development of concept
**design informants...**

[1] Primary users [the children]
- Requirements
- Activities
- Anthropometrics
- Safety [zoning / defensible space]

[2] Formal to informal
- City to zoo
- Dense fabric to sparse
- Inside to outside
- Vehicles to pedestrians

[3] Pedestrian walkway
- Accommodates children / parents / elderly / casual onlookers / people in transition through block

<table>
<thead>
<tr>
<th>boys</th>
<th>girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>age 2</td>
<td></td>
</tr>
<tr>
<td>864 [height]</td>
<td>856 [height]</td>
</tr>
<tr>
<td>age 4</td>
<td></td>
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<tr>
<td>age 6</td>
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**keywords...**

- **regeneration** - periphery = degraded urban fabric
- **inbetween** - hardscape & softscape / inside & outside
- **transition** - formal to informal / inside to outside
- **connectivity** - city framework / linking of nodes / site to context
- **branching** - link to context / neighbouring buildings
- **integration** - context / setting / urban fabric
- **threshold** - street to site / landscape to architecture
- **interface** - building to playground / site to context
- **versatility** - more than one use / expand or contract / shift and adjust / push and pull / interactive

**figure 7.1**
Concept: extending the field of play

Learning through play [in totality] by expanding the area of impact

Defining the fields...

Functional
- literal play carried out on the outdoor playgrounds and play activities performed indoors.

Volumetric
- experimenting with the use of different levels and heights
- enhancing spatial quality by tweaking the mundane envelope and internal volumes

Contextually
- connecting with the city and the zoo precinct to provide a diversified and unique learning environment
- reflecting the story conveyed by the historical setting
- play hide and seek when coming into contact with the sites edges
- include parents and people in transition past the site or provide a point of interest for those at leisure

Light and Colour
- dabble with the implementation and effects of different lighting techniques and colours.

Play... a physical or mental activity that is undertaken for enjoyment or self-development and can be undertaken by individuals or groups of children spontaneously or as part of a planned activity [Definition of Play 2007]

...games = structured play
usually defined by the parameters of rules

...structuralism [the exploitation of geometric grids and modular repetitive structures creating complex yet clear organisation]

Extend to...
- Role as designer
- Physically [horizontally / vertically]
- Choice of materials
- Space and form making
It is through functional play that the notion of tying in landscape and architecture, inside and outside, is implemented. The supporting structure forms part of the play equipment and the ground is articulated to create transitions between buildings and the outdoor play area.

Dutch structuralist Aldo van Eyck promoted the “twin” or “dual phenomenon” where he describes the city as a big building and buildings as a city. In essence the passage ways and circulation are likened to streets of movement. It is this perception, and that of a child’s preoccupation with height and wanting to be taller or older, that gave rise to the idea on how to tackle volumetric play. The design incorporates each classroom sitting at various heights according to the age group it accommodates. A hierarchy of ages is implemented where the oldest children are positioned at the highest level and the youngest on the ground. The utilisation of the “Y–axis” creates dynamic varied heights mimicking the city skyline. Opportunity for play is created in the space below each classroom where a child can either crawl under or walk beneath the intermediate classrooms or climb on the structure below the highest classrooms. Children are thus encouraged to be more active reinforcing “learning through play”.

Van Eyck stated “…a configuration of intermediary places clearly defined, this does not imply continual transition or endless postponement with respect to place and occasion. On the contrary, it implies a break away from the contemporary concept [call it sickness] of spatial continuity and the tendency to erase every articulation between spaces i.e. between inside and outside, between one space and another. Instead, I tried to articulate the transition by means of defined inbetween places which induce simultaneous awareness of what is signified on either” [Modern in Melbourne: Structuralism]. In keeping with these views presented by van Eyck, I have articulated the circulation by implementing ramps to access the various classrooms.

![figure 7.4 sketch of building concept](image-url)
Contextual play and structuralism are incorporated with the implementation of a grid throughout the site. This grid and its associated rigidity reflect the one imposed on the inner city of Pretoria and begins to connect with the site's setting. Its proportions are based on the dimensions of the classroom [10m in length by 6m in width]. It too echoes the “dual phenomenon” notion where the built structure falls within the blocks and circulation occurs in the strips between.

For safety reasons the site is enclosed with a “green screen” - a frame structure on which planting is grown. The enclosure will however have transparent Perspex gaps through which passers-by can catch a glimpse of, and connect with, the world created within. A display wall, in which the children’s artwork can be placed, is situated along the heritage route for pedestrians to admire. Opportunities are created so that parents may watch their children at play.

The children can also reconnect with the outside world, so as to not feel completely isolated, due to their positioning at various heights and opportunities created by the vantage points.

With the creation of a pre-school complex different to standard buildings with a dissimilar form to which children are accustomed to, one is to believe that they will then be further encouraged to interact with the structure and develop various skills that normally would not be stimulated at other standard pre-schools. We are currently in an era where climbing trees is no longer the norm. Hopefully this passion will be re-awakened with this architectural typology.
Connectivity is key, not only in terms of the site to its context, but also in organisation of the site and built structures. Ideals of this concept are found to be reflected in the assembly of “Lego” building blocks through: versatility and flexibility of uses and inter-activeness where the different possible combinations of the components create a single functioning entity.
development of design
proposal 001...

figure 7.10  concept model

figure 7.11  sketch plan

figure 7.12  3D views
This proposal focused on connections to the pedestrian walkway while leaving maximum space for play. The attempt was made to extend the field of play by pulling out the structure of the dining area to create play equipment. Staggering of the buildings resulted in an inner core that was buffered from the southern edge of the site.

**Criticisms...**

The site was under utilised without any evidence of it being controlled or shaped. It was suggested that the site be made smaller and the structuralism approach applied to the entire site and not only to the building. The edges failed to connect to the immediate context or the urban framework. Ideas of play were not explored to its full potential enough to create an innovative architectural typology. The location of the entrance was also deemed to be uncomfortable.
resolution of issues...

optimising site usage_ In order to make better use of the site the number of classrooms originally accommodated was doubled. This can be justified by the increased residential components proposed in the urban framework resulting in a large enough population of children. The pedestrian walkway was made wider to give more of the site back to the public. A heritage walkway was proposed alongside the heritage route so that there would be a comfortable passage through the block.

ordering device_ A tartan-like grid was then applied to the entire site to assist in ordering the site and configurations of the various structures. This resulted in a village-like setting where the separate entities are connected by pathways.

contextual links_ The edges of the site still however failed to connect to the context. I maintained that the pre-school needed to turn its back to its surroundings in order to create a safe internal environment. Relocating the entrance was experimented with to several possible positions to gain the best possible access to the site and to link to the most important contextual intervention, the pedestrian walkway.
The conclusion arrived at was that the entrance was best suited centrally for practical reasons of reduced circulation for the children. This resulted in a central corridor through the site that started to connect in a north-south manner.

Still remaining was the notion of creating a play-inspired more innovative architecture. This was achieved by varying the heights of each of the classrooms to create play-spaces beneath where the supporting structure forms climbing equipment. The circulation ramps became tunneled tubes that added to the element of fun.
ordering and contextual connectivity. To try add further order to the layout an attempt was made to unify the classrooms on the northern half of the site by placing them under a single roof structure while still maintaining the staggered effect as the classrooms were displaced under either side of the roof. The dimensions of the roof were generated by the geometry of the pathways between the neighbouring heritage buildings in a desperate effort to connect.

This however proved to be unsuccessful as the varying heights of the classrooms proved to be problematic and the imposed roof became redundant.

introduction of landscape and architecture_

I realised I had not achieved what I had originally set out to do, to design the site as a whole by integrating landscape with the building. My pre-occupation was still with creating a built structure then trying to design the spaces between.
This proposal further focused on connections to context by creating view points on the eastern and western boundaries. Circulation was celebrated and the central route emphasised.

**Criticisms...**
The density and scale of the building was still an issue and was said to be too “suburban”. It was once again suggested that the site should be made even smaller or other buildings proposed on the site. I had the option to create a park and pre-school in one or to create a pre-school with a park on the side. The scheme was believed to be limited with not enough development of the architecture.
figure 7.21 3D views of second proposal
site density and scale_ To alleviate the density issue I have proposed a three storey block of rentable space on the southern boundary of the site. This not only serves in the densification of the site but assists in scaling down from the eight story building across the road to the proposed two storey pre-school.

The rentable space can be used for the promotion of community assistance by housing upliftment facilities [clinic, night classes, communication facilities etc.]

site reconfiguration_ The addition of the office block raised a new question of how to handle the space between it and the pre-school. The entrance was once again relocated creating an enclosed activity corridor between the two structures. This went against too many original design informants and this exploration concluded in going back to the previous scheme and reconfiguring it to suit.

connecting to the park_ Due to the reduction of the site the park had to be relocated north of the pedestrian route. The geometry of the neighbouring boundaries conflicted with the school’s central circulation feature. Moving the entire feature west segregated two classrooms so the attempt was made to stagger the route.

pairing of classrooms_ The possibility of classrooms sharing spaces and opening out into each other was considered.
integrating landscape and architecture
Integration of landscape and architecture still had not been explored to its full potential by this stage. The green roofs applied to the stereotomic structures was as far as the notion had been taken.

I proceeded to slope the roof of the central circulation route so that access could be gained to the green-scape which would have otherwise been unused and gone to waste. The result is a man-made hill-like structure on which the children can play. This feature also assists in creating a sense of continuation of landscaping from the playground to the pedestrian recreation strip, through the pre-school, terminating in a green wall on the southern facade of the proposed office space. This gives the appearance of the green peeping between the two wings of the office block while improving the quality of the street-scape.

configuration of classrooms
The layout is such that all classrooms ramp to undercover paved outdoor play spaces which flow into outdoor green play areas. Classrooms had to be strategically positioned so that the climbing structures in the voids beneath could be accessed.