classrooms and meeting spaces (listed here from smallest to largest) because even though the activities and interface entailed by each differ slightly, the spaces in which they happen are reasonably generic and largely interchangeable.

These programmes are generic or similar in the following ways: they adhere to SANS regulations and are not held to a higher clinical standard; they require very little if any specialised services; and that they would require similar levels of natural light and ventilation.

For programme 3 I would like to develop design strategies around spatial needs or layout of each activity; numbers and sizing of each of the spaces; how the interface of each differs with relation to public and private; the temporal implications of each; and lastly the opportunities that these generic spaces could hold for programmes beyond community organisations.

NGO requirements

natural ventilation
natural light
privacy
larger spaces
comercial interaction space?
bake sale etc
storage space
access to transpot & vehicles
childcare?

NORMAL DAILY: offices

SPECIAL WEEKLY/BIWEEKLY: research

individual consult and group consults
at least partially shielded waiting space
safe access

SPECIAL WEEKLY/BIWEEKLY: events

publically visible space
flexible
access to kitchen& services
further away from treatment spaces

FIGURE 72.

Civic amenity, classrooms and meeting spaces

Management model

Logical 'owner' of meeting spaces - otherwise those spaces are unowned and accessible from a passage - this way there is a regulating framework as well as one point of access that is locked.

Conclusion

This section has specifically left out the courtyard (space of negotiation). This is because I want to emphasise that the programme is not itself programmed but rather a space that is affected and moulded through the uses that form its borders. It could support many small group therapy sessions on a weekday morning; or be criss crossed with queues on a particularly busy day at the Day Hospital; or function as an overflow homework space after school. The space could also facilitate larger urban activities such as a church service on a Sunday; or a game of soccer on a weekday afternoon; or house an outdoor cinema at night. I intend for this space to be un-programmed in and amongst all the specificity of the institution.

SECTION 08: LIST OF FIGURES

SECTION 09: LIST OF REFERENCES

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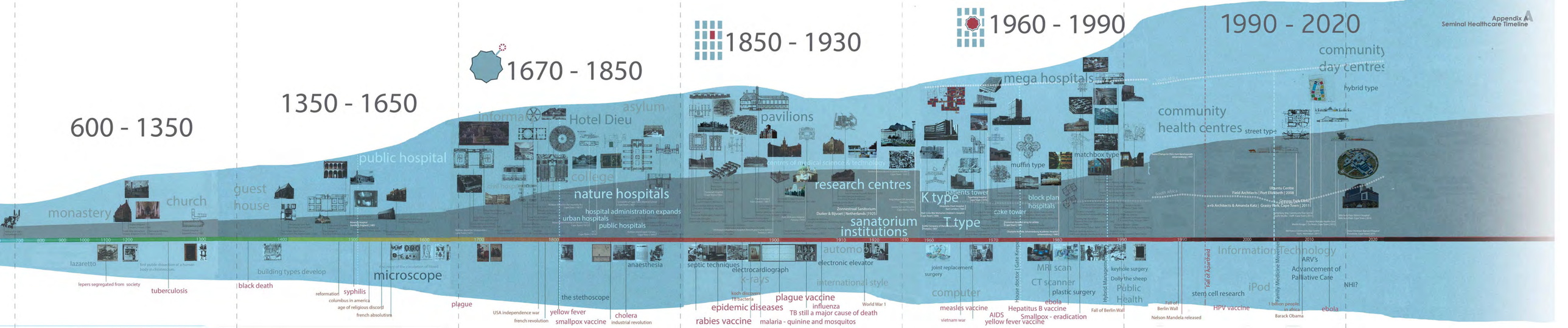
SECTION 10: APPENDICES 10


Appendix A
Seminal Healthcare Timeline
600 - 1350
1350 - 1650
1670 - 1850
1850 - 1930
1960 - 1990
1990 - 2020
monastery
church
lazaretto
lepers segregated from society
tuberculosis
guest house
public hospital
building types develop
black death
microscope
reformation
syphilis
columbus in america
age of religious discord
french absolutism
plague
information
Hotel Dieu
asylum
college
nature hospitals
hospital administration expands
urban hospitals
public hospitals
the stethoscope
USA independence war
french revolution
yellow fever
smallpox vaccine
cholera
industrial revolution
pavilions
centres of medical science & technology
research centres
sanatorium
institutions
septic techniques
electrocardiograph
x-rays
anaesthesia
automobile
electronic elevator
international style
koch discovers TB bacteria
epidemic diseases
rabies vaccine
plague vaccine
influenza
TB still a major cause of death
malaria - quinine and mosquitos
World War 1
mega hospitals
muffin type
matchbox type
patients tower
K type
T type
cake tower
block plan hospitals
joint replacement surgery
computer
measles vaccine
vietnam war
AIDS
yellow fever vaccine
MRI scan
CT scanner
plastic surgery
ebola
Hepatitus B vaccine
Smallpox - eradication
keyhole surgery
Dolly the sheep
Public Health
Fall of Berlin Wall
Nelson Mandela released
community health centres
street type
hybrid type
community day centres
Ubuntu Centre
Field Architects | Port Elizabeth | 2008
Groote Park Clinic
a+b Architects & Amanda Katz | Grassy Park, Cape Town | 2011
Information Technology
ARV's
Advancement of Palliative Care
NHI?
iPod
stem cell research
HPV vaccine
1 billion people in africa
Barack Obama
ebola
Fall of Apartheid
Family Medicine Movement
House doctor | Gate Keeper
Hybrid Management
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1910
1920
1930
1960
1970
1980
1990
2000
2010
2020

Appendix B
Technical characteristics: policy and minimum standards

Lighting

In health care settings light is vital for the comfort and use of space. In health care settings light is an opportunity to connect users to the outside (through the use of windows) but studies have also shown that natural light has a "positive effect on the recovery state of patients" (NHS Wales, 2013). Adequate lighting is also important for patients and staff to be able to perform their roles.

All lighting and electricity norms should aim to be applied with the maximum energy and cost efficiency. Therefore daylight harvesting is encouraged with "passive building elements and active systems response" (IUSS N&S Task Group C:08, 2014).

Natural daylight

Reliance upon natural daylight may cause problems outside and inside some buildings. Strongly directional daylight from windows and roof-lights may cause changing patterns of light and shadow across interior surfaces. Moving sunlight can cause unacceptable glare.

Daylight requirements can be met by borrowing from adjacent spaces through glazed walls, provided that privacy is maintained and that adjacent spaces fall within the same clinical 'unit' e.g.. mother and child services or infectious diseases(IUSS N&S Task Group C:08, 2014).

Sunlight should be taken advantage of because it is 'therapeutic and invigorating' (NHS Wales, 2013: 39) and also practically because dependence on electrical lighting drives up running costs. Reducing the life cycle costs of electrical lighting can free up budget better spent.

Lighting should illuminate the space without glare, which increases the likelihood of confusing reflections or shadows, for people entering, using and leaving a building. (IUSS N&S Task Group C:08, 2014)

Special attention should be paid to doorways and places where people may be expected to manoeuvre or change pace.

Ventilation

Although ventilation of non-clinical spaces is more relaxed than in clinical spaces, it is important that a minimum standard is obtained in non-clinical spaces to make sure that a pressure differential is not created between clinical and non-clinical, making specialised systems less effective on the whole.

Maximum airborne-precautionary steps should be undertaken in non-clinical spaces to avoid the obvious risk of cross-infection between patients.

Natural ventilation

According to IUSS N&S Group (C:03) **natural ventilation is acceptable for non-clinical spaces** but it is stressed that natural ventilation is variable. Factors that can affect ventilation could be occupants opening or closing windows and doors, solar heat gains or differences in wind pressure on the day. Therefore it is recommended that where natural ventilation is considered the primary strategy for ventilation that dedicated and controllable openings be ensured (Department of Public Works, n.d.).

If the minimum air quality, quantity and consistency cannot be reached through passive design then a mixed mode should be considered before full mechanical systems. Mixed modes means mechanically assisted by fans and damper-controlled ventilation openings. (IUSS N&S Task Group C:03, 2014)

Temperature, relative humidity (rh) and fresh air requirements

Climate and social customs should always be considered when determining thermal comfort in a space but IUSS dictates that temperatures should not drift more than 1°C daily and 3°C weekly. For the majority of occupied spaces, unless otherwise indicated, a **temperature range** of **18-28°C** is acceptable. Direct humidity control is not necessary for non-clinical spaces.

Fresh air requirements for non-clinical spaces are subject to National Building Regulations (NBR), but where airborne cross infection is controlled primarily through dilution and natural ventilation, medium and high risk areas require 60 or 160 litres per second per person respectively.

Air change rates per hour (AC/h) are calculated according to ceilings heights of 3m.

Rates can be reduced with higher ceiling levels. The accepted norm is between 12 and 20 AC/h.

Supply-only systems do not supply air evenly to all spaces, they supply to the 'least contaminated spaces' and then are allowed to 'cascade' from the clean core throughout the building. This ensures that less clean air never flows into clean spaces. This type of system is not appropriate for very specialised systems(Department of Public Works, n.d.).

Airborne contamination-control concepts

IUSS have identified strategies for the control of airborne contamination. Strategies that could apply to non-clinical spaces are:

Displacement ('flushing' contaminants away with high volumes of clean air) and dilution (introduction of air at the same rate of contamination introduction).

Medium-risk areas such as waiting areas, should have a nominal ventilation rate of 60 ℓ/s per person (IUSS N&S Task Group C:03, 2014).

Extraction

Special consideration need to be given to the potential for air to be reintroduced into the system, therefore exhaust points should be placed 3m away from windows (IUSS N&S Task Group C:03, 2014). If this is impossible, precautionary measures such as aerosol or chemical filtration should be applied.

Toilet facilities must be well ventilated. Single ablution facilities do not require extract ventilation but, where ablutions are grouped extraction is a minimum requirement (IUSS N&S Task Group C:03, 2014).

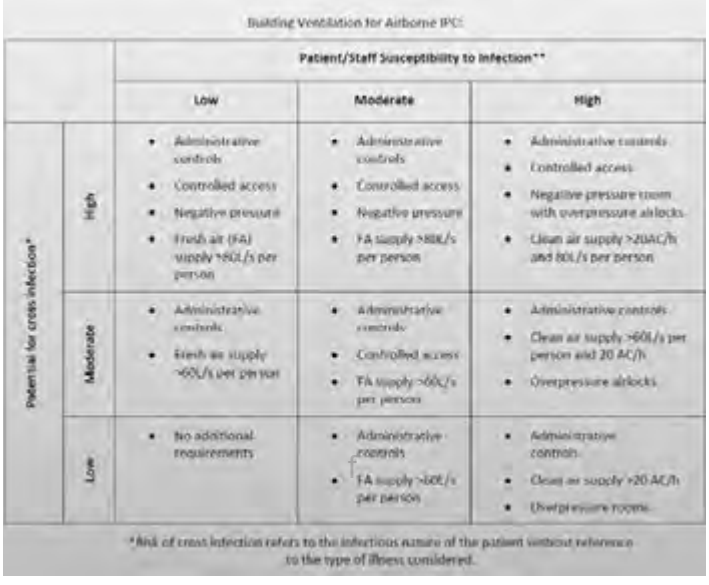


FIGURE 100. Building Ventilation for Airborne IPC (Infection Prevention and Control). Table credit: IUSS N&S Task Group C:08, 2014. This table shows how spaces are rated in terms of airborne infection risk and cross matches it with the vulnerability of people within the space in order to determine the rate of air change and supply per person.

Wet services

Plumbing services (water supply and drainage) must comply as a minimum with the following Standard Specifications and Codes of Practice:

SANS10400: The Application of the National Building Regulations, including Part XA: Energy Use in Buildings

SANS10252 – Part 1 – Water Supply Installations for Buildings

SANS 10252 – Part 2 – Drainage Installations for Buildings

UK Department of Health Technical Memorandum 04-01: The Control of Legionella, Hygiene, "Safe" Hot Water, Cold Water and Drinking Water Systems: Part A: Design, Installation and Testing, and Part B: Operational Management or the equivalent SANS standard when available.

Site-water reticulation must be designed using sound engineering principles, with adequate provision being made for isolating sections of the reticulation whilst keeping the remainder in operation.

Fire-protection water reticulations must be kept totally separate from the domestic water reticulation(IUSS N&S Task Group C:08, 2014).

The South African Patients' Rights Charter (1997) states: "Everyone has the right to a healthy and safe environment that will ensure their physical and mental health or well-being including ... protection from all forms of environmental danger, such as pollution, ecological degradation or infection."

h

Material

The selection criteria for materials in non-clinical spaces are:

Materials and finishes have been chosen in health care spaces according to the following characteristics in declining order of importance (Rohde ,2002): “Aesthetics, durability, ease of maintenance, client preference, initial cost, cost of maintenance, infection control, ease of installation and life cycle cost” (IUSS N&S Task Group C:05.1, 2014). Infection prevention must be the paramount consideration, even though not all spaces are considered high risk, movement between spaces results in a minimum standard.

The two major considerations regarding infection prevention and materials are firstly whether the “surfaces are likely to become reservoirs for infectious agents” (IUSS N&S Task Group C:05.1, 2014). This is a function of the surface conditions and structure of the flooring. The second is the ease of which the surface is cleaned.

While textile finishes do reduce “cold and institutional environments’ they would be entirely inappropriate in high risk areas. It is recommended that carpets are avoided in all spaces, mainly because the use thereof would put a greater strain on cleaning and maintenance costs.

In high risk areas of health care the requirement is that there be no joint between the floor and wall but rather a continuous round integral surface (IUSS N&S Task Group C:08, 2014). In non-clinical spaces the regulation is that skirting should be 100mm high and can be pre-manufactured as long as there is a seal joint both between the walls and floor.

Floors in general should be durable, low maintenance, washable, non trip and slip resistant. (IUSS N&S Task Group C:08, 2014)

Appendix C
List of community organisations in health care in Cape Town

South African National Tuberculosis Association

Santa, as a dynamic, community-based, voluntary association, is committed to serving communities and TB patients throughout South Africa by providing preventative, curative and rehabilitative services in partnership with other stakeholders. Now over half a century since it was formed, SANTA continues its fight against TB but with a new emphasis. In addition to feeding schemes, its care work and awareness programmes, SANTA are training volunteers in DOTS (Directly Observed Treatment Short-course). Volunteers in SANTA branches around the country are helping TB sufferers in their communities by making sure that they take TB drugs. These drugs are very powerful and will make TB sufferers better but if they are not taken correctly or if patients stop taking them before they should, the drugs become useless against the powerful TB germ.

http://www.santa.org.za/contact-us.html

South African National Tuberculosis Association

"Uthando (meaning love in Xhosa) is a unique non-profit and Fair Trade in Tourism accredited organization which aims to raise funds for life changing community development projects in South Africa. Despite its breath-taking natural beauty and diverse cultures, South Africa has many acute social challenges – millions of its citizens live in extreme poverty and face daily struggles to survive, let alone flourish. Motivated by love, compassion and respect for our common humanity, Uthando seeks to form part of the solution to meet these challenges. As an award winning model of Responsible Tourism and Travelling Philanthropy, Uthando is drawing on an extensive network of cherished partnerships in tourism and community development, with the ultimate goal of linking these two sectors in a myriad of innovative, sincere and meaningful ways. Through our deeply respectful and culturally-sensitively Philanthropic Tours and experiences, Uthando celebrates our Proudly South African culture, while shining a light on the many deserving but hitherto unsung community heroes whose efforts so often go unrecognized and unrewarded. Through a powerful combination of love and action, Uthando works to make South Africa, and the world, a better place."

http://www.uthandosa.org

Hope4Destiny

"We are a NGO called HOPE4DESTINY situated in Delft (Cape Town). We freely try to improve, uplift and empower our community as a whole by providing HIV / AIDS and TB awareness, educating our youth through various workshops, learnerships, fight against abused children and senior citizens and by providing feeding schemes. Delft is overwhelmed with poverty, crime, drugs, unemployment, HIV / AIDS and domestic violence.

http://www.charitysa.co.za/hope-4-destiny.html

Mothers 2 Mothers

We train, employ, and empower local mothers living with HIV, called Mentor Mothers, as frontline healthcare workers in understaffed health centres and within communities. In one-on-one and group sessions, Mentor Mothers provide essential health education and support to women on how they can protect their babies from HIV infection, and keep themselves and their families healthy. Mentor Mothers' intimate understanding of the social and cultural challenges of living with HIV gives them a unique ability to form trusted relationships with other women, vital to helping them overcome their fears and make lifesaving decisions.m2m's scalable, high-impact peer approach has been proven by independent researchers to: Reduce number of infants infected with HIV; Improve the health outcomes of mothers and infants; Save money that would have been spent on treatment

https://www.m2m.org/

PATA PATA

"Since 2005, PATA has held 10 Continental Summits, 3 Regional Forums and 18 Local Forums in Botswana, Kenya, Lesotho, Malawi, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. Together, these Summits and Forums have built the capacity of multidisciplinary PATA teams from 228 health facilities across 24 countries, sharing paediatric HIV learning and best practices and enhancing HIV response implementation. From PATA's first forum in 2005, where teams from 10 facilities across 3 countries shared models of best practice, PATA's most recent Continental Summit in 2011 included teams from 41 facilities across 18 countries.

2. The Clinic-CBO Collaboration (C3) Programme in partnership with the Positive Action for Children Fund (PACF) promotes collaboration between 36 clinic teams and community-based organizations (CBOs) across districts in 9 countries.

3. The Zimbabwe/ Zambia Community Health Worker (CHW) Programme in partnership with the Department for International Development (DFID) and One to One Children's Fund improves paediatric and adolescent services in 16 health facilities across Zimbabwe and Zambia."

"4. The Re-Engage Children and Adolescents with HIV (REACH) Programme in partnership with One to One Children's Fund employs peer supporters to support adolescents and young people living with HIV in 20 health facilities and communities across 5 countries.

5. PATA's Research Portfolio undertakes multi-country surveys and project and best practice assessments, with data presented at regional and international conferences and peer review publications.

6. PATA and the African Youth Positives Network (AY+) launched the Peers 2 Zero (P2Z) Coalition in the beginning of 2016 to improve access to effective treatment and care for adolescents living with HIV (ALHIV; ages 10-19) and young people living with HIV (YPLHIV; ages 18-24)."

http://www.teampata.org/

Treatment Action Campaign

The TAC National Council has decided on five key campaigns. The five campaigns aim at both direct improvement of healthcare services and achieving knock-on improvements in the healthcare system. The Free State and Eastern Cape campaigns address collapsing healthcare systems in the two worst-affected provinces. In both cases a large part of the TAC's work is to monitor health facilities and communities' access to HIV and TB services in particular and to let that information inform our advocacy. In the Eastern Cape we led the establishment of a coalition of over 20 organisations. In the Free State, we are engaged in a struggle to have MEC for Health Benny Malakoane removed from his position and an emergency plan to fix the health service there. Malakoane faces multiple charges of fraud and corruption.

"Finally the TAC's flagship treatment literacy programme remains key to our model of highly informed grassroots activism. Funding pressure has in recent years taken a toll on this programme, but we remain committed to teaching the science of HIV/AIDS, TB and relevant treatments to our members and the general public. This programme promotes highly informed and active community members who understand the importance of treatment and adherence. Branch leaders are trained and subsequently facilitate trainings at a branch, community and clinic level. In addition accurate and informative materials related to adherence and treatment literacy are disseminated through localised social mobilisation campaigns.

The TAC has already developed several relevant materials that are used to improve understanding of HIV, TB and treatment such as its booklets HIV in Our Lives, and its quarterly publication Equal Treatment. Equal Treatment is the TAC's high quality treatment literacy magazine. Through it we aim to empower people living with and affected by HIV and TB to take responsibility for their own health and for their healthcare system. The magazine covers various issues relating to one's rights in the healthcare system and to the science and treatment of HIV and TB. The magazine forms the cornerstone of the TAC's treatment literacy programme through which we build our cadre of highly informed active citizens. Equal Treatment is available in four languages. It is distributed for free to TAC members, partner organisations, policy makers, and libraries. "

http://www.tac.org.za/contact

Mamelani Projects

"Focus areas:

1. Community-based health education: Mamelani's Wellness Program - empowering people to have the necessary knowledge to be able to take action regarding their health and the health of their families.

2. Youth Development: Project Lungisela - Independent Living skills for youth leaving alternative care (children's homes and foster care).

3. Child and Family Support: Nonoza Education Fund - supporting vulnerable children and their families"

http://www.mamelani.org.za/

Soul City Institute

On the 11th of August 2016 Soul City Institute relaunched itself to become a Social Justice organisation that focusses on Young Women & Girls and the communities they live in. An organisation that is, a pillar of strength, support and hope for a new dawn. An organisation that ensures that young women & girls, have equal access to resources that enable them to self-actualise and reach their full potential and take their rightful place in society. An organisation that promotes a just society and ensures equal treatment and respect for basic human rights.Despite legislative efforts, South Africa remains a patriacal society, where women have been discriminated against, from disenfranchisement to various forms of abuse. The oppression of women has also been promoted by cultures, social system's and religion. In South Africa discrimination against women was also compounded by the apartheid system, which resulted in triple oppresion for black women in terms of race, gender and class or other factors. In terms of socio - economic empowerment and gender equality, women have not advanced rapidly and remain the worst affected by inequality, poverty and unemployment. Furthermore, serious gender –related challenges persist, including unacceptable levels of gender based violence.

https://www.m2m.org/

Safer Spaces

"SaferSpaces is an interactive platform run by and for community safety and violence prevention practitioners in South Africa to connect, share knowledge and learn from each other.

SaferSpaces supports the sharing of knowledge on promoting community safety and preventing violence in South Africa. It serves as a source of knowledge on good practices and experiences, as well as a virtual meeting place for those involved in and interested in safety-related interventions."

http://www.saferspaces.org.za

Touching Nations

"Touching Nations respond to the following challenges concerning HIV / AIDS. By using the public and media spheres, acknowledge the seriousness of the TB/HIV/AIDS epidemics. Minimising the personal and social impact thereof by operating counselling and testing programmes. Protecting and promoting the health of all through education and awareness. Challenging discrimination and stigmatisation through engaging in meaningful debate. Mobilising and supporting community responses."

http://www.touchingnations.org/contactus.html

TASK Applied Science

"TASK Applied Science's vision is to be the preferred partner for institutions needing clinical trials for Tuberculosis drug research.TASK Applied Science's mission is to assist in developing a new and better cure for Tuberculosis.The Western Cape of South Africa is among the regions with the highest Tuberculosis incidence worldwide. TASK staff have accumulated years of experience in Clinical Tuberculosis Research to provide:

Expertise in trial design and interpretation of results

Modern TB laboratory infrastructure with capacity for clinical trials: Good Clinical Practice (GCP) standard; Good Laboratory Practice (GLP) standard; Trained medical staff and laboratory technologists experienced in Tuberculosis.

Academic support from the DST/NRF Centre of Excellence for Biomedical Tuberculosis Research at the University of Stellenbosch"

http://www.task.org.za/contact-us/sites/

Hope4Destiny

"We are a NGO called HOPE4DESTINY situated in Delft (Cape Town). We freely try to improve, uplift and empower our community as a whole by providing HIV / AIDS and TB awareness, educating our youth through various workshops, learnerships, fight against abused children and senior citizens and by providing feeding schemes. Delft is overwhelmed with poverty, crime, drugs, unemployment, HIV / AIDS and domestic violence.

http://www.charitysa.co.za/hope-4-destiny.html

Ikhaya le Themba

Ikhaya le Themba offers holistic After School Care programs to primary school children of Imizamo Yethu informal settlement in Hout Bay. This service includes home visiting, advocacy and referral for their family carers. We work to ensure that family units remain strong under the strain of illness and poverty and to support communities in caring for their orphaned and vulnerable children. Therefore 2 programs were set-up besides the main after school care program. These programs entail a community development program and a parent centre, all complimentary to the benefit of the child. Our community development program aims to support the families and carers of our children. This program offers support through family visits, food parcels, support groups and material assistance to our particularly impoverished families. We also work closely with other organizations to make a bigger impact in the greater community. Our parent center aims to develop our parents so they can find work or start their own businesses. We offer training workshops in skills such as English Literacy, Personal Vision, CV writing, Worker Readiness Training, food gardens, computer training, etc.

http://www.ikhayalethemba.org.za/

Westlake United Church Trust

A COMMUNITY ADVICE OFFICE has been established by WUCT, which is run by two members of the Westlake community. They assist the community with queries regarding IDís (identity documents), social grants, typing of cvís and printing services. They also help people to find employment and assist the community with transport to and from the Home Affairs Office, Social Services, Police Station, or Hospital. They also manage the Hall Complex for its tenants, who hire out the hall for church services, forum meetings and other community functions. This office is buzzing with activity as they tend to a constant stream of people from the community or visitors who come in daily. We estimate approximately 400 people per month visit this office.

WUCT facilitates 2 HIV/AIDS SUPPORT GROUPS. They are called ITHEMBA (XHOSA for HOPE). Ithemba deals with a range of issues including education, prevention, home based care and anti-retroviral treatment. Support is given in the form of monthly food parcels and assistance with transport to hospital, whenever necessary. Problems are shared and members are encouraged to help, care and support one another as they come to terms with living with HIV. We also work in partnership with the Fikelela Aids Project, the Anglican AIDS outreach organization.

WUCT runs a HOME BASED CARE PROGRAM in partnership with the Department of Health. We employ a registered nursing sister who co-ordinates the program, 15 trained home based carers, including a full-time community healthcare worker, who visit and care for sick people in their homes. We also employ 2 Patient Advocates (Treatment Supporters) who monitor anti-retroviral treatment (ART) and report back to the ART roll-out site . We also run CHRONIC DISEASE SUPPORT GROUPS in Westlake and surrounding areas, for mainly elderly people who suffer from conditions such as hypertension, diabetes, etc.

"A SECOND HAND SHOP has been started by WUCT as a job creation project for 4 members of the Westlake community. This shop is situated in a disused shipping container, which is one of three in the very large hall complex. Each Tuesday, clothes and household goods that have been donated by the churches are sold at very reasonable prices to the Westlake community. This has been a huge success and the women running the shop have been able to generate some income.

4 women from the community have received training from Soil for Life, and have started an ORGANIC FOOD GARDEN at the WUCT Community Centre premises. This project is called MASIVUKE and fresh lettuce and vegetables are sold to a local restaurant, as well as the community and Ithemba support groups. (The garden has now moved to Lynx Road and the site is being re-developed as a new playground).

"A CRAFTS CENTRE has been set up where beadwork and sewing is taught by volunteers from the various churches. The crafting is proving to be popular amongst the women in the community who gather to learn new skills. Beadwork orders have been received and income has been generated. A sewing course was run by False Bay College, Noordhoek, and the trainees received certificates at a graduation ceremony.

ADULT BASIC EDUCATION AND TRAINING classes are run twice a week, on a Friday morning from 10.00-12.00 and on Wednesday evenings from 5.30-7.00pm. The program teaches learners functional numeracy and literacy and the facilitators were trained at Maryland Literacy Centre, Hanover Park.

An INTERNET CAFE has been started at the WUCT premises following a generous donation from the Dell Development Fund. Computer courses are also been offered at the Internet Cafe.

Several churches from the surrounding areas run an afternoon FEEDING SCHEME for children returning from school. This is held every weekday at 3pm at the Community Centre premises and up to 300 children per day receive sandwiches and fruit or soup in winter.

The EMMANUEL EDUCARE CENTRE is a registered pre-school, run by WUCT for 194 children aged from 3 to 6 years. Mrs Eleanor Lawrence, a retired schoolteacher, is the Principal. She is assisted by Hazel, Val, Cher, Maxine, Amezil and Gretchen, who are trained teachers, as well as Pauline, Shirley, Portia, Amanda and Dolly, who are the teachers' assistants. Maria, Anna, Doreen and Phamela run the kitchen and prepare breakfast,lunch and afternoon tea for the children. There is a Board of Governors who meet regularly. The preschool is open from 07h00 to 15h00 Monday to Friday. The school has recently been renovated and extended. The pre-school is always in need of funds as the teachers salaries are very low and many children require assistance with their school fees. Our caretaker, Japie, is a highly valued member of the team, and we have a part-time admin assistant at the school as well.

http://www.wuct.org.za/

Compassion in Action

"We provide a hospice facility caring for the terminally ill including patients with HIV and AIDS. We provide palliative care for children, adults and older persons as well as counselling, care and support services for their families. We do not have an in-patient unit as all the care given is home-based. We also provide private palliative care for older persons. There is an additional fee for home-care service for persons needing daily care which is beyond the free palliative care service provided to patients with a life-threatening illness. We have a small community resource centre. Our services include: Palliative Care; Child Abuse Prevention, Therapy and Treatment; HIV and AIDS; Information Provision and Referral Services; Legal Assistance; Life Skills Training; Nutritional Support; Primary Health Care; Psycho-Social; School Health Services; Peer Support Group Services and Mentoring Support.

http://www.charitysa.co.za/compassion-in-action.html

Community Women Action

"Vision: Empower communities to become sustainable and selfemployed; To empower communities to become economically sustainable and self reliant.

Mission: To provide skills development training to unemployed people in order to;minimize and prevent crime; Create job opportunities and promote local and international tourism through partnerships; To fight poverty and promote local and international tourism and to spread the benefits;

The organization operated from a container sponsored by the Department of Social Development and Poverty Alleviation in which we did sowing skills courses and eventually in 2001 started the assistant chef course. Later the organization bought an old house which was refurbished by volunteers from the surrounding communities.

http://www.communitywomenaction.org.za/en/

Living Hope

"The Capri Centre runs a 22-bed hospice unit and has a men's, women's and children's ward. This centre also runs HIV and AIDS awareness courses and provides skills development programmes, a vegetable gardening project, support groups and spiritual ministry. The Masiphumelele programmes include: home-based care, VCT services, general counselling services, a wound dressing clinic, distribution of food parcels and children's and teenager's clubs. The Centre works in partnership with other churches, organisations, hospitals and the provincial health department.

The lifeskills programme targets children 4 to 14 years of age in 13 schools during the mornings. The lifeskills educators teach a values based Life Skills curriculum, based on the Department of Education's guidelines. In the afternoons this lively, creative and vibrant team of young people run clubs for children at 9 different venues in the community areas in which Living Hope serves. During the school holidays 3 hour clubs are run in the various communities, encouraging children to make positive, Biblically-based life choices.

Running parallel to this programme is the 'wait 4 me' campaign which encourages children to sign up and commit to 'abstain from sex until marriage,' and the 'Eve Project,' which is a project whereby Living Hope encourages donors to donate feminine hygiene products to encourage young girls to continue their education while they are menstruating.

Living Way is the income-generating arm of Living Hope. Living Way assists unemployed people with training and entrepreneurial development. They can be contacted on 021 785 2597 or info(at)livingway.co.za. Living Grace assists homeless people with food security and access to social security services and runs a substance abuse rehabilitation and recovery programme. They can be contacted on 021 788 9702 or manager(at)livinggrace.co.za

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http://www.livinghope.co.za/

Baphumelele

"The vision of Baphumelele is to provide a temporary shelter for vulnerable/orphaned children and young adults with chronic diseases and HIV/Aids, and to provide skills development for the unemployed, early childhood care, alleviation of poverty, and healthcare information to the community in Khayelitsha and surroundings, so that the lives of everyone we touch can become more productive and accepted individuals who make a difference within society"

http://baphumelele.org.za/

Hope

"HOPE Cape Town's purpose is to directly address the HIV and AIDS pandemic and related diseases by providing access to education, treatment and on-going support within the existing provincial and municipal health structures in the Western Cape Province of South Africa. HOPE Cape Town is co-located and associated with the Ithemba (Hope) Ward at Tygerberg Hospital in Cape Town and has a memorandum of understanding with the University of Stellenbosch. We cooperate with "KID-CRU", the Tygerberg Hospital research unit for paediatric infectious diseases. The offices of HOPE Cape Town are located at the Medical School of the University of Stellenbosch - Tygerberg Campus in close vicinity of the Tygerberg Hospital.

Over the years HOPE Cape Town has sustainably demonstrated its standing as a non-profit organisation through the successful projects implemented. HOPE Cape Town has laid out strict founding principles. Our dedicated staff is at the heart of HOPE Cape Town. We provide scarce human resources, by adding qualified professionals to optimize, strengthen and network where they are needed most: at community level. In this way, HOPE Cape Town manages to operate flexibly and change strategies quickly according to changing needs and demands."

http://www.hopecapetown.com/

Society for Family Health

"The Society for Family Health (SFH) is a leading South African social marketing organisation that utilises the strategies and techniques of commercial marketing to bring quality health products and services within the reach of vulnerable and low-income communities. For more than two decades SFH has focused on the challenges of HIV prevention. We have distributed more than a billion condoms, performed more than a million HIV tests and circumcised more than 100 000 men. HIV prevention will remain the mainstay of SFH for some years to come but we are looking to applying the knowledge we have gained and the systems we have built to other areas of health in the near future. Established in 1993 as a non-profit, non-government organization, the scope of SFH's work grew as options for HIV prevention increased. Initially, our efforts were focused exclusively on the social marketing of Lovers+ and Trust condoms. Today SFH is driven by the understanding that prevention of HIV requires a combination of interventions that are mutually reinforcingso we have moved in an innovative way to expand our offering of products and services."

"The SFH New Start programme, run in partnership with several organizations, is our delivery platform. It comprises a network of service centres and clinics in four South African provinces – Free State, Gauteng, KwaZulu-Natal and Mpumalanga – from which: Male condoms, female condoms and lubricant are distributed; HIV counselling and testing is offered and CD4 count testing is done for individuals who test positive; TB sputum samples are collected and sent to laboratories; Medical male circumcision is performed; Referrals are made to other services where needed; These interventions are supported by behaviour change communication, marketing and training."

http://www.sfh.co.za/

The Future for African Children

"The Future for African Children (FAC) is a non-profit organization created in 2007 with the purpose to create a better society fits for children where they are free from poverty, abuse and exploitation by promoting, monitoring and upholding children's rights. FAC is politically independent and it engages with other institutions and organizations that sustain children' rights culture. It seeks to provide practical support and advocate for the rights of vulnerable African children by: speaking on behalf of the most vulnerable African children and engaging communities and leaders to uphold the best interests of children and young people in Africa; giving a meaningful future to the life of hopeless African children through the improvement of the quality of life and advancing African children's rights; working to bring all about changes for good on behalf of African children and their families, and encourage them to participate in processes which enhance their equality, self-reliance and long term sustainable development; seeking to provide hope / assistance to the very poor and disadvantage humankind without any bias and discrimination whatsoever, wherever possible to provide practical support which allows African children to grow up in a safe environment within their own families and communities."

http://www.charitysa.co.za/future-for-african-children-fac.html

Etafeni Trust

The Trust, in partnership with the local community, has built a multi-purpose Day Care Centre in Nyanga which takes into account the needs of vulnerable children, the needs of those who care for them, and the needs of the community who will, of necessity, be their safety net. With over 12 different programmes, the Etafeni Centre is always busy and provides a beautiful space and shelter for members of the community. The Etafeni Day Care Centre Trust has developed a replicable model of holistic sustainable community-based care for AIDS-affected and vulnerable children and their caregivers. We hope that the model, when it is complete, will be of use to South Africa and to all AIDS-affected developing countries in their struggle to address the needs of vulnerable children and the needs of the community in which they live.

http://www.etafeni.org/

Boland Hospice

"The Boland Hospice Team have rendered end of life care services to the communities within Worcester (Zwelethemba, Roodewal, Avianpark and Overhex) since August 2005. We expanded our service area to include Touwsrivier, De Doorns, Rawsonville and Slanghoek. As a NPO, Boland Hospice relies heavily on donations and fundraising initiatives to provide care for patients suffering from life-threatening illnesses.

Our Mission is to provide Excellent and Sustainable Palliative Care (including paediatrics) ensuring quality of life and dignity in death.

Our Vision is to provide professional Palliative Care and Early Childhood Development services through an In Patient Unit and Home Base Care."

http://www.bolandhospice.org/

Arebaokeng

"Arebaokeng Hospice was established in the year 2000 by Ms Flora K. Modiba in response to the increasing rate of HIV/Aids and cancer populations. It was registered as a Non-Profit Organization on 28 June 2000. The motivating factor for the establishment of Arebaokeng Hospice was the need for Palliative care for the Community of Tembisa. Tembisa as a community has always had home-based care projects but none was providing palliative care. There was a great need for this service as all the hospices in Ekurhuleni Municipality are not in proximity with Tembisa.

The vision of Arebaokeng Hospice is to be a centre of excellence in the provision of quality Palliative Care and Primary Health Care Strengthening, Orphans and Vulnerable Children's care for the community of Tembisa and the surrounding areas.

Our mission is to provide Palliative Care as defined by the World Health Organization "Palliative Care is the approach that improves the quality of life of patients and their families facing problems associated with life-threatening illness, through the prevention and relief of suffering, the early identification and impeccable assessment and treatment of pain and other problems, physical, psycho-social and spiritual"

http://arebaokeng.org.za/

Health Systems Trust

"Health Systems Trust currently operates through three units: Health Systems Research; Health Systems Strengthening; Corporate Services .

The Health Systems Research Unit conducts policy-relevant health systems research to strengthen the district health system, its support mechanisms and priority programmes. We focus on improving knowledge management, translating research into policy and practice, and building capacity within the paradigm of Essential National Health Research.

The Health Systems Strengthening Unit provides implementation support through the strategic use, analysis and distribution of health and related information to enhance evidence-based management. HST facilitators based in the districts work closely with health district management teams and healthcare workers to transfer skills through training and mentoring for sustainable quality improvement in service delivery.

Health Systems Trust's Corporate Services division provides essential and specialist support services within the organisation. It delivers a comprehensive and integrated finance, human resources, information technology, administration, and marketing and communications function."

http://www.hst.org.za/content/cape-town-office

Cotlands

"Cotlands is a non-profit early childhood development organisation addressing the education and social crisis by establishing early learning playgroups and toy libraries in under-resourced communities to serve vulnerable children aged birth to six.

Founded in 1936, Cotlands was originally created as a sanctuary for abandoned babies. It all started one night when a baby was left on the doorstep of Matron Dorothy Reece's home in Mayfair, Johannesburg. She decided to take the infant in and care for it and so, Cotlands was born out of this single act of kindness.

Vision: To see children in South Africa thrive in their formative years.

Mission: Cotlands provides children with effective, high impact health, psychosocial and early learning play based development opportunities to help them thrive. "

http://www.cotlands.org.za/

Alnoor Orphanage

"The main aim of AL-NOOR ORPHANAGE is to protect vulnerable orphans; HIV/AIDS infected & affected & abused children by providing them with accommodation, education, medical, cultural and human basic needs. AL-NOOR OPRHANAGE CENTRE is a registered non-profit organizationestablished 2001. Al-Noor does not receive any subsidy from government and rely solely on good hearted individuals and from companies for sustenance."

http://www.alnoororphanage.org.za/

HPCA

"The Hospice Palliative Care Association of South Africa (HPCA) is an Association incorporated under Section 21 of the Companies Act (Reg. No. 1986/001887/08). The hospice Association was founded in 1987 and is a membership organisation for South African hospices. HPCA has 7 regional association members from each province (W Cape, E Cape, KwaZulu Natal, Free State, N cape, NW Province). During the last decade HPCA has established national and provincial Palliative Care development structures aimed specifically and purposefully at support and capacity building of member hospices and more recently of partner organisations in terms of the provision of quality palliative care. HPCA is a national organisation operating in all 9 provinces in South Africa with 134 member and affiliated hospices countrywide. Mission Statement:To Promote quality in life, dignity in death and support in bereavement for all living with a life-threatening illness by supporting member hospices and partner organisations."

http://www.hpca.co.za/

Text sourced directly from websites of various associations and organisations. This list is a sample of the types of NGO's that could use space within my design. It is not a complete list and is only intended to illustrate demand for NGO premises.