Twelve
Designing for Re-integration

Design Development

Janeke and her colleague sit around a table with the design team to discuss the design development of the project. The team has spread out a series of sketches and models elucidating the design investigation. She has asked Mr Pillay and Dr Radebe to sit in on the meeting and is encouraging them to participate in the discussions.

Figure 58: (spread) Design Development Sheets that illustrate 9 stages of development, that will be looked at in further detail (Patrick, 2016)

1 See Figure 58

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1 - 4
Design Development

Stitching old (traditional uses) & new (healing)

5 - 6
Design Development

Organisation & integration of healing programmes
Janeke reviews the decisions made at each stage of the design process and makes a resumé of the valuable or problematic aspects, which became evident in subsequent development investigations.

Design development stages one to four\(^2\) can be grouped together because they all looked at stitching the old fabric (traditional functions) together with the new fabric (healing functions). The link between the old and the new becomes a journey. Points along this trajectory, where old and new functions converge, create a series of connections or nexus points, linking the ideas in this project to the greater network. The initial diagrammatic illustrations were well ordered, and emphasized the way in which architectural forms “protect” the private functions by providing a sense of refuge in the interior spaces, for the inhabitants. The resultant forms become inward looking, so as to cater for inhabitants’ need for introspection, but the street outside is ignored. The problem with this idea was that this building would have provided limited interface with the public realm, in its relationship to the street edge, with the proviso that interaction is an essential element of this project. It was unclear how this new journey into the existing fabric would actively regenerate it.

The next couple of investigations\(^3\) were comparable and we decided to combine them. They both focussed on the question of responding to the built edges of the site, as well as the natural elements of site. Supportive programmes were proposed along the edges and healing programmes were centrally located alongside the journey into the built fabric. Nature was considered in the architectural investigations: pergolas intended to have creepers growing up them, balconies with planters and “therapeutic” gardens. However, the form presented some awkward angles as well as awkward spaces. The public space was not really designed.

This investigation was taken further and water was considered as a life force and healing element that would render the built fabric more cohesive. The resulting forms were more organic and the architecture began to better integrate with the existing fabric. When defining the public spaces, existing informal trade was considered. Pedestrian walkways were defined alongside these spaces, and alongside the river, with gathering places and areas in which to relax. The river bridge links up these walkways. The resultant forms were hard to justify practically and more investigation was necessary in terms of the bridging of the old and new architecture.

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\(^2\) See Figure 59 & 60

\(^3\) See Figure 59 & 61
CONCEPTUAL SECTIONS

Stitching old (traditional uses) & new (healing) Concepts

1 - 4

Design Development

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CONCEPTUAL SECTIONS

Stitching old (traditional uses) & new (healing)

CONCEPTUAL PLAN

Ground Floor

Figure 60: (spread) Design Development 1-4 (Patrick: 2016)
Organisation & integration of healing programmes

CONCEPTUAL PLAN

Ground Floor

Design Development

Axes

Natural Contours

Figure 61: (spread) Design Development 5-6 (Patrick: 2016)

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Design Development

Consideration of route & each user's perspective

Exploration of natural & built relationship

Exploration of thresholds

Exploration of quality of rooms

Exploration of essence on plan

Exploration of golden section on plan

Integrating water & natural elements in architecture

Conceptual plan

Conceptual plan

Conceptual plan

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Design development stage seven dealt with an investigation of organic form in terms of the integration of water and landscape with the architecture. The investigation went on to structure, in a rational way, the organic form in terms of the golden ratio.

Dr Radebe and Mr Pillay are looking rather confused and so Janeke makes a few rough sketches to explain the golden ratio.

The Golden Ratio is a common mathematical ratio that has been identified in nature. It is related to the Fibonacci Sequence: a number sequence where each number in the sequence is the sum of the previous two numbers. This is the sequence: 1, 1, 2, 3, 5, 8, 13 and so on. In the sketch you can see how this relates to a ‘Golden Rectangle’ where the same rule applies. A spiral can be drawn within this completed rectangle, that relates back to nature, as in the seashell. The benefit of adopting these proportions in design, is that it produces a well-proportioned plan, section or elevation of the design.

The conceptual plan derived from this exploration, focussed on the urban edges and the public pedestrian path through the site, and how it branched off into more private spaces. This conceptual plan did not have the same appeal that the previous organic plan had because of the awkward angles that were created.

The next stage of the design development consolidated all of the explorations thus far, so as to understand the overlaps between them, which are important aspects in order to take the process forward. It was also decided to approach this from the perspective of the user. Drawn perspectives of important spaces, mostly in these areas of overlap, were generated in order to understand the functioning of these areas better. The architecture that resulted from this exercise did not relate, in plan and section, in the way that it did in the perspective drawings.

This brings us to the latest design development, which focuses on the different experiences of each user. Mr Pillay, Dr Radebe and Katlego were considered as representative of the various potential users of the space.

Mr Pillay describes his perspective.

The public square is envisaged as a ‘filtering’ strategy, introducing the public to the other programmes which branch off from the main public route. The positive aspects of this design proposal were identified as being the bridge across the river, which becomes an active part of the architecture and of the journey. Also the existing fabric was used in order to house certain programmes.

I imagine the public square, and spaces alongside the river, as places of respite - not only for the public, but also for fellow shop owners. I look forward to spending some of my lunch breaks here.

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4 See Figure 62 & 64  
5 See Figure 63  
7 See Figure 62 & 65  
8 See Figure 62, 66 & 67
EXPLORING ESSENCE OF SITE ON PLAN

EXPLORING GOLDEN SECTION ON PLAN

CONCEPTUAL PLAN

Ground Floor

Integrating water & natural elements in architecture

Design Development
Design Development
Consideration of user perspective

EXPLORING SPACES IN SECTION
Concepts

CONCEPTUAL PLAN
Ground Floor

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Design Development
Consideration of route & each user's perspective

EXPLORATION OF NATURAL IN DETOX ROOMS
EXPLORATION OF QUALITY OF ROOMS
EXPLORATION OF THRESHOLDS
EXPLORATION OF NATURAL & BUILT RELATIONSHIP

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1 - 4
Design Development

Stitching old (traditional uses) & new (healing)

5 - 6
Design Development

Organization & integration of healing programmes

7
Design Development

Integrating water & natural elements in architecture

8
Design Development

Consideration of user perspective

9
Design Development

Consideration of route & each user's perspective

Figure 67: (left) Design Development 9 (Patrick: 2016)

Figure 68: (above) Design development stages one to nine (the process) (Patrick: 2016)
DESIGN DEVELOPMENT
Janeke adds here:

The qualities of these different spaces could be easily understood on the basis of the perspectives. However, the architectural language became fragmented as no clear decisions had been made in terms of space.

Dr Radebe adds her opinion here:

The route required further definition if it were to provide guidance and support and acquire a legibility, which would make way-finding for the users of the space very simple. Were it taken further, the design could introduce more spaces to facilitate interaction between the various users.

They conclude the meeting and agree to reconvene in a couple of days to discuss the next stage of design development.

Once more at the drawing board, they are keeping in mind processes they have already gone through9. Their initial investigations had looked at how the spatial fragmentation in the model could be resolved through re-organisation10. Janeke refers to various design precedents, which had been discussed during the design process.

The last design development drew inspiration from the design principles found in Le Corbusier’s chapel ‘Notre-Dame-Du-Haut’11. The chapel is interesting because it has two roles, providing an introspective and focussed interior while to the exterior it caters for large influxes of worshippers, as it forms an important part of the historical pilgrimage-route between France and Spain. The thick outer walls are plastic forms, which direct the circulation of pilgrims and visitors around the exterior of the building before entry12. A dynamic spatial plasticity highlights the topography of the site and shapes unique interior spaces. The deep-set openings in the thick south wall are incised into the massive stone and concrete structure, while openings to the north reveal an expansive landscape from the crest of the hill13. A phenomenological reading of the chapel involves the quality of the light, as it penetrates the interior, as well as the tactile sensation of the pews (the richness of the wood) and the ancient stone14, a remnant of the original 4th century Christian chapel, imbues this place of worship with a sense of history.

This precedent is relevant to our project: we can now look at using plastic forms as a way of joining the fragmented parts that were evident in the development and this could also bring out the unique spatial quality of the architecture that could result from such plastic forms. The proportional systems applied to the chapel were also derived from proportions based on the human body and the Golden Section – but it is only to be perceived at a subliminal level and in this way it provides for a more enriching experience of the building.

9 See Figure 68
10 See Figure 69
11 See Figure 70

Figure 69: (left) Design development: investigation through model-building (Patrick: 2016)
Precedent - Design

Chapel Notre-Dame-Du-Haut

Figure 70: Design precedent - Chapel Notre-Dame-Du-Haut. Image sources: (McCarter et al.: 2012: 33-37)
Precedent - Design

Chapel Capuchinas

INTERIOR VIEW FROM COURTYARD THROUGH BRIGHT YELLOW CONCRETE GRATE

ILLUMINATION THROUGH NARROW COLOURED GLASS OPENING ON TIMBER FLOORS & ORANGE WALLS

CLIMBING VINES GROW FROM THE SQUARE STONE SURFACE CONTRASTED WITH THE POLISHED BLACK STONE FOUNTAIN
Precedent - Design

Courtyards on Oxford

VEGETATION IN THE COURTYARD

UPSTAIRS BOARDROOM

COURTYARD SWING: OUTSIDE ROOMS IN THE BACKGROUND

OXFORD STREET, JOHANNESBURG
STUDIOMAS ARCHITECTS

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We also drew inspiration from the Chapel of Capuchinas\textsuperscript{15}, which has been described as “a space made of silence and light”\textsuperscript{16}. Looking at our selected images of this work, the spiritual quality of the place is apparent and one can read into it, a place of escape from the everyday. This is created by the use of minimal forms and materials, giving simplicity to the architecture\textsuperscript{17}. I feel that the courtyard space is subtly understated. It provides a place for inner reflection, as one sits surrounded by natural elements, with vines and flowing water, and natural materials such as stone.

Janeke gets up to make coffee for the team as they continue their discussion. Janeke returns with coffee for everyone. She refers to another precedent.

A couple of months ago I visited the development ‘Courtyards on Oxford’ \textsuperscript{18}, in Johannesburg. It comprises a complex of six courtyards sandwiched between six slender live-work units. The conceptual underpinning of these courtyards was that nature would slowly take over with creepers growing up dividing walls\textsuperscript{19}. I entered one of these courtyards\textsuperscript{20}, experiencing the small world within this enclosed space. The courtyard opens onto another room. Here, the two spaces are separated by a seamless division of frameless glass panels and the threshold between outside and inside is further articulated by a narrow water channel. Looking back at the garden, I still felt as if I were standing on the outside. Climbing a small staircase, I discovered another outside room. The boardroom, a glass box, is positioned at the level of the treetops and is surrounded by vines which clothe the boundary walls beyond.

The team feels that the courtyards in their project should form an integral part of the architecture and its sequence of spaces. Some of the qualities illustrated in these precedents could be reflected in the next design iteration.
Janeke and Dr Radebe go to Mr Pillay’s shop to discuss progress on the design development thus far. Janeke focuses on a specific stage of the development in order to reflect on the strength of the latest concept. She places a series of pages in front of them that have grid lines on them.

In this exercise we superimposed a new rotated grid, that recognises the river, onto the existing grids of the built fabric.

She presents them with drawings of the design that resulted from these conceptual explorations.

The river is naturalised and the buildings connect and insert themselves into the existing fabric. The resultant architecture facilitates the interaction between people as they filter from the public square into the more private spaces.

The ancillary functions of the soup kitchen, halfway house, pharmacy, women’s clinic, the existing medical centre and formal retail, are highlighted in light grey. The darker grey buildings house the primary, very private functions of the rehabilitation centre. The functions on the ground floor include: the dwelling spaces for the first stage of rehabilitation, therapy spaces, a library, the skills workshops and various courtyard spaces in-between. The first floor includes the dwelling spaces for the second, third and fourth stages of rehabilitation.

Janeke then explains that the perspectives have been arranged in such a way that one can understand the spaces, in sequence, through a journey. She elaborates on the nature of this journey.

A new walkway replaces the road, taking one past informal trading, which is now elevated on raised plinths with roofing. A new timber screen can be seen in the distance. Along the pathway one encounters a soup kitchen, leading off the public square. The soup kitchen can serve as a programmatic gateway introducing inhabitants to the additional facilities which are provided as part of the drug rehabilitation programme. The link between the soup kitchen and the greater rehabilitation programme means that doctors are encountered informally and can explain the various support facilities available. On making the decision to enter the rehab facility, a person enters the secondary foyer, leading onto a courtyard that opens out to other courtyards and is overlooked by spaces on the first floor.

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21 See Figure 73
22 See Figures 74-76
23 See Figure 77
24 See Figure 78
25 See Figure 79
26 See Figure 80
27 See Figure 81
28 See Figure 82
29 See Figure 83

Figure 73: Final conceptual development: rotating and overlaying grids (Patrick: 2016)
UNDERSTANDING HIERARCHY

PRIVATE vs PUBLIC

NB FUNCTIONS = ROTATED GRID

FORMAL PRECEDENT:
SAYAMAIKE HISTORICAL MUSEUM, TADAO ANDO ARCHITECTS

EXISTING

EXISTING

EXISTING
REVISED CONCEPTUAL PLAN

TECTONIC vs STEREOTOMIC

OLD vs NEW

EXISTING

UNDERSTANDING HIERARCHY PRIVATE vs PUBLIC

FUNCTIONS = ROTATED GRID

FORMAL PRECEDENT: SAYAMAIKE HISTORICAL MUSEUM, TADAO ANDO ARCHITECTS

ITERATIONS OF FIRST FLOOR GEOMETRY

Figure 74: (spread) Design Development 10 (Patrick, 2016)
Figure 76: Conceptual First Floor Plan (Patrick 2016)
Mr Pillay and Dr Radebe really value the way the journey through the various spaces of the project, has been made accessible to them through the presentation and linking of the perspective drawings. For Dr Radebe, it is the courtyards that should take priority as she finds them exciting.

Janeke and her colleagues assess the design critically. One of them comments that the spaces do not come across as ‘homely’. Janeke responds.

This is true! We need to think about what a home really is: it is a place for daily rituals\(^{30}\) and I believe that this can be integrated into the ritual of healing.

Regarding the interior spaces, it might be easier to consider dwelling in these three ways: biological, emotional and intellectual\(^{31}\). The biological aspect would integrate the bio-cultural elements of entry, roof, hearth and stove. These spaces should focus on an interaction between prospect and refuge: opaque boundaries and low ceilings should define smaller areas of refuge allowing for sleep, meditation, healing, and providing a general haven, while high ceilings with opaque boundaries, at a greater distance from one another, are used to define more expansive spaces and to provide broader views and prospect\(^{32}\).

By designing with the emotional experience of an inhabitant in mind, a slightly different approach is taken where built elements are designed in such a way as to allow for the personalisation of space to take place. The intellectual aspect also has to do with identity and education and can be realised in the library and the workshop spaces.

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Figure 80: Approaching Conceptual Foyer (Patrick, 2016)
Figure 80: Approaching Conceptual Foyer (Patrick: 2016)

Figure 81: Conceptual Secondary Foyer that looks onto a courtyard (Patrick: 2016)
Figure 82: Conceptual intermediary courtyards (Patrick: 2016)
Figure 82: Conceptual intermediary courtyards (Patrick: 2016)

Figure 83: Conceptual first floor walkway (Patrick: 2016)
Precedent - Design

Falling Water

EXTERIOR MATERIALITY
[OUTSIDE TERRACE]

INTERIOR / EXTERIOR
MATERIALITY

INTERNALISATION OF LANDSCAPE
[LIVING ROOM]
A precedent that I feel will inspire us to realise these aspirations is Falling Water, as I believe that its design speaks to the landscape, resulting in an interior which has been informed by its beautiful natural setting. Evident on the plan are the horizontal ‘built planes’ that replicate the existing rock layers within the stream. This reference to geological stratification is what most architects admire about this building, and so do I. But, it is the rooms that interest me most in this case.

The living room on the ground floor creates a space of refuge with its low plastered ceiling and a flagstone floor. This is paired with the idea of prospect: the use of large steel frame windows creates a sense that the room could open up completely. From this room, one can hear the stream flowing beneath the house.

The first floor is at the same level as the tree tops while the roof terrace helps to blur the division between inside and outside. The study, on the second floor, is enclosed by three anchoring stone walls. The detailing and positioning of the window, with its discreet frame, makes the observer feel at one with the landscape. From here, one looks out over the waterfall below.

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33 See Figure 84