



## CHAPTER TWO

### 2. Design Concept, Programme and Theoretical Informants

#### 2.1 Concept

#### 2.2 Programme and Client

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Figure d. Older man (Author 2016)



## 2. DESIGN CONCEPT, PROGRAMME & THEORETICAL INFORMANTS

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### 2.1 CONCEPT

As highlighted in the previous chapter of this dissertation, one can see that the current healthcare facilities in the South African context are grossly inadequate in terms of both service provision and accessibility to holistic healthcare for all members of society. Therefore the main investigation behind this dissertation is into an alternative health care facility design which investigates overcoming these inequalities in order to make holistic healthcare more accessible to all.

Considering the issues laid out in the first chapter of the dissertation, the main conceptual driver began with the investigation into a hybrid form of co-existence between the spatial organisation and scale of the current proposed top down approach and the existing bottom up approach towards health care. The intention behind this being to investigate the spatial manifestation of an intermediate scale holistic healthcare provision facility which becomes both a base for care givers to be visited by the community, as well as a dispersion point from which health workers can carry out visits to the community.

Using the Pholela health care model as a precedent, the intention is for this facility to adopt a primarily preventative approach to health care so as to better support the holistic well being of the community whilst also offering a supporting small scale curative aspect when needed (Kautzky & Tollman 2009: 18). When referring to the holistic well being of the community, this is not only seen to encompass the holistic well being of the patients visiting the facility, but also the staff working at the facility as well as the larger community interacting with the public areas of the facility.

Another important driving concept for this dissertation is to investigate a health care facility which considers the design's spatial effects on the mental and emotional well being of all its users and observers (Cooper Marcus 2005). This is intended to encourage a preventative approach to holistic well being rather than simply replicating a machine oriented facility made up of insensitive inhumane spaces solely intended for medical health care delivery. In other words, adopting a shift in focus from delivering curative health services to a more patient-centred one that encourages health promotion, prevention and community involvement.

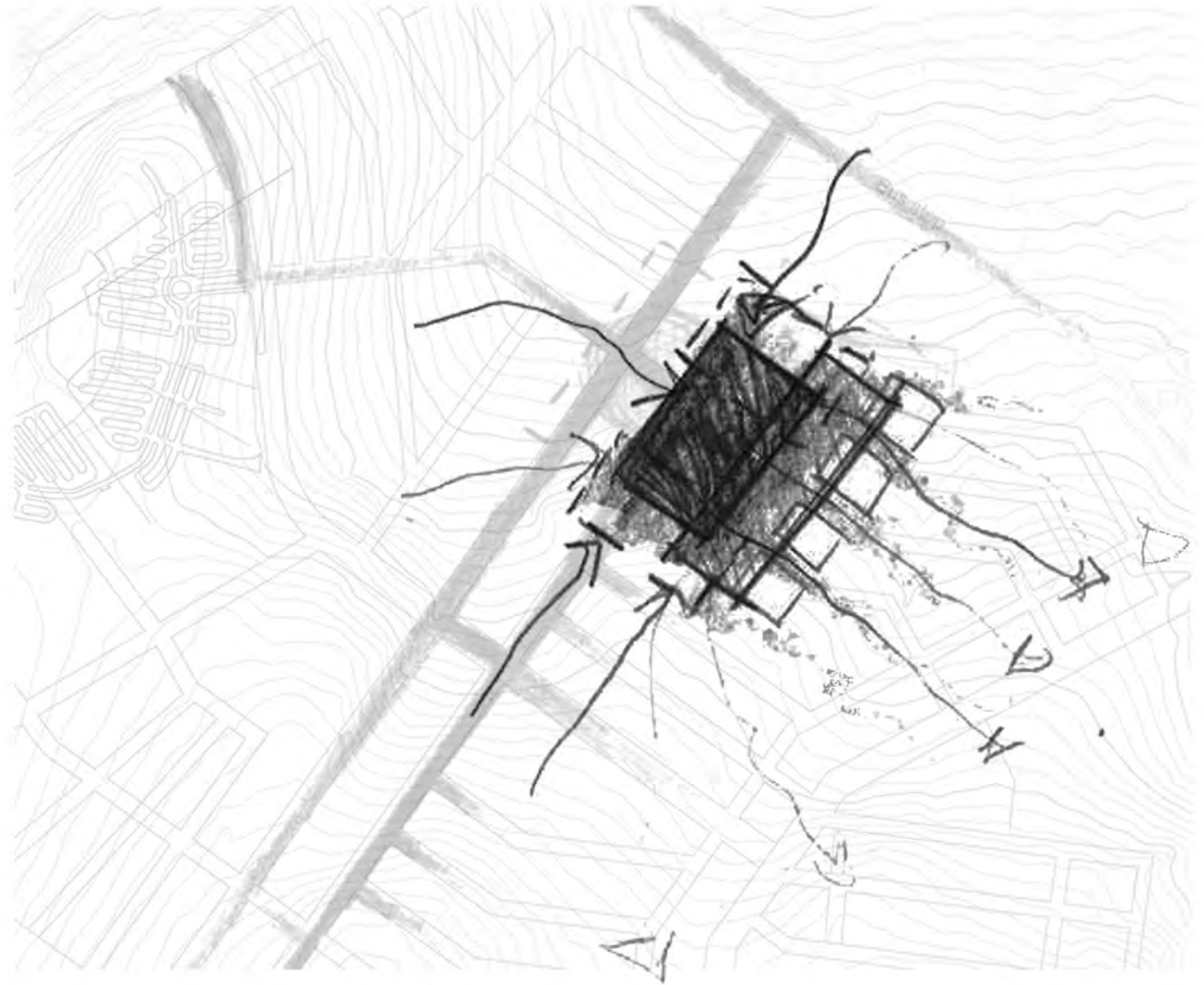
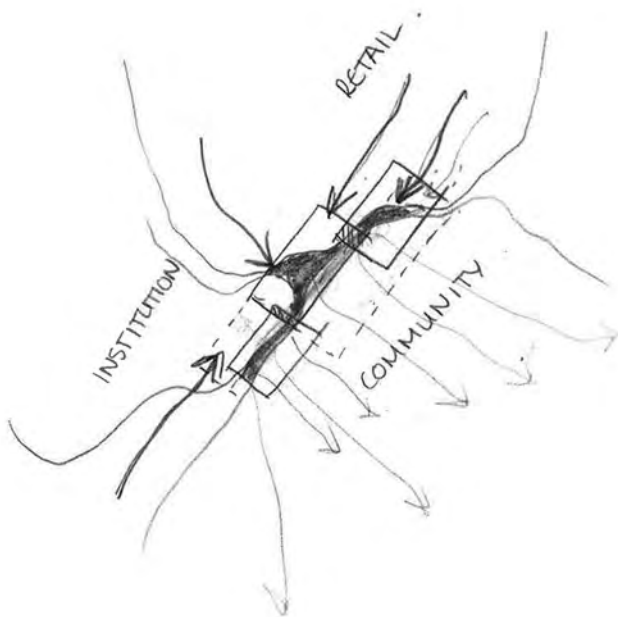


Figure 35. Diagrams illustrating conceptual intentions (Author 2016).

## 2.2 PROGRAMME AND CLIENT

In order to implement this concept, the evaluation of the users which would be directly engaging with the facility and the refinement of the programme that they would be engaging with, was first considered. This evaluation concluded that the primary users of the facility's spaces include the medical staff, facility staff, patients, visitors as well as the larger community passing by the facility during their daily commute. In order to specify the programmatic functions of the facility, the focus on a primarily preventative health care approach with a small scale supporting curative aspect was refined.

So as to accommodate both these preventative and curative aspects of health care, the programme is suggested to be divided up over three main stages of health care attention, namely; immediate care/attention, intermediate care/ attention as well as long term care or support.

The immediate care or attention is catered for in the clinic typology sector of the design. A national health profile survey conducted by the National Department of Health, informed the illnesses/issues catered for by the clinical programme which includes a mother and child care unit, chronic illnesses consultation rooms, an injury and trauma unit and an infectious diseases ward (NDoH 2015:19).

The other two stages of care may be seen as the preventative approaches to health care in the programme. The intermediate care is seen to be provided by the COPC community health workers who conduct household visits into the surrounding community, and provide healthcare education and training to the community. Their offices, as well as the training spaces and community meeting rooms are suggested as the more public interface area of the programme. This public interface includes other public spaces which double up as waiting areas in some instances, and are seen as a comfortable engaging environments from which other activities promoting the preventative aspects of long term healthcare, such as healthy eating, are based. For example, the inclusion of a vegetable garden to the northern corner of the site which softens the site's street edge to the adjacent pedestrian boulevard.

The main intention behind the inclusion of this garden is to expose the passers-by to the process of growing and harvesting healthy fresh vegetables. It also acts as a supply chain to the kitchen facility found adjacent to it. This kitchen is anticipated as a shared activity which engages with the public realm through the pedestrian boulevard and with the health care facility itself. Another aspect to this long term care stage is manifested in the residential aspect of the programme, which allows for the rehabilitation of trauma or abuse victims of the community. Therefore, the programme for the research project may be summarised as a community healthcare support centre with the client being the community of the Plastic View precinct, including the health care facility staff.

### Conceptual Accommodation Schedule:

#### A. Community Interface:

-COPC healthworker's office	x1 open plan
-Community meeting rooms	x5
-Community training rooms	x4
-Residential units for abused patients	x3
-Residential unit for nurse/warden	x1
-Public restaurant & kitchen	x1
-Vegetable garden	x1
-Ablutions	x8 (4;4)
-Waste disposal	x1

#### B. Clinic:

-HIV/TB consultation rooms	x4
-Mother and child consultation rooms	x4
-Chronic diseases consultation rooms	x3
-Emergency ward with after hours access	x3
-Records	x1
-Reception	x1
-Help desk	x1
-Pharmacy	x2 outlets
-Ablutions	x5

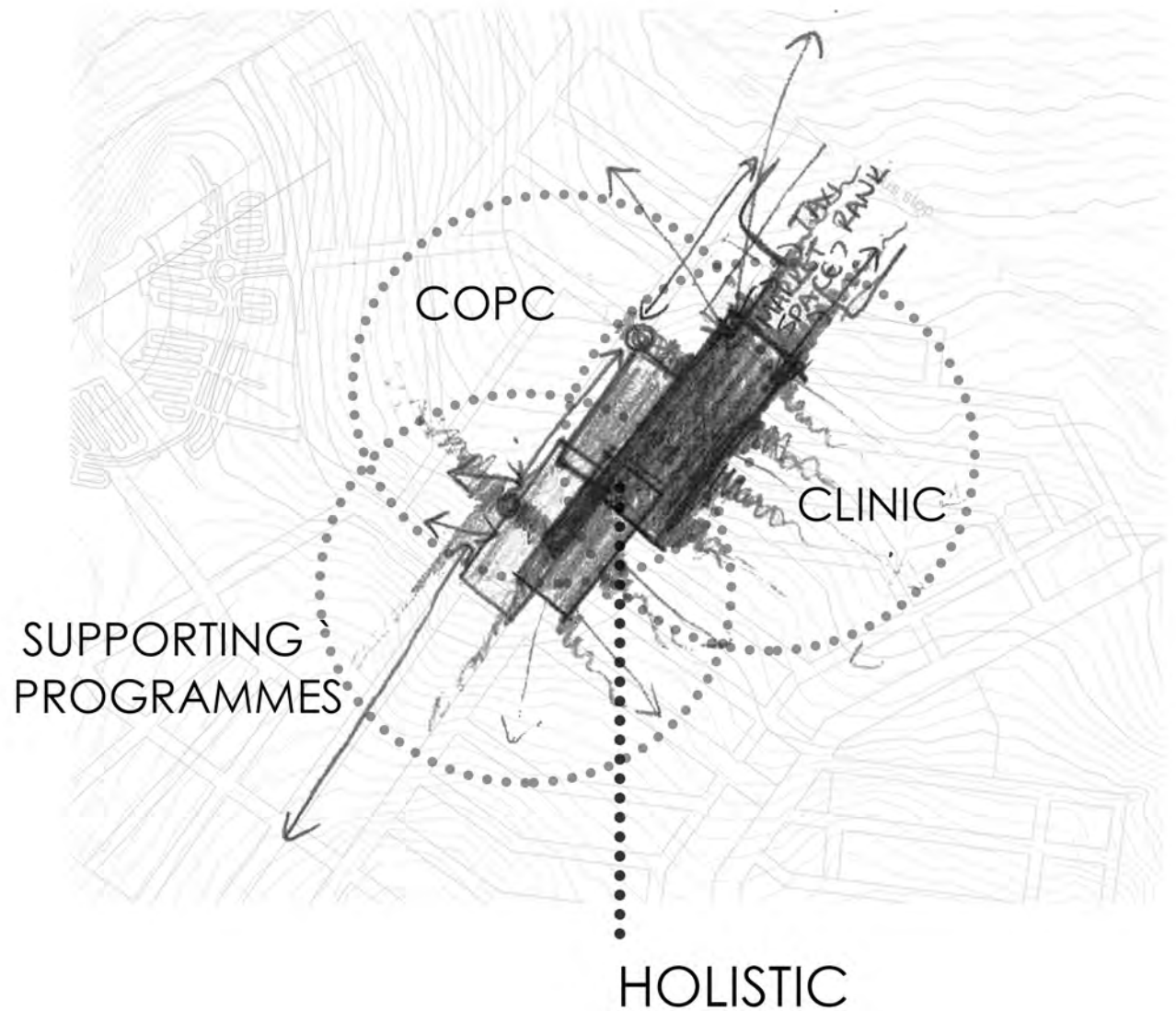
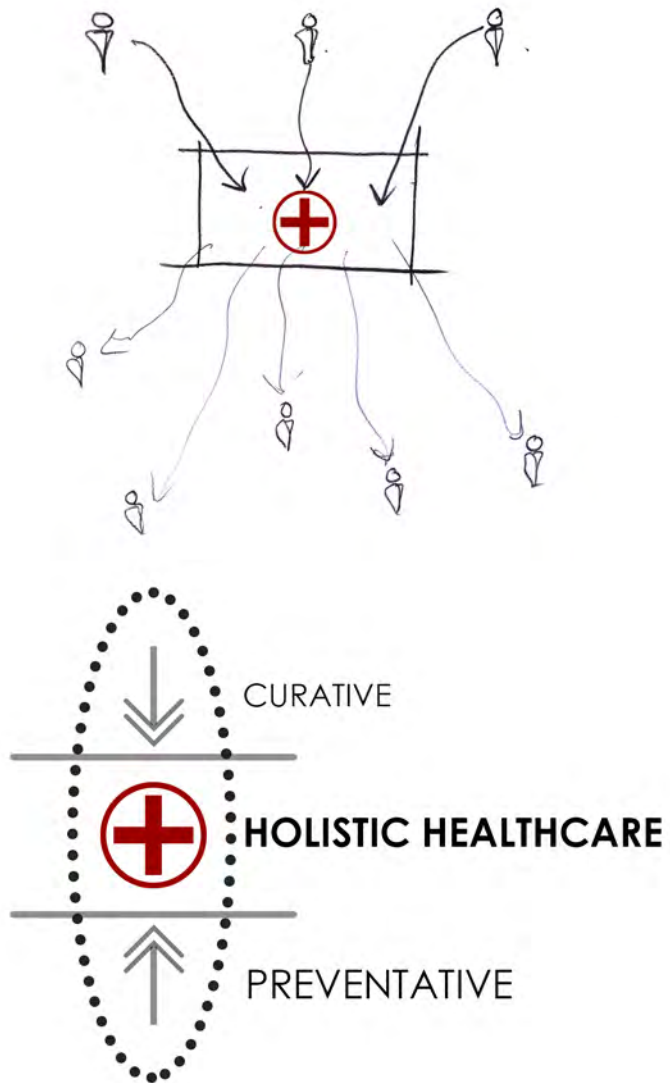


Figure 36. Diagrams illustrating programmatic intentions (Author 2016).

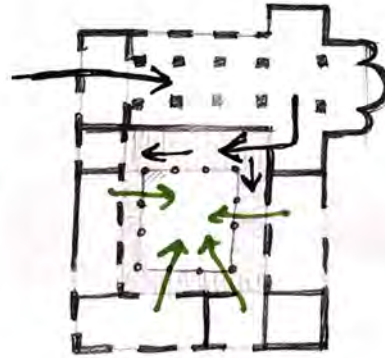
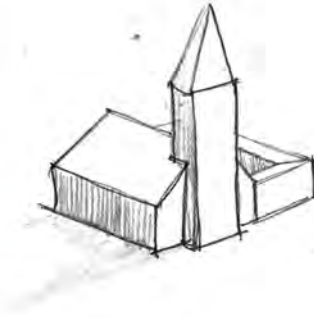


## 2.3 THEORETICAL INFORMANTS

As explained thus far, one of the main conceptual informants for this dissertation is the consideration for the holistic well being of all the users of the facility as well as the larger community on the Plastic View precinct. As the facility programme is aimed to deal with the preventative and curative aspects of physical health care, the main purpose of the theoretical drivers was to inform the architecture of the facility to focus on the mental and emotional effects that a space can have on the users' well being. This dissertation delimits the investigation to two main theoretical approaches which focus on considering all user groups of the health care facility, namely the interior users as well as the pedestrians passing the outside of the building.

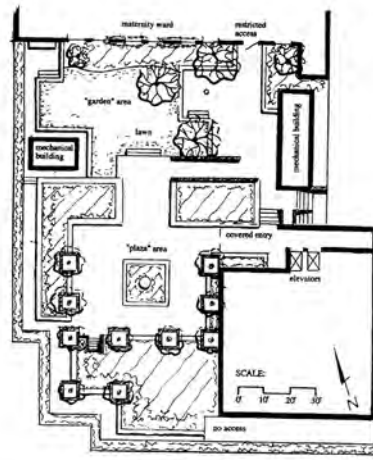
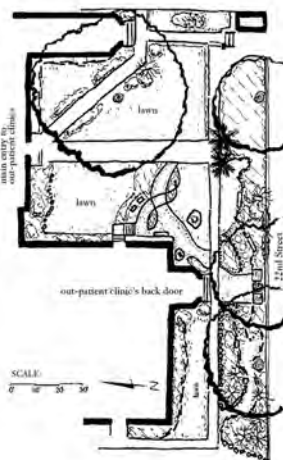
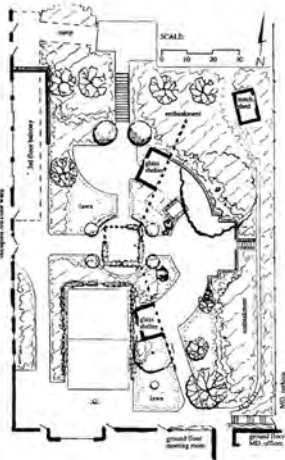
The first theoretical driver focuses on the holistic well being of the interior users of the facility, and deals with the previously mentioned concept of the healing power of place and space, as explored by theorists such as Ulrich (1993), Cooper Marcus (1995) and Sternberg (2013). This concept was first explored by Roger Ulrich (1993) through a number of strict experimental controls and quantified health outcomes in order to demonstrate the health benefits of just overlooking a garden, or natural area in improving the well being of patients, family members and staff of health care facilities (Ulrich 2002: 1). The purpose of this research was to raise awareness about the unacceptable conditions which the current day health care facility presents with regard to the lack of provision for the mental and emotional effects that these spaces have on the well being of the users (Franklin 2012).

Ulrich's (1993) argument emphasises that despite the intense stress caused by illness and traumatic experiences at health care facilities, little attention is given to creating calming environments that would address the emotional needs of patients and staff (Ulrich 2002: 2). This argument was strongly supported by developments made in mind-body medical science (Ulrich 2002: 2) where scientific evidence recorded that an area of the human brain responds to beautiful views, generally landscapes and nature, by releasing a set of endorphins into the body (Sternberg 2013). These endorphins are responsible for reducing negative emotions such as anger, anxiety and pain by promoting positive feelings such as relaxation and a sense of calm, which promotes mental well being and in turn, physical healing (Cooper Marcus & Barnes 1995: 2).



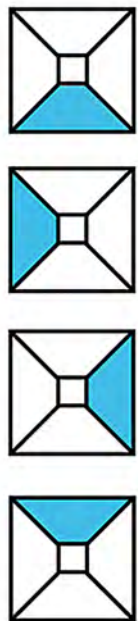
The work of landscape architects, Cooper Marcus and Barnes (1995), further expanded on the physical manifestation of Ulrich's (1993) theories by studying several hospital designs in Northern California which incorporate gardens and courtyards. The physical layout and daily use of the hospital gardens in these facilities was documented through observational studies and interviews with patients as well as staff members of the facilities (Cooper Marcus & Barnes 1995: 2). The results of these case studies produced unequivocal evidence of the therapeutic possibilities introduced by the inclusion of gardens and courtyards in health care facility design, not only for the patients, but also for the mental upliftment of the health care facility staff (Franklin 2012).

For example, the hospital patient recovery was recorded as being much faster when patients were able to look out at vegetation rather than surrounding buildings (Cooper Marcus & Barnes 1995: 2) and interviews with staff members showed that the garden spaces were used as a positive place of escape to help them cope with their stressful work shifts (Ulrich 2002: 6).



By considering the different aspects of these facilities which made them into such successful healing spaces, Cooper Marcus and Barnes (1995) then suggest a set of design standards for health care facilities in order to reduce stress and promote mental and emotional well being of the users, namely; the inclusion of landscaped grounds and courtyards, a human scale sensitive entrance, locational and way finding elements, plaza/public space and healing gardens/viewing gardens within the facility design (Cooper Marcus & Barnes 1995: 11-21). These standards were then used as a conceptual design precedent for the start of the design development process, specifically focusing on the connection between interior spaces of the facility and the surrounding natural landscape in order to promote the mental well being of both the visitors and the staff.

Figure 37. Diagrams showing Cooper Marcus and Barnes (1995) theories and their relation to the historical context on the left (Author 2016).



The second theoretical driver considered as an important informant in the design process considers the holistic well being of the larger community interacting with the exterior of the facility.

As explained previously, the streets surrounding the facility are intended to be pedestrianised and therefore, for the sake of the following explanation, may be viewed as large sidewalks. Walking down these sidewalks may be seen as a healthy event in itself as it is a form of physical exertion, however the mental and visual stimulation of the facility's facades becomes important in impacting on the emotional well being of the community members walking past (Bloomberg et al 2013: 11).

The text *Active Design: Shaping the Sidewalk Experience* (2013), investigates a number of case studies where these visual and mental stimulations are explored. This text suggests, with reference to many theories put forward by well known urban designers such as Jan Gehl (2010) and Jane Jacobs (1961), what may be incorporated in order to create comfortable, enticing sidewalk experiences (Bloomberg et al 2013: 11) which provide opportunities for social interaction and community engagement with their context (Bloomberg et al 2013: 21).

In order to explain the sidewalk and what elements may be incorporated to achieve the latter, this text conceptualises the sidewalk as a room, where the wall plane is created by the adjacent building facades, the floor plane is created by the ground surface and the roof plane is created by the sky/ overhead elements such as trees (Bloomberg et al 2013: 8).

Figure 38. The sidewalk explained as a room (Bloomberg et al 2013:9,60).





Through the use of case studies and examples, the text explores each of these planes and how they may be designed in order to encourage mental and visual stimulation and enhance the sidewalk experience (Bloomberg et al 2013: 46-65). Whilst all of these planes are seen to add to the sensual experiences of the passers-by, the information most influential on this dissertation's design development, was the investigation of the wall plane in informing the interaction of the health care facility with the passing pedestrians. Following what this text suggests, the first step in analysing this wall plane involves the consideration of the human scale. According to the average height and visual access of a pedestrian, the two lower floors of any building are seen as the portion of the facade which the community interacts with the most (Bloomberg et al 2013: 33).

Figure 39. The sidewalk explained as a room, using the senses (Bloomberg et al 2013:9,60).



Therefore complexity, vertical elements and continuous variety are suggested for these two levels in order to heighten the visual stimulation effect of the facade and break down the length and rhythm of a long sidewalk vista, as well as breaking down the building mass to a pedestrian scale (Bloomberg et al 2013: 31). This may be achieved through the inclusion of elements such as awnings, balconies, signage, planters, seating, stoops and architectural detailing (Bloomberg et al 2013: 62). The degree of transparency and visual hierarchy of the facade also becomes important in informing this visual stimulation and mental interaction with the sidewalk as it entices passers-by with the activities taking place in the interior of the building whilst balconies and awnings affect the overhead plane of this space and what may be visible above (Bloomberg et al 2013: 60). Intermediate transparency, in other words not completely transparent but not completely closed off, has been proven to be the most engaging for the particular scale that this dissertation is dealing with (Bloomberg et al 2013: 31).

This suggestion of different facade depths, transparency and textures was taken into consideration together with the recognition of what programmes were taking place within the facility in order to inform what should and should not be visually accessible to the public. For example, as one of the programmes suggested is health education, the concept of transparency was incorporated into the visual access to this education in order to raise awareness of health care education. In order to further improve the passers-by experience of the building facade, this text also suggests encouraging pedestrian interaction by providing places to sit or to stop and talk, creating entrances that are recessed or pushed out onto the sidewalk and the introduction of the occasional stoop and planter (Bloomberg et al 2013: 31). The recognition of the role that all these layers and elements play in shaping the sensual experience of the pedestrians walking past the facility, became an important informant in the way that the facades of the design were handled going forward.

Figure 40. Context photo (Author 2016)