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Cover illustration

Mike Visser at the Worcester Museum, Kleinplasie, in 2006 (Pat Kramer).
Photographs of Mike Visser in 2006 and 2007, by Pat Kramer.
Mike Visser: a sociable loner

Joanna Marx

Mike was the eldest of three brothers, sons of a bank manager, who grew up in several country towns. He valued and kept up his family ties and was especially knowledgeable about the Louw clan. His particular architectural skill was hospitals, and he saw Tygerberg and Groote Schuur through construction, as well as a hospital in the Kenyan highlands.

Vernacking with Mike Visser was both pleasurable and instructive. He knew places and people all over the Cape. He and I set up the first Vernac weekend outing by bus to the Sandveld in 1987 when, after many years, the bus companies decided to promote weekend use of their vehicles rather than leave them garaged. Thus planning a tour had to include access for a large bus of indeterminate age.

Whenever we went out of town through the Koeberg interchange with the N1 Mike would launch into a tirade about its faulty design. Usually I drove my capacious old Merc: first Daisy Wheels (yellow), then Saartjie Albert Witblits (white), with a cool-bag and a tatty Persian carpet in the boot. Mike would be armed with his ubiquitous camera, ‘nose-bag’ and thermos flask of tea, and Swiss pocket knife with corkscrew. Often we teamed up with other Vernacs and if necessary stayed overnight in a country town. Of course the recce would have been planned to investigate interesting places and inspect those recorded in the standard sources: Fransen and Cook, de Bosdari, Malherbe, et al.

The procedure was to arrive at a farmhouse (sometimes by appointment), knock on the door, explain ourselves and the reason for the visit – and usually be invited in for coffee and discussion. (How times have changed!) A great advantage was that Mike was completely bilingual (like me), and usually he could dredge up a family connection.

Mike would observe the interesting features of the building and its setting, as well as the contents. Having sussed out the suitability of the place for a visit we would press on to the next place on our route, with appropriate stops for lunch. By the end of the recce we would have figured out the route, order of places to be visited and picnic stops for the outing. The strict Vernac code of conduct and their long record of visiting homes full of valuable furniture and objects – or neglected places – gave us the confidence to assure potential hosts that there would be no misbehaviour.

Mike and I recced all over the old Cape Province. The high point was a five-day recce in the Great Karoo with James Walton and Philippina Oberholster for the 25th anniversary of VASSA. As usual, the recce was preceded by much discussion, phoning and research in books and maps which went with us. We saw amazing scenery in the Karoo: Matjiesfontein with snow all around, the road along the escarpment between Sutherland and Fraserburg, back roads, isolated settlements and an incredible variety of corbelled structures and truly vernacular architecture.

Other recces were undertaken in preparation for excursions to Riversdale and Heidelberg, Montagu, Tulbagh, Clanwilliam, Ceres, Citrusdale, Piquetberg, Swellendam. We looked at the towns together with the settlements and the farms around them, as well as old routes and remote farms. There was much bundu-bashing, adventure and discovery.

To all of this, Mike brought an encyclopaedic knowledge of construction methods, plan form, historical architecture, property ownership and genealogy. I shall miss his ability to spot the detail that provided the clue to explain dating or construction, his generosity in sharing his observations and conclusions, his contempt for nonsense, and his sometimes sly remarks. He made his life work for him.
At home Mike made his life both comfortable and convenient: a slow cooker yielded delicious stews; his ‘nose-bag’ of sandwiches and raw vegetables was compact and nutritious. He was frugal and self-sufficient, and invested wisely in a succession of pleasant flats, paintings and furniture. He regularly attended openings of art exhibitions and quality auction sales by Sotheby’s – and rugby matches at Newlands (until it became too much of a crowd). He collected furniture, paintings and books: he had the entire Van Riebeek Society series and an unusual collection of Dutch Reformed Church centenary publications. His had a vast collection of slides, all identified and catalogued. I enjoyed visiting Mike for a dop or two of brandy, which would sometimes be followed by a nice plate of whatever was cooking washed down with wine. And he would come to dinner at my house. On his eightieth birthday Mike hosted a delightful party in his flat, which somehow accommodated relays of well-wishers who were plied with drinks and snacks.

Mike enjoyed cruising holidays, which took him to interesting places such as Zanzibar and St Helena Island. He had a time-share at Kagga Kamma which he used regularly. For several years his knees and later his hips gave him trouble, so that staying at home and watching his favourite TV programmes became the routine.
Mike Visser: how I remember him

David van den Heever

I first met Mike when Jean and I joined the Vernacs some 35 years ago, in the seventies. I knew Mike’s brother Dirk very well, as we had various professional interests and connections in common at that time.

It did not take very long before we realised that both Mike and Dirk possessed an exceptional knowledge of vernacular architecture - Dirk with his hands on experience in restoration and Mike with his academic approach to the subject. What I also realised was that the brothers had been raised at their mother’s knee appreciating all the wonders of Cape culture, including both architecture and furniture. Mike’s mother was a Louw with family connections to the Babylonstoring Estate in the Groot Drakenstein. Mike therefore had a head start on all of us budding conservationists and he knew it. When I was still playing with my Dinky Toys at an equivalent age, Mike knew all about the design of Cape gables, mouldings and Tulbagh chairs! Inevitably because of this, he spent his whole life devoted to the arts.

The Vernacs has always had its fair share of eccentrics and Mike was very much one of them in both behaviour and appearance. His most memorable characteristic was to publicly air his knowledge by interrupting speakers during a lecture or on an outing. I had personal experience of this characteristic, both when giving a talk or leading an outing for the Vernacs. It was however usually done with good intentions and we all learnt something in the process, even if the lecturer was flustered at times. To illustrate the point, one new member of the Vernacs asked who this “rude man” was. The rude man was of course Mike Visser in full stride!

As far as appearances go, Mike lived up to his eccentricity by always wearing his little sun hat with his Vernac badge attached, perched on the top of his head during outings. In the mid nineties, he went one step further and grew his hair long and sported a pony tail. This was for Mike nothing extraordinary and in fact it endeared him further to us all.

About outings, he loved to go off into the country, preferably with Joanna Marx in her Mercedes called ‘Daisy’, and do recces for outings and places to stay. Mike preferred this sort of activity rather than being a Vernac office bearer – he always resisted being chairman, a post he could and should have held.

Mike was also a reluctant speaker and very seldom gave presentations to the Vernacs – the only one I remember was a talk on some place in the Indian Ocean he had visited on a cruise. He loved cruising and did a lot in his older age. What a pity he did not share his knowledge by lecturing or publishing more readily.

What I will always remember are Mike’s arrivals at Vernac meetings held in the Athenaeum. He would usually be a little late and squeeze into the front row as his hearing had deteriorated. To hear more clearly he would characteristically cup his hands over his ears so as not to miss anything. It was so sad to see him becoming more and more frail as the years went by.

Finally, we will miss the presence of our friend Mike at outings and talks – he has gone but we will always remember him. Perhaps he and Dirk are right now arguing as to whether the pearly gates have baroque or rococo gables!
What is a vernacular building?

David Glennie

Vernacular, a word usually relating to language, means an informal dialect in popular use generally in a particular region. When related to the old buildings of the Cape the words ‘vernacular architecture’ denote buildings designed informally, i.e. often by people without formal training and built by craftsmen whose skill did not always include much, if any, awareness of the significance of the architectural features that they constructed.

The alternative to vernacular speech is polite or educated speech and the alternative to a vernacular structure is, I believe, an architectural structure; designed with an educated consideration of the shape or form of the building, the proportions of its constituent elements and a well-informed knowledge and understanding of the origins of the design elements comprising an architectural style.

The difference between vernacular design and polite or correct architectural design does not differentiate ugly buildings from beautiful buildings as there are few if any absolutes in the matter of architectural aesthetics. In his foreword to James Walton’s Old Cape Farmsteads, Professor Barrie Biermann describes the case well when he says: “Official buildings designed by architects in the service of the Dutch East India Company co-existed and interacted with vernacular buildings drawing on traditions from diverse parts of Europe” (Walton 1989: v). The results of this interaction are the beautiful Cape Dutch buildings that we see today.

What is under discussion here is a comparison of the different processes for producing either an ‘architectural’ structure or a ‘vernacular’ structure. In the period under consideration, to describe a person as an architect was not, as it is today, to speak of a person on the register of the South African Council for the Architectural Profession. The “architects” that Barrie Biermann speaks of were drawn from several backgrounds, namely military engineers, architects, surveyors and master builders and so forth, people with experience and a skilled interest in the design of buildings and capable of producing design drawings. The “vernacular buildings” Bierman refers to were very unlikely to have started life on a drawing board, much less to have been built to comply with detailed contract documentation.

It must surely be axiomatic that sophisticatedly designed and intricately detailed buildings such as Rust en Vreugd, Koopmans-de Wet House, Nektar and other similar buildings are architectural structures. Equally it would be obtuse to argue that buildings like the cottages to be found in fishing and mission villages and the very small two- and three-roomed rectangular farm houses are not vernacular structures.

However, the plot thickens when we come to times of greater prosperity when people looked to enlarge their businesses or to improve their living conditions. In this process previously vernacular structures could be transformed into architectural structures, as is for example most likely the case with Koopmans-de Wet House which seems to consist in part of an old single-storeyed house that was later enlarged by the addition of a new double-storeyed front and a first floor over the old house. Farmers who needed additional workshops, wine cellars, stables and the like were fully aware of the potential to group buildings and present the resulting complexes in such a way as to make a statement about their own social status.

Improvements to a farm werf would almost certainly involve work on the homestead, and in this way, small straightforward rectangular houses, possibly with wolweneus-end and dormer gables, could be enlarged to become T-plan or H-plan in form, and be given decorated gables while at the same time windows could be replaced and so forth. When this work was done by a skilled builder under the influence or supervision of an architect the original ‘vernacular’ house
could undergo a metamorphosis, being transformed into an ‘architectural’ structure and at the same time spreading the latest building style and innovations.

A description of the way new design trends can be spread and how innovative building details come into general use is given by the Chief Curator of the Historic Royal Palaces and historian, Lucy Worsley, in *Cavalier* (2008), her story about the Cavendish family and their buildings in the period from 1610 to 1670. Talking about the building of Bolsover Castle in Derbyshire, Worsley describes a site meeting of John Smythson, designer of Bolsover (son of Robert Smythson designer of Longleat), and two masons named Goodman and Baram as follows: “Goodwin and Baram now check that they are using the correct templates to guide them in shaping the stone. Smythson draws the sections he requires for decorative mouldings (for a window jamb for example) onto paper at a one to one scale. He gives these paper templates to the joiners who then make cutouts for the masons in oak or beech. Sometimes these paper or wooden patterns are re-used at another house. This is how architectural details creep from house to house across the countryside: masons carry old templates with them to new projects and a regional architecture develops”.

In *The Pelican History of Art* series edited by Nicolas Pevsner, there is a volume titled *Architecture in Britain 1530 to 1830* by John Summerson. Discussing Bolsover Castle, he says: “When Bolsover was approaching completion we know that Smythson traveled south (1618-19) and saw Theobalds and many of the newer buildings of London, including Arundel House (Fig.1) and the beginnings of Inigo Jones’s Banqueting House in Whitehall. The drawings he made on this occasion still exist. They betray the reaction of a provincial mind, unable to grasp the essentials of the newer classicism but eager for its crisp and mechanical character. He drew some of the intricate Flemish wall-panelling at Theobalds and reproduced it at Bolsover. He drew the new Italian gateway in the garden of Arundel House (where Inigo Jones was probably then at work) and adapted these, too, as features for his castle (Fig.2). The adaptations are unscholarly, but dramatically placed and not at all lacking in artistic feeling” (Summerson 1953: 51).

The process that took place at Bolsover Castle would be very similar, I believe, to the process that would take place in improving and enlarging a farm house in South Africa (Bolsover Castle was built on the foundations of a previous and very old structure). However the *dramatis personae* would have to be locals and the recasting in South Africa would be something like this: the masons at Bolsover / skilled slaves and their descendants, John Smythson / a military engineer or a building contractor, Inigo Jones in London / Louis Michel Thibault in Cape Town. In this way vernacular structures in the Cape Dutch style developed from simple rectangular plan structures, often built by the farmer himself, to larger structures built by skilled builders and having sophisticated joinery and plaster decorations.

**References**


Figure 1. Arundel House, London. Gateway designed by Inigo Jones, c.1816 (Summerson 1953).

Figure 2. Drawing of the same gateway by John Smythson (Summerson 1953).
Herbert Baker: the Dutch connection

André van Graan

Herbert Baker, when he arrived at the Cape in 1892, was the first to recognise the unique character of Cape vernacular architecture (Fig. 1). He is often accused of “misusing the Cape Dutch style in his architecture” (Keath 1992), but it is important to remember that there was no ‘Cape Dutch Style’ until he came here. It became a style when he self-consciously revived it. Professor Barrie Biermann said:

In the past there has been a tendency to consider the buildings at the Cape in isolation as a style in its own right, the so-called Cape Dutch style, on the assumption that every country is entitled to its own architectural tradition and that every such tradition is the product of indigenous evolution. This view was largely a child of its time, when the revival of historical styles was still a viable means of architectural expression, and when research into the sources of the designs had not progressed beyond informed conjecture ... It would be more accurate to see the old Cape architecture as a ‘regional variant of a world-wide European colonial vernacular’ and, as such, utterly dependent upon European prototypes (Biermann 1968:29).

One needs to understand the basis for Herbert Baker’s incorporation of elements of Cape architecture to create a style of architecture. Michael Keath relates this to contemporary design practices in London and elsewhere: the adopting of the local vernacular and freely translating some of its elements from other sources and the architect’s own invention. At that time architectural style was particularly eclectic and domestic architecture reflected the wide range of stylistic derivations that were to be found, and they ranged from Greek, Roman and Byzantine sources through to Gothic and all the variations of Classicism from the Renaissance to neoclassicism and the Baroque.

What was significant in Baker’s architectural training was the influence of the Art Workers’ Guild and the Arts and Crafts movement. The movement found inspiration in the teachings of Pugin, Ruskin and later, William Morris. The architecture that resulted was driven by a desire to exploit the virtues of good craftsmanship and local materials, and found its inspiration in the rural vernacular buildings of England. The English architect, Philip Webb, a friend of William Morris, advocated “a close study of the materials and characteristics of the neighbourhood”. The Arts and Crafts Movement helped to bring about the end of the use of classical and Gothic forms for emotional and literary reasons in domestic buildings. The movement led to the so called ‘Freestyle’, which, although eclectic, sought to create picturesque, rather painterly domestic buildings, whose style was derived from the English vernacular architecture with a particular focus on the late Stuart period, hence the term ‘Queen Anne Revival’.

Doreen Greig (1970) relates how Baker was interested in any work done in the spirit of the Crafts Revival. After all, he had been brought up in rural surroundings in Kent where isolation had preserved the traditions of good craftsmanship, and where he had frequently travelled about sketching the traditional buildings that were to become an integral part of his architectural vocabulary. It is interesting to note that traditional Kentish architecture also has a strong Dutch influence in its architectural forms, with a number of red brick gabled yeomen houses that contrasted with the timber framed cottages. Kent is the closest point in Britain to Europe and it had thus been influenced by Dutch building forms, particularly from the reign of William and Mary in the late seventeenth century. William of Orange brought a strong Dutch influence to England.
While Baker was working with Sir Ernest George and Harold Peto in London he started travelling extensively to Europe and, although he went to Italy, most of his travels were nearer home, in Holland, Belgium and France. His sketchbooks show examples of gabled houses in Haarlem, an elaborately ornamented elongated gable, and a carved fanlight in Antwerp (Fig. 2). These sketchbooks were to be a source of inspiration to him in his later buildings.

Figure 1. Herbert Baker (Greig 1970). Figure 2. Fanlight in Antwerp (Greig 1970).

When Baker came to the Cape the gabled houses that he found here must have struck a familiar chord and he would have drawn comparisons with the Dutch and Flemish buildings that he had sketched. His first response to the Cape was to marvel at the setting of Cape Town at the foot of Table Mountain, which overawed him. But he was delighted with the vernacular architecture that he found in the countryside around Cape Town and wrote:

In my visits to the old farms on the Peninsula and in the rich valleys among the neighbouring hills I was thrilled to discover the dignity and beauty of the old homesteads that had been built by the Dutch and Huguenot settlers: dignified by the ordered layout of house, outbuildings, avenues, orchards, and vineyards; beautiful in the simplicity of the architecture, white walls, solid teak or green-painted shuttered windows and doors, gracefully curved gables with softly modelled enrichments, and quiet ‘moleskin’ thatch. The chief charm of thatch, as of all roofing materials, consists in its unreflecting surfaces ... I carefully studied and made sketches of the architecture of the old houses. When I talked about them to my friends at the Cape, I wondered how little their beauty seemed to be known or appreciated” (Baker 1944:23).

This was to appeal to Cecil John Rhodes who had recently purchased the old converted Dutch East India Company barn at Rondebosch and had renamed it with its old Dutch name, Groote Schuur. Baker alludes to Rhodes’ intuitive liking of Cape architecture:

Rhodes, too, had seen the old homesteads and he knew by a natural instinct that they were good, and formed a living part in the harmony of the Cape landscape. Their beauty was being rapidly destroyed by the discordant methods of building that were fast spreading over the country (Baker 1944:23).

This led to Rhodes asking Baker to work on the restoration of Groote Schuur. Baker said:

Rhodes had heard that I took an interest in the old Dutch houses ... and asked ... if I would rebuild his house Groote Schuur ... Sketches of its old appearance had been preserved (Baker 1944:30).
The sketches that Baker alluded to were those that were made in 1838 after Abraham de Schmidt, then the owner, had altered it in the 1830s. He subsequently changed it again in 1842. These sketches showed the house with a strangely uncharacteristic colonial Dutch appearance. Rhodes asked Baker to restore the house to its original architectural character and he referred to these sketches with “the original high-pitched roof and the windows of the gable”. Baker, while recognising that the evidence was scant, believed that the representation was accurate and original. On this basis it “made it possible to rebuild the front with some degree of faithfulness to its original form and type” (Fig. 3).

Biermann records the significance of the architecture of Groote Schuur as:

The re-instatement there, in the official architecture of the nation, of the colonial style of the Dutch East India Company made an impact on design and the public taste which was to last for half-a-century. Groote Schuur not only typifies the latest nineteenth century eclectic revival; it constitutes what is certainly one of the boldest and most successful essays in reconciling the Gothic and Classical traditions of Western architecture (Biermann 1970:13).

As Michael Keath points out, “Baker cannot be blamed for accepting the only documentary evidence available at the time. Nevertheless, one does wonder why Baker failed to comment, even forty years later in his autobiography, on the atypical Cape character of the de Schmidt drawing”. Barrie Biermann (1970) commented:

It is ironical that this particularly short-lived and eccentric phase in the history of one building should have been singled out as typical of two centuries of the colony’s architectural development; for the progeny of this ephemeral structure - the legacy Baker left to the Public Works Dept of the Union of South Africa - ultimately multiplied and migrated further over the sub-continent than its contemporaries, the wagons of the Great Trek”.

He goes on to say:

Chance played a major part in Baker’s choice of elements for the design of Groote Schuur and, consequently for the official architecture of ... South Africa. Not only did he base his plans on the old building, as he found it, which was thoroughly atypical of the Cape-Dutch period; he seized upon its most prominent feature, the semi-circular window over the front door, as the theme of his east elevation. He thereby introduced a Palladian element foreign to the Cape-Dutch style, but one which allowed him greater freedom in fenestration and effects of palatial grandeur, than the homely features of the typical farmhouses. His designs for larger public buildings, where these elements were incorporated, meet with more success than does his domestic architecture (Biermann 1970:19).
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Figure 4. Brenthurst, Johannesburg, designed for a ‘grand landscape’ by Baker & Masey (Greig 1970).

Speaking on ‘The Architectural Needs of South Africa’, Baker pleaded for the revival of subordination of detail to a central idea (Fig. 4), which inspires what has sometimes been called ‘the grand manner of architecture’:

Nature’s handiwork is on a larger scale ... in South Africa, which the Arch-Architect has designed so essentially in the ‘grand manner’. Here the landscape is so bare in detail, and so vast and grand in its general features that the design and disposition of buildings must be conceived on a monumental scale to be in harmony with the work of nature.

Our early settlers, bringing their traditions from Holland and France, have handed down to us very noble examples of how to build South African homesteads ... these houses are excellent examples of the ‘grand manner’ simplified to meet the needs and conditions of colonial life. The charm of these old Cape homesteads lies more in these larger qualities than in their picturesque detail (Baker cited in Le Roux 1970:22).

Biermann tartly comments on Baker’s assertion that “Principles of Spartan simplicity during the best days ruled the architecture of the great people who conquered the world through the arts”, saying, “however Baker was not alone among architects who preached simplicity and practised effulgence. He advocated shady eaves, and replaced them with attenuated gables; for the simple pediments he praised, he substituted scrolls and undulations” (Biermann 1970:23). Yet even Rhodes had understood the need for simplicity as he expressly asked for “the big and simple, barbaric if you like”; and said, “I like teak and whitewash” (Baker: 1944:31).

What is interesting is that Baker did not appear to respond at all to the old city architecture of Cape Town. No mention is made of the flat-roofed townhouses that were still so plentiful in the late nineteenth century. He records that, “I found soon after my arrival someone who shared my feelings for the old homesteads in Madame Koopmans de Wet, a Dutch lady, who looked as if she had walked out of a picture by Franz Hals”, and goes on to say that, “she lived in an old house in Cape Town full of old Dutch furniture and household things brought out by the early settlers; it might have been in the Heerengracht in Amsterdam” (Baker1944: 44). But no comment is made on the classical architecture of the house.

In Baker’s introduction, ‘The origin of Cape Architecture’, to Alys Fane Trotter’s sketches of Cape houses (published as Old Colonial Houses of the Cape of Good Hope in 1900),
he wrote: “A student of Architecture in South Africa is at first surprised to find so little resemblance between the old homesteads of the Dutch colonists and the houses of their ancestors in the mother country”. He suggests that the settlers, in the adaptation of their architecture to different conditions and materials here in South Africa, produced a new style of architecture. There is no comparison of the houses in the plan form.

He then looks for similarities in the gable forms (Fig. 5). He compares the classical gable with its projecting central bay to the end gabled buildings of Holland, where the gable gave access to an attic store and the projecting bay related to internal brick piers to the Cape version, which, he said, retained the form including the projecting bay, “but the now meaningless vertical lines still remain” (Trotter 1901). Groot Constantia is given as an example of this form. He then tried to trace the origin of the holbol gable, and asserted that nothing like it was to be seen in either Holland or Belgium, but found earlier sketches of Amsterdam gables that resembled them. He goes on to sketch simpler holbol gables, which have square projections only, and no mouldings, and which he finds graceful. They are, he says, seldom found in Holland or Belgium, but are common in the south-east coast of England in the brick cottages and farmhouses attributed to the Flemish refugees. He points out that examples from the east coast of Kent would show little to distinguish them from the work of the Dutchmen who emigrated to the Cape, were it not for the slight difference of detail necessitated by the unplastered brick construction and the fenestration for the inhabited attics.

Figure 5. Clockwise: Gables in Belgium and Stellenbosch (Trotter 1900), Haarlem and Antwerp (Greig 1970). Bottom left: Groot Constantia.
He also says that the tall wooden small-paned sash windows and doors and carved fanlights that are so characteristic of Cape houses are less frequently found in the Netherlands. He traces the origins of the doors to Belgium. The boldness and simplicity of form and the beauty of curve, which characterise the Cape Town examples, are in the old country entirely obliterated by coarse outlines and rococo details.

I believe that Baker, in drawing comparisons between the architectural forms in the Cape and those in Holland and Belgium, is trying to reconcile the differences, and this reconciliation would possibly explain his reason for adopting the attenuated gable form that came to constitute his ‘Cape Dutch’ style. It is much closer to the Dutch and Flemish gables than the Cape gables. Many of his gables, at Welgelegen, for example, are directly based on Amsterdam gables (Fig. 6). Baker could not have failed to see the difference.

The form that Baker established at Groote Schuur became the prototype for the style that spread across the entire country: the attenuated side gables with a less prominent central gable, the ubiquitous Palladian ventilator and, often, a central porch. Perhaps Baker’s eclectic Cape Dutch style, a child of its time undoubtedly, was an appropriation that sought, by its academic ‘correctness’ (going back to Dutch sources) and ‘un-Cape’ plan forms, to appeal to English colonialists by making allusions to other than ‘Afrikaner’ tradition, thus making the architecture of the Dutch the architecture of Union (Fig. 7).

The Afrikaans media of the time was attempting to persuade their readers that they needed to shrug off the dead imperialist and European past so that they could establish a material Afrikaner identity. Fisher and Le Roux emphasize the leitmotiv in articles on architecture and the visual arts, largely written by Jacob Pierneef (better known as an artist) and the architect Gerard Moerdijk, both leaders in their fields. Both write of the need to establish a style that is derived, de novo, from the Afrikaner spirit. This was, to a certain extent, driven by a desire to find an architectural expression other than the Romantic Vernacular Revival of the British architect, Sir Herbert Baker. His appropriation of Cape Dutch gables and the elements of the Cape farmhouse to create his Cape style resulted in its rejection as a ‘foreign style’ by both Moerdijk and Pierneef. In an article written by Pierneef in the April 1920 edition of *Die Boervrouw*, he says that: “The Cape Dutch style is not ours, no, we look for a pure Afrikaans (style), that will carry the stamp of our volk spirit” (Fisher & le Roux 1989: 5).
In the end, Baker’s Cape Dutch style became an architecture of division and not mediation, an architecture of appropriation and not appropriateness. In creating a Dutch connection, he lost the South African connection. He had himself cautioned: “What is the form of the impress we are stamping on the soft clay mould, which will be burnt into the architectural style of the future? For assuredly what we do now will to a large extent influence for good or bad the future architecture and even the art of South Africa” (Biermann 1970: 27).

**Bibliography**

Building in stone in the Karoo: possible explanations for the restricted distribution of corbelled houses

Judy Maguire

Introduction

The June 2007 issue of the VASSA Journal was devoted to an interesting compilation of hitherto dispersed information concerning corbelled buildings in the Karoo. The maps appended at the back of that issue show that corbelled buildings have a restricted distribution in the Karoo and indeed in South Africa: the only other areas in South Africa where corbelled structures are found are in the eastern Free State where the usually much smaller corbelled ‘beehive huts’ were originally attributed to the Ghoya and other Sotho clans (Schoeman 1982), and limited occurrences of small corbelled stone buildings in Mpumalanga (Esterhuysen and Smith 2007). In the Karoo, corbelled buildings are confined to the approximately quadrangular area defined by Williston in the north-west, Carnarvon in the north-east, Beaufort West in the south-east and Sutherland in the south–west, with one or two exceptions which occur outside this area but still close by. Within this area, several localized clusterings occur, each with its unique characteristics. Maps showing the distribution of corbelled buildings in the Karoo have also been published by Walton (1965) and Fransen (2004).

The present paper looks at stone-built structures in a broader context right across the Karoo in an attempt to discover the reasons behind the interesting restricted distribution of the corbelled structures.

The approach was to examine stone structures across the Karoo from its southernmost margin against the Swartberg to its northernmost limit, which was taken as the line defining the northern aspect of the Kareebergen. North of this line, the Karoo grades imperceptibly into Bushmanland and Kalahari veld. In doing such a transect, the entire suite of rocks available for stone masonry can be sampled as one crosses the Cape Supergroup in the south, and successively, the Dwyka, Ecca, and Beaufort Subgroups of the Karoo Supergroup as one moves from south to north.

There is an interesting relationship between geology and the types of stone masonry, however, many factors other than geology influence building techniques. These include landscape characteristics, local climatic factors, vegetation, tools available, economics and the requirements of subsistence farming. Stone buildings are also considered in these contexts.

Building in stone: Table Mountain and Witteberg Quartzite

Table Mountain and Witteberg Quartzites and sandstones are found all along the southern margin of the Karoo where they form the Swartberg and associated parallel Witteberg mountain ranges, separating the Little Karoo (to the south of the Swartberg) from the Great Karoo on the north of these fold-belt mountain ranges.

The raw material, Table Mountain Quartzite (formerly known as the Table Mountain Sandstone or TMS) is a sedimentary rock that was originally laid down as beach sand on the shores of the ancient Agulhas Sea some 500-460 million years ago.
Subsequent metamorphosis altered it to a medium- to fine-grained quartzite. The beds of the TMQ vary enormously in thickness, as they do in grain size – some beds are immensely thick while others are much thinner. Subsequent compression, buckling, folding and fracturing of the beds (Fig. 1) has not only given rise to the magnificent chain of fold mountains and spectacular poorts through the range, but has created broken pieces of rock or clasts of every possible thickness, size and shape, from blocks the size of a house to fine frustules of rock.

Figure 1. Dramatic folding and fracturing in the Meiringspoort. Note the well-defined beds of differing thickness.

The clasts are angular where they occur on mountainsides but where they occur in stream and river beds they have gradually become rounded by eons of high energy water action from rivers draining off the Swartberg. The angular fragments are not easy to fracture or dress as the quartzite is dense and intractable; the rounded river cobbles even more so. The approach for builders in both cases (angular or rounded clasts) is to use as is.

Magnificent examples of the use of angular pieces of TMQ of different sizes can be found in the famous mountain passes of Thomas Bain through the Swartberg, notably the Swartberg Pass itself (built 1881-1886), the Seweweekspoort and Bosluiskloof Pass (1862), and the road through Meiringspoort (1858) (Ross 2002).

The only explosive commercially available to civil engineers at the time was gunpowder. Dynamite was only developed by Immanuel and Alfred Nobel of Sweden in 1867 (Taylor 1982), and it was some time before this was commercially available in South Africa. Gunpowder had to be ignited by flame or heat and could not break rock effectively. Boulders were split by heating with fire and then doused with cold water.
Swartberg pass was built with pickaxes, spades, sledgehammers, crowbars, wheelbarrows and gunpowder (Marincowitz 2002). For this reason, travellers over the pass will notice that the road is built up against the side of the mountain, following the contour, rather than using the cut-and-fill technique, because cutting often requires blasting. The retaining walls show how the largest rocks were used at and close to the bottom, with a tendency for smaller rocks to be used towards the top. However, it was not easy to pick and choose sizes of rock collected from adjacent mountainsides. Close examination of Figure 2 shows that rocks of different size were used and tight packing was achieved by using numerous quite small rocks around larger rocks, a hallmark of construction technique found in the passes constructed by Thomas Bain. No mortar was used, and it is a monument to effective packing of the dry stone walling that the pass, now over 120 years old, is still in an excellent condition.

Figure 2. Portion of Bain’s Swartberg Pass, completed in 1886, showing the Buchu Kloof crossing and drainage. Note the patchwork use of large and small angular clasts, with a packing of small, flatter stones around each of the larger rocks. The retaining wall is 18 metres at its highest.

It is far more difficult to use rounded boulders of widely differing diameters for stone masonry projects, especially walls of any height, and to create bonded corners. Few structures built exclusively of rounded boulders were found, apart from modern ornamental walls of less than 1,5 metres in height, built at a time when motorised vehicles and mechanised stone-moving equipment was available to gather together large quantities of sorted rounded boulders from the local rivers. Older stone kraal or paddock perimeter walls, built prior to mechanisation, are usually of similar height and built of mixed rounded and angular clasts, depending on the proximity of the wall to stream bed material.
An old resident of the farm Damascus near Prince Albert, on which such old stone walls occur, related how in the past, itinerant wall-builders would come and build walls – collecting the rocks as well as packing the stone – for one shilling a yard.

It is interesting to note that despite the fact that stone is readily available, the oldest houses still standing in the southern Karoo area around Prince Albert and the Koup (probably dating from the late 1700s or early 1800s, judging from the surrounding occupational debris) have clay rather than stone walls, surmounted on stone foundations. Sometimes the clay walls, constructed by means of the opgekleide (‘shuttered’) technique (Barnard 2003; Marincowitz 2006), are used in conjunction with stone walling. Stripped of plaster (the oldest of which is tempered with animal manure, rather than cereal stalks), the walls have a curiously patchwork appearance (Fig. 3). Roofing was of the brakdak type, where a ceiling of closely tied reeds, supported on beams of wit karee (Rhus viminalis), were covered with a layer of cereal straw or rushes followed by a layer of specially prepared brak (salty) mud and topped with ant-heap soil (also brak). A brak clay refers to clay which contains alkaline salts which makes the clay impervious to water when hardened. After rain, the clay roof would dry and the salts would crystallize and harden into an impermeable roof. A thin layer of mud could be added after rain, or on an annual basis, to ensure impermeability. The remnants of such a roof can be seen in Figure 3.

Figure 3. Ruin of Trekboer homestead in the Koup at Allemansdrift (south of Gemsbok station on the N1 between Prince Albert Road and Laingsburg) showing mixed use of opgekleide mure and stone walls, stone foundations and the remains of a brakdak. The horizontal lines are typical of opgekleide (‘shuttered’) clay walls and represent successive clay layers.

Building in stone: Dwyka Tillite

The Dwyka Tillite or Diamictite is a rock type which is of glacial origin. The geological upheaval responsible for the crustal compression which gave rise to the Southern Cape Fold Mountain Belt caused a massive heaping up of sediments. Originally, the Swartberg was probably as high as the Himalayas. The immense weight of this heap of material in turn caused crustal sagging on the landward or northern side of the mountains, giving rise to a huge basin in which was the Karoo Sea. Over time, this Karoo basin filled up with sediments, known in geological parlance as the Karoo.
Supergroup and representing a sedimentation period dating from 310 to 180 million years ago. Lowermost of the sedimentary Subgroups is the Dwyka Tillite, formed at a time when the supercontinent Gondwana (of which the Karoo was the heartland) was situated close to the South Pole and was covered with an ice sheet of continental proportions. The Karoo Sea was deepest in the south. Icebergs breaking from the grounded ice sheet to the north drifted out into the sea, melted and dropped their load of rock flour (formed by the grinding power of slowly moving ice) and the assorted pebbles, rocks and boulders which had formerly been frozen into the base of the glaciers. The tillite is thus poorly sorted: large to huge boulders occur as inclusions or ‘dropstones’ next to small pebbles in a matrix of bluish-grey rock flour and the rock is either poorly bedded or not stratified at all. This means that there are no clearly defined bedding planes along which the rock prefers to break. Weathering of the Dwyka Tillite creates peculiar jagged slabs of rock (Fig. 4) to which the name ‘tombstone weathering’ has been applied.

Figure 4. Tombstone weathering of Dwyka Tillite on the Matjiesfontein-Sutherland road about 25 km north of Matjiesfontein. The lack of well-defined bedding planes makes this rock difficult and unpredictable to break. Consequently, it is not much used in stone masonry.

(Photograph: B. Berg-Mattiassen)
The physical properties of the Dwyka Tillite preclude it from being a satisfactory building material, and apart from its opportunistic use in stone walling along with other rock types, it appears not to have been used much to build stone structures.

**Building in stone: rocks of the Ecca Subgroup**

Close to the base of the Ecca Supergroup is a layer of dark, almost black carbonaceous shale which, however, weathers white on exposure and which was formerly known as the ‘White Band’. Now known as part of the Whitehill Formation, the white-weathering Whitehill shales have at their top a thin but conspicuous layer of pale-coloured extremely fine-grained Matjiesfontein Chert. The ‘White Band’ and its overlying band of chert is well-exposed just outside Laingsburg on the Touws River side, the chert appearing as if it has been built as a regular cream-coloured man-made line of stones (Fig. 5).

![Figure 5. The Whitehill Formation outside Laingsburg, showing the cream-coloured layer of chert appearing as a line of stones above the white-weathering dark shales. The even thickness of the chert makes it a suitable rock type for building purposes.](image)

Because of intense folding in the southern part of the Karoo, the chert horizon is often exposed edgeways on, the formerly horizontally-bedded sediments having been tilted until they are sub-vertical. In some places, the weathering-resistant chert (relative to the carbonaceous shale to one side of it) is easily smashed off in regular blocks of uniform thickness. They can thus readily be used for building purposes. Figure 6 shows the barn at Zwartskraal near Zeekoegat, built mainly from regular blocks of Matjiesfontein chert.
Intense folding also means that much of the Ecca Subgroup in the Southern Karoo, made up mostly of sandstones and mudrocks, outcrops edge on. Thus, there are few horizontally bedded exposures, and the vertical beds are difficult if not impossible to quarry effectively. The folding in the south is associated with fracturing and jointing of the rock, which fragments easily but unpredictably. Some of the Ecca shales fragment into sharp pencil-sized slivers or are brittle and fissile and totally unsuitable for building purposes. This explains why Ecca shales, in the southern Karoo at least, have not been much used for stonework.

In the north, where the effects of folding did not make themselves felt, the situation is different. Thus, in the Carnarvon district, where Ecca rocks once more outcrop, many of the corbelled buildings have been built from fine-grained sandstone rock, or mudstones which have been baked or indurated by heat from nearby intrusive igneous rock.

The intense folding characteristic of the Southern Cape Karoo gradually dissipates northwards in folds of ever-decreasing intensity. Close to Beaufort West, some 125 kilometres from the foot of the Swartberg, the folds become scarcely a ripple before dissipating entirely. North of Beaufort West, the Karoo sediments are typically horizontally bedded, giving rise to the characteristic flat-topped mountains or ‘mesas’ of the Karoo.

**Building in stone: the Beaufort Subgroup**

The sediments ascribed to the Beaufort Subgroup were deposited by great meandering northward-flowing Mississippi-sized rivers in the channels of which sand accumulated, flanked by extensive floodplains where periodic floods deposited mud and silt. The floodplains were home to a variety of reptiles which lived here about 250
million years ago, the fossil remains of which preserve a rich record of their evolutionary history.

The rock types provided by this depositional environment include well-bedded sandstones, siltstones, mudstones and shales. It is the rocks of the Beaufort Subgroup, and in this context the Lower Beaufort subdivision, which have provided the building material for the rich tradition of stone masonry of the Upper Karoo. Suitable rock outcrops extensively over the distribution area of the corbelled houses and, being readily available and easily quarried, has been used for a great variety of purposes. It has been used for stone kraal walls, dam walls, water furrows, boundary markers, corner posts for fencing, kookscherms, houses, churches, wolwehokke, corbelled buildings and kafhokke, public buildings, informal housing in ‘squatter camps’ and gravestones.

Structures without a built up threshold (the English word means to retain or hold the ‘thresh’) and which are associated with cooking scherms have been taken as being dwellings. Structures which do have thresholds and which are associated with threshing floors and old lands have been taken as kafhokke. The use of structures may change over time. Labourers’ huts are usually smaller and more carelessly built and are at some distance from the opstal.

Evidence for relatively easy dressing of the stone is attested by the thousands of dressing scars visible on the exposed faces of stone built structures (Fig. 7), and the accessibility of blocks of equal thickness by the relatively well-coursed and even rows of packed stone (Figs 8 and 9).

![Figure 7. Detail of stone packing in dam wall on Driefontein, Fraserburg District. Note the conchoidal fractures where the stone has been dressed. The rock is probably a fine-grained sandstone.](image-url)
Figure 8. Detail of stonework around doorway of a ruin at the top of Theekloof Pass, Fraserburg District. Note stone lintel above wooden door frame, evenly packed stone rows and dressing marks.

Figure 9. Walls and end gable built from fine-grained Beaufort sandstone of even thickness. Note the huge flat slab used for the door lintel and the evenness of the packing of the stone rows. Reiersvlei, Nuweveld, Beaufort West District.
Stone for corbelled structures appears to have an optimum dimensional format, that is, slabs that are approximately 3:1 in their length to width ratio, but the size and shape of rock used in their construction is still being researched, as is the precise manner of their packing. Packing technique is easy to see in corbelled huts which have collapsed due to structural failure. The reasons for such failure are also being studied. At this stage, it is possible to say that blocks which are too square create structures which are unstable (Fig. 10).

It should be noted that the packing of most stone-built structures used as storage or as dwellings is not dry stone walling like that of sheep kraals or paddock boundary walls, but built with a mortar of mud. Most of the corbelled structures were originally finished off with a plaster made from mud and chopped cereal stalks. This would have kept insects, arachnids and other irritations out and helped to make the structure waterproof by closing the small gaps between stones. The outer plaster would have had to be replaced on an almost annual basis, because downpours would have simply washed it off.

Figure 10. Photograph showing corbelled hut in the process of collapse. Failure was probably due to collapse of a window lintel area which allowed the overlying rocks to collapse. Poor selection of material, poor choice and placement of foundation row rocks, and poor packing of rows has led to instability.

The sediments of the Beaufort Subgroup have been extensively intruded with igneous material in the form of dolerite sills and dykes. Sills of dolerite often cap Karoo koppies, giving rise to their characteristic flat tops. The intrusions weather to form ‘castle koppies’ of piled up dolerite boulders and ‘woolsack’ weathering, such as the ‘Die Rante’ area south of Fraserburg and much of the country west of Williston on the Calvinia road.

Dolerite has a strongly rectangular jointing pattern but its weathering is of the spheroidal type and results in rounded boulders with sometimes conspicuous weathering skins, so-called ‘onion-skin weathering’ (Figs 11 and 12). The rounded cobbles and rocks with their flaky outer skins are difficult to use as there are always spaces between the stones, and rows are almost impossible to pack. Nevertheless, there are structures built of dolerite cobbles, including the ‘Fort’ just outside Williston (Fig. 13), where
round cobbles were built into a curved rather than rectangular set of walls with bonded corners.

Figure 11. Jointing pattern and spheroidal weathering of dolerite outcrop.

Figure 12. Onion-skin weathering on rounded cobbled of weathered dolerite.

Fig 13: Circular 'fort' built from dolerite boulders on outskirts of Williston.
West of Williston there are conspicuous outcrops of dolerite, particularly noticeable on the hill crests in the form of sills. The dolerite – a magnesium-calcium-alumina silicate – is a source of calcium. Water seepage carries the calcium salts downwards and causes cementation of calcareous nodules in the soil. Calcrete horizons (layers) have developed in this way and these hard layers cover and bury the underlying useful Beaufort rocks, making them inaccessible. This probably accounts for the fact that, west of Williston there are few stone-built structures, including corbelled houses.

North of the line running between Williston and Carnarvon, the substrate is once again back into the Ecca, and the corbelled houses in the vicinity of the Kareebergen are mostly built from fine-grained Ecca sandstones. Further north still, outcrops are obscured by wind-blown Kalahari sand and one moves onto the Dwyka Tillite which is not amenable to masonry work. These facts together probably account for the restriction of corbelled structures to suitable substrates mainly to the south of the Kareebergen.

**Reasons for the restricted distribution of corbelled buildings**

**Geological reasons**

- The best stone raw material for masonry, the shales and igneous intrusion-baked mudrocks of the Lower Beaufort Subgroup, is located within the corbelled building distribution area.
- Within this area, the rock outcrops are horizontally bedded and easily quarried.
- Flat outcrops are extremely common. Flat slabs of stone are therefore the commonest building material. This is easily broken to the required dimension.
- The overburden of soil is extremely shallow, and outcrop is readily accessible. The shallow soil also explains the absence of trees for use as roof timbers (Fig. 14).
- The thickness of the beds creates slabs and blocks of suitable thickness.
- The rock is relatively easily dressed by means of simple tools, such as mallet and chisel.
- The natural pattern of joints facilitates quarrying. Large slabs can be removed, exposing further underlying suitable rock.
- West of the corbelled building distribution area (i.e. west of Williston), the Beaufort Shales are capped by a hard, thick, intractable calcrete horizon. Outcrops are confined to drainage lines and are not extensive. Corbelled structures or other stone-built structures do not occur here.
- West of Williston, rock outcrops occur high up near the crests of hills and mountains, far from where rock is needed.
- Outcrop giving rise to topography is usually composed of dolerite, which weathers into spheroidal cobbles and boulders. Such clasts are unsuitable for building corbelled buildings, which require pieces of approximately a 3:1 length to width ratio. It is also difficult if not impossible to create bonded corners with round clasts.
- South of the distribution area, i.e. south of the Roggeveld and Nuweveld escarpment, the Ecca Shales are folded and fractured, apart from occurring in near-vertical outcrop making quarrying difficult.
Below the Nuweveld and Roggeveld escarpments, in the Onder Karoo, *Acacia* and *Rhus* trees occur in ephemeral drainage lines, providing a source of roofing timbers not available in the corbelled building distribution area.

North of the distribution area lies an extremely arid area which was used only as seasonal grazing. This land was not permanently occupied or even surveyed until well into the 20th century (Penn 2005) and is underlain by rocks of the Ecca and Dwyka Subgroups.

East of the distribution area the Karoo dwarf shrubland grades into the summer rainfall area with better grassland and a thicker soil covering. Outcrop availability diminishes eastwards.

![Figure 14. Boundary markers built of local stone. These also serve as attachments for fencing wire in places where the substrate does not allow fence droppers to be embedded. Note the shallow soil and extensive rock outcrop: also reasons accounting for the lack of trees.](image)

**Climatic reasons**

- The low rainfall, cold winters and high altitude precludes tree growth, even in the ephemeral drainage lines. Timber of a size adequate for use as roof timbers is therefore not available.
- Frail *brakdak* roofs cannot be used in areas where snow occurs because it lies on the roof before melting, and prolonged wetting of the roof clay allows leaks to develop.
- Winters are extremely cold and cold winds create a wind chill factor making shelter imperative. Early Trekboers moved to the Onder Karoo for the winter, to minimize stock losses.

**Economic reasons**

- There was no full security of land tenure prior to the conversion of loan farms to Perpetual Quitrent farms (1813) and ultimately to freehold farms in the late 1800s, because the land was owned by the State and rented to the Trekboers.
Much of the area was used for seasonal grazing only. It did not make economic sense to build large permanent houses on land which was rented or only seasonally occupied.

- The Nuweveld was not permanently settled until well into the 1800s because of fierce resistance of the San and persistent threats from equally militant Koranna and ‘Bastaard’ groups (Penn 2005). The Trekboers’ grip on the land was tenuous and the uncertainty of their tenure made ambitious housing projects untenable. Small structures built from readily available building material made more sense, until more permanent arrangements could be made.
- Beaufort shales and sandstones could be quarried, transported and dressed with equipment normally affordable and available to the average Trekboer. Such equipment would have included crowbars, hammers, chisels, spades and picks, and ox wagons and donkey carts.

**Environmental reasons**

- Shelter had to be close to a permanent source of water. This was usually a spring or seep, which normally occur in bottomlands. Outcrops of rock are common in such places and as ledges on the sides of valleys cut by streams.
- Sites abutting on such rocky outcrops or cliffs were often chosen because the cliff face could be used in lieu of a back wall, either for houses or for stock kraals.
- Such outcrops, located a little above the valley floor, are often in a thermal belt with raised temperatures – the valley bottoms get the frost and coldest air.
- Storage facilities were also needed close to the tiny patches of irrigable alluvium adjacent to springs and seeps. The farmer had to grow wheat to make his bread and this had to be threshed and stored. Stone corbelled kafhoks are often found in association with arable patches and old lands. They are often adjacent to circular threshing floors.
- Rocky ledges provide protection from cold and fierce winds that the Karoo is prone to.

**Conclusions**

A variety of factors have influenced the stone masonry of the Karoo. The geological properties of the various rock types making up the sedimentary sequence of the Karoo Supergroup and the type of exposure and ease with which these rocks are quarried and worked has played a major role. The Karoo igneous intrusives give rise to spheroidal boulders which have a limited application for use in masonry projects. However, many of the finer-grained varieties develop hard black weathering skins of ‘desert varnish’. These jet black shiny rocks have provided the substrate for many San rock engravings, such as those in the Vosburg, Brandvlei and Van Wyk’sVlei areas.

Other factors such as climate and vegetation have played a role, as have such legal and economic factors as security of tenure and land use.

There are many dozens of stone-built buildings in the Karoo towns mentioned above, almost all of them older than 60 years and therefore under the protection of the National Heritage Resources Act. However, the Act is difficult to implement on account of a lack of capacity and still more difficult to police. Stone-built structures, even public
buildings, are falling into disrepair or are being desecrated by inappropriate restoration and painting. The tradition of stone masonry has almost disappeared and it is difficult to find competent artisans who can undertake such repair work. Nobody knows how to dress and pack stone any more. Modern examples of vernacular building in stone (Fig. 15) have none of the finesse of the much older structures.

Figure 15. Stone built informal housing, local township, Fraserburg, 2005. Local stone-built structures are harvested for building materials. Technique is unrefined and makeshift.

There has been a complete break with the tradition of building corbelled structures, and the culture which promoted their construction and maintenance has disappeared. The old culture of the Karoo Trekboers and sheep farmers has also all but disappeared, and the aging inmates of retirement homes in the small Karoo dorps represent the last living repositories of this culture. A new and different Karoo culture is developing but it is still in its embryonic stages. This culture sees nothing inappropriate in stone-built Victorian houses brightly painted in turquoise or mauve PVA, or in making repairs or additions to stone-built houses with face-brick.

References


