

The phenomenology of water 4

4.1 Introduction

By using constructed wetlands for treatment, treated industrial waste water will be made visible in this project. This, in turn, could create an opportunity to attract wildlife, such as birds and aquatic life, that could increase people's awareness regarding green networks and attract individuals back to the landscape. This regenerative process makes the unseen visible, as water not only provides a source for man's survival but also of experiential therapeutic value.

In order to get a better understanding of the value of water as a resource, people need to become emotionally attached before they will care for it. Becoming emotionally attached to water can be considered from a phenomenology perspective

4.2 Phenomenology

Phenomenology is the description or study of appearances. Any description of how things appear, especially if sustained and penetrating, can be called phenomenology (Lacey 1996:251). Such appearances are called phenomena. Phenomenology is also the study of essences, such as the essence of perception or consciousness (Ponty 1962:1). Phenomenology has philosophical qualities that put essence back into exist-

tence, offering an interpretation of space and time of which humans are a part (Ponty 1962:1). The study of phenomena attempts to define "our experience as it is, without taking account of its psychological origin and the causal explanations which the scientist, the historian or the sociologist may be able to provide" (Ponty 1962:1). When referring to phenomenology as the description or study of appearances, as well as offering an interpretation of space and time, it means that the experience of phenomenology is subjective in nature.

Phenomena can be concrete or intangible (i.e. experienced as sensations) (Norberg-Schulz 1991:6). Concrete phenomena that form part of everyday life are contained within people, flowers, trees and forests, animals, stones, earth, wood and water, streets, houses and towns and the changing seasons (Norberg-Schulz 1991:6). Intangible sensations, such as people's feelings, refer to unseen aspects (Norberg-Schulz 1991:6). These types of sensations are often interrelated in contradictory or complex ways (Norberg-Schulz 1991:6). It has also been found that some concrete phenomena may contain other concrete phenomena; like forests that contain trees, or towns that are predominantly defined by houses,

commercial buildings, industrial sites and general infrastructure (Norberg-Schulz 1991:6). This indicates that phenomena form an environment that is part of and contains things that make up a place (Norberg-Schulz 1991:8). A place is stitched together with concrete things having material substance, textures, shapes and colour. These things determine an environmental character that has qualitative values and cannot be reduced to any of its single concrete properties (Norberg-Schulz 1991:6).

Phenomenology has mainly been concerned with the philosophical study of being, the science of behaviour (psychology) and, to some extent, aesthetics (Norberg-Schulz 1991:9). The work of a few pioneers has approached phenomenology through the use of literature and poetry, which, in fact, is able to contrast those things which are tangible and opposed to science (Norberg-Schulz 1991:9).

French philosopher, Gaston Bachelard (1958:9), one of these pioneers, states that phenomenology is understood through the study of the imagination by using poetry to reflect an individual's mind and soul. The mind (i.e. to think) and soul (i.e. the human body) are in contrast with one another, as the

mind is capable of relaxing, whereas the soul keeps an active state when daydreaming (Bachelard 1958:9). The mind and soul are continuously aware of the tangible and intangible, which is further emphasised through the quality of a space. The quality of a space to stop a person in their daily routine and let them experience the place through its phenomenological qualities indicates that the person is conscious of the space's appearance. The moment that a person, group or cultural society qualifies a space as a significant landscape, such a landscape has mental significance (Pellitero 2011:62).

4.3 Phenomenology through architectural lenses

Holl, Pérez-Gómez and Pallasmaa (2006:41) underline that phenomenology can be understood by experiencing a place through the use of various architectural lenses, such as an enmeshed experience driven by intangible qualities, colour, light and shadows, time and perception and/or sounds and water. Integration happens between spaces; the fixture of materials and the detail of the connectivity between the materials (Holl et al. 2006: 45). Holl et al. (2006:63) further argue that when natural light is exposed to spaces that are created by three dimensional objects,

shadows are a result of what the eyes see in the form of transparencies, voids and solids. Additionally, the authentic sounds captured in a space should not be watered down by artificiality (Holl et al. 2006:87). An example of this is the live reflection of echoes and re-echoes within a stone cathedral that increase individuals' awareness of the space, its geometry and the materials of which it is made. Imagine if the same space is fixed with acoustical softening materials. This could destroy the qualities of the original space's experiential dimension. According to Holl et al. (2006:87) technology, unfortunately, cannot recreate the qualities of authentic sounds when such sounds are captured in a space using electronic speakers.

Water as a phenomenal lens is, therefore, captured through the abilities of its reflection, refraction, spatial reversal and the continuous transformation visible by the rays of light, which can give value to a spatial experience by creating authentic sounds using water play (Holl et al. 2006:83).

It can be said that phenomenology is often the result of a designer's efforts to use different architectural lenses to address a space in a certain way. The challenge in architecture is to stimulate people's

perceptions of a space by emphasising phenomenal experiences and creating meaning within a place. Zumthor (2005:11) argues that qualities in architecture are evident when a place 'moves' an individual. Such emotional connection, according to Zumthor (2005:11), is the atmosphere that is created through emotional awareness when an individual experiences a place. Atmosphere is perceived through emotional sensibility, a form of perception that works incredibly quickly, and which human beings evidently need in order to survive. Zumthor (2005:12-13) gives value to perception, as certain elements that are present within a space lead to first impressions of that place. These elements can constitute the: people, air, noises, sounds, colour, materials present, textures and/or forms present within the environment. A person's own overall mood, feelings and sense of expectation, of which they become aware while dwelling in a place, could either lead to making that person feel comfortable, like being at home, or cause the person to get a negative impression of the place (Zumthor 2005:33). All these noted elements, along with sound and water considerations, are reflected in the Pretoria Works initiative.

4.4 Phenomenology of water

When an individual is exposed to water, their reaction to its appearance can be subjectively described. Betsky (1995:13) is of the opinion that the phenomenological value of water is not always recognised because cities no longer develop around water sources such as rivers, springs, pools and harbours. Rather, cities now develop around airports, shopping centres or highways, thereby causing people to no longer recognise the presence of water and yet demand its availability. This behaviour forgets the fundamental and vast infrastructure systems of extraction, purification, distribution and drainage in cities, with little or no hint of water's presence in the man-made environment (Betsky 1995:13). The Pretoria Works industrial waste water treatment plant is one such example of water that is hidden.

Water should again become present in society, as it represents the source of life and rebirth (Betsky 1995:13). Water can also be seen as a mirror that creates a heterotopic alternative (i.e. worlds within worlds) to lived experiences. Additionally, seasonal changes can contribute to different ways of experiencing water and the ways in which water fashions landscapes through waterfalls, rough oceans or calm

reflections that observe a favourable universe (Wylson 1986:3).

Betsky (1995:10) also believes that water is spatially characterised as one of four aspects in architecture: a point, a line, a pool and an edge. A point represents gathering, a line acts as the source of power, a pool refers to a place of culture and reflection and an edge as a place of restrictions and imagination (Betsky 1995:11). Chapter 5 includes how these aspects relate to the proposed productive landscape, aquaponics and recreational activities at Pretoria Works.

4.4.1 The Point of gathering

The point of gathering can be seen through a fountain taking centre stage (Betsky 1995:11). This centring or point of gathering can produce magical connotations where individuals can experience an escape from everyday life and journey towards mysterious grottoes (Betsky 1995:11).

A grotto can be described as a place to hide; a concealed subterranean passage, cavern, cave or pit or even a natural covered opening in the earth (Miller 1982:8-9). Grottoes can also be artificial man-made recesses that resemble a natural cave (Miller 1982:8-9). The impact of a grotto as a point of gathering

can be clearly seen in Miller's (1982:5) translation of Leonardo da Vinci:

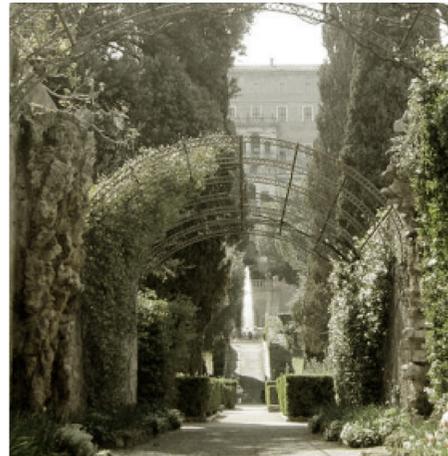
“And after having remained at the entry some time, two contrary emotions arose in me, fear and desire – fear of the threatening dark grotto, desire to see whether there were any marvellous things within it.”

The point of gathering is nowhere more accurately witnessed than at the Villa d'Este, dated from the 16th-century, in Tivoli, near Rome. This estate is famous for its terraced hillside Italian Renaissance garden and, especially, for its profusion of fountains (Miller 1982:44). Elements of aesthetic water spouts are present throughout, creating sounds of water in the garden that drown out the babbles of tourists' voices. The vibrant aspect of the water and its aural range is paralleled and accentuated by the movement towards and away from the theatre of infinite aquatic plays. Trees and vegetation are laid out in such a manner as to screen the fountains and grottoes (see figures 4.2-4.6). The purpose of the grottoes is for them to act as a cooling reservoir and a source of springs (Miller 1982:44-45).

The proposed design for Pretoria Works makes use of



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waterfalls (points) placed at the end of an aquaponics system, which oxidise the water and, at the same time, form spaces of gathering. The proposed design also makes use of hierarchical points of gathering to

which people are attracted.



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| 1 Gran Loggia and view of the Garden | 9 Fish Ponds |
| 2 Fountain of Lepa and Tripod | 10 Fountain of Neptune |
| 3 Fountain of Europa and Pegasus | 11 Rotonda of the Cypresses |
| 4 Cardinal's Walk Loggia of Pandora and "Bicchierone" | 12 Fountain of Diana of Ephesus |
| 5 Fountain of Tivoli or Oval Fountain | 13 Stairs of Bollori |
| 6 Hundred Fountains | 14 Fountain of the Owl |
| 7 Fountain of the Organ | 15 Fountain of Rometta |
| 8 Fountain of the Dragon | 16 Grotto of Diana and Vialone |
| | 17 Loggia and Corridor of the Long Sleeve |



Fig 4.7 The Point of gathering (Author 2018)

4.4.2 The Line as a source of power

The ‘line’ can be classified as a controlled river, running through a landscape (Betsky 1995:11). This river may be dammed and parcelled out for irrigation and recreational activities. It often gives birth to hierarchical societies whose rulers mimic the line in their developments (Betsky 1995:11). Thus, the line becomes a source of power. In such cases, nature is replaced by irrigation grids and reflects an artificial culture, wherein an individual is completely contained argues Betsky (1995:11).

Apart from being a source of power, water as an element is characterised by flow and penetrability. Seeing flowing water, even more so when it forms part of a productive landscape and especially during a hot day, can relax people and encourage them to follow the flow of the water (Gelder 2018). The extent of this desire may depend on whether an individual is looking at a slow river, a rustling brook or a wild mountain stream (Gelder 2018). People might even consider jumping into flowing water and allowing themselves to float along with it. When this happens, it is possible to say that the power of water lies in its attractiveness (Gelder 2018). During most warm-to-



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hot days, when the smooth surface of a quiet dam is visible, it can elicit quietness and tranquillity, as the nature of the water can influence an individual’s mood. On the other hand, when people are exposed to these same objects of water during cold winter days, the water is no longer as attractive (Gelder 2018).

Supporting evidence of the line as a source of power is found on the farm of Babylonstoren, which is surrounded by the Du Toitskloof, Simonsberg and Fran-



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schhoek Mountains in the Western Cape (see figures 4.8–4.11). The farm is inspired by the Company’s Garden vernacular in Cape Town. The Company’s Garden has a significant heritage value that is known for supplying fresh fruit and vegetables to the Dutch East India Company (Babylonstoren 2018). Simon van der Stel, the then Governor of the Cape (1691–1699), placed the Babylonstoren farm under the guidance of Pieter van der Byl, who planted the vineyards and improved the irrigation furrows found on

Fig 4.8-Fig 4.11 The Babylonstoren garden (Babylonstoren 2018)



Fig 4.12 The Line as a source of power (Author 2018)

the land. An efficient watering system was installed that is still used to this day, where water is pumped from the nearby Berg River to an irrigation dam, and then flows with the help of gravity through the garden in canals (Babylonstoren 2018).

The line as a source of power, which is proposed for the design of Pretoria Works, is created through the use of an aquaponics system wherein fish dams and terraced planter beds function adjacent to each other. The main goal of the intervention is production, which is controlled through rigid lines.

4.4.3 The Edge of reflection

The edge and the pool mirror each other (Betsky 1995:11). The edge is visible when looking at the coast, or the delta where the earth, water and sky mix and give birth to civilisation. The edge also serves as a reflection of the place where another world begins; a place of both danger and possibility (Betsky 1995:11). Betsky (1995:11) advises individuals to explore the edge like a sailor setting off into another realm of beauty and peril.

An example of the edge can be seen in the location of tide pools placed at the edge of the ocean, which fascinated landscape architect Lawrence Halprin. Neal (1986:26-30) quotes Halprin as saying:

“As the waves wash in, the quiet pools are obliterated in a wonderful froth of raging waters, which in their turn subside as the pool grows still, and the remarkable creatures wiggle around again. I find myself identifying with the still pool, peopled by weird and amazing creatures.”

This combination of danger and beauty at the edge is especially evident in one of Halprin's favourite places to wander near Sonoma Country in California. The edge in this location creates a habitat for strange and

wonderful little marine creatures (see figure 4.13) that flourish in the still tidal pools (Neal 1986:30).

The edge of reflection is experienced at the proposed design for Pretoria Works, where individuals can be especially overwhelmed when experiencing the threshold between land, water and distances viewed. An intangible feeling of emotion is experienced when people enter the pool or overlook the entire site, as well as when they view the city of Pretoria from an edge.

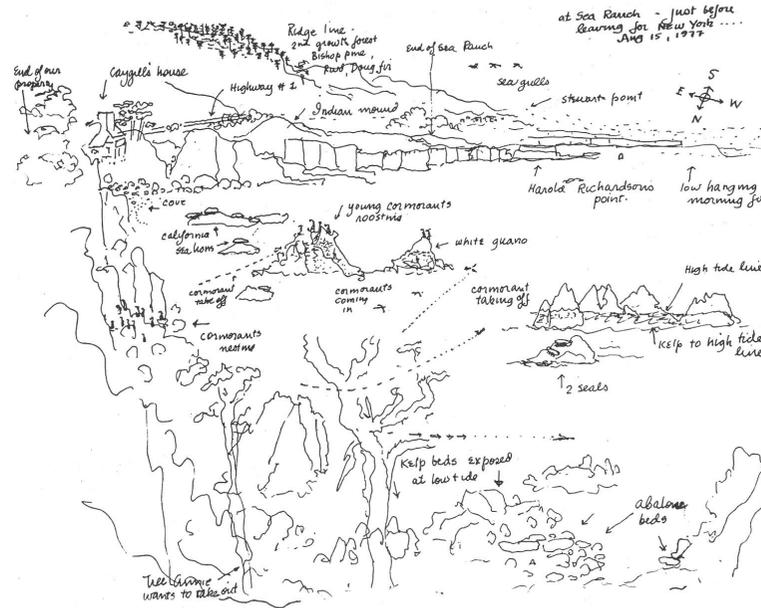


Fig 4.13 Lawrence Halprin drawings of the Sea Ranch (Neal 1986:30)



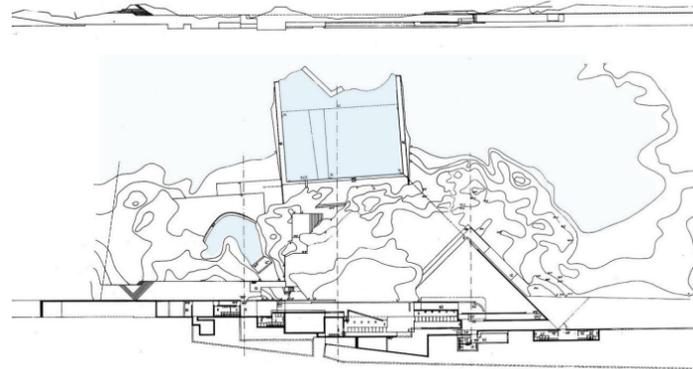
Fig 4.14 The Edge of reflection (Author 2018)

4.4.4 The Pool of mystery

The pool is seen as a mirror of society; a place where humans can admire themselves, and where the real and the unreal mix (Betsky 1995:11). It represents the very edge of possibilities, since it is both a man-made artefact and something that cannot be contained by man (Betsky 1995:11).

The clearest example of the pool is the swimming pool, which originated as the antipodean answer to the piazza; a public space that deserves protection (Hill 2016). The swimming pool attracts society with a sense of social fluidity where people like the freedom a swimming pool offers (Hill 2016). It also acts as a reminder and pointer for green and blue infrastructures, as it is a place that embodies civic sensibility (Hill 2016).

The most common type of water activity at a pool is swimming. Passing through the threshold of water, when swimming, a person becomes part of a profoundly different world (Colin 2011). When swimming, the water envelops the body and, when an individual moves, they can feel the water on their body. This effect is magnified when a person opens their eyes under the water. They cannot see as clearly, but can feel the water washing across their eyes. Hear-



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ing is also disturbed underwater; dull sounds are very faint, while metallic sounds are experienced loud and clear (Colin 2011). Being immersed in water has a profound impact on the senses, which does not occur on land. For example, humans seldom feel the air on their skin when they are on land the way they feel water (Colin 2011).

Supporting evidence for both the edge of reflection (noted previously) and the pool of mystery is the Leça Swimming Pools designed by Álvaro Siza. This site's integration between the edge and the pool is achieved by a careful reconciliation between nature's edges and the man-made public pool design. The public pool is intentionally camouflaged by the ocean's edge. This



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enriches the swimmer's experience of the expanse, yet obscures the man-made pool design (Balters 2011). Siza also displays a connection with the natural landscape by integrating existing rocks into the design (see figure 4.15-4.16). The pools intentionally extend out towards the ocean, thereby combining effortlessly with the natural rock pools at the edge of the Atlantic coast (Balters 2011).

The pool proposed for Pretoria Works is experienced through a natural swimming pool that is cut within the landscape and which will allow bathers to immerse themselves into the water surrounded by lush wetland plants. In this way, it may be possible for users to forget about the everyday rush of the city.



Fig 4.17 The Pool of mystery (Author 2018)

4.5 Conclusion

The concrete phenomena that forms an integral part of everyday city life includes people, flowers, trees and forests, animals, stones, earth, wood and water, streets, houses and towns and changing seasons that affect weather conditions. Apart from the concrete phenomena, humans are usually also aware of intangible phenomena, such as people's feelings. This leads to the realisation that phenomena form an environment that is part of things that make up a place. Landscape architecture benefits from realising the complementary role of intangible phenomena when making decisions about space creation.

It is worthy to note that a philosophical understanding of water as a resource, known as the phenomenology of water, can yield exciting insights that may benefit the designer when making decisions. In this regard the design vision and conceptual approach are discussed in Chapter 5.

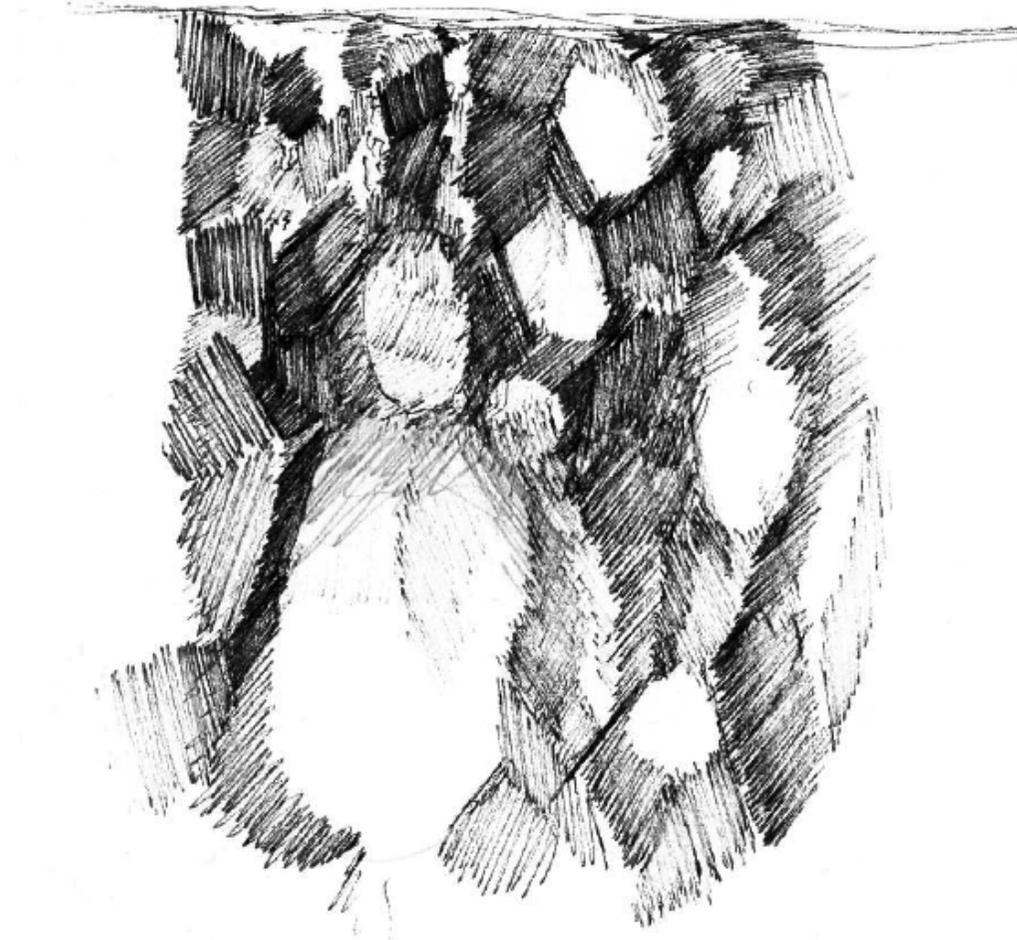


Fig 4.18 Conceptual drawing of water (Author 2018)



Fig 5.1 Pretoria Works unattended sedimentation dams (Author 2018)