

river system, rain and runoff system and grey water system. Where detail lacks in other technical aspects of the design, an informed assumption was made.

The self assessment audit (table 14) rates the project 37%. The score can now be divided by 44,2% to relate it back to the landscape applicable categories. Thus the project scores 83,7% which would be a six star rating.

Comparing Green Star SA Office V1 with the outcomes of the Sustainable Sites Initiative (SSI) investigation

Main themes form the SSI includes

- Conserving water sources and the systems they support while optimising the use of on site water and reducing the need for potable water
- Preserving existing natural and on site region appropriate biomass
- Using renewable- and waste minimising materials that does not pollute through manufacturing, application or after installation
- Optimise human use and health benefits by integrating the on site systems to improve the experience of man's environment

Through the Green Star SA Office V1 rating process and the study of eco-system services (listed above), the author found that the Green Star SA rating system addresses most of the themes from the SSI investigation.

The positive result of the audit might not be as accurate as one would hope because a lot of assumption had to be made with regard to basic building information that was required and estimated.

From the comparison

The author believes that converting the Green Star SA rating tool into a fully fledged landscape rating tool is well within reach. In the envisaged tool, there should

GREEN STAR SA AUDIT

The investigation of a possible application of Green Star SA on Landscape Architecture (see chapter 2) has shown that 44,2% of the rating tool can be applied.

The author concluded in chapter 3 that water appears to be the golden thread that links most on site systems and eco-system services; therefore all *green* aspects of the project was conceptually approached through investigating the role of water in every part.

From this the technical investigation of the project (see chapter 9) focussed on the three on site water systems:

The need of cleansing

The proposed investigation originates from a need identified within the South African urban context. Basic ablution facilities are often not provided, or are unusable in South African cities. Municipal priorities and economic realities commonly lead to their degradation. Public ablution buildings often become neglected, vandalized and generally dangerous environments. This common scenario arises from the tendency to isolate ablution buildings from the public, not celebrating their public potential.

The aim of this proposal is to address this situation through a public place of dignity and social potential centred on the enrichment and celebration of the necessary ritual of cleansing. Considering a public building as a reflection of its users implies experiential quality as a means of integrating a personal ritual with its environment. The intent is to create a social and economic asset to a community, not a vandalized loss to a municipality. The programme proposes a democratic place through exploring the inherent properties of architecture-not a building as sign or personal statement, but a shelter to be used and a canvas for experience as a bathhouse.



A brief history of public bathing

The bathhouse as an architectural typology has a rich and established history. A contemporary investigation of this typology requires a clarification of relevant terms and concepts, ensuring that the project is undertaken within the appropriate context. Crucial to this undertaking is an appropriate definition of the term 'public bathhouse', as it forms a base for interpretation of the investigation. Considering classic, contemporary and local precedent; that which is considered core to a public bathhouse is identified, considered, adapted and possibly discarded. A model of superimposing contemporary advantages onto the ideals of a classic bathhouse is investigated, aiming to avoid the imposition of an alien, ancient or inappropriate intervention. Site, client and end-user are identified to assist in contextual resolution and appropriate response.

In essence, a public bath originates from a communal need for a place to clean (in times or places) where fine grain infrastructure is not available to all, be it through a lack of technology, availability of resources or prejudice. Communities therefore gather at places of communal bathing where a central facility is able to serve a large population efficiently (Showerman, 1931: 357).

Public baths consequently appear at a variety of times and places throughout the world. Examples being the Turkish hamman, Japanese onsen or sentō, Finnish sauna, Russian banya and Roman thermae. Public baths appear in architectural and social history from the 6th century BCE to present (Anon, 2009), and is not solely a romantic, classical typology, although investigation of the classic is considered relevant.

The Roman thermae as a classic precedent embodies the closest relation to this dissertation, where government involvement, democratic access and servicing potential relates to the proposed urban context of the investigation. The built form of the Roman bath is not the focus of the investigation, the emphasis lies in understanding the growth and role of the bath within the Roman city and society. Thermae evolved from the Latium of the country where one could wash the feet, hands and face on a daily basis and only washing the entire body at intervals, progressing towards the great baths of the emperors where washing of the whole body was possible and daily baths were considered the social norm. With the increase of popularity of bathhouses, certain additions of convenience were made to the original facility, ultimately resulting in the inclusion of medical, hygienic, athletic, lounge and library facilities (Showerman, 1931: 355-358). The individual interpretation of available facilities encouraged a personal ritual of use.

Figure 1.
Photograph of a public
toilet in Marabastad.

Prices and funding structures were managed in a manner that promoted accessibility. This system ensured personal ritual ranging from a visit for cleanliness out of need, to exercise, preparation for dinner, meetings and debate (Showerman, 1931: 358).

Contemporary bathhouse

It is crucial to note the shift in the nature and perception of the public bathhouse since the Modern era. Coinciding with the improvement of service delivery to private dwellings, the role of the public bathhouse changed. Considering the contemporary example, the thermal baths at Vals by Peter Zumthor (1996), proves the case in point. Relevant to its affluent context, the bath serves as a recreational and profitable addition to a hotel complex. Whether this building is to be considered a true public bathhouse is questionable, as it provides to a limited range of clients whilst physical, necessary cleaning of oneself is not the primary goal of a visit. Formally the baths at Vals can be defined as a private spa, rather than a public bathhouse. A public bathhouse has origins in providing a necessary service, as *thermae* embody. While access to *thermae* was available and encouraged to all citizens, the baths at Vals is considered to embody a character of exclusion rather than inclusion.

Locally this same phenomenon of exclusion appears in the case of wellness centres, spa's or gym facilities, where access is granted on the base of membership or entry fees. Although these facilities aren't strictly bathhouses, the nature of the shift away from providing a basic service is evident. In contrast, the Roman *thermae* were accessible, subsidised and functional baths, with exercise and wellness facilities attached over time. The contemporary examples of exercise facilities do not provide the necessary service of cleansing as primary goal.

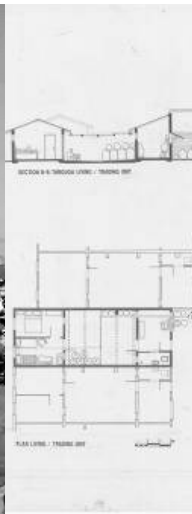
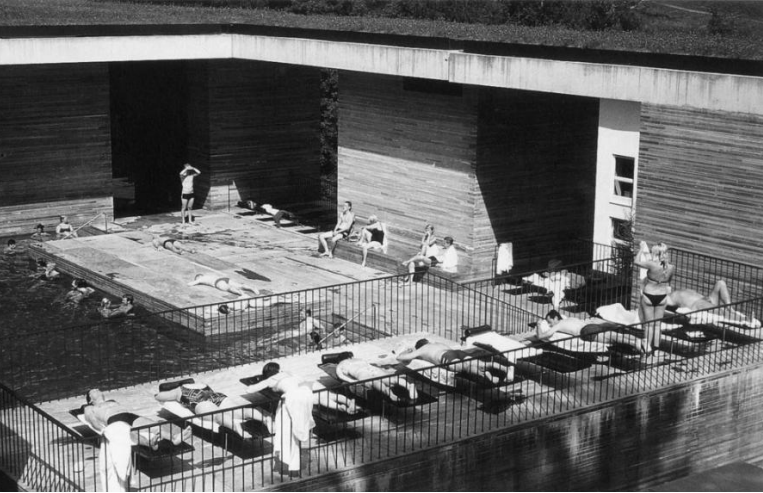
The work of Rodney Harber is investigated as a contemporary South African precedent of public ablution and bathing. In essence the core of a public bathhouse provides a service to an area that does not have basic ablution facilities. Expanding on the basic need, Mansell Road bathhouse deliberately includes and anticipates for a layer of commercial activity, thereby expanding the programme and providing opportunity to vendors, realizing a true public bathhouse. The bathhouse includes ablution facilities, accommodation and opportunity for formal and informal trade (Low, 2005:5). The inclusion of commercial activity as a part of public ablution facilities addresses issues of security within an urban

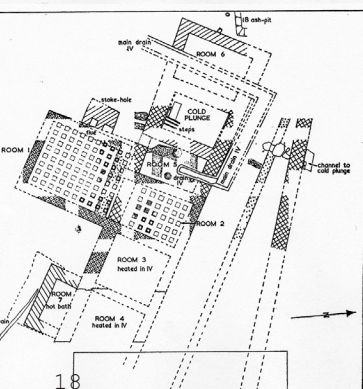
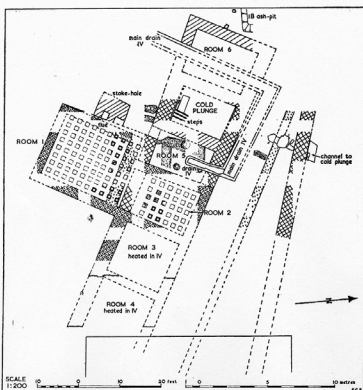
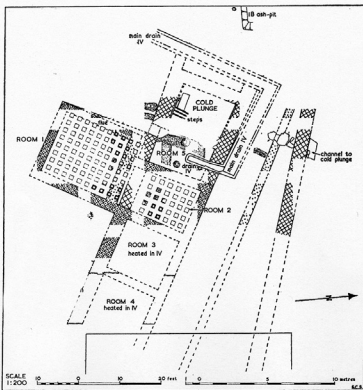
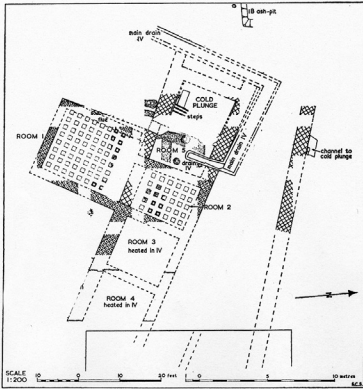
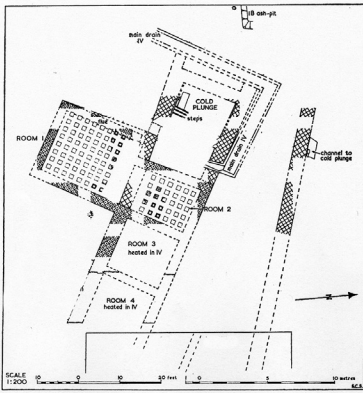
Figure 2. (opposite top)
Photograph of the present condition of Roman baths at Bath, England, displaying its adapted function as tourist attraction.

Figure 3. (opposite middle)
Photograph of the thermal baths at Vals by Peter Zumthor.

Figure 4. (opposite bottom)
Photograph, plan and section of the bathhouse in Mansell road, Durban by Rodney Harber.

Figure 5. (opposite right)
Photograph of an utaseyu shower at a Japanese hot spring.





setting. By providing passive surveillance through the permanent presence of shopkeepers and clients, a form of community policing, as defined by Jane Jacobs as the 'eyes of the neighbourhood', are introduced. The result is a commercial niche, specifically relevant to the users of a bathhouse. This public bathhouse encourages opportunity and variety, enriching the bathing ritual and confirming the building as a public bathhouse.

The presence and involvement of a community with direct interests in the bathhouse could facilitate the transfer of ownership, intentionally, or if conventional municipal support might be withdrawn in the building lifespan. Criticism arises when the built form of the Mansell Road is considered. The built structure accommodates programme functionally, but hesitates to celebrate the act of cleansing through experience. The question is asked whether an understated, hidden building realizes the social potential of the act of cleansing.

Defining the public bathhouse

A South African bathhouse could be defined as a service facility within an environment where densities of potential users who share the communal need for ablution, is identified. This intervention could act as social and commercial catalyst within its context, thereby enriching the ritual of bathing through its location in the public realm.

A bathhouse in the urban context of South Africa should embody a democratic attitude of accessibility, thereby informing the architectural programme. In terms of built form the building must realise a balance between quality of design, durability and avoiding an inappropriate character.

Issues surrounding safety and security can be addressed by ensuring privacy without isolation; achieved through the provision of deep edges and implied passive surveillance. The ownership and funding structure together with the possible transfer thereof, should acknowledge the local conditions. Ultimately, the public bathhouse should integrate ritual with the environment through the architectural experience.

User, client, site

A projected 40 percent of households in Gauteng have safe running water available in dwellings. However, the majority of these dwellings are not located in rural or informal settlements. Within these communities, access to water, especially water for bathing, is still limited. A communal tap, or tap on site, is commonly the primary source of water (Statistics South Africa, 2007:39). This service situation defines the primary user of the proposed bathhouse as commuters travelling to and from rural areas and informal settlements to the city.

An estimated 81 200 people commute from informal and rural areas to Marabastad by rail, bus, taxi (Tshwane strategic public transport plan and network, 2006). Included in these estimates is the proposed bus rapid transit system (BRT operational plan, 2004). Marabastad, Northwest of the Pretoria CBD, with its scattered, underserviced and informal public transport nodes, is identified as the study area. Marabastad provides the opportunity for the project to facilitate a connection between commuters, vendors, the homeless, visitors, and residents on the level field of partaking in a ritual of basic human need. Through appropriate location and design of the public bathhouse, communities that engage with and use Marabastad, could find common ground and mutual support.

An informal survey conducted in the Belle Ombre rail station and surrounding area, as barometer for public transport interchanges in Marabastad, confirmed the potential user base. Interviews with vendors, shop owners taxi drivers and commuters were conducted.

Taxi drivers waiting between rush hours, or long distance drivers who stay in town for several days, gave a positive reaction to the project proposal during interviews. Shopkeepers and vendors also responded with optimism, while commuters agreed with the idea. In conclusion 73 percent of those interviewed responded positively and would appreciate a bathhouse in the vicinity of Belle Ombre station. Only 2 respondents disagreed with the proposal (Author, 2009:1-10).

The current and projected large number of people utilizing public transport would serve as the base of users. The possibility therefore exists to initiate a Public-private partnership. Various entities could be approached to act as joint clients for the implementation and maintenance of the project. A system of presentation of transport ticket stubs in exchange for a token to use the ablution facilities could aid in cross-subsiding costs. Sponsorship through advertisement beneficial for an institution wishing to promote its interest in public wellbeing can act as an ancillary means of funding the facility. Originating from the Roman example of emperors using the bathhouses to gain the favour of the citizens (Showerman, 1931: 357). The ultimate goal would be to transfer ownership and management of the bathhouse to a local community. It is envisioned that buildings around the bathhouse transform to service the newly established market in the form of barber shops, hairdressers, gyms, laundromats or light industry to supply soaps. Proposing thereby that enough businesses and individuals can become involved to ensure a feasible support structure, in the case of ownership transfer.



Figure 6. (opposite) Diagram illustrating the additions of convenience and necessity made to the Roman thermae at Leintwardine between Ad 140 and present

Figure 7. Collage of a metro rail ticket stub, enabling use of the bathhouse.