3.PRECEDENT STUDIES

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3.1 INTRODUCTION:

In this chapter the author will look at various precedent studies which will be divided into different categories.

These categories include:

- Philosophy of rehabilitation of people with cerebral palsy
- Accommodation and functional layout of rehabilitation centers for disabled people
- Spaces for children
- Architectural style

In some cases, one project may be used in more than one of the above mentioned categories.

Figure 54. Precedent studies compilation

3.2 PHILOSOPHY FOR REHABILITATION OF PEOPLE WITH CEREBRAL PALSY

3.2.1 WILLIAM C HARVEY SCHOOL, LONDON

William C Harvey School is one of the leading rehabilitation schools for children with disabilities, and their specialized and innovative methods of rehabilitation makes this an ideal case study for functional purposes.

Its vision is that 'the school should be full of laughter, light and enthusiasm' has an extremely positive impact on pupils' achievements and their personal development, both of which are excellent. There's a clear focus on the individual needs of the children.

The use of innovative skills and sensory development through enjoyment makes them a leader in rehabilitation and education of disabled children.

Although William C Harvey is an educational school, much can be learned in the techniques used to educate and rehabilitate these children to develop their full potential.

3.2.2 LITTLE SCHOOL. SAN FRANCISCO ARCHITECT: MARK HORTON, 2005

A modern design for innovative children facilities that captures their imagination. Using a multi-sensory approach and incorporating current knowledge about learning.

By partnering with parents, teachers build a trusting, caring relationship with each child based on deep knowledge about that child's needs.

Little school believes that learning occurs through exploration, experimentation and discovery. By combining open, play-based times with more structured activities like music or meeting time, children experience a wide variety of settings designed to serve all learning styles. **Fun is a top priority.**

This precedent represent a philosophy of exploring through play and building relationships between child, therapists and the building.

The children build a relationship with the building because of the excitement created by the play areas.

To build a relationship with the child, the teachers of Little school spend time playing with the child and thus moving into the same social levels.

Trying to define a space that a child is attached to, would be the main idea. The spaces in the building should have special attributes and make the child aware of here and now. These children need boundaries which guide them in forming a bond with the building (Blom 2006; 25-32)

Figure 55.Play ground image, little school

Figure 56. Play ground image, little school 2

3.3 ACCOMODATION AND FUNCTIONAL LAYOUT OF REHABILITATION CENTERS

3.3.1 RIVER FIELD LODGE, MULDERSDRIFT, SOUTH AFRICA

Life River field Lodge is situated in the Fourways area, in a tranquil, peaceful setting on the banks of the Jukskei River.

The care centre accommodates about 30 adults with cerebral palsy and specializes in aspects like psychology and physical therapy. An intensive care unit for the Cerebral Palsy section of +/- 10 beds accommodate severe cases rehabilitating directly out of the hospital.

After an interview with their head psychologist, Roline Hofsure, a location with enough recreation and social space is integral for the rehabilitation of people with Cerebral Palsy.

Social spaces like TV rooms, eating halls and lapa's are necessary for interaction between disabled people, and good for their overall self confidence. The designer used courtyards to connect the building and patients to the environment.

Figure 57. Green areas between walkways and buildings

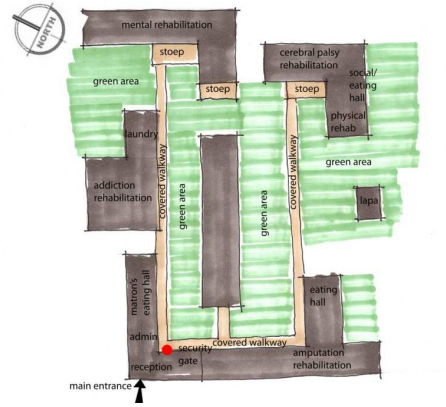


Figure 58. Schematic representation of River filed Lodge. The use of green spaces between the buildings create a quiet and relaxing atmosphere for patients.

3.3.2 WILLIAM C HARVEY SCHOOL, LONDON

As stated in precedent study 3.1.1, William C Harvey school specializes in innovative methods for rehabilitation.

The specialized therapy include rooms such as :

- Dark room therapy
- Play room therapy
- Hydro therapy

DARKROOM THERAPY:

This therapy is dedicated to channel the child's concentration to one matter where nothing else can divide their attention. The dark room also helps the child to identify with his/her

Example: Some pupils can not move their feet if they can't see them. Lava lamps are a good way to learn colours and is used for relaxing.

Figure 59. Dark room therapy

PLAYROOM THERAPY

Here, the children can express themselves through play. The playroom is equipped with various toys and equipment to accommodate any play fantasy. The theory here is that the therapist participates in the play and thereby acquires a better idea of the child's personal needs. This also builds a relationship between child and therapist.

Figure 60. Play room therapy

HYDRO THERAPY:

Physical therapy in a heated pool which helps the muscles relax, especially in case of severe spastic children. The different flows and thrusts of the water stimulate the muscles . This is a more private space than the pool area.

Figure 61. Hydro therapy pool

3.4 SPACES FOR CHILDREN

3.4.1 ASAHIKAWA SHUKODAI PARK

Location: Asahikawa, Japan, 1994

Architect: Mitsuro Man Senda

Children's adventure park.

Touching, jumping, chasing, feeling their way, climbing and sliding. Using all their senses and adapting their bodies to different situations.

Play is intermingled with nature, creating a sort of partnership. The site is located on a site affording the maximum contact with nature

"Play can involve nature as a friend"- Mitsuro Man Senda.

Senda states that it is the height of vision that is the determining factor when considering the design.

Details must be meticulously studied and materials must be both harmless and suitable, no matter how the children choose to use the play areas. (Cerver,2000: 471)

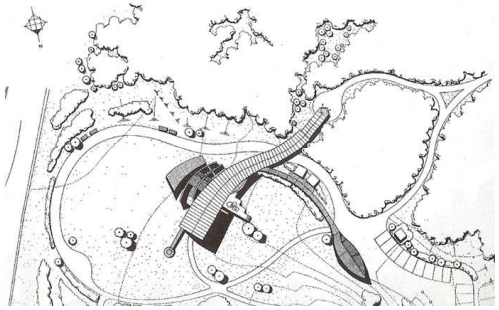


Figure 62. Image fromShukodai park

Figure 63. Image from Shukodai park

Figure 64. Image from Shukodai park

3.4.2 KIDS PLAY ROOMS

Architect: un known

COLOUR:

The use of color is very prominent in both designs for children spaces. Bright colours stimulate senses and creates excitement for children.

ACCOMMODATION:

Different play methods are specifically allocated within the play area. This will force the play to be specific and organized.

MATERIALS:

Materials are soft and suitable for any type of play. Materials create different challenges of play, example, sliding in pipe, moving over fibre net, keeping balance on different shapes of support.

Figure 65. Playground image from world wide web

Figure 66. Playground image from world wide web

3.5 ARCHITECTURAL APPROACH

3.5.1 N4 DIAMOND HILL TOLL PLAZA, GAUTENG, 2005

Architect: Mathews & Associates Architects in association with Karlien Thomashoff Argitek.

This precedent was chosen to investigate the simplicity of the architecture as well as the use of materials such as natural stone, steel and glass and its connections.

To build on a large flat open site, the architect used elements like steel light masts to create a sense of space which forms the gateway through the toll plaza.

The use of corrugated steel roof sheeting on the control building are direct references to the pre-manufactured agricultural sheds in the surrounding landscape.

The contextually inspired design approach is carried through to the choice of building materials for the building and structures.

External derailing ensures that security concerns did not destroy the aesthetics of the building.

Concealed gutters were incorporated into the design, with down pipes forming an integral part of the external fenestration.

(digest of South African Architecture, 2005: 68)

Figure 67. Rainwater down pipe detail

Figure 68. Roof and gutter detail

Figure 69. North western elevation

Figure 70. Roof deatail

3.5.2 KIRSYENBOSH RESTAURANT

Southern Cape, 1999

Architect: GAPP Architects

This precedent was chosen for the way this restaurant connects with the environment through material usage and layouts.

GAPP Architects describes the architectural language which it has used as deriving from the natural world. " Its grammar and syntax are rooted in the culture of modernism which seeks to heighten the experience of the natural world through its juxtaposition and contrast with the constructed artifact rather than by blurring the boundaries of the two" (Digest of South African Architecture, 2000 :12)

Nature is invited into the restaurant area with the use of double volume glass facades, which allows for a view towards large trees and green areas. The nature feeling is emphasized with the use of natural timber ceilings and stone.

The pergola covered patio acts as a transition area towards the garden and creates direct access to the restaurant area. The large glass facades in this instance creates an inviting feeling into the restaurant.

This is a venue competent to meet the wishes of every individual and exploit the beauty of every season.

On a warm, summers evening it is possible to savor a good wine or sip away at a cocktail whilst the Cape sun sets majestically over the mountain. In the winter it is possible to dine in intimate delight as the warmth from the glowing log fire pleasantly lulls your senses.

Figure 71. Large glass façade and restaurant area

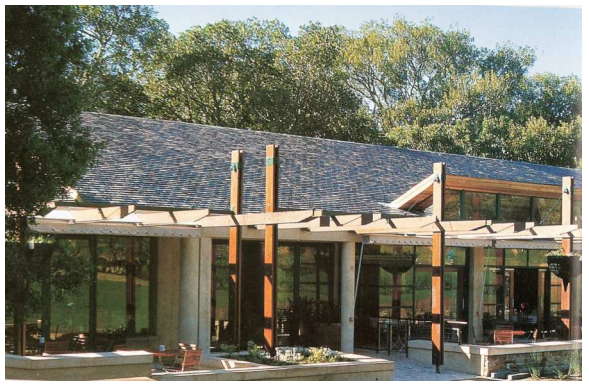


Figure 72. View towards restaurant area

Figure 73. Dining area

3.5.3 BARCELONA PAVILION

Barcelona Spain, 1928, rebuild 1959

Architect: Ludwig Mies van der Rohe

"The Barcelona pavilion was without practical purpose. No functional programme determined or even influenced its appearance. No part of its interior was taken up by exhibits: the building itself was the object on view and the 'exhibition' was an architectural space such as had never been seen. The building consisted of walls and columns arranged on a low travertine marble podium...it channeled space between separate vertical and horizontal planes. But this time the flow of space was held within clamp-like walls at each end of the podium."- Pawley

The canvas roof appear very light because it is seated on only eight steel columns. This allowed the walls to be separated from the structure and define the interior flowing spaces.

(De Sousa, 2002:14)

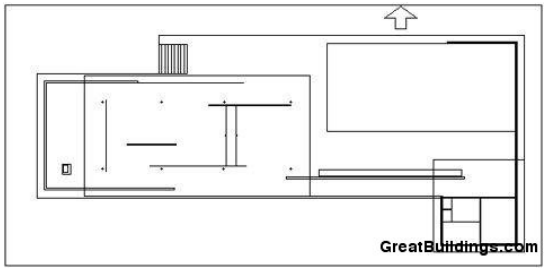


Figure 74. Plan of pavilion

"Radical rationalist that he is, his designs are governed by a passion for beautiful architecture. He is one of the very few modern architects who has carried his theories beyond a barren functional formula into the plastically beautiful. Material and space disposition are the ingredients with which he gets his effect of elegant serenity. Evincing in his work a love for beautiful materials and textures he emphasizes this predilection."— Helen Appleton

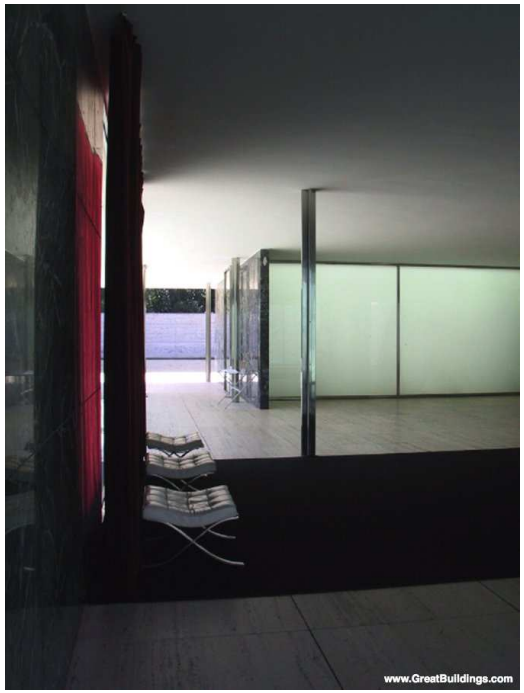


Figure 75. Steel column in building

Figure 76. Elevation over pond

Figure 77. Steel column and glass facade

3.5.4 GARDEN PAVILION

Nieuw Muckleneuk, Pretoria, 2000

Architect: Comrie Wilkinson

A very transparent method of construction is used, consisting mainly of off-shutter concrete, timber and large glazed areas.

The light structure of the rest of the building enhances the bold sculptural qualities of the off-shutter concrete wall and the square and circular geometrical shapes at the far end of the building. Together with the main roof sloping upwards to the southern side, the adjacent lush and tall tropical plants are invited into the building.

From these pictures below, the simplistic nature of this architecture is evident. By creating a solution for using a light structure, the use of materials comes to the forth.
(South African architect, 2000:22)

Figure 78. Images garden pavilion

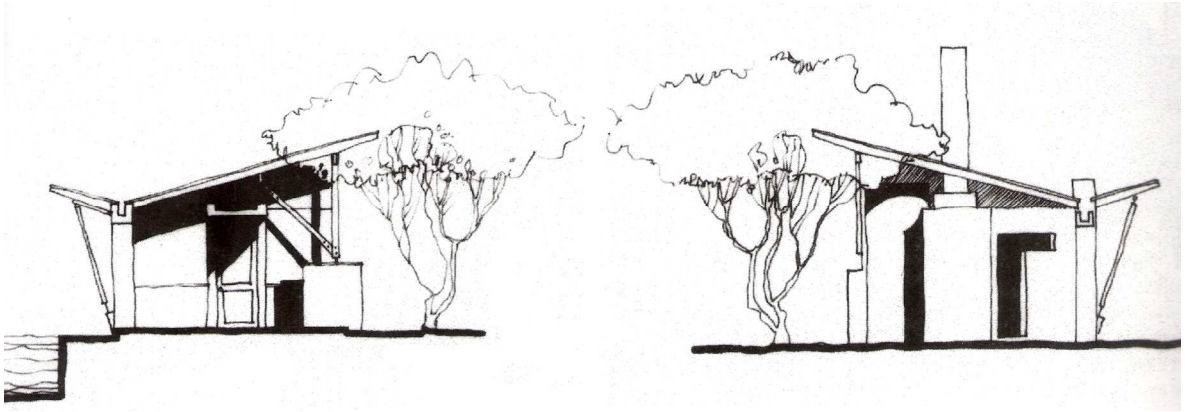
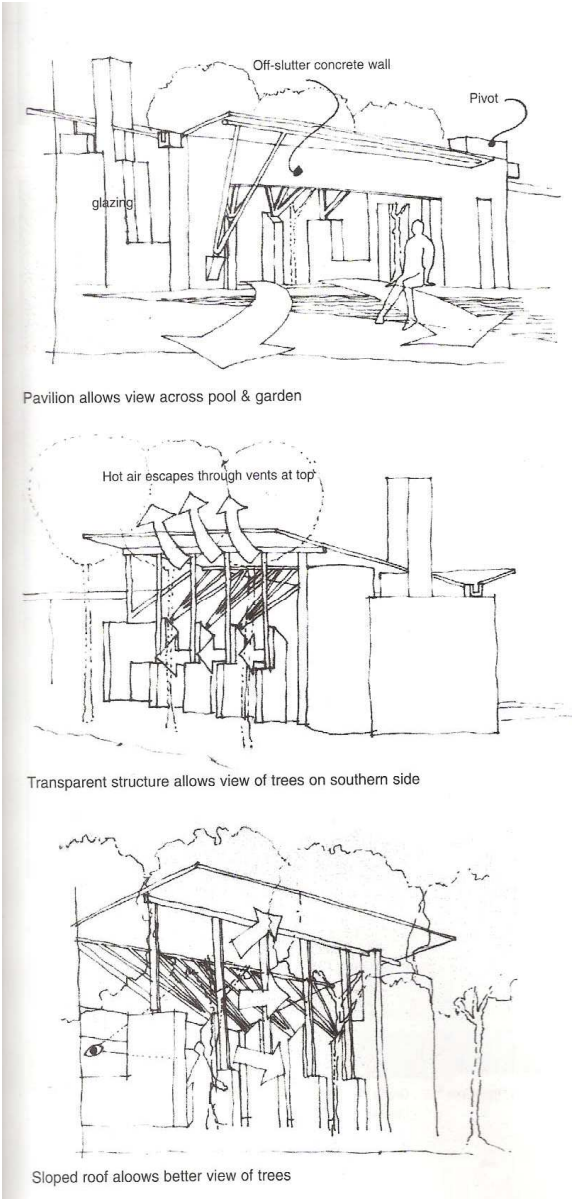


Figure 79. View of interior detail

Figure 80. Images of garden pavilion



3.5.5 TEA PAVILION

Rheden, Netherlands, 2002

Architect: Bjarne Mastenbroek

“Green is the calm component of the city, a constant factor. That is why I have a somehow obsessive relation to trees. Trees are to me something very important in urban life. I think I could never miss this basic quality."-Bjarne Mastenbroek

Mastenbroek’s ambition is to give strong spatial and natural qualities also to buildings on urban locations. He emphasizes the importance of the balance between built volume and green open space in the closest neighborhood.

To create a rustic ceiling texture, Mastenbroek used vertical hanging pieces of timber.

The flooring is textured by cross-cut sections of local trees, embedded in epoxy flooring, leveled and sealed. (Hauser, 5/2004:14)

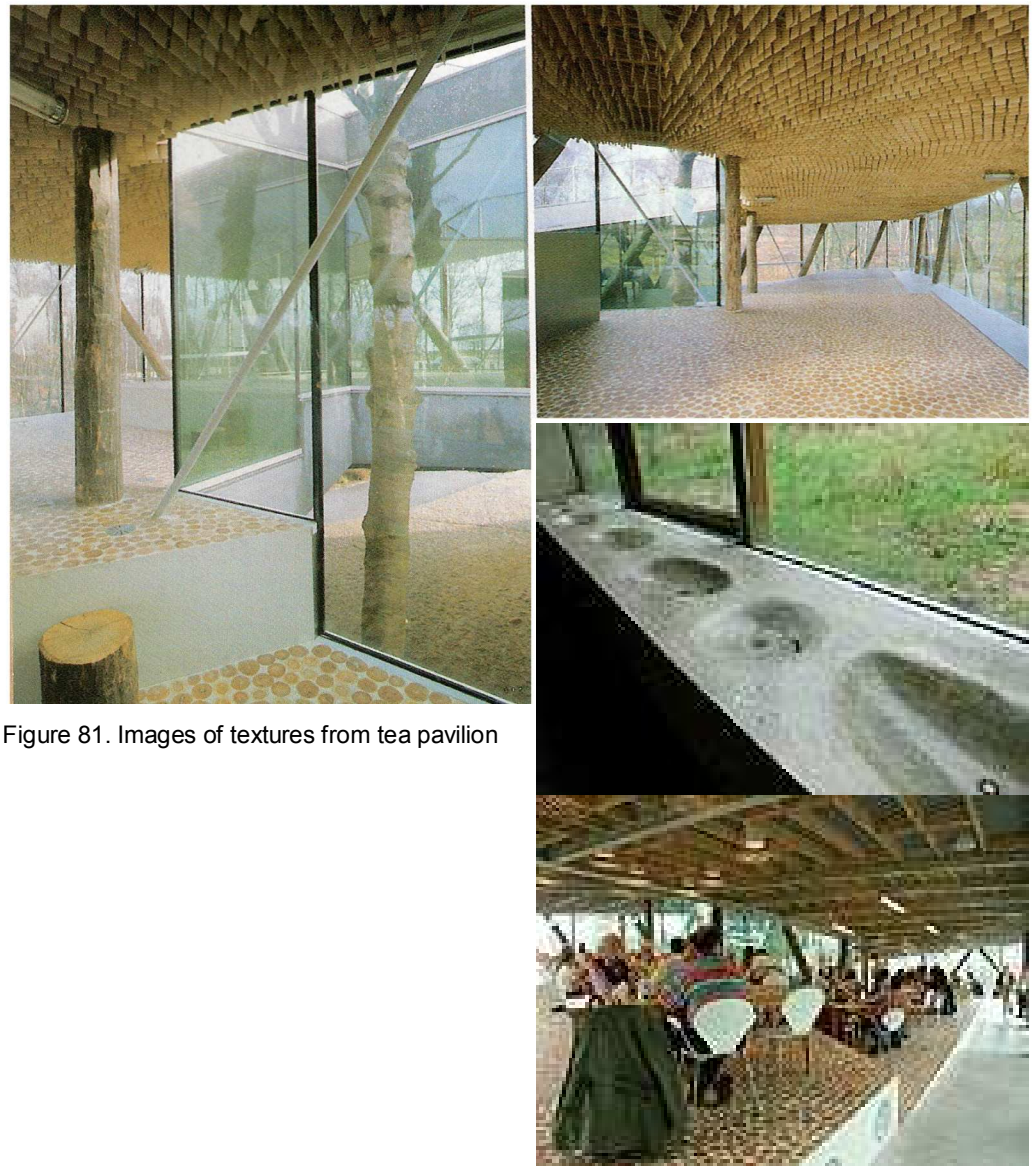


Figure 81. Images of textures from tea pavilion