

# SLUM UPGRADING IN SUB SAHARAN AFRICA

## Urban Thinker's Campus (UTC)

### THE EXPERIENCE OF

## ETHEKWINI METROPOLITAN MUNICIPALITY

### (SOUTH AFRICA)

05<sup>TH</sup> NOVEMBER 2020



**"iQhaza Lethu"**  
An informal settlement upgrading partnership  
initiative co-funded by the European Union



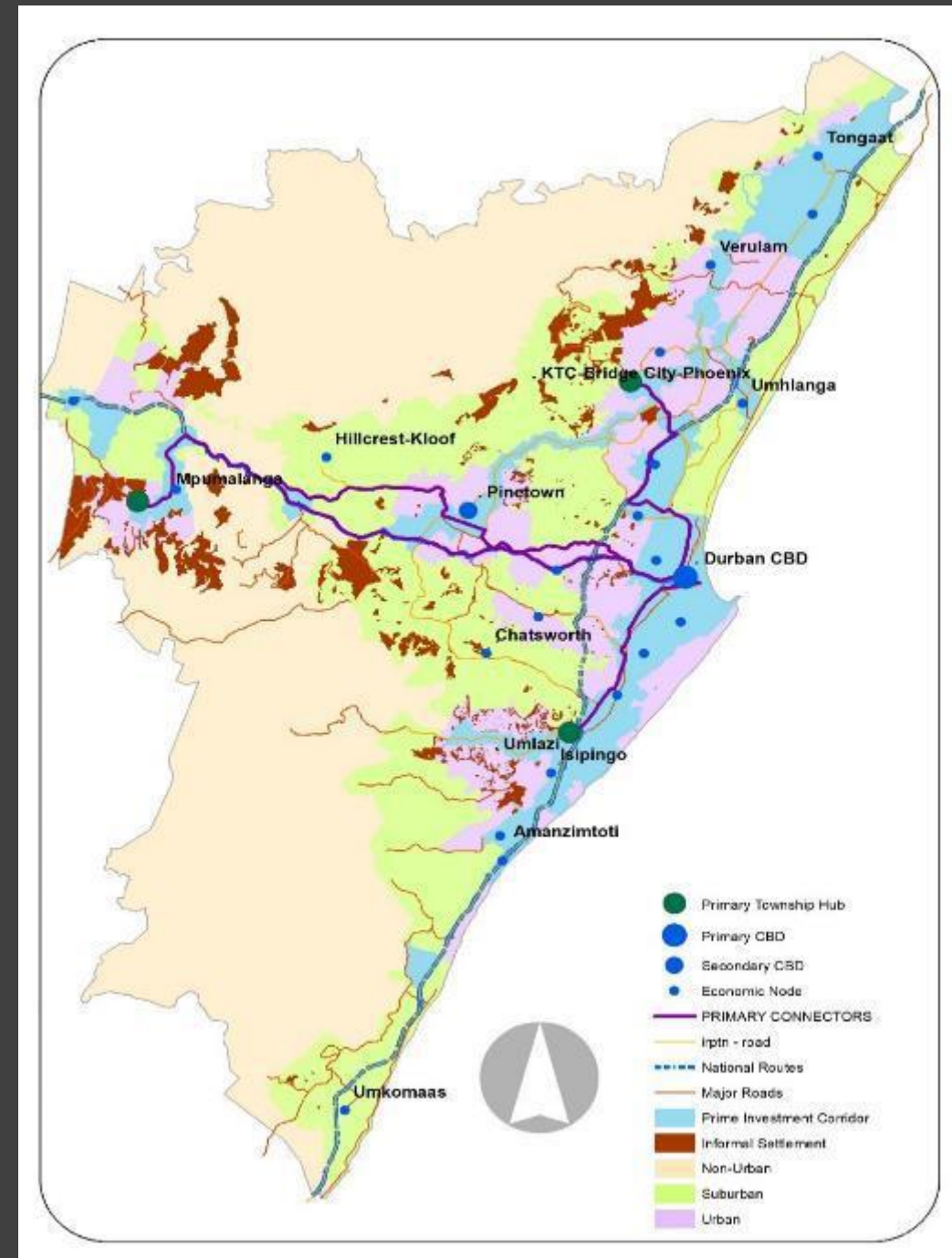
# Informal Settlements in eThekweni

- Over 580 urban informal settlements, 287,000 households.
- Nearly a quarter of the City's population.
- Continued urbanization and scarcity of well located land.
- Over 80 years to overcome just the informal settlement backlog by means of conventional housing delivery.
- Challenging topography, high densities and many settlements within environmentally sensitive areas
- 112 settlements comprising >1000 households
- **77% are category B1 (incremental in-situ upgrade with essential services) - 342 settlements, 220,000 hh**
- **Many are very dense (200+ du per hectare)**
- Less than 3% of households earmarked for relocation (due mainly to sites being unsafe for habitation)



# Informal Settlement Status Quo

<b>CATEGORISATION</b> (as per national (NUSP) guidelines)	<b>Settle- ments</b>	<b>Structures/ households</b>
A (Full conventional upgrade i.e. formal housing project)	63	27,500
<b>B1 (Incremental upgrade with essential services)</b>	<b>342</b>	<b>220,000</b>
B2 (Deferred relocation with emergency services)	118	30,500
C (Imminent relocation)	27	7,000
Under investigation	31	2,000
	<b>581</b>	<b>287,000</b>



# APPROACHES / STRATEGIES ADOPTED – 1994 to date

- **1994-2010: FORMAL HOUSING PROVISION:**

- **Approach:** The dominant approach (in line with National Housing Policy) was the provision of formal state-funded housing with title deeds (formal tenure), formal planning, and the provision of full individual services to each resident. Substantial delivery was achieved: More than R9billion was spent creating >200,000 housing opportunities were provided with delivery peaking at 15,000 units per annum around 2009.
- **Challenges:** The approach is not sustainable. The informal settlement backlog grew despite large scale housing delivery. There is insufficient funding and well-located land to enable the approach to be continued as the primary means of addressing the informal settlement challenge. Low density housing provision was also exacerbating urban sprawl.

- **2010-2020: INTERIM SERVICES PROVISION:**

- **Approach:** The revised approach shifted to upgrading households in-situ with basic service and functional tenure wherever possible (in line with the 2004 national Upgrading of Informal Settlements Programme – UISP) . Significant basic/interim services delivery was achieved (see subsequent slides).
- **Challenges:** Settlements continued to expand and densify. Living conditions in most settlements remained poor. The cost of ‘interim’ services grew but there was limited reworking of space in order to optimise the urban form. Settlements remained outside of the municipality’s planning frameworks. More efficient use of funding and resources became necessary to address sustainability challenges.

- **2020 ONWARDS: OPTIMISED CITY-WIDE INCREMENTAL UPGRADING:**

- **Approach:** Differentiated, city-wide approach as per settlement categorisation. E.g. Services frame approach for dense, well-located settlements. E.g. Incremental planning solutions. E.g. Optimised pipeline planning and prioritisation. E.g. Expanded partnerships e.g. with CSOs. E.g. alternative housing typologies which enable use of steep well located land.
- **Challenges:** Coordination between municipal departments. Funding constraints. Regulatory inflexibility e.g. regarding building standards.

BREAKING NEW  
GROUND (BNG)  
HOUSES – LOW  
DENSITY



## 1. Conventional Housing Approach in eThekweni



**BREAKING NEW  
GROUND (BNG)  
HOUSES –  
MEDIUM  
DENSITY**



**1. Conventional Housing Approach in eThekweni**



# Incremental Upgrading: Service delivery to Date

- **Communal ablution facilities (CABs):** More than 1,507 units delivered benefiting +113,000hh in +370 settlements.
- **Electricity:** More than 102,000hh benefiting from electrical connections - 226 settlements fully electrified and 45 partially electrified.
- **Water supply** (standpipes & via communal ablutions) to most settlements including 'relocation' settlements: at least 148,000hh within approx 231 settlements.
- **Roads, footpaths & storm-water (RFS):** 26,500hh in 40 settlements; +32km road, +27km footpaths



## 2. Interim services approach in eThekweni



# Optimized Approach to Upgrading

- **INCLUSIVE & CITY-WIDE** – reaches ALL informal settlements
- **INCREMENTAL** – improvements over time
- **IN-SITU** – relocations a last resort
- **PARTNERSHIP BASED** – municipality, communities, CSO/NGOs, universities etc.
- **PARTICIPATIVE** – communities are co-drivers
- **PROGRAMMATIC & AREA-BASED** – as opposed to project-delivery focussed
- **DIFFERENTIATED** – addresses a range of key local priorities, not one-size fits all
- **FLEXIBILITY** – statutory and regulatory, working with not against informality

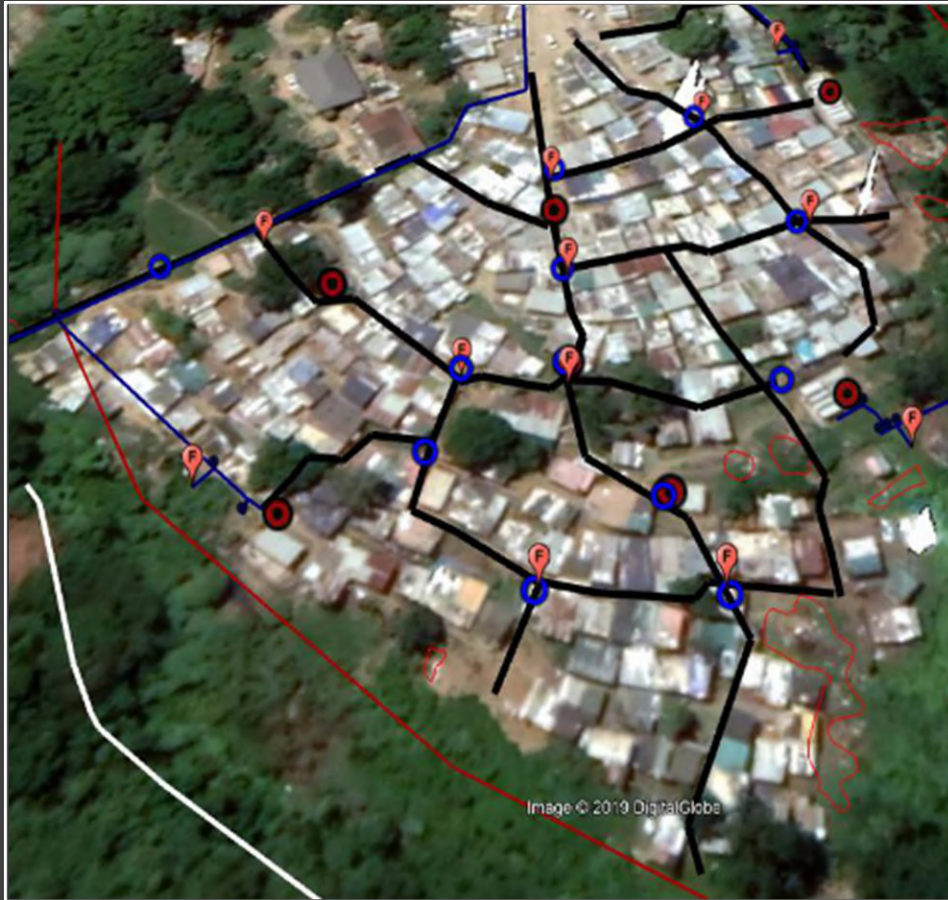




# 3. OPTIMISED INCREMENTAL CITY-WIDE APPROACH

- **Optimised services frame approach for dense B1 settlements** – integrated services frame within settlements, reworking the urban form.
- **New incremental land rights and planning arrangements** – landowner notices, incremental bylaw, incremental zones, SDF designation – conventional planning/township establishment/zoning not viable.
- **New servicing standards/norms** – e.g. for shared services, pedestrianised access etc.
- **New alternative, double story typology** – lightweight, works on steep slopes, people can build for themselves using familiar materials and technology.
- **Incremental individual tenure** – e.g. municipal occupancy or tenure certificate (as next step up from non-individual administrative recognition which is already in place)
- **Improved procurement / SCM solutions** – faster, integrated delivery, can accommodate changes in scope, timetables and moving resources away from blocked/non-performing projects
- **Strengthened capacity and institutional arrangements** (including improved transversal coordination & IGR, additional dedicated in-house capacity, NGO partnerships)
- **Strengthened and sustained community participation** – linked to the above, need dedicated capacity, ongoing engagement over time, upgrading not a once off project
- **Strengthen parallel support programmes** for key social facilities/services, livelihoods, economy e.g. early childhood development, owner-driven housing improvements, micro-enterprise etc. Partnerships key.

# Example 1: Optimised servicing: Services Frame for dense, well-located in-situ upgrades



- **Significant numbers of these settlements with severe vulnerabilities. Conventional (formal) upgrading not possible** due to densities, non-qualifiers, lack of alternative land, steep slopes, geotech., costs and other factors.
- **Optimised approach is therefore the establishment of main service access ways within the settlement with:**
  - Communal ablutions and wash facilities
  - Fire hose points
  - Solid waste bins
  - Footpaths and storm-water controls
  - Electricity.
- **Limited re-blocking and relocations required to liberate the required space.**
- **Establishes a more functional urban form for future consolidation and improvement, including owner-driven housing improvements.**

# Parkington,

informal settlement, eThekweni  
municipality, Ward 34,  
Incremental Upgrading Service  
Upgrading **Concept Plan**



## “iQhaza Lethu”

*An informal settlement upgrading  
partnership initiative co-funded by  
the European Union*

### Proposed upgraded services

Roads	
Footpaths	
Lighting	
Water pipes	
Sewer pipes	
Water hose points	
Standpipe Drainage Facility	
Existing Sewer pipes	
Existing communal ablutions	
Mini communal ablutions	
Solid Waste bins	
Solid Waste Containment area	
Bridge	
Project Boundary	
Fire Hydrant	



Date : February 2020  
Drawn by : iQhaza lethu - team

100 m

## Example 2: Incremental planning and land rights solutions

- **POLICY:** Policy / Standard Operating Procedures for incremental planning solutions developed and close to finalised. Noting that many settlements are on private land and that land acquisition, formal township establishment and planning approvals not rapidly achievable across 580+ settlements.
- **PRIVATE LAND:** Provision of services on private land in advance of land acquisition (based on two legal Senior Counsel Opinions and extensive internal engagement) subject to:
  - Settlements having been categorized (A,B1,B2,C).
  - Categorization having been reflected in the SDF (or at least in progress).
  - Notice having been served on the landowner, a period for response given and any objections considered and noted.
  - A land acquisition programme being at least in the process of establishment.
  - A statutory servitude having been established (or in progress) by means of an appropriate bylaw in order to protect municipal services.
  - Finalization of incremental land use SOPs (preferably).
- **SPATIAL PLANNING:** All settlements reflected in SDF as per their categorisation (A,B1,B2,C) with details of split categorisation (e.g. 80%B1, 20%B2). Incremental land use arrangements to be reflected once finalised.

## Example 2: Incremental planning and land rights solutions continued...

- **LAND USE PLANNING:** The following land use categories to be established (supported by social process / social compacts rather than legal enforcement):
  - **Temporary Development Area (TDA) for deferred relocations (B2):** The priority should be on the mitigation of imminent health and safety threats (e.g. fire, flooding, solid waste, sanitation) and provision of emergency basic services (e.g. communal ablutions and standpipes, fire protection and solid waste management, early flood warning or flood attenuation measures etc.).
  - **Incremental Development Area level 1 (IDA1) for in situ upgrades (B1):** Minimum, 'entry-level' land use category. This should be regarded as a temporary, incremental planning solution. The level of service would typically be higher than for TDA1, services should be undertaken in such a way as to minimize abortive costs and form part of longer term permanent solutions to the extent possible, and efforts should be made where necessary to rework space to create main access ways (also known as partial re-blocking or the provision of a 'services frame').
  - **Incremental Development Area level 2 (IDA2):** A next phase alternative 'less-formal' permanent or semi-permanent solution on sites where formal town planning and township establishment are not viable in the medium term once the following preconditions have been achieved: land has been acquired; settlement layout (as household/site level); and subject to other social preconditions such as a list of all resident households and the absence of local contestations (e.g. relating to sub-rentals). Can enable the possibility of incremental individual tenure solutions once they have been developed and the capacity for local administration is in place (e.g. a municipal certificate of occupation or a municipal tenure certificate).

# Example 2: Incremental planning and land rights solutions continued...

## **ADDITIONAL LAND USE NORMS FOR ALL INCREMENTAL UPGRADES (IDA, TDA1 & TDA2):**

- **Payment for services:** Residents should be expected pay for certain services. Currently the only service residents pay for is electricity (once their informal structure is connected). Other shared services such as communal ablutions are provided free of charge. The cost of operating maintaining services within informal settlements is high and financially unsustainable for the Municipality and new solutions need to be found, including the possibility of residents paying for a high level of shared service where it can be located closer to their dwelling (e.g. a mini-CAB shared by a small number of households).
- **Illegal connections:** Residents should desist from illegal connections including to the municipality's electrical, sewer or water grid. This relates closely to the issues of payment for services and operational sustainability thereof.
- **Further occupation of land:** Residents should assist the municipality in preventing further occupation of land and further densification of the settlement, especially where the settlement is already dense and further settlement makes servicing more difficult. This includes leadership immediately reporting any new settlement to the Municipality's Land Invasion Unit and working constructively with the Unit.
- **Responsible use of municipal services:** Residents should use municipal services responsibly and with appropriate care (e.g. avoid throwing foreign matter into toilets, desisting from vandalism and illegal connections). Community leadership should report incidents of vandalism or faults with services immediately to the Municipality and assist in discouraging such behavior. Local, community-based maintenance approaches can be considered to assist in achieving this objective.
- **Solid waste:** Residents must ensure that their own household solid waste is placed in black rubbish bags and moved to the nearest municipal collection point either inside or on the edge of the settlement. The Municipality will assist wherever possible in providing a certain number of black plastic bags to settlements and might also assist with stipends for waste collectors, but the responsibility remains with each household to manage its solid waste responsibly.
- **Building materials:** Residents should desist from using highly flammable building materials such as plastic and cardboard. At IDA2, it should be agreed that residents endeavor to build to a higher standard (e.g. either using the norms for BNG housing where sites are relatively flat or the lightweight wood-frame housing typology recently developed for steep slopes in eThekweni) and that they utilize build double story structures where possible to make more efficient use of space and maintain access ways. Standard designs for selected typologies should be provided by the municipality to residents. Consideration will be given to establishing a PHP-type housing support programme to enable residents to build higher quality housing themselves

# Example 3: Prioritised upgrading pipeline planning

- **PRIORITISATION CRITERIA:**

- **Vulnerability:** extent of health and safety threats, using net density as one of the means to apply this criterion.
- **Services Deficit:** the various components of Incremental Services that are absent or lacking due to inefficient ratios/thresholds of household numbers relative to service points.
- **Population Coverage:** the larger the settlement in terms of the number of households, the greater the efficiency of delivery and return on investment.
- **Age of Settlement:** how long have people been waiting for services.
- **Community Readiness:** how stable the community and leadership are and their appetite to embrace the new, incremental approach.
- **Location:** how well located the settlement is, noting the importance of addressing spatial inequality and inefficiencies and the constraints relating to over-extending the reach of the municipality's bulk infrastructure networks.

- **DATABASE:** Database containing all 581 settlements including: land information, services delivered, site constraints etc. developed. Community base data solutions being piloted e.g. regarding services problems. New municipal data systems under development.

# Example 3: Prioritised upgrading pipeline planning continued...

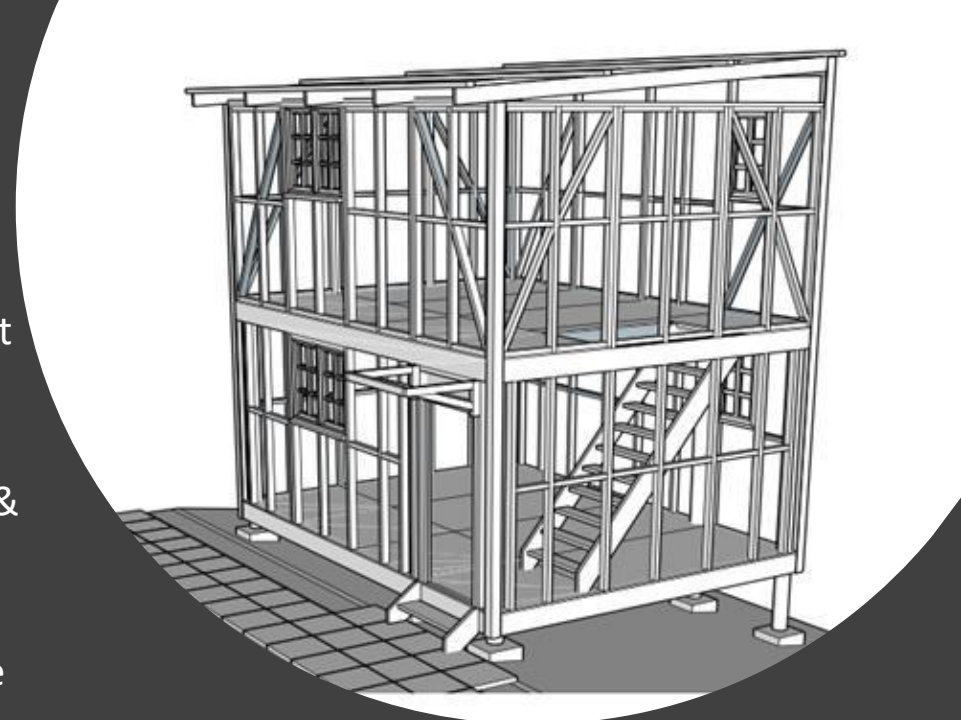
## **DIFFERENTIATED INCREMENTAL UPGRADING PIPELINE:**

- **Prioritisation for urgent mitigations of severe (life-threatening) risk/vulnerability:** Life-threatening vulnerability is the overriding criterion. These responses should receive top priority, regardless of other criteria or settlement categorization. All households at severe and imminent risk of loss of life should be identified and emergency mitigation strategies determined which may include immediate relocation or other mitigations e.g. flood attenuation measures or early flood warning / response.
- **Prioritisation for provision of basic emergency services for B2 settlements (11% of all settlements):** These are provided mainly to mitigate general health and safety threats and meet minimum basic service standards. Given that these settlements are not going to be upgraded in situ (i.e. they will eventually be relocated), the criterion of location would receive less weighting than for B1 settlements. **Services deficit is the primary criterion** with settlement size, age and location being 'modifying' criteria.
- **Prioritisation of basic services for B1 settlements (77% of all settlements):** These are provided on the same basis as the above. Wherever possible, services would be provided in a more integrated fashion and with attempts to avoid abortive costs and take into account long-term planning solutions. **Services deficit remains the primary criterion** with settlement size, age and location being 'modifying' criteria.
- **Prioritisation of partial re-blocking and services frames for well-located B1 settlements:** This approach is for well-located B1 settlements which are dense or approaching high density and where pre-emptive action is required. Responses may include the integrated design of services, partial re-blocking and installation of a services frame within the settlement and supporting improved owner-build housing typologies. **Good location is the primary criterion** with moderating criteria being density, services deficit, size of settlement and age.



# Example 4: Alternative housing typologies

- **Acute scarcity of well-located land** in eThekweni. Most dense settlements are well-located but the land is steep. Conventional housing on these sites is not viable or cost effective.
- **Double-story, low-cost, lightweight, timber-frame structure**, micro-pile foundations & external metal cladding – can function effectively on steep slopes.
- **Enables use of well-located land** and in-situ upgrades on sites which would otherwise not be possible.
- **Imbeds within communities a different way of building for themselves** (either organically or via with PHP-type support). Units are built on-site by local builders, artisans and workers utilizing materials readily available from any local hardware store.
- **Units are safe and engineer-certified**, developed by an experienced team of architects, supported by a fire report from a fire specialist and informed by inputs from municipal building inspectors and numerous other stakeholders. Units are structurally strong, safe in terms of fire, and meet SANS codes for a timber structure in all material respects.



Demonstration unit at Parkington finalised and handed over in September 2020



# REMAINING CHALLENGES, RISKS AND LESSONS

- **FUNDING:** Severe fiscal constraints. Therefore critical to optimise available funding and ensure optimal distribution of funding across different human settlements programmes. In particular – sufficient funding for incremental upgrading which will necessitate some reduction in funding for formal housing provision. Greater flexibility is required in respect of some grant instruments e.g. removing formal planning milestones from the USDG.
- **OPERATING AND MAINTENANCE:** Services experience high ‘wear and tear’, urban poor can’t afford to pay for services, and the municipality has insufficient funding to carry these costs into the future. Solutions may include stronger social processes, more responsible use of services by communities, community-based maintenance and an increased portion of grants being made assigned for O&M.
- **COORDINATION:** Difficulties in achieving effective coordination across multiple municipal line departments involved in upgrading (housing, roads, electricity, water and sanitation, solid waste etc.). Informal Settlement Incremental Upgrading Forum (ISIUF) well-established but more work required.
- **CAPACITY CONSTRAINTS:** Upgrading requires sustained engagement, planning, and follow through over periods of many years. Most municipal line departments are stretched to the limit addressing services backlogs.
- **PROCUREMENT:** Government procurement processes are slow, inflexible and cumbersome. More work is required in this area to enable government funding to flow more quickly and effectively.
- **RIGID NORMS AND STANDARDS:** E.g. relating to services, town planning, tenure and building standards. The Municipality cannot overcome these on its own e.g. in terms of achieving more flexible building standards. Further engagement with national government required.
- **FUTURE INFLUX:** Settlements continue to grow and land continues to be invaded. Solutions might include more effective protection of vacant land and reduction of densification of existing settlements through stronger social process. Serviced land release affords limited scope in eThekweni due to a lack of available well-located land.

# REPLICABILITY POTENTIAL FOR OTHER CITIES IN SOUTH AFRICA

- Significant degree of replicability in multiple areas including in respect of:
  - Incremental planning solutions
  - Dealing with privately own land
  - Services frame for dense well located settlements
  - Alternative housing typologies (lightweight, double story)
  - Flexible servicing in particular shared services and pedestrianised layouts
  - Prioritised pipeline planning – differentiated project pipeline based on agreed criteria

**FAIZAL SEEDAT**

**SENIOR PLANNING MANAGER HUMAN SETTLEMENTS**

**ETHEKWINI MUNICIPALITY**

[seedatf@durban.gov.za](mailto:seedatf@durban.gov.za)

+27 (0)31 311 3288



**MARK MISSELHORN**

**CEO**

**PROJECT PREPARATION TRUST OF KZN**

[markm@pptrust.co.za](mailto:markm@pptrust.co.za)

+27 (0)31 305 1288

