

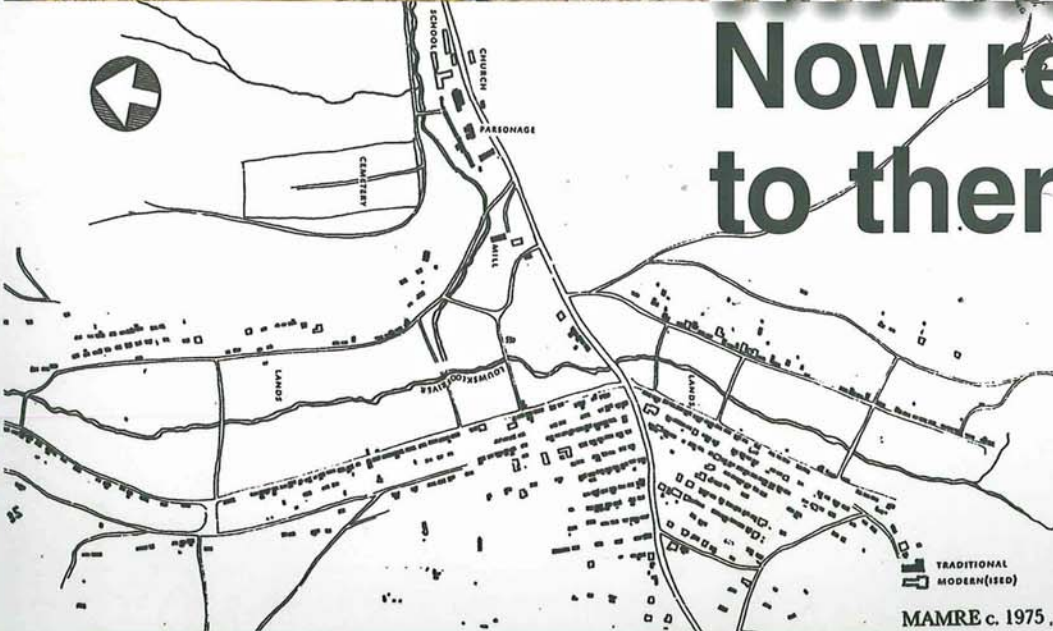
urban green FILE

'GREEN' –
an architect's account

EIA regulations:
SIDES DRAWN



MAMRE: Now returned to then



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TOWN PLANNING

Return to

The typical model of Moravian villages holds a fascinating blueprint for a sustainable settlement.

The Mamre Heritage Revitalisation Project was established to foster a sustainable community which can maintain its own heritage.

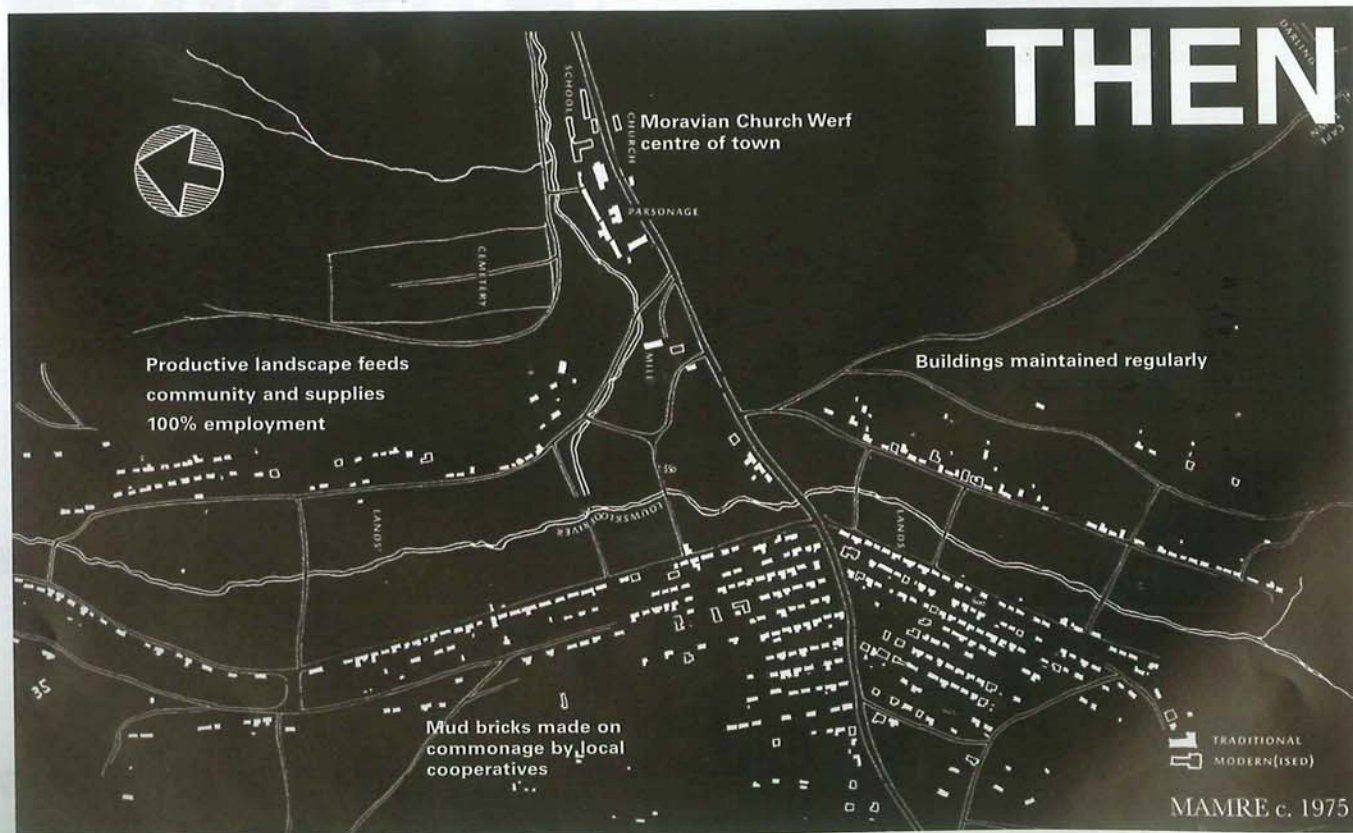
Mamre, located about 50 km north of Cape Town, was established as a Moravian mission station which served Khoikhoi soldiers of the Cape Corps and their families in the early 1800s. In 1854, the town was renamed from Groenekloof to Mamre. It experienced an influx shortly after the slave emancipation in 1839 and has had steady growth since the 1930s. Andy Horn of Eco Design Architects (EDA) says

that Mamre, which followed the typical model of Moravian villages, such as Genadendal and Wuppertal, holds a fascinating blueprint for a sustainable settlement. "Allotment gardens are found in the middle of town along a fertile riverbed and the buildings are located along contours around it," he notes.

However, the organic growth of the town around the allotment gardens was brought to a halt in the apartheid era after a period



Photographs by Revel Fox



Eco Design Architects

TURNAROUND — tradition

of forced removals. Then, during the 1970s, authorities expanded the town significantly to the south-west but along modern town-planning paradigms with a suburban character. In addition, Atlantis was developed 5 km south of Mamre to house people removed from District Six.

After 1994, the town was again extended by authorities, this time to the north-west, with the addition of an RDP settlement. Today, Mamre consists of three disparate

areas – each with a character of its own. In the late 20th century, the labour force of Mamre became absorbed into Atlantis and Cape Town; creating a void in local skills. Few of the historic buildings are still intact and the urban form has degraded extensively.

Sjanel Buchel, of the City of Cape Town Heritage Resources Section, points out to *Urban Green File* that only the Moravian Church Werf and Mamre Water Mill

have been declared provincial heritage sites. The Mamre Heritage Revitalisation Project was established in order to rectify this situation and to protect the historic buildings which remain in the town and on the Werf.

The project also aims to empower the local community by entrenching lost traditional building skills; ensuring a sustainable community which can be proud of and maintain its own heritage.



Photographs by Gerrit van Wyk

NOW

A THREATENED HERITAGE Mamre Now

IMPOSED "MODERN" WATER SUPPLY INFRASTRUCTURE
"Lej Water" canal system imposed by Apartheid Government

RDP HOUSES

Government subsidized, low cost "hop huisies" disrespects Heritage pattern language with Imposed Grid

TOWN DEVELOPMENT SINCE THE 1970'S

- Modernist town planning ideas imposed with a town centre/CBD established in new part of town.
- Road layouts depart from old pattern of streets following contours with adjacent allotment gardens
- Modern Tertiary education dominates over indigenous land based education.
- Heritage culture & character has diminished significantly
- High rates of unemployment

REKINDLING TRADITIONAL TECHNIQUES – Historic fabric retained

The typical focus of heritage practice is usually on the final expression of character and not the process of making. The Mamre Heritage Revitalisation Project placed people at the forefront; making the inhabitants the custodians of the town's heritage.



Photographs courtesy of Eco Design Architects

For the revitalisation project, an initiative to build a traditional structure in Mamre, as a vehicle to rekindle traditional construction skills, was formulated. This will increase heritage-sensitive repair and maintenance of buildings with some historic significance.

Occasionally, neophytes will enter an arena with an atypical approach which enriches and reaffirms the value of that field's established conventions. In these cases, it challenges the newcomer and veterans to have the maturity to learn from each other.

EDA's involvement in the Mamre Heritage Revitalisation Project did not constitute a typical approach to a heritage project. EDA placed focus on preserving and rekindling an appreciation of traditional building techniques and practice in order to ensure that the knowledge of how a community can create its own built form is retained within people rather than in books or museums. The focus fell more on how people create cultural resources than the character of the outcome.

In the absence of the usual heritage-resource tools to conserve the historic urban fabric, this is a resourceful approach. It shifts emphasis to Mamre's inhabitants acting as custodians of their heritage. Most heritage practitioners sympathise with this line of thought yet seldom pursue it. The typical focus of heritage practice is usually on the final expression of character and not the process of making. Nevertheless, there is merit in the conventional stance and drawbacks to the approach pursued at Mamre.

Strategic advantage embedded

Buchel states that, for the revitalisation project, the City of Cape Town formulated an initiative to build a traditional structure in Mamre as a vehicle to rekindle traditional construction skills. Once acquired, these skills would also create employment opportunities for the local community and develop an appreciation of the

historic built form. Importantly, this focus on rekindling traditional building skills possessed a strategic advantage. Many of the town's historic buildings are deteriorating rapidly due to a lack of appropriate skills in traditional building methods needed to maintain and repair structures.

Typically, authorities proclaim areas of historic significance as urban conservation areas to overview and guide the proposed changes and improvements to the built form. Mamre has no such status, and it is difficult for the city to compel owners to ensure that proposed alterations and additions acknowledge and harmonise with the town's historic fabric. To create awareness of traditional building techniques was a proactive approach in sensitising owners to a preferred attitude when engaging with the town's historic core while the process of declaring an urban conservation area in Mamre is still under way.

Skills revived, town conserved

The City of Cape Town has started with the process of declaring parts of Mamre as urban conservation areas. The town has completed an inventory of historically significant buildings which form the basis of identifying which areas should fall within the urban conservation area.

Once the city's integrated zoning scheme comes into place early in 2011, the declaration of an urban conservation area can follow. To complement this, the town will also need to prepare a policy document which indicates guidelines on how development and restoration should take place.

Margot van Heerden, of the Heritage Resources Section, Central City District A, comments that a City of Cape Town Heritage Advice Pamphlet No 15 has been

produced but may not be familiar with local residents. She adds that a big problem is people building without approvals and demolishing structures older than 60 years which are protected. The ideal mechanisms for managing Mamre's historic townscape, therefore, have not yet been clearly formulated and made known in the community.

Nevertheless, it would be a mistake to view the focus on traditional building techniques as an interim measure. Knowledge of appropriate building technology empowers owners and residents to interact with their environment and ensures that they identify with it; preventing the intellectual alienation or gentrification of urban-restoration projects which occur when left solely to professionals. Too many restoration projects turn into shells of the past rather than enduring envelopes of contemporary life. Van Heerden believes that the recently completed Mamre Visitor's Centre is an excellent example of the integration of contemporary building needs and materials with traditional building techniques.

The heritage dimension to the revitalisation project's approach is not the only empowering aspect. Trainees also learned new skills which they can use for future projects in Mamre or can export beyond the town. The improved urban fabric will encourage tourism in Mamre and will acknowledge the town's cultural value as well as the roles played by its residents.

EDA was appointed by the City of Cape Town to perform the task of training and revitalising Mamre's community in traditional building techniques. The nature of Mamre's historic fabric has its roots in vernacular architecture and EDA's knowledge of sustainable building practice resonates strongly with this.

COMMUNITY-CHOSEN, community-built

Public participation was a starting point to ensure relevance and a backdrop for the initiatives which were subsequently identified as pertinent – one has been implemented.



Local craft master, Herbert Arendse

A public-participation process was undertaken to establish the nature of the project and the needs of the community, and to embed traditional building techniques in the community.



Photographs courtesy of Eco Design Architects

A PUBLIC PARTICIPATION – Establishing ideas and securing support

To achieve the aim of embedding traditional building techniques in the community, a public-participation exercise was necessary. The nature of public participation changed with each phase of the project but remained integral throughout it.

As a first phase, the city stipulated the investigation of a number of aspects through public participation. The first was to establish the nature of the project, and the needs and skills base of the community. The involvement of the community was also necessary to establish ideas for the use of the building and a site for the project. Further, the process kept the community abreast of developments.

The investigation phase ran over a six-month period where EDA spent time interviewing individuals, meeting community leaders, attending local meetings, participating in local events, and generally advertising its presence and objectives. According to Horn, EDA gained the most knowledge of the town from the inhabitants. "We obtained a first-hand account of what happened in Mamre. For example, we would never have realised that there had been a whole gravity-fed system of dams, tanks and leiwater channels irrigating all the allotments which was purposely destroyed under the apartheid government on account of a typhoid outbreak."

The first six months established mutual awareness and a relationship which made it easier to proceed to the next stage with the community's trust in EDA. It also helped identify parties whose knowledge and resources EDA could use at later stages, and sensitised the community to the matter at hand.

B IDENTIFYING AND STRUCTURING IDEAS – Master plan produced

The next stage of the project involved identifying relevant heritage issues which EDA could address through a building project. EDA organised two full-day charrettes, as well as a follow-up meeting. Representation at these charrettes was good, Andy Horn of EDA notes. EDA presented the City of Cape Town's ideas and intentions, and members of the community could comment. In addition, the community could also voice its own ideas for potential building projects. To ensure that the event ran democratically, participants had to write their ideas on separate cards provided by the organisers. This ensured that all voices were represented and that strong public speakers didn't dominate the charrettes.

The organisers collected the cards, pinned them up and grouped the ideas into families. This process clearly revealed ideas which concerned the community the most and would receive its support. The ideas varied so much that, to structure the range and produce priorities, EDA created a master plan which identified potential heritage and infrastructure initiatives for the town.



Images courtesy of Eco Design Architects

1 INFRASTRUCTURE INITIATIVES

Enhancement of traditional structuring elements

The ideas with the strongest support from the community did not have an architectural nature but involved infrastructure; represented in infrastructure initiatives, identified by the community, which centre around the nature of the structuring elements of the urban fabric:

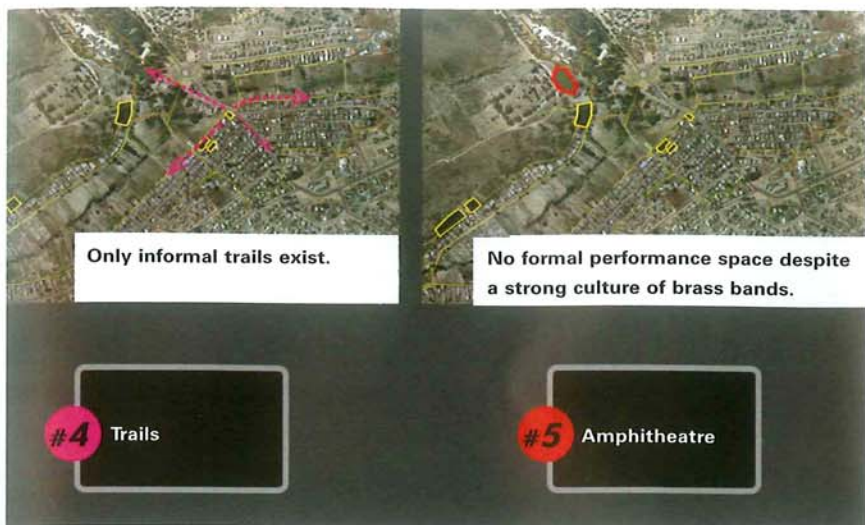
- restore leiwater and dams;
- reinstate allotment gardens;
- upgrading of roads;
- establishing and formalising

walking trails; and

- amphitheatre.

The re-establishment of the leiwater system will allow reinstatement of the allotment gardens to their full possible potential which, in turn, will support the livelihood of the community. The community only uses 25% of these gardens. The road upgrades involve changing the character of roads to acknowledge the town's rural heritage. The tarred roads with

standard concrete curbs disturb the community's memory of street life. The trails established will lead to and link various significant sites, and the amphitheatre will give local brass bands adequate space for performances and festivals. It is revealing that the community identified its heritage in elements which were not artefacts, or built structures, but customs and their support base.



Only informal trails exist.

No formal performance space despite a strong culture of brass bands.



The re-establishment of the leiwater system will allow reinstatement of the allotment gardens to their full potential and the character of the roads will change to acknowledge the town's rural heritage.



Environmental centre



Photographs by Gerrit van Wyk

2 HERITAGE INITIATIVES

Knowledge preservation and tourism creation

The master plan also identified a number of heritage initiatives:

- information centre;
- gardening and education centre;
- multi-skills training and craft centre;
- guest houses; and
- environmental centre and endemic nursery.

These ideas were not only supported by the community but also spoke to the city's intention to build a traditional structure to rekindle the associated building skills. The focus falls on creating centres to preserve the knowledge base of the town's heritage.

The initiative for tourist accommodation identified a number of house ruins in Berg Street which the community could restore and run as guest houses; creating tourism in the town by allowing visitors to spend time there and learn about its history, contemporary life and environment.

The gardening and education centre, as well as skills and craft training centre could also be accommodated in existing ruins while two new buildings were proposed to accommodate the information centre and a facility for Custodians of Rare & Endangered Wildflowers with an associated nursery.

Existing ruins were identified for a number of centres which would preserve the knowledge basis of the town's heritage, as well as tourist accommodation which would foster tourism. Two new buildings were proposed.

INFORMATION CENTRE

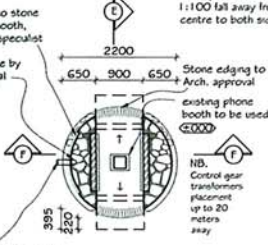
STONE CONE / PHONE BOOTH

100 mm recess into stone cone plastered smooth, map of Mamre by specialist

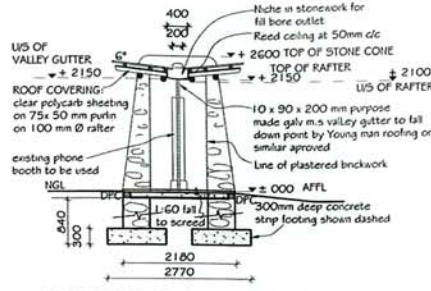
cast iron down pipe by 'supercast' or equal

100mm cast iron downpipe to wide elbow & outlet @300mm above NGL

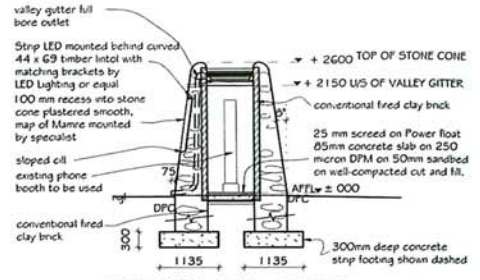
NOTE: Phone booth floor to slope a minimum of 1:100 fall away from centre to both sides



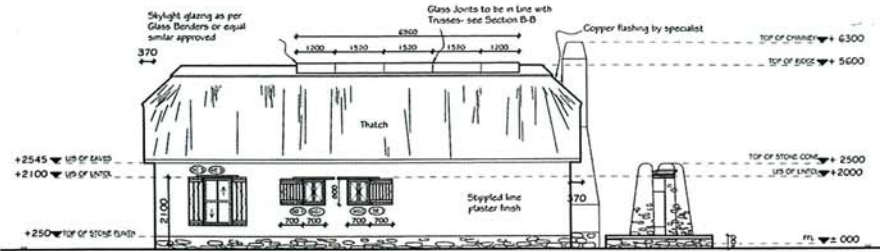
PLAN SCALE 1:20



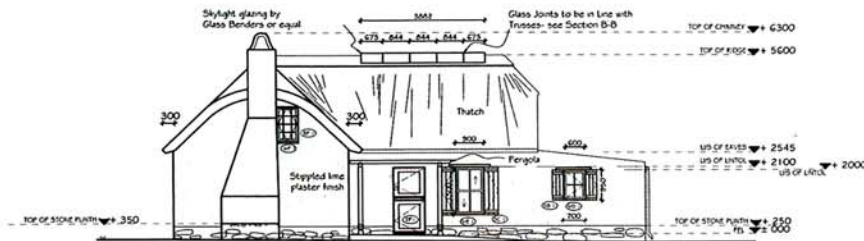
SECTION E-E SCALE 1:50



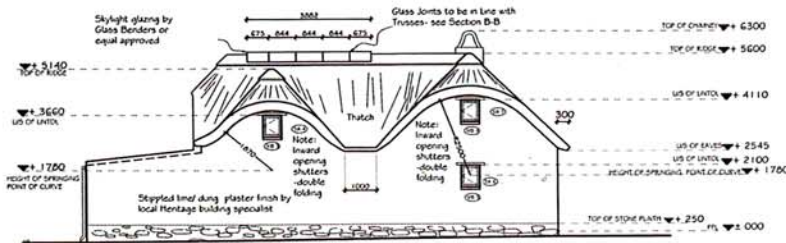
SECTION F-F SCALE 1:50



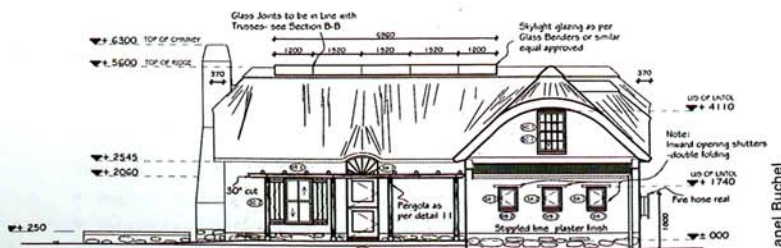
SOUTH EAST ELEVATION SCALE 1:100



NORTH EAST ELEVATION SCALE 1:100



SOUTH WEST ELEVATION SCALE 1:100



NORTH WEST ELEVATION SCALE 1:100

Sjanel Buchel

Local expertise and material – pros and cons

From this range of potential projects, it was decided that the construction of a new information centre best satisfied the needs of the community and the City of Cape Town. This initiative was identified as an ideal project to boost tourism interest in the area and was scheduled for completion in December 2010. It includes an exhibition of Mamre's history and the Moravian Church Werf, and offers tourists information on scenic walks, the donkey trail, picnic spots and the annual flower festival.

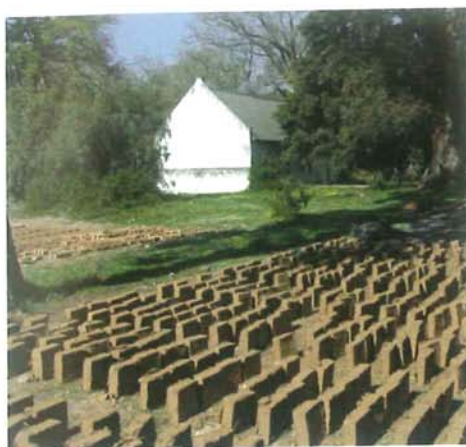
The community identified the site it felt was most suited to construction. "The site was not identified by the City of Cape Town and we would never have considered it without the charrettes," Horn states. There are no plans to implement other identified initiatives but EDA feels that the project has succeeded in its primary goal.

Horn states that follow-up looks good as a local initiative has taken up the ideas of the master planning into its project ideas and the newly trained local team has been booked for further natural building projects.

Natural materials advantageous

Most of the building material came from the local area; ensuring that the community has access to resources to complete any future building or restoration work. These materials are cheap, have low embodied energy and are accessible. Using traditional and natural materials also meant that repair or restoration work to the older buildings is married sensitively to the original material and doesn't exacerbate damage as some modern materials do.

Mud bricks, roof timber and dung-lime plastering were used, and stone for the foundations. The trees felled for the roof



Photographs courtesy of Eco Design Architects

The use of natural local materials was advantageous but also presented certain challenges while the use of local labour also presented difficulties. However, these were overcome and the project's primary goal was achieved through the construction of an information centre.



structure were local poplars and gum trees. Participants in the project cut the trees down using the "age-old" moon-phase harvesting system which reduces the requirement for rot treatment and insect repellent.

Logistics and tendering issues overcome

During the construction of the information centre, craft master Herbert Arendse trained builders in the local vernacular. The training of the builders slowed down the building process but ensured that the project met the intention of the public-participation process. "One has to remember that this kind of project is not typical and one needs to motivate for a longer implementation stage," Horn points out.

Another challenge was that, despite having the skills and materials to thatch the building, the City of Cape Town's tender requirements to qualify for the work on the project meant that no locals qualified to tender for the roofing contract.

"Under the general tender conditions of government, a contractor which was not a local Mamre thatch cutter, won the local thatch-cutting tender as it had

tendered at the lowest price," Horn notes. "The awarded contractor took shortcuts like tying thinner bundles and failed to properly cure the thatch before bundling it. As a result 80% of what was harvested subsequently rotted." The community stepped in and local craft masters solved the problem. Curiously, the city's institutional requirements still frustrate the desired involvement of local skills.

A delay between the production of the mud bricks and the beginning of construction presented some issues with regard to storage. EDA initially stored the bricks in a building provided by the Moravian Church but had to remove them when the church wanted to resume use of the space. In addition, in the moving process, some of the bricks were lost or damaged. Fortunately, the community had the skills and resources to replace them by making more bricks for the new information centre.

The use of local materials still presents challenges. With conventional building, suppliers address issues such as storage and adequate supply. One, therefore, has to quantify the required local materials carefully and arrange transport and storage on site. "We collected and prepared

the materials separate from the building contract," Horn notes. "This ensured that potential contractors were not disqualified from tendering for the project because they didn't have the relevant knowledge to produce traditional materials."

Resource conservation included

The design of the information centre incorporates a number of energy- and water-conservation features. The L-shaped plan provides protection from the western sun and a pergola will be planted with deciduous grape vines on the north-facing walls to provide shade in the summer and allow sun through in winter. The walls of the building are 340 mm-thick mud brick with natural lime-dung plasters. Together with the thatch roof, these provide excellent thermal performance with good thermal mass and humidity modification.

The roof ridge has a thin skylight to illuminate the interior without overheating it. All electrical illumination comprises LEDs and is controlled by sensors. Interruptible flushing toilets and a waterless urinal were installed, and it is hoped that enough money will remain in the landscape budget to include a rainwater tank.



Gerrit van Wyk

Lessons to be learned

Too few conservation projects look at culture and techniques, especially when it comes to the built environment. This focus requires public participation and EDA's methodology is a model in this regard. It also demonstrates how to reveal historic resources in terms of re-establishing knowledge and skills which foster a common appreciation of heritage.

Conversely, engagement with typical heritage practice reveals the need to look at the range of issues and contesting ideas which occupy conservation projects. Conservation looks at the broad range of cultural expression. To understand how to build in the local vernacular is just as important as understanding how the outcome is manifested in terms of typology or contemporary extension.

In this regard, many conservation practitioners are guilty of squaring-off turf to favour their own strengths; dismissing differing attitudes. They lack the maturity to identify views which will supplement their own and the intellectual courage to assimilate or incorporate unfamiliar ideas. ■

EDA's public-participation process provides a model for conservation projects in terms of a town's culture and demonstrates how to re-establish knowledge and skills while fostering a common appreciation of heritage.

Holistic approach lacking?

There are limitations to the Mamre master plan of heritage and infrastructure initiatives. As it stands, one should consider it as a record of ideas the community would support rather than a conventional heritage or urban-design master plan. To be fair, the City of Cape Town did not intend that EDA should prepare the plans and limited the project to a few goals. However, the revitalisation project reveals a need for a holistic approach, and EDA's work has only dealt with one aspect of the whole.

A future master plan or development policy ought to look beyond the historic core of the town and attempt to integrate the character of its disparate parts. It could look at the potential of reinstating the leiwaterrivier system to original areas as well as beyond the historic core. Extending the allotment gardens along the valley to accommodate future settlement around it also needs investigation. The design of a streetscape appropriate to Mamre's rural character is another device which could extend to the town in its entirety.

EDA's master plan doesn't show a holistic approach but focuses on preservation and reinstatement of a few areas in an array of heritage considerations. It lacks participation by a variety of professionals which will reveal priority areas where public participation cannot do this. In addition, it did not spend time creating awareness of building typologies and characteristics of location, local horticulture or streetscape.

Conservation has a retrospective and prospective view and aims to integrate or harmonise the past with the present. One, therefore, can't reduce heritage to a few issues and future conservation projects need to be integrated with broader town planning and development projects to prove their relevance and value.

Andy Horn of EDA states that the city was specific in its brief that it must stick to the area of old town Mamre and ignore the Moravian Church Werf ground, which has its own master action plan, and the newer parts of town. "We were told to focus specifically on ideas that enforce heritage. As such the heritage-revitalisation master plan is more like a concept mapping of the ideas which came out of the public participation for the old town area of Mamre and nothing more. It was never intended to portraying a holistic master plan."

Please send comments to vellmore@brookepatrick.co.za.