

Nine

The Re-integration of the People

Definition of Client & Approach to Treatment

Now, Janeke through her numerous site visits with Dr Radebe, has a growing understanding that drug addiction is just one aspect of the complex issue of homelessness¹. This issue involves our **client**, the street homeless of Marabastad especially the drug addict; in order to determine what infrastructural and social support is necessary, a thorough investigation is required in order to bring about reintegration through this architectural project.

Janeke has learnt from attending the 'Pathways out of Homelessness Conference', that facilities for the homeless should include safe-housing, sufficient amenities, education, assistance in finding employment and provision for the treatment of substance abusers².

Dr Radebe and Mr Pillay are talking to Janeke about the project. It involves a reviewing of drug addiction, rehabilitation and re-integration, as well as support platforms for the homeless people of Marabastad.

Dr Radebe shares her knowledge regarding the current model used in state drug rehabilitation centres, and the new model proposed by COPC (Community Orientated Primary Care): a harm reduction strategy. She flips through a booklet of basic norms and standards, as well as strategies for in-patient treatment centres³.

The National Department of Social Development provides guidelines to be adhered to by these centres. They propose various levels of service delivery: prevention, harm-reduction, statutory process and continuum of care. The first level, namely prevention, is intended to provide access to resources, for the community, in order to prevent drug dependency⁴ However, the public are often not aware of the many free services that are available to them, including both in-patient and out-patient facilities⁵. The second level, namely harm reduction, is severely hampered by inefficiencies associated with admission protocol⁶. An example of this is when a patient

- 1 See Figure 36 - the complex issue of drug addiction within a complex issue of homelessness
- 2 According to Marianne De Klerk in Tshwane Homelessness Forum, City of Tshwane, University of South Africa & University of Pretoria, *Pathways Out of Homelessness: Research Report 2015*. Available online: http://www.up.ac.za/media/shared/249/ZP_Files/homelessness-report-2015.zp70613.pdf Access Date: 22/04/2016, 20
- 3 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria
- 4 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 20
- 5 This was observed in the number of callers that called into 702Talk radio station asking where they can send their loved ones that are struggling with drug addiction. 702Talk, *Missing Link with Drugs*. (08/06/2016) Internet: <https://omny.fm/shows/the-best-of-redi-tlhabi/> Accessed: 08/06/2016
- 6 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 22

Figure 36: Intervention that provides support to get over the barrier of drug addiction - healing of place and people (Patrick: 2016)



is referred to a centre, only to be subjected to long queues and unnecessary bureaucratic complexity. The third level, namely statutory, caters to people who have been involved in criminal activities that involve substance abuse⁷. The final level, providing for a continuum of care, focuses on patient improvement during treatment⁸.

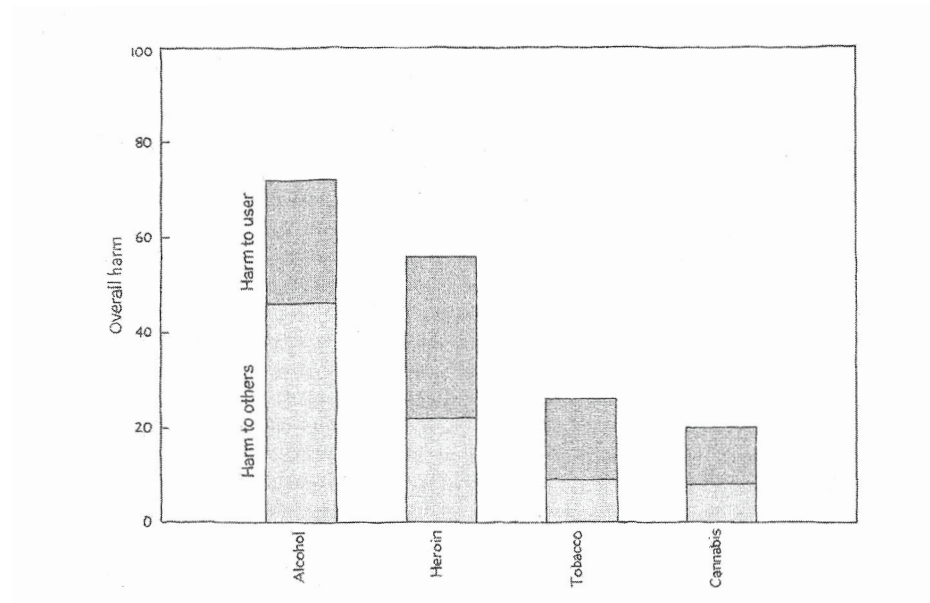
Although the intention behind these levels of service delivery is admirable, their application on the ground is not ideal. The detoxification protocol speaks of “safe, quiet and comfortable spaces for the detoxification process”⁹. However, a hospital environment with rows of beds lining the walls is not conducive to a feeling of well-being¹⁰. The daily treatment programme¹¹ only provides group therapy¹² which does not cohere with a continuum of care. How would a rehabilitated drug addict, now ‘clean’, re-enter and adjust to life within the community? However, there is provision for after-care where the patients are referred to social workers and social community centres¹³.

The guidelines, as set out by the National Department of Social Development, suggest the provision of spaces for relaxation, solitude, exercise and recreation. Unfortunately, the reality is often just a room with a television set and an outdoor area for playing soccer¹⁴. The sleeping areas, mostly shared, consist of dormitories with few individual rooms, and even these do not have much more space than is required for a bed. This does not constitute an environment which lends itself to relaxation or an enjoyment of solitude¹⁵. Some of the rooms are clustered around a small courtyard – these spaces have the potential to be developed as positive spaces¹⁶. There is some provision, according to the standards, for the cleaning of spaces and for the preparation of food (for a minimum of four hours a day)¹⁷ but due to the outsourcing of these types of services, there is often a lack of implementation of policy¹⁸. Due to spaces not being maintained, patients cannot feel responsible or develop a sense of ‘ownership’¹⁹. All of this undermines the intention to provide “an acceptable residential environment that enhances the positive self-image of patients/clients...[and that] preserves their human dignity”²⁰.

Many centres provide treatment in places far removed from the city, for instance the Dr Florence Fabian Ribeiro Treatment Centre in Cullinan. This does not help in any way the re-integration process, as patients are so removed, during their recovery, from their day-to-day environment.

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- 7 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 24
- 8 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 26
- 9 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 31
- 10 This information was distilled from a site visit that took place at Dr Florence Fabian Ribeiro Treatment Centre in Cullinan, on 18 May 2016
- 11 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 33
- 12 This information was distilled from a site visit that took place at Dr Florence Fabian Ribeiro Treatment Centre in Cullinan, on 18 May 2016
- 13 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 33
- 14 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 42
- 15 This information was distilled from a site visit that took place at Dr Florence Fabian Ribeiro Treatment Centre in Cullinan, on 18 May 2016
- 16 This information was distilled from a site visit that took place at Dr Florence Fabian Ribeiro Treatment Centre in Cullinan, on 18 May 2016
- 17 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 34
- 18 This information was distilled from a site visit that took place at Dr Florence Fabian Ribeiro Treatment Centre in Cullinan, on 18 May 2016
- 19 This information was distilled from a site visit that took place at Dr Florence Fabian Ribeiro Treatment Centre in Cullinan, on 18 May 2016
- 20 Department of Social Development. *Minimum Norms and Standards for Inpatient Treatment Centres*. Pamphlet. Pretoria, 44

Figure 37: A photo selected from the photo essay by Lindokuhle Sobekwa: *Nyaope. Everything you give me my Boss, will do*. [Image source: (Sobekwa: 2015)]



Dr Radebe looks at Janeke and Mr Pillay as she places the book of standards on the table. Mr Pillay responds to Janeke.

But in our case, the proposed project is situated on a busy street in Marabastad. This already differentiates it from the existing norm, since patients remain in the community and in this way their re-integration, once recovered, is facilitated.

Tell us about the harm reduction strategy proposed by COPC.

Dr Radebe picks up a file of loose papers and begins to explain the harm reduction strategy.

The City of Tshwane is investigating how to coordinate public health and clinical care, and to work with people in their communities. They have adopted a Community Orientated Primary Care approach to service delivery²¹.

Their strategy looks at drug addiction as affecting not only the individual, but also their families²² and the community as a whole. Both biologically and psychologically, addiction is harmful as it affects the social well-being of all parties involved. At a global level, the most successful approach thus far to the management of substance abuse and dependency, has been three-tiered: to reduce demand, limit supply and diminish harmful effects²³.

In the late 1990's, with the increase of the smoking and injecting of heroin in South Africa, there was a greater demand for the drug²⁴. The continuing demand is cause for concern due to the potential for the spread of infectious diseases, due to drug abuse and the sharing of syringes; HIV/Aids and TB are notably related to drug abuse²⁵. This is a major public health concern as it increases statistics associated with the annual deaths related to disease.

If successful rehabilitation has been achieved, it remains nevertheless difficult for a person to be reintegrated into society. The WHO (World Health Organisation) posited that drug addiction is a bio-psycho-social health disorder and therefore requires a multi-disciplinary approach to treatment. This approach requires psychotherapeutic, social and pharmacological interventions that include the family or care network in the healing process²⁶. It goes against the common approach of abstinence. The harm reduction approach is a bio-psycho-social strategy aiming to reduce harmful effects of substance abuse in the context of the use / abuse continuum and to decrease dependency by improving the general well-being of the individual²⁷. OST

21 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 10

22 See Figure 38

23 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 3

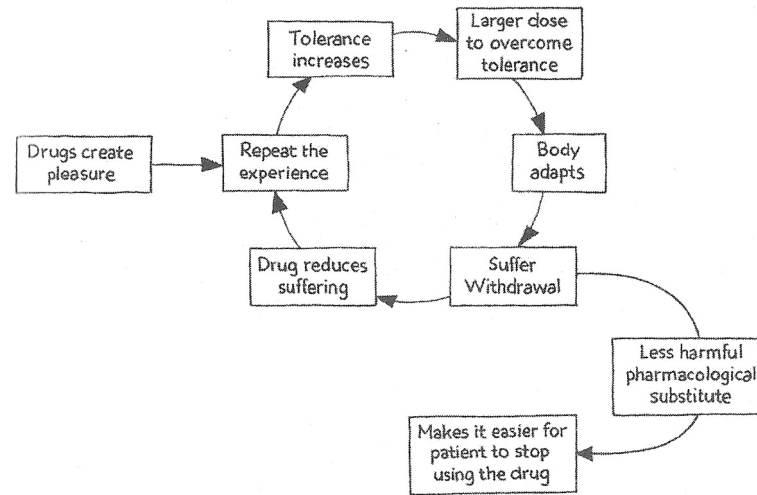
24 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 3

25 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 4

26 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 7

27 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 8

Figure 38: (left) The graph illustrates the harm of four drugs, including heroin, to the user and to others (Nutt: 2012: 44)



(Opiate Substitution Therapy) is integral to this strategy²⁸; heroin is replaced with an opioid agonist²⁹ or partial agonist³⁰. This substitution relieves the withdrawal symptoms without producing the “high”³¹; this ensures that other aspects of the individuals’ well-being may be ameliorated.

Nyaope addiction, which is prevalent at present in Marabastad, begins with experimentation, progressing to substance abuse and addiction³². Individuals are addicted to heroin, in addition to other substances, and become physiologically dependent. Acute withdrawal symptoms are experienced when the drug is not taken; these are often flu-like in nature and easily relieved by another ‘hit’ of heroin. The withdrawal process is very dangerous if there are no medical professionals to attend to the symptoms and monitor the individual, as well as to prevent their access to more heroin³³. It is common to become dependent on alcohol after trying to go off opiates, but this is dangerous because the combination of alcohol and OST can lead to respiratory depression³⁴.

Mr Pillay is deeply distressed and comments that this approach might be more beneficial, in the context of Marabastad, than what is currently being implemented. Janeke agrees and goes on to say:

When an addict is experiencing withdrawal symptoms, they are in need of a nurturing environment. The project that we are proposing involves an approach of harm reduction, as proposed by the Department of Family Medicine and the UP COPC Research Unit, which will be adopted as an alternative to existing approaches to drug addiction.

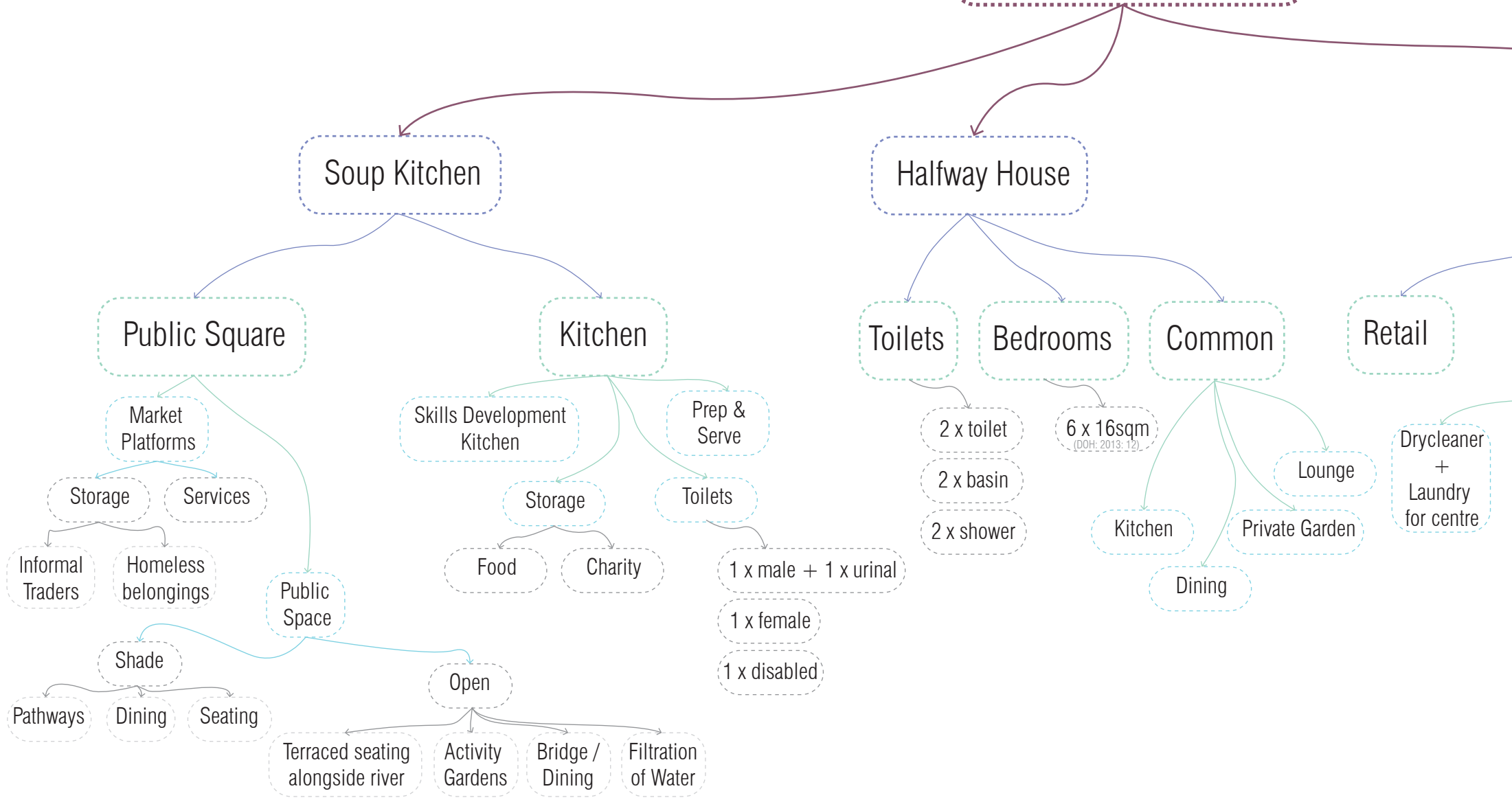
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- 28 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 8
See Figure 39
 - 29 Such as Methadone
Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 8
 - 30 Such as Buprenorphine sometimes mixed with antagonist Naloxone
Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 8
 - 31 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 8
 - 32 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 6
 - 33 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 8
 - 34 Department of Family Medicine, *Opioid Substitution and Substance Abuse Harm Reduction through COPC in the City of Tshwane: A holistic and Community Based Primary Health Care Intervention Strategy*. (University of Pretoria: 2015), 7

Figure 39: (left) The diagram highlights that pharmacological substitutes can help break the cycle of withdrawal (Nutt: 2012: 159)

Support Base

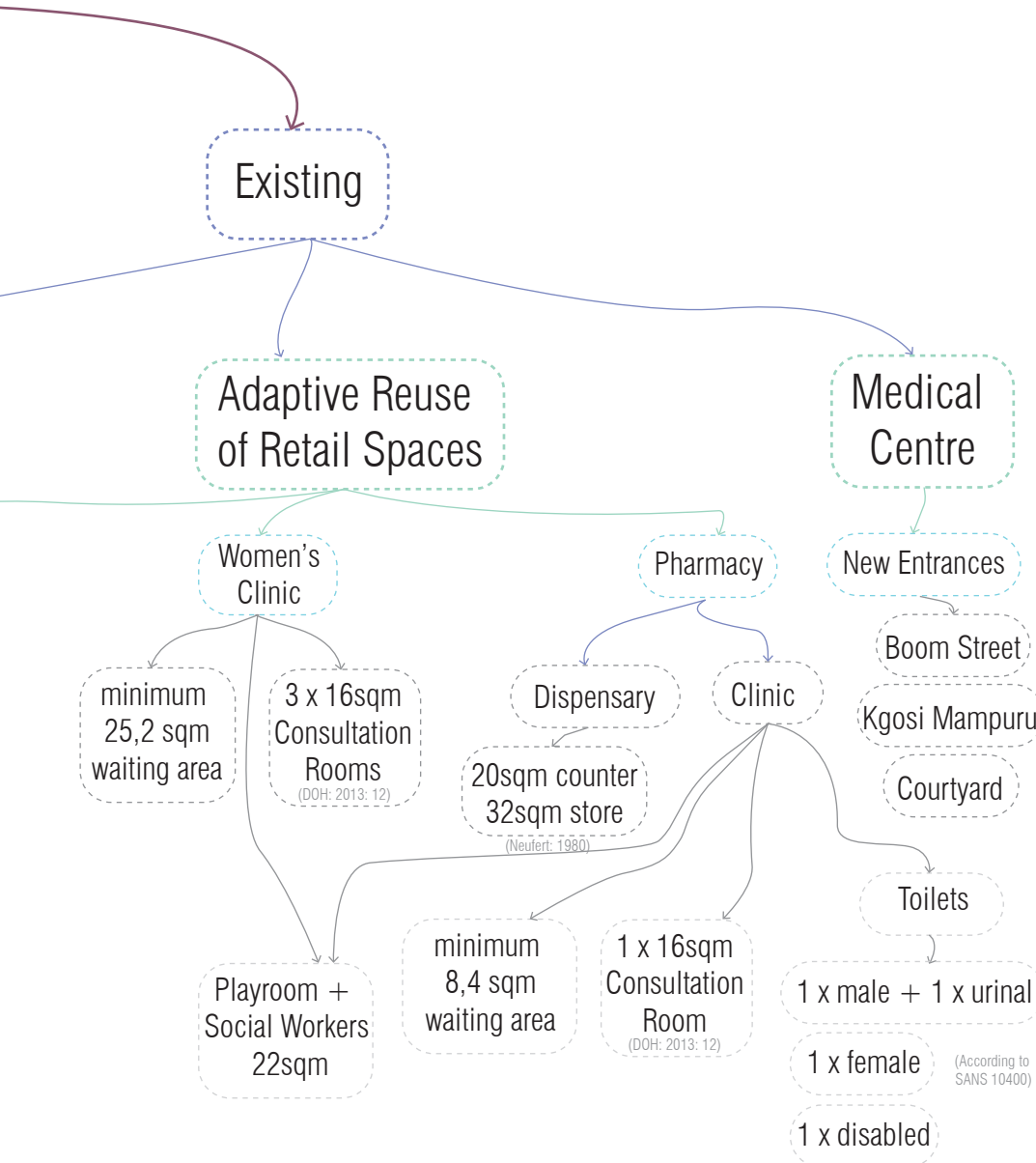
ANCILLARY FUNCTIONS



Ten

The Re-integration of the People

Programme(s) Definition: Spatial & Quality



Janeke and Dr Radebe are on site discussing how the building can best provide support for the community. Dr Radebe has some interesting suggestions.

If we were to consider the list of facilities for the homeless which we have discussed, ablutions and a shelter are already in place. The ablutions, west of Steenhovenspruit on Grand Street, are in need of an upgrade and a more prominent entrance to provide access. The existing Struben Street Shelter also requires an upgrade of facilities, as presently it does not provide adequate shelter.

Janeke begins sketching on the map that is in front of them as she considers the existing facilities that Dr Radebe has mentioned as well as the projected ones. After some thought Janeke responds.

My feeling is that this is a multi-faceted project, and as such it should provide facilities that cater for a wider community, not only for the drug addict. I would suggest that as ancillary functions to the drug rehabilitation centre, we provide a soup kitchen, halfway house (intermediary or transitional between homelessness and reintegration), a pharmacy and a clinic for women. The existing medical centre, as well as the row of shops on Boom Street, should be adapted and considered as ancillary functions. The soup kitchen, beyond providing food, implies the concern of the community. This could also be seen as an environment for providing access to existing support networks, where people can find out about skills development and medical services, elsewhere in Tshwane, that may not be catered for in our project.

The primary activities associated with drug rehabilitation, ought to afford far more privacy. There are various stages of rehabilitation and these require different kinds of accommodation. In addition there would need to be therapy rooms, a library and common room, courtyards, skills workshops and facilities for the staff.

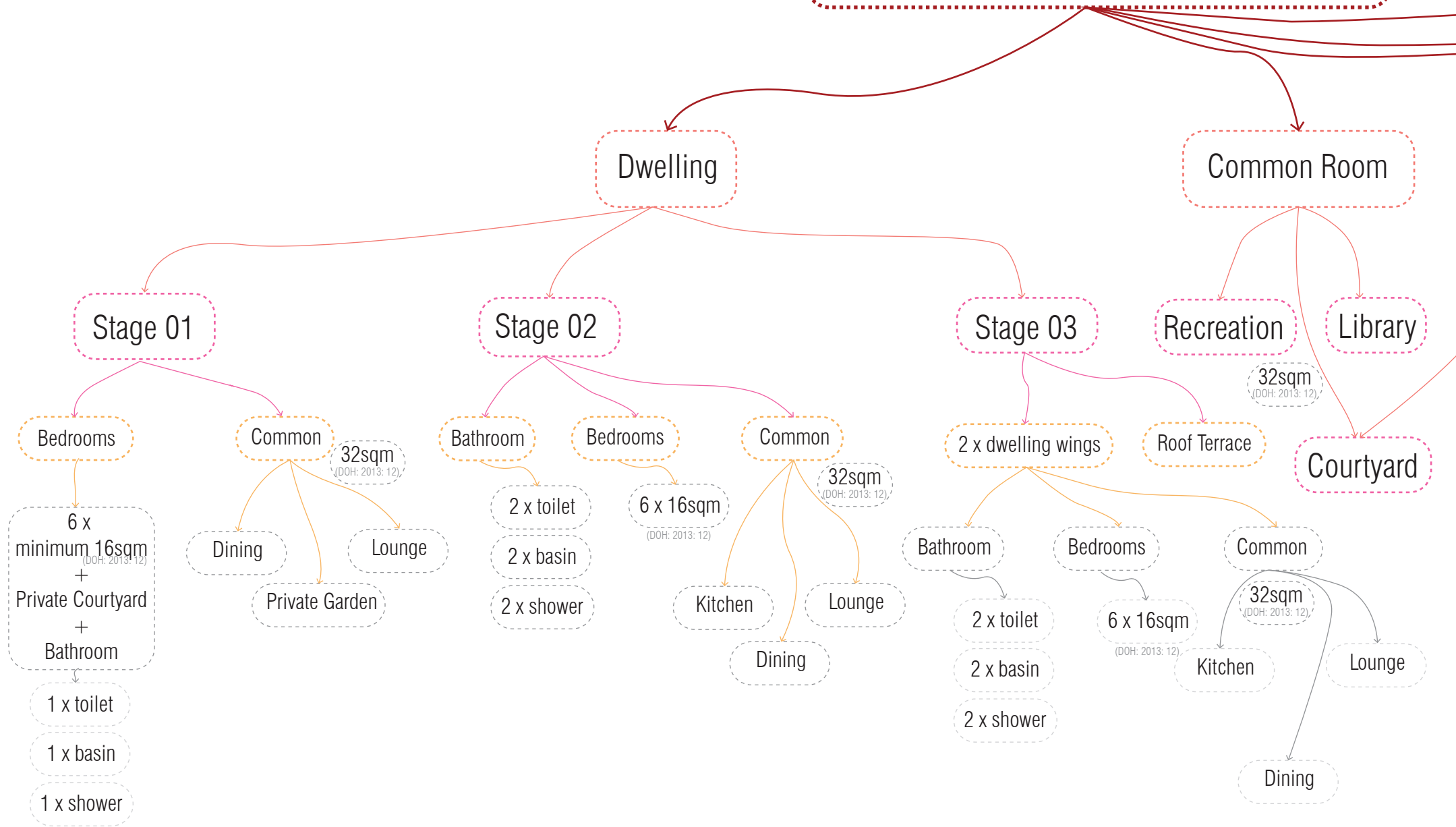
Dr Radebe feels concerned that the project might be becoming too complex and attempting to house too many functions. Janeke assures her that in the same way that drug addiction should be treated through a multi-disciplinary approach, so too, the complex issue of homelessness (including drug addiction) should likewise be treated in a multi-faceted manner. Each function forms a part of the network which connects Marabastad to the greater support network. Janeke decides to put together a framework to enable a clearer understanding of the project and its attendant functions¹.

Figure 40: Ancillary Functions of the project (Patrick: 2016)

1 See Figures 40 & 41

Drug Rehabilitation Centre

PRIMARY FUNCTIONS



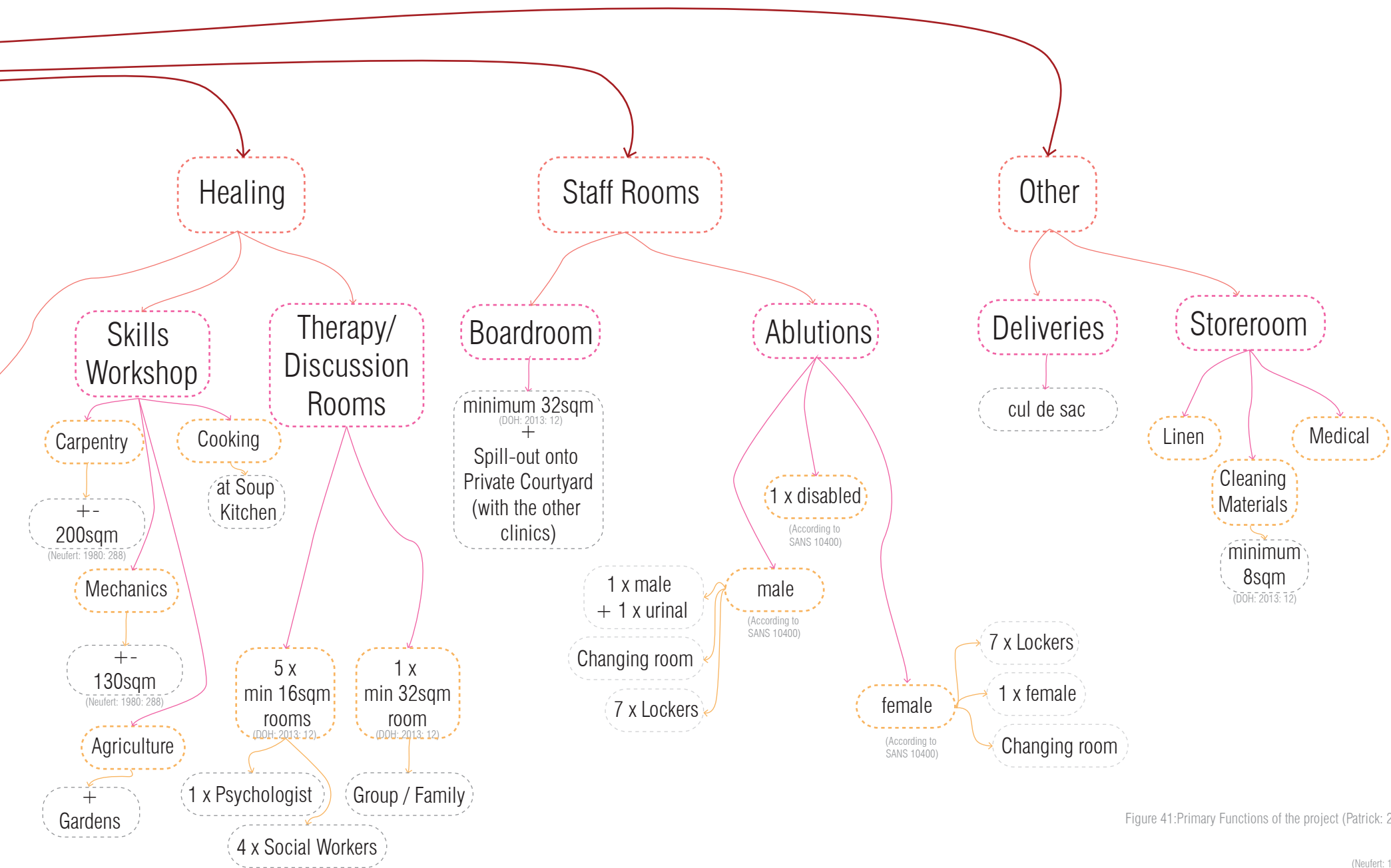


Figure 41: Primary Functions of the project (Patrick: 2016)



Figure 42: SANCA Castle Carey Clinic, Pretoria (Castle Carey Clinic: 2006)



Figure 43: SANCA Nishtara, Lenasia (SANCA Nishtara: 2009)



Figure 44: SANCA Horizon Clinic, Boksburg (Google Maps: 2016)

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The framework sheds more light on the primary and ancillary programmes that the project involves. Dr Radebe is unsure about what is going to happen next and Janeke suggests the possibility of conducting precedent studies, as a means of determining what is possible. Dr Radebe asks the others if they think they ought to look at SANCA drug rehabilitation centres as examples of how to design these spaces, seeing that existing state institutions are not meeting the requirements. She goes on to tell them everything that she knows about the SANCA in-patient clinics in Gauteng: SANCA Pretoria(Castle Carey), SANCA Horizon/The Bridge(Boksburg) and SANCA Nishtara(Lenasia)². She has not been able to access the clinics, but has spoken to fellow colleagues about them. She discusses these with them.

The three centres work according to SANCA's general outline for prevention and treatment strategies. This outline would have to be adapted to the harm reduction approach that we have agreed upon. All of the centres include the family in the recovery process and provide an after-care programme as an extension of their out-patient clinics.

The Castle Carey Clinic's process of recovery takes six weeks and caters for fifty-two patients³. The centre, while listed as a clinic in Pretoria, is in fact right on the outskirts of the city, in Hammanskraal. It is not a good example of how to integrate a clinic in a public realm.

The Horizon Clinic has a multi-disciplinary team responsible for the treatment process: a medical doctor, a psychologist, a psychiatrist, social workers and professional nurses⁴.

The Nishtara Clinic also employs a multi-disciplinary team: there are offices for doctors and six social workers⁵. The clinic provides for ten 'youth' beds and twenty adult beds with an additional two rooms for live-in nurses. They also run prevention and community awareness programmes⁶ which help to integrate the clinic into the public realm.

I feel that we can learn from these examples. I like the idea of a multi-disciplinary team and the inclusion of the family in the recovery process. The number of in-patients that these centres can accept in relation to the number of staff, is largely sufficient. They could however, take the after-care process further, with internships and skills training assistance in the reintegration process. The fact that the project we are working on is not on the outskirts of a city, also provides something new to think about in terms of integrating it into the public realm and including the community.

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- 2 SANCA, *National Footprint: Gauteng* (SANCA National Directorate: 2012)
Internet: <http://sancanational.org/index.php/national-footprint/48-gauteng-2.html> Accessed: 01/02/2016
See Figures 42-44
- 3 Castle Carey Clinic, (2006) Internet: <http://www.addictionrehab.co.za/TreatmentProgramsCastleCareyClinic.asp>
Accessed: 17/03/2016
- 4 SANCA Horizon, *Horizon Clinic: Alcohol and Drug Centre* (2015) Internet: <http://www.horizonclinic.org/index.php>
Accessed: 17/03/2016
- 5 SANCA Nishtara, *Nishtara: Alcohol and Drug Centre* (2009) Internet: <http://www.sancanishtara.co.za/inpatient.htm>
Accessed: 17/03/2016
- 6 SANCA Nishtara, *Nishtara: Alcohol and Drug Centre* (2009) Internet: <http://www.sancanishtara.co.za/inpatient.htm>
Accessed: 17/03/2016

Table 1
Summary of the relationships between design factors and healthcare outcomes

Healthcare Outcomes	Design Strategies or Environmental Interventions										
	Single-bed rooms	Access to daylight	Appropriate lighting	Views of nature	Family zone in patient rooms	Carpeting	Noise-reduced finishes	Ceiling lifts	Nursing floor layout	Decentralized	Acuity-adaptable rooms
Reduced hospital-acquired infections	**										
Reduced medical errors	*		*				*				*
Reduced patient falls	*		*		*	*			*		*
Reduced pain		*	*	**			*				
Improved patient sleep	**	*	*				*				
Reduced patient stress	*	*	*	**	*		**				
Reduced depression		**	**	*	*						
Reduced length of stay		*	*	*							*
Improved patient privacy and confidentiality	**				*		*				
Improved communication with patients & family members	**				*		*				
Improved social support	*				*	*					
Increased patient satisfaction	**	*	*	*	*	*	*				
Decreased staff injuries								**			*
Decreased staff stress	*	*	*	*			*				
Increased staff effectiveness	*		*				*		*	*	*
Increased staff satisfaction	*	*	*	*			*				

* Indicates that a relationship between the specific design factor and healthcare outcome was indicated, directly or indirectly by empirical studies reviewed in this report.

** Indicates that there is especially strong evidence (converging findings from multiple rigorous studies). Indicating that a design, intervention improves a healthcare outcome.

Janeke nods as she responds to Dr Radebe.

You have raised some valid points and I think that they can help us with the design process, but there is also potential for integrating the harm reduction strategy with a regenerative approach to architecture. Biophilic design, which speaks to the affinity humans feel with nature, is said to improve cognitive function and creativity whilst reducing stress and improving overall well-being and ability to heal⁷. There are very few examples of drug rehabilitation centres that have been established with biophilic design in mind, but health architecture in general is beginning to develop in response to the idea that contact with nature is beneficial to the healing process. These few examples are illustrative of the success of this relatively new approach to healing.

Evidence Based Design (EBD) is a medical approach whereby lessons learnt from a previous procedure, inform the approach to new cases. Architectural design looks to architectural precedent, as providing some guarantee of the success of various strategies. This becomes especially important in the design of a medical facility, where the functioning of the facility put into practice, will impact directly the healing process. Therefore Evidence Based Design, though initially a medical approach, becomes an informant in the development of health architecture.

Janeke shows the others a table that she has sourced.

This table⁸ illustrates sixteen healthcare cause and effect outcomes that show the relationship between design elements and healthcare outcomes⁹. The aspects of healthcare design that are most effective are the provision of single bedrooms, appropriate lighting and the integration of noise-reducing finishes¹⁰.

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- 7 Browning, W.; Ryan, C. & Clancy, J., *14 Patterns of Biophilic Design: Improving Health and Well-being in the Built Environment* (Terrapin Bright Green: 2014), 4
- 8 See Figure 45
Steven Lundin, *Healing Architecture: Evidence, Intuition, Dialogue* (Department of Architecture: Chalmers University of Technology. Gothenburg, Sweden: 2015), 68
- 9 Steven Lundin, *Healing Architecture: Evidence, Intuition, Dialogue* (Department of Architecture: Chalmers University of Technology. Gothenburg, Sweden: 2015), 68
- 10 Steven Lundin, *Healing Architecture: Evidence, Intuition, Dialogue* (Department of Architecture: Chalmers University of Technology. Gothenburg, Sweden: 2015), 69

Figure 45: Table indicating the relationship between design elements and health outcomes (Lundin: 2015: 68)

Precedent - Health

Östra Hospital, Psychiatric Dept.



COURTYARD SPACES ALONGSIDE CONVERSATIONAL SPACES



VARIETY OF SPACES IN SINGLE ROOMS



OPEN GARDEN SPACES TO EXPERIENCE WITHOUT SUPERVISION

- | | | | | | |
|---|--|--|---|--|---|
| <p>1</p> <p>An externally attractive impression, with justice done to the natural setting and good communications with the rest of the Östra Hospital.</p> | <p>2</p> <p>Low-rise, small-scale building development comprising units of 2 or 3 storeys. Care units on floors 1-2 for maximum ground contact/proximity. The view from the patients' rooms, e.g. out over the surrounding natural scenery, to be taken into account.</p> | <p>3</p> <p>Seclusion in the form of single rooms, coupled with opportunities for socialising. Modules of 4 patient equivalents each. Flexibility of unit sizing. Sheltered patios.</p> | <p>4</p> <p>Care and treatment to be integrated within the unit. Communication between units to satisfy security requirements.</p> | <p>5</p> <p>Emergency care kept separate from planned care.</p> | <p>6</p> <p>Colour and design promoting healing processes.</p> |
|---|--|--|---|--|---|

GOTHENBURG, SWEDEN
WHITE ARKITEKTER

Throughout the design process we can have a look at buildings in which these factors have been considered, as is the case at the Psychiatric Department at Östra Hospital¹¹.

However, we must remember that this is a design exercise; therefore ticking all the boxes of programmatic requirements will not necessarily lead to an integrated and appropriate design solution. Perhaps we should look at 'healing architecture' as a means to steer the design process towards a more holistic approach. In general, factors that tend to promote a positive healing environment include few patients in a unit, spacious facilities, individual rooms and access to the outdoors¹².

11 See figure 46

The Psychiatric Department at Östra Hospital Precedent Study:

The architectural team knew that the aesthetics and functions of the building have an effect on the recovery process. The team implemented a "Six Little Houses" plan for the design of the department. These principles ensured that the spaces looked at smallness of scale, an attractive exterior, small care units (patients and staff privacy), good access to natural scenery, and colour and design promoting the healing process.

According to Lena Walther in

Lena From & Steven Lundin, *Architecture as Medicine - the Importance of Architecture for Treatment Outcomes in Psychiatry*. 1st ed. (Gothenburg: The Architecture Research Foundation: 2010)

Available online: http://www.white.se/app/uploads/2013/01/Architecture_as_Medicine.pdf, 21

The spaces of the staff and the patient are brought closer together, encouraging mutual spaces of conversation. These kinds of spaces also allowed for more freedom of movement into open garden spaces (without supervision). The individual rooms allow for a range of choice in terms of resting space - an armchair next to the window, the bed looking out the window and a desk in front of the window.

White, *Healthcare building for Psychiatry, Östra Hospital*. (2015) Internet: <http://en.white.se/projects/healthcare-building-for-psychiatry-ostra-hospital/>. Accessed: 27/09/2016

12

According to Stefan Lundin in

Lena From & Steven Lundin, *Architecture as Medicine - the Importance of Architecture for Treatment Outcomes in Psychiatry*. 1st ed. (Gothenburg: The Architecture Research Foundation: 2010)

Available online: http://www.white.se/app/uploads/2013/01/Architecture_as_Medicine.pdf, 46

Figure 46: The Psychiatric Department of Östra Hospital illustrates design elements that positively influence health outcomes. Image sources: (Lundin et. al: 2010) & photographer Christer Hallgren (White: 2015).

Precedent - Health

New North Zealand Hospital



NATURAL THRESHOLDS



ROOMS LEAD INTO
INTO COURTYARDS



URBAN THRESHOLD

HILLEROD, DENMARK
HERTZOG & DE MEURON

Sliding a sheet of paper across the table, she points to a selection of photographs which show the way in which the New North Zealand Hospital¹³ has provided a range of outdoor spaces.

Health facilities are referred to as institutions, but the mental image that comes to mind when one thinks of an institution is bareness and lack of comfort¹⁴. *As an environment that is meant to provide support and care for a patient, this is a cause for concern. The identity of these institutions must be envisaged in such a way as to provide an atmosphere in which the patient has a sense of well-being; the 'hard-edged' quality of the traditional institution has to be rethought.*

Janeke pauses, picking up another sheet of photographs she recalls her visit to the Ubuntu Centre in Port Elizabeth.

Figure 47: New North Zealand Hospital illustrates design elements that positively influence health outcomes.
Image sources: (Frearson: 2014)

- 13 See figure 47
The New North Zealand Hospital architects brought the natural surroundings through into a central garden. Rooms for examination and treatment fill the ground floor, while the wards on the first floor overlook the gardens below. The hedges within the gardens define pathways and allow for visual privacy.
Internet: <https://www.herzogdemeuron.com/index/projects/complete-works/401-425/416-new-north-zealand-hospital.html> Accessed: 27/09/2016
- 14 According to Stefan Lundin in
Lena From & Steven Lundin, *Architecture as Medicine - the Importance of Architecture for Treatment Outcomes in Psychiatry*. 1st ed. (Gothenburg: The Architecture Research Foundation: 2010)
Available online: http://www.white.se/app/uploads/2013/01/Architecture_as_Medicine.pdf, 46

Precedent - Health

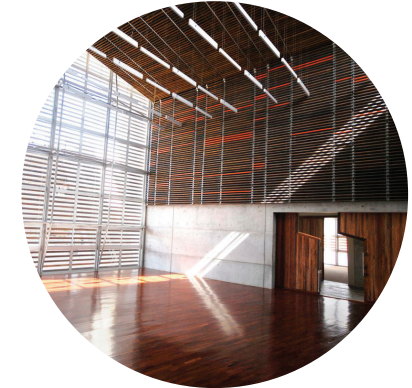
Ubuntu HIV Clinic & Community Centre



- | | |
|--------------------------------------|--|
| 1 Resource/ Computer Learning Centre | 6 Pharmacy |
| 2 Multi-Purpose Hall | 7 Reception/ Entrance Hall |
| 3 Community Kitchen | 8 Flexible/ Expandable Meeting Rooms |
| 4 Staff Lounge | 9 Parking |
| 5 Pediatric HIV/TB Clinic | 10 Garden Court/ to Rooftop Vegetable Garden |



PRODUCTIVE ROOF GARDEN



INDIRECT DAYLIGHT



PORT ELIZABETH, SOUTH AFRICA
FIELD ARCHITECTS



NATURALLY-LIT CORRIDORS

When I visited the Ubuntu Centre in Port Elizabeth¹⁵, I was hoping to find a building that would provide a supporting and caring atmosphere. With the design of the HIV clinic, the architects have attempted to bring across the idea of support, by dividing the façade into a series of elements that appear to lean, supporting one another both visually and structurally. These formal elements are arranged around pedestrian walkways through the building, intended as a continuation of the existing township pathways. The architects' intention was to create a sense of community and a feeling of continuity through the use of pathways¹⁶, however this was not entirely successful because the entrances to the building need to be highly controlled, and therefore not inviting to the unofficial visitor¹⁷. Once inside the building, the atmosphere is more welcoming; timber screens and doors along the stone-tiled walkways warm the spaces while a natural light filters from above. The restricted views to the outside, while providing an internal focus, make the building seem 'introverted'.

Open and unprogrammed spaces in a health facility contribute to a greater feeling of comfort¹⁸ and give the patient a feeling of independence when going about their everyday activities. The access to nature in such an environment brings us back to our discussion of biophilic design.

Janeke pauses, reaches over to the bookcase and pulls out a beige book. She explains that Christopher Day describes the process of healing as a difficult one. She reads a paragraph out of the book.

The transformation occurs within, but "something from outside...is needed to initiate and support the process. Environment is one such agent: it can provide nourishment, support and balance for [the] human spirit as much as it can starve, oppress and pervert it...Our environment is part of our biography. It is part of a stream of events and surroundings that help make us what we are."¹⁹

Aspects of biophilic design that support the process of healing and are directly related to the project include: a connection with nature (visual and other senses), the presence of water, dynamic and diffuse light, a connection to natural systems and to natural materials. The important aspect for the quality of these environments, particularly the individual room, is the creation of spaces that provide both prospect and refuge for the dweller²⁰.

15 See figure 48

The Ubuntu Centre provides free community social services: paediatric HIV & TB testing and counseling clinic, career guidance and computing center, health resource library, a multi-purpose hall for community events and occasional shelter. [Guenther, R. & Vittori, G., Sustainable Healthcare Architecture. 2nd Edition (Wiley: 2013), 414]

16 The architecture attempts to destigmatise HIV/Aids and the treatment thereof. The facility supports the youth in the area with an organic rooftop vegetable garden that (together with other neighborhood gardens) feed 2,245 students daily. [Internet: <http://www.archdaily.com/135432/ubuntu-centre-field-architecture> Accessed: 01/05/2016]

16 Arch Daily, *Ubuntu Centre / Field Architecture*. (2011) Internet: <http://archdaily.com/135432/ubuntu-centre-field-architecture> Accessed: 01/05/2016

17 This information was distilled from a site visit that took place at the Ubuntu Centre in Zwile township, on 9 May 2016

18 According to Stefan Lundin in Lena From & Steven Lundin, *Architecture as Medicine - the Importance of Architecture for Treatment Outcomes in Psychiatry*. 1st ed. (Gothenburg: The Architecture Research Foundation: 2010) Available online: http://www.white.se/app/uploads/2013/01/Architecture_as_Medicine.pdf, 46

19 Christopher Day, *Places of the Soul* (Taylor & Francis: 1990), 23

20 Browning, W.; Ryan, C. & Clancy, J., 14 *Patterns of Biophilic Design: Improving Health and Well-being in the Built*

Figure 48: Ubuntu HIV clinic and community centre illustrates design elements that positively influence health outcomes. Image sources: (Arch Daily: 2011)



As I have mentioned before, human beings are instinctively drawn to a natural environment, as an escape. Nature's contribution to a healing environment includes the fostering of human health, productivity and well-being²¹. Natural environments have proven to be the most effective restorative environments²².

These natural environments provide opportunities to **see, hear, touch and smell nature** as well as to understand the **natural systems** at play within the environment through, for example, the **presence of water**.

The quality of space is an important part of the healing process. Christopher Day relates the quality of space to the soul, and "what nourishes the soul nourishes the body."²³ He defines this "nourishing" of the soul as an environmental balancing factor, which corrects any imbalance experienced at that time. He goes on to say that "architecture in the sense of environmental design is the art of nourishing these senses."²⁴

In the same way that nature is seen to provide a nurturing environment, so too, an indoor environment should aid the healing process. The use of natural light and natural materials contributes to a healing environment.

Most of the time our positive response to architecture is due to the quality of light. The use of strong light and colour to articulate a space creates a very different effect from the use of delicate colour and light that is subtle. The textures revealed by the use of light, or experienced through touch, and even what we see, effects the approachability of the architecture. Sounds and their echoes may also affect mood in a room²⁵.

The Psychiatric Department at Östra Hospital uses colour and design to promote healing processes. Light is a big part of this approach. The interior and exterior detailing includes sensual materials, bright colours and shimmering surfaces. Daylighting enhances these details, while allowing for much lower lighting levels than in a normal medical setting. When artificial lighting is used, only warm filament bulbs are used, never fluorescents²⁶. Light has been proven to have beneficial effects on depression, sleep disturbances and physical aggression²⁷.

Dr Radebe has learnt from the analysis of these precedents and Mr Pillay is enthusiastic, if somewhat overwhelmed. Janeke concludes that the principles of biophilic design that they have discussed will prove invaluable in the design phase of the project.

(Environment. Terrapin Bright Green: 2014)

21 Guenther, R. & Vittori, G., Sustainable Healthcare Architecture. 2nd Edition (Wiley: 2013), 68

22 Lena From & Steven Lundin, *Architecture as Medicine - the Importance of Architecture for Treatment Outcomes in Psychiatry*. 1st ed. (Gothenburg: The Architecture Research Foundation: 2010). Available online: http://www.white.se/app/uploads/2013/01/Architecture_as_Medicine.pdf, 153

23 Christopher Day, *Places of the Soul* (Taylor & Francis: 1990), 21

24 Christopher Day, *Places of the Soul* (Taylor & Francis: 1990), 49-51

25 Christopher Day, *Places of the Soul* (Taylor & Francis: 1990), 48-50

26 Lena From & Steven Lundin, *Architecture as Medicine - the Importance of Architecture for Treatment Outcomes in Psychiatry*. 1st ed. (Gothenburg: The Architecture Research Foundation: 2010). Available online: http://www.white.se/app/uploads/2013/01/Architecture_as_Medicine.pdf, 63

27 Lena From & Steven Lundin, *Architecture as Medicine - the Importance of Architecture for Treatment Outcomes in Psychiatry*. 1st ed. (Gothenburg: The Architecture Research Foundation: 2010). Available online: http://www.white.se/app/uploads/2013/01/Architecture_as_Medicine.pdf, 156

Figure 49: An image that speaks to the soul and the senses. Image source: (Lundin et. el: 2010: 218-219)