

Annexure A

Field Manual for Site Planning & Pegging

Initial Settlement Stage

1. Site Preparation Stage:

- i. The outer figure of the site to be settled needs to be pointed out by a professional land surveyor. It may be useful to connect the outer figure corners with string to clearly have the boundaries visible during site preparation.
- ii. Assess the gradient of the property. Any areas steeper than 1:5 need to be avoided.
- iii. Any specific vegetation pattern that may pose a problem to settlement needs to be identified, and if needed an expert opinion obtained whether the vegetation should remain undisturbed.
- iv. Any watercourses will have to be identified. Where there is a risk of flooding, no settlement is to take place below the 1:100 flood line, or nearer than 32 meters from the watercourse. The flood line or buffer needs to be clearly demarcated on-site by means of placing pegs/beacons along the watercourse.
- v. Access to the settlement area must be defined, within minimum sight distance and gradient parameters.
- vi. Any servitudes and services crossing the site will be identified and should be pointed out on-site as areas to avoid during the settlement phase.

2. Settlement Planning Phase

After site preparation and initial constraints analysis have been done, settlement can be commenced with for informal structures. In order to assist with the initial settlement process the following minimum guidelines must be complied with.

i. Access roads

1. Settlement areas are to be developed in cluster units at approximately 20 units per cluster.
2. Access to such clusters should be provided from a publicly accessible access road surface of not less than 5,5 meters wide, but with a road reserve of a minimum of 16 meters.
3. These access roads must be graded/hardened and provide access to each cluster for refuse removal and fire and police (as a minimum)

4. Turning circles should be provided at the end-points of these access roads to ensure vehicles can turn around without problems, if such roads are designed as culs-de-sac.

5. Where possible these internal access roads should be planned as loops, to connect back onto itself and ensure ease of access.

ii. Fire Safety:

- No structure should be further than 90 meters from the main access roads.
- Where structures cannot be clustered in a maximum of 20 units, the minimum spacing between 9 meters between shelters should be adhered to.
- If buildings are clustered in groups of 20 units, with adequate separation between the clusters, then the minimum distance between buildings will be 4 meters.

iii. Open Space

- A minimum of 10m by 20m open space should be provided at the centre of each cluster to serve as playground and open space.
- These open spaces should be functional and integrated with the movement networks within the settlement area.

iv. Community Facilities

- Space needs to be set aside for a minimum of local crèche facilities at the discretion of each “woonerf” block.
- Ideally multi-purpose shared community facilities should be provided per two “woonerf” blocks
- These sites are to be shared between the different clusters/settlement groups.

v. Public Transport Facilities

- Public Transport facilities should be provided at the access point to the settlement site.
- Provision should be made to avoid minibus taxis and buses interfering with access to the site and other vehicular traffic on the main access road(s).

vi. Land Surveying and Pegging

1. Before site demarcation commences a basic layout plan should be prepared based on the contours and design principles set out above. The layout plan should have the dimensions of each site.

2. It is important to remember to keep boundary lines as straight as possible to facilitate the installation and upgrade of services (roads, pipes) over time.

3. There are 2 options for demarcating sites –

1. the first is to use a surveyor who can place markers in accordance with the basic layout plan. If the terrain is not flat or the layout is not simple, then this

would be the preferred option.

2. The second is to do basic demarcation using a 50m tape to determine the approximate positions of site corner points. This option is suitable when the terrain is fairly flat and the “woonerf” design is simple.

4. If option 2 is chosen, then basic demarcation can be done using wooden droppers or fence standards to mark the corners or bend points in the boundaries.

1. Setting out and measurements should be supervised by a person who can read and understand the layout plan and who has experience with measuring and setting out points using simple geometry and distances.

2. The person supervising should note the field measurements on the layout plan and compare these with the dimensions given on the plan. This will enable the community to confirm that the sites have been set out reasonably correctly in accordance with the layout plan.

3. Where sites are to be set out along an established erf boundary, care needs to be taken not to create encroachments over the boundary into the neighbouring property.

4. An easy starting point must be selected – such as the line between 2 well defined points on the boundary of the property. Measurements will be based on these points and extended to define the roads and sites.

5. It will be important to keep the road widths consistent through the “woonerf” so that vehicles can move through the area as planned. Specific care should be given to this aspect of the setting out, so access problems are minimised as the development formalises.

6. Measurements should be done with the tape as level, straight and tight as possible to reduce taping errors.

7. On straight lines along roads and erf boundaries, the site corner points should be set out first. A check measurement can be done between the front and back markers to make sure that the site is approximately the same as shown on the layout plan.

8. The layout plan with design and final measured dimensions should be returned to the authority dealing with the settlement for record purposes.