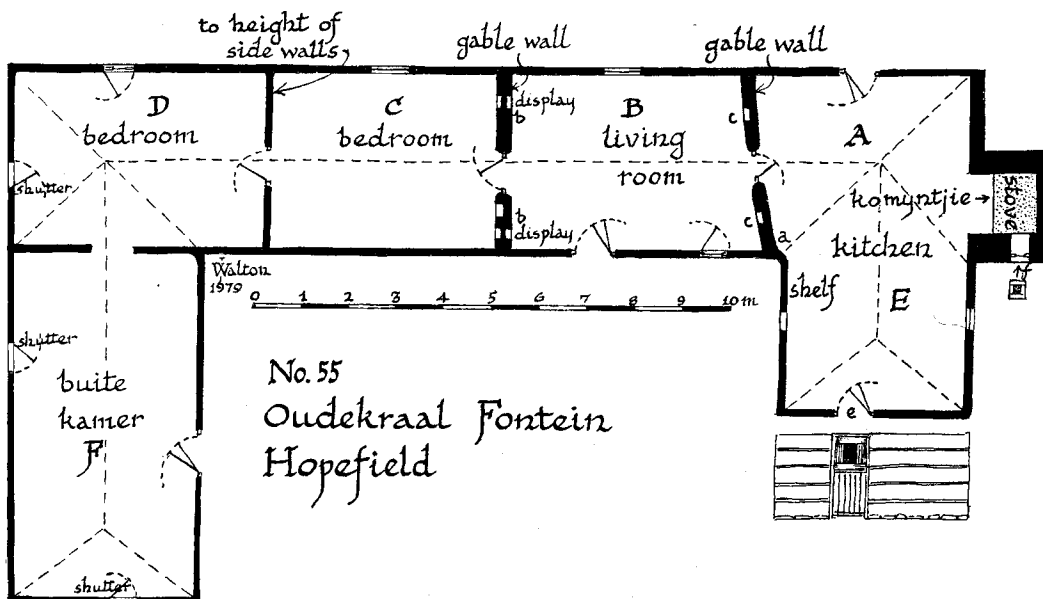


Vernacular Architecture Society of South Africa
Volksboukundige Vereniging van Suid-Afrika



A Guide to Measuring Buildings



James Walton
[Cape Cottages., Cape Town: Intaka, 1995]

Colette van Niftrik

2003

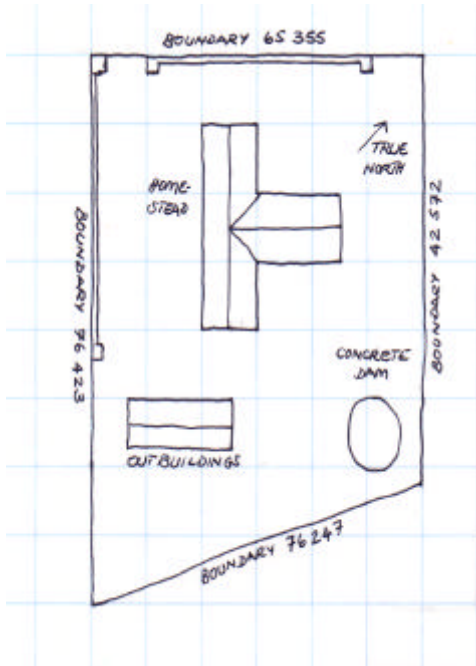
USEFUL THINGS TO TAKE ALONG

1. An **erf diagram** if one is available (try the owner or the surveyor-general's office).
2. **Tape measure** of 5 metres minimum.
3. **Ball of string** to measure circumferences (eg. dam).
4. **Spirit level**. A long one to help with unreachable parts.

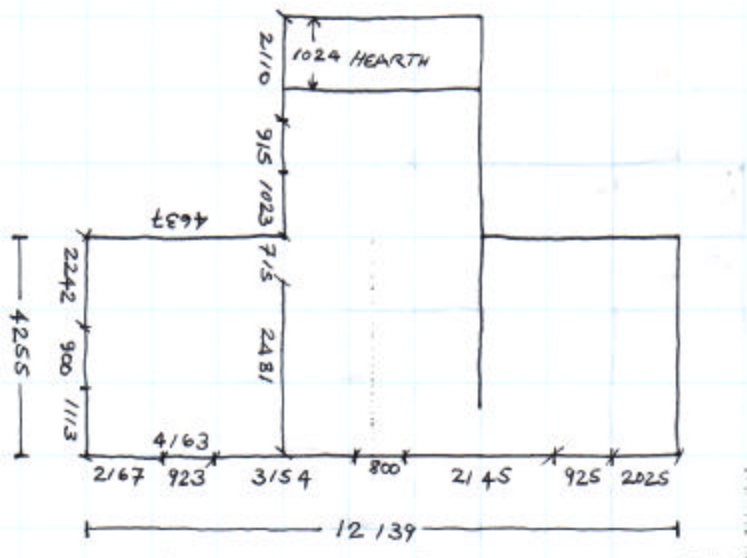
A GUIDE TO MEASURING BUILDINGS

A completed project will include:

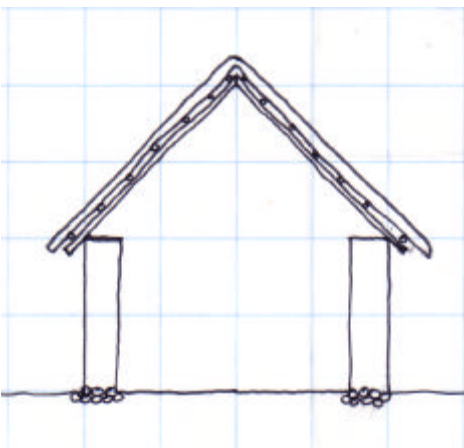
An Erf Diagram



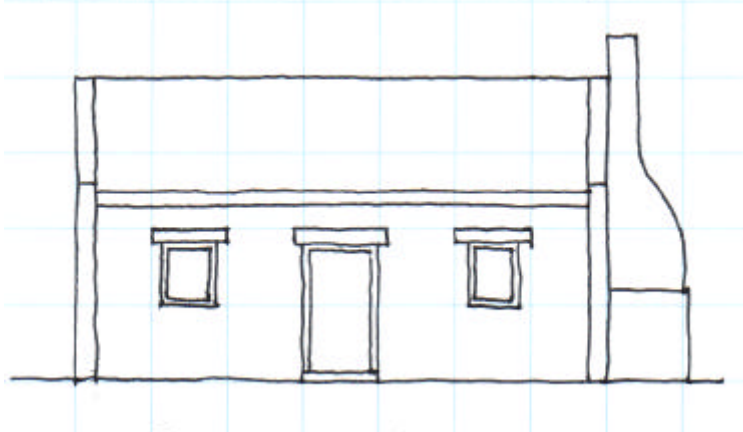
A Floor Plan



Cross-Sections



Elevations



GETTING STARTED

When you arrive on site:

1. **Take ten minutes** to do a quick but comprehensive **recce** of the site, with the following in mind:
 - do you need to draw up an erf diagram?
 - take note of every structure on the erf
 - take a good look inside all the buildings.
2. **Assess the scope** of the project using these pointers:
 - **time** available
 - **quantity** of measuring
 - how much **detail** is required
 - ‘work to be done’ against ‘**people power available**’
 - decide on the **priorities** the group should work to
 - can the work be apportioned and allocated to groups of at least two people per group? Three is ideal two to measure and one to write.

UNIT OF MEASUREMENT

The general trend is to express measurements in millimetres as it leaves little room for misinterpretation:

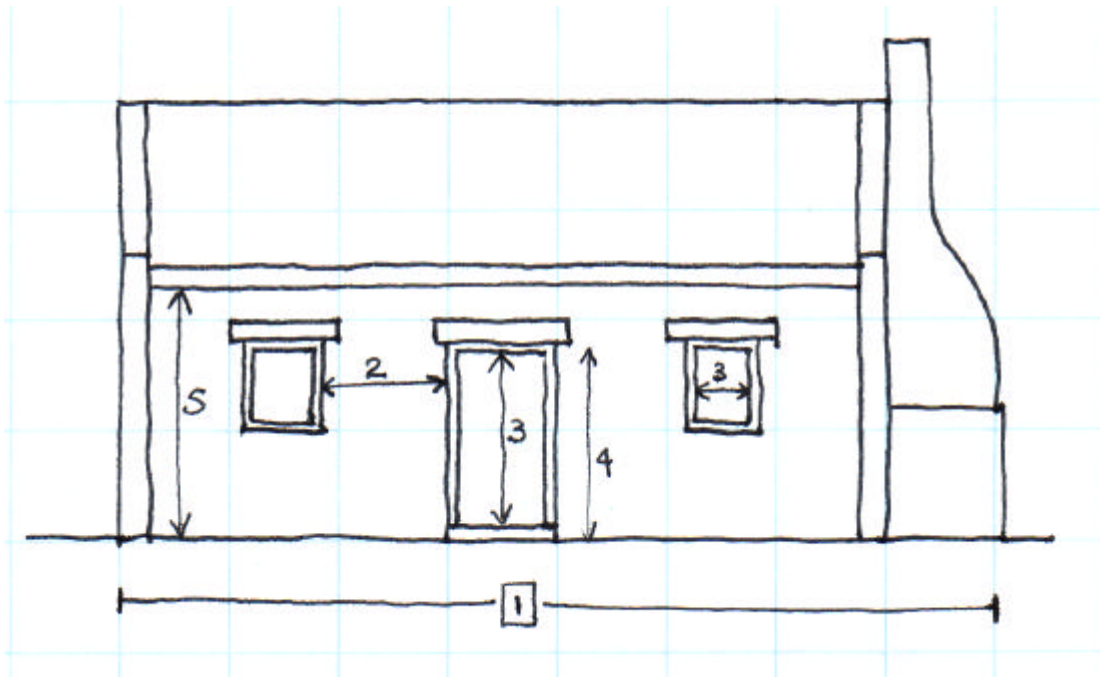
1. We know that we must have at least four digits in our dimension unless the dimension is less than a metre.
2. We are all familiar with interpreting figures by means of thousands, hundreds, tens, units.

BEGINNERS BASICS

Measuring the Structure

You are measuring the essential structure:

1. Overall length of walls.
2. Length of walls between openings.
3. Width and height of openings.
4. Height of openings above floor level.
5. Height of walls under eaves, ie, where roof meets wall.



Remember

* ‘openings’ refers to doors, arches and windows

* openings are measured brickwork to brickwork, ie we ignore the door or window frame when measuring these.

THE FLOOR PLAN

Ready, steady ...

1. Decide which building you'll start with.
2. Pace the full length and breadth of the building to get an idea of what you have to fit onto your paper.
3. Using squared paper can help get dimensions more accurate, eg. 1 block = 1 m²

Go !

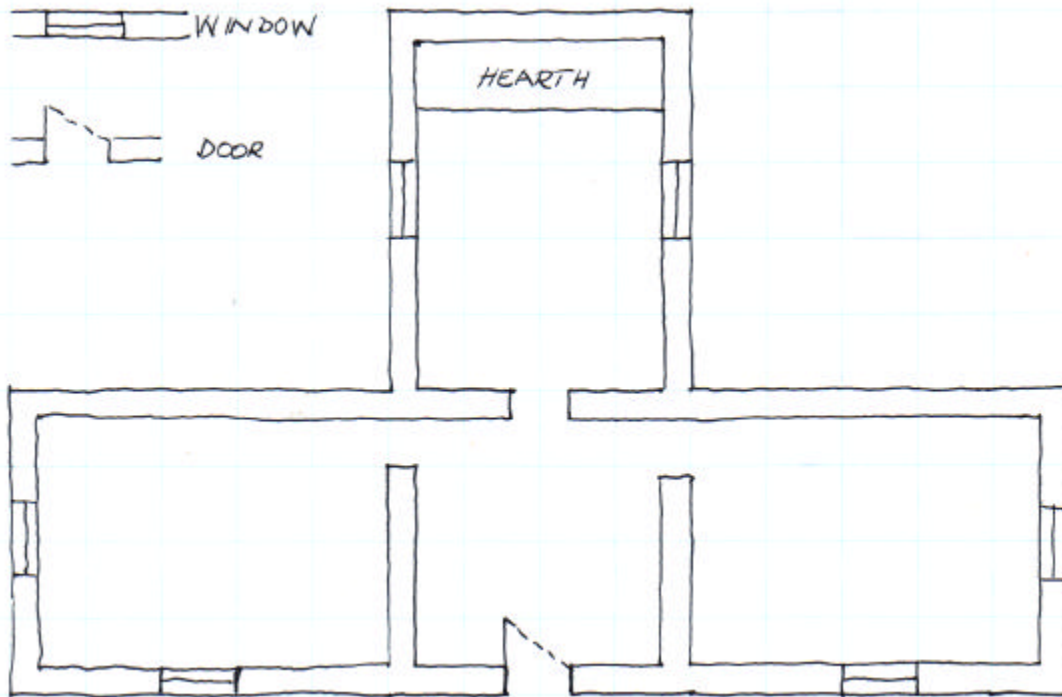
1. Choose a starting point, eg. the front of the house.
2. Working in a clockwise direction, measure from the right corner of the building to the right side of the first opening, ie window, and record the dimension, eg. 2025.
3. Measure the width of the opening, eg, 925.
4. Measure from the left side of the opening to the door, = 2145.
5. Measure width of door, = 800.
6. Measure from left of door to next window, = 3154.
7. Measure width of window opening, = 923.
8. Measure from left side of window to left corner of the building, = 2167.
9. Measure from left corner of building to right corner of building, = 12 139.
10. Do your figures agree?

To proceed:

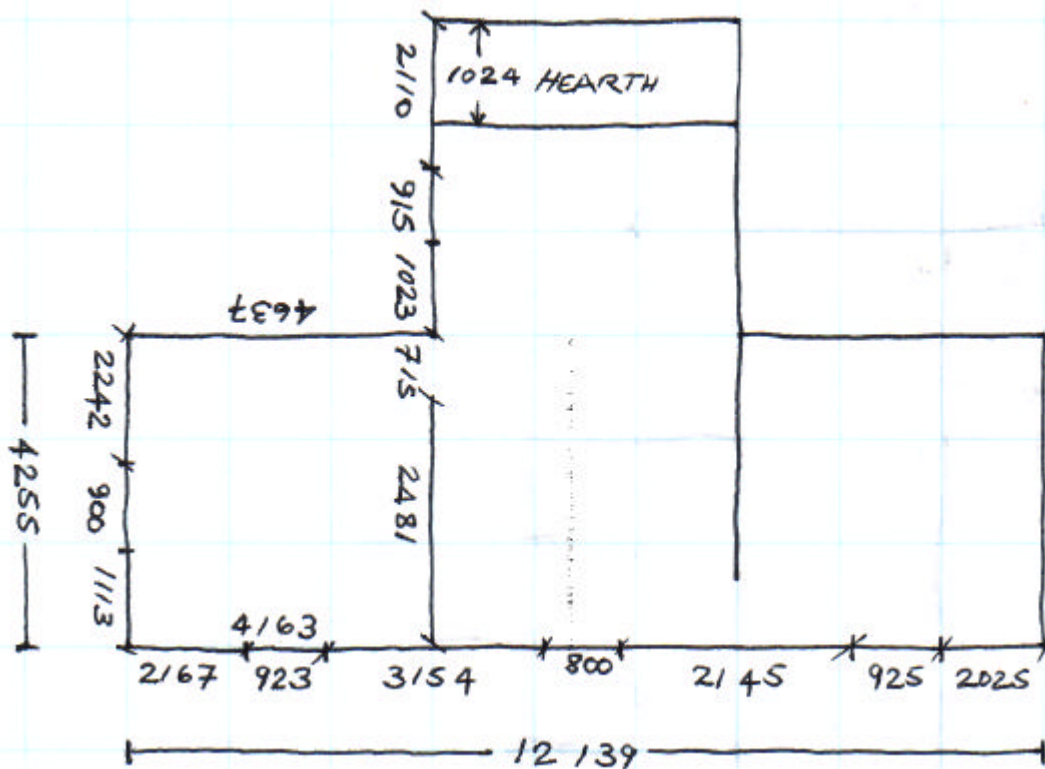
1. Turn the corner, keeping to the clockwise direction, and repeat the exercise.
2. Continue to work your way around the building until you return to your starting point.

INSIDE THE BUILDING

Record **plumbed items**: **hearths** and other **built-in features**
 wall thickness
 internal heights



The floor plan could be recorded in this way:



Note: To check whether a room is 'square' and your dimensions are accurate, measure the diagonals (from corner to corner). These should be approximately equal.

Once you have recorded the basic footprint, turn your attention to the elevations and any other details you may have decided to record.

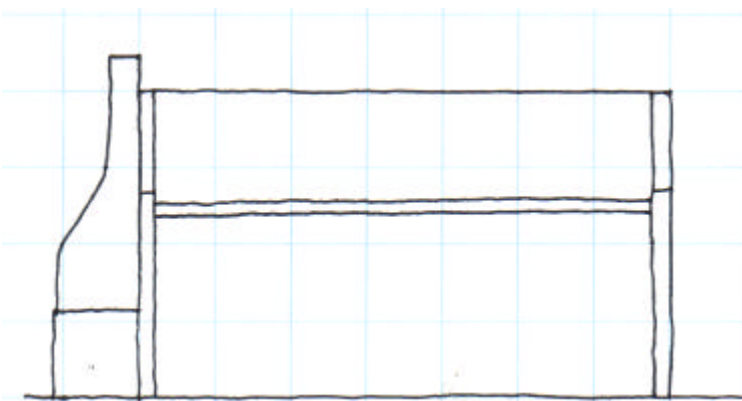
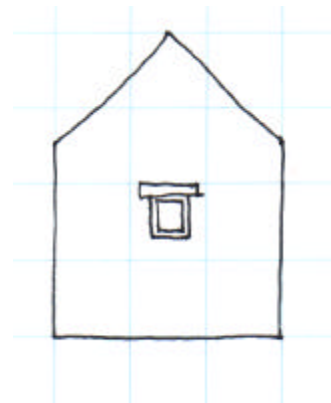
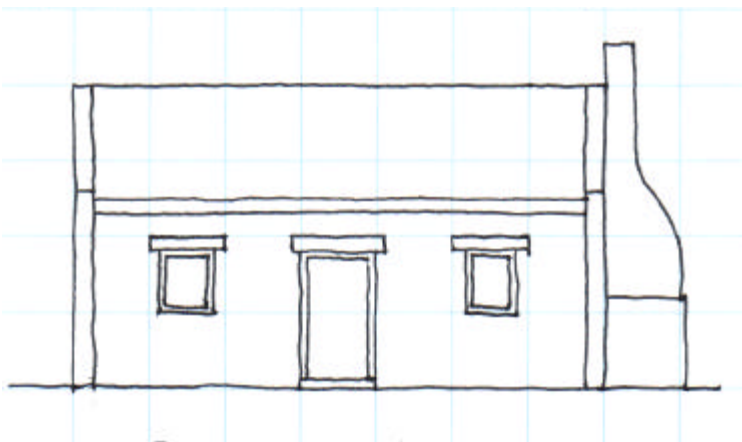
ELEVATIONS

There are generally four elevations recorded for a single building.

These show:

Each **façade** of the building, usually identified by the compass point from which we view them.

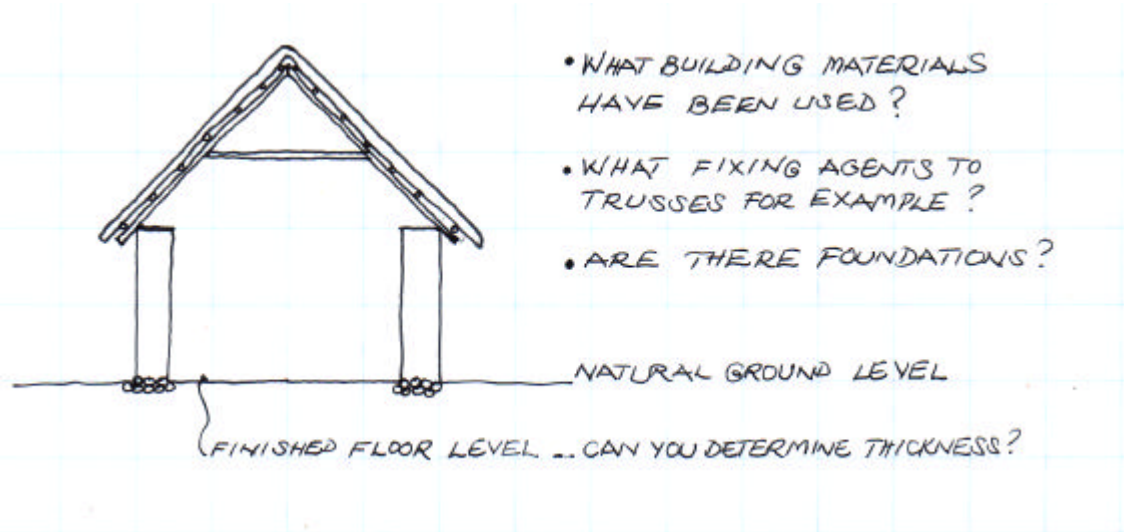
The **structural** and **decorative** lines of each façade.



SECTIONS

A section shows the structural details of a building.

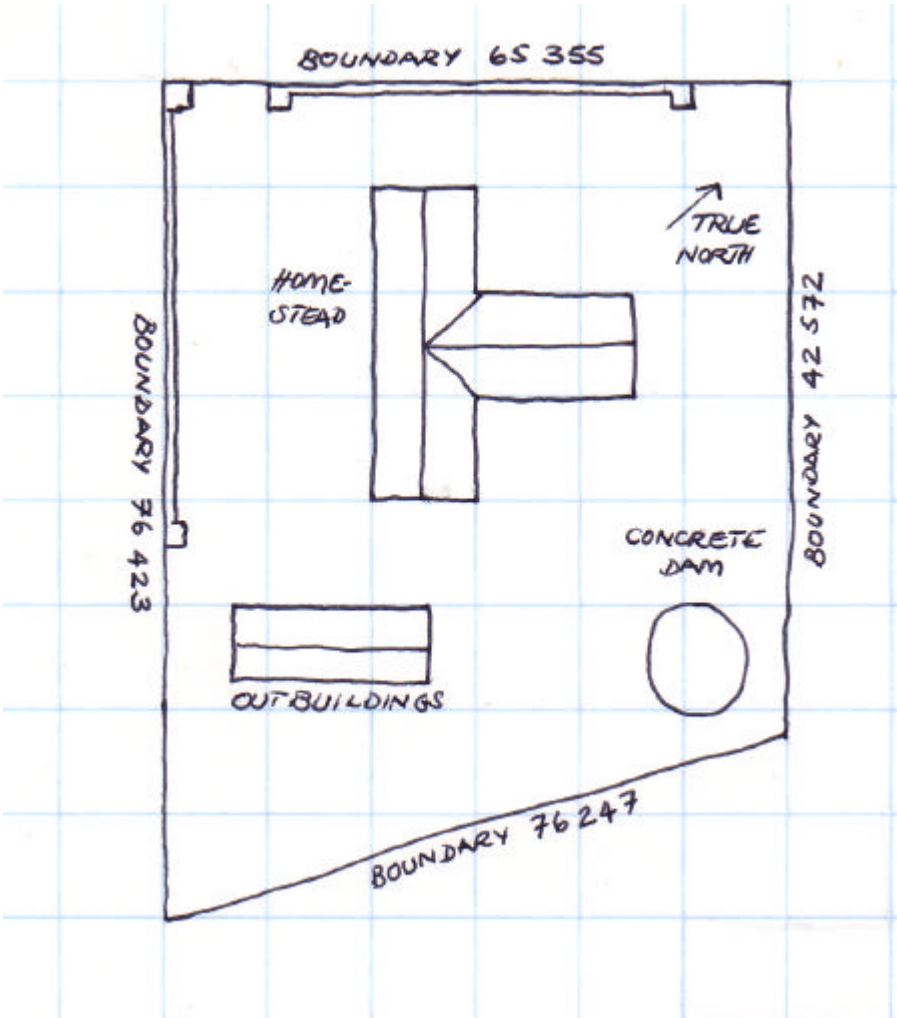
These details are not always visible and may entail clambering in the dark or digging trenches to uncover foundations with permission of course among many possibilities.



ERF DIAGRAM

This shows:

1. The **boundary lines** of the erf, preferably as recorded and stored in the Surveyor-General's Office.
2. The **position** of all the buildings and **structures** on site. This can include perimeter and other walls, windmills, walled dams, pools, sheds - anything of a permanent or semi-permanent nature.
3. Pace the **distance** between these structures.
4. The **erf number** and those adjoining them if they're available.
5. **True North**.



NOTES

Vernacular Architecture Society of South Africa Volksboukundige Vereniging van Suid-Afrika



The **aims of the Society** are to

- promote and encourage the study of South African architecture and its cultural context
- organise lectures
- arrange excursions and study-tours
- foster research
- publish original work
- undertake and promote the recording of sites visited
- publish or lodge studies or surveys in a repository for the use of students and other interested persons
- selectively lobby for heritage issues.

Contact

Voicelink telephone number 088 122 6771
PO Box 15347, Vlaeberg, 8018
VASSA1@hotmail.com
www.museums.org.za/vassa/

The Vernacular Architecture Society of South Africa is not responsible for authors' opinions or factual errors contained in contributions.