Another component of this detailed investigation was to measure up all the building stock on one hectare of land including the interior living arrangements. It was revealed that 28% of the land was already built on, very high for a relatively steep site and particularly high for a layout composing freestanding units. The average site size was only 104sqm!

Occupational density, the total area of habitable rooms/occupants is a keen indicator of overcrowding. Here it proved to be dangerously high at 6.33sqm per resident. Five square metres is generally accepted as the minimum but in this sample the lower quarter averaged 2sqm per person or less - little more than a bed - with the severest case at 1.3sqm. At this level it implied that all floors were covered by bedrolls at night with minimal privacy. The average shelter had six residents and 2.5 habitable rooms. Many rooms were very simply curtained for further privacy.

Interpolating these figures revealed a very high density of 436 people per hectare and a total population of up to 35000 residents. Importantly, pedestrian access was also an accepted norm.

CONSOLIDATION

By then, the block yard had ceased to exist, leaving a well secured vacant site for the city to acquire communal buildings. This presented a golden opportunity, and the space eventually housed central offices, a hall, library, primary school, market stalls and service depots. The Urban Foundation established offices there as well.

All sites were pegged and surveyed after a drawn out and laborious process of initially placing wooden pegs on all corners after mutual agreement by all neighbours, generally after office hours. This process sent a signal of potential security of tenure which resulted in
a flurry of upgrading by residents themselves. Hygiene was an important consideration at such high densities. Since water still had to be carried to each site, waste water was generally spread onto the vegetation. Initially every site had a masonry, ventilated pit latrine built on the edge and lined up wherever possible for subsequent pipelines. Electricity was supplied via prepaid meters, from a forest of overhead wires on poles that generally also served as street lighting. This all brought about a profound transformation in living conditions.

THE BUILDING PROGRAMME

Funding eventually became available for each resident to have the equivalent of a 16sqm masonry room built onto their existing house or as a freestanding unit. The Urban Foundation devised a computer programme consisting of the names of approved beneficiaries and the subsidy amount credited to them. Thereafter local hardware shops tendered to provide packages of basic materials and to deliver them as close to sites as possible when called for. They had to allow for five such deliveries to each site. The materials would then be paid for monthly from the central fund and the allocation of each beneficiary reduced.

This unleashed a flurry of construction by local contractors who had their labour costs settled at agreed rates based on output. Owners could also draw down their allocation with materials to improve existing houses. Numerous 'building inspectors' were available to approve proposals in situ, offer advice and to approve payments. Once again this was a drawn out process which maximised possibilities of individuality, treating each beneficiary and site as a unique element.

LESSONS LEARNT

Due to community involvement, Bester's is a high density settlement with mainly pedestrian access, situated near a variety of public transportation links and, most importantly, is visually stimulating due to the variety of building solutions - with most of the
elevations being visible due to the steep terrain. Sub-tropical vegetation also unifies the vista and consolidates the soil.

All this results from IN-SITU UPGRADED, a people-centred approach which searches for, and responds to, the unique characteristics of every site.

Two decades ago there were half a dozen housing delivery methods to respond to. Now we simply have RDP layouts and some social housing from the public domain. The reasons are clear compared to the Modernist paradigm which has subsequently gripped our housing delivery in South Africa. Straight lines, identical delivery at volume, full services, overall control, annual budgets and, ultimately, dissipated responsibilities. The model is Service, Build then Occupy.

This is inverted in In-situ Upgrading. To Occupy is paramount - inevitably in a good location. As security of tenure is perceived, the Build consolidation phase ensues followed by Service. Instant shelter! Consider the advantages of the building process alone. Dozens of small time, labour-only contractors have been set up and continue to operate in the surrounding areas.

Housing authorities shy away from this people centred approach because it is drawn out and never has a fixed exit date. Budgets are perceived to be problematic and it also involves tedious community involvement, after office hours! Grand control appears to be relinquished!

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