



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

# Innovative servicing, planning and housing Solutions for dense, well-located informal settlements (April 2022)

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# 1. The need for a new and optimised servicing approach

## 1.1. Need for new approaches and iQhaza role

New approaches for more effectively planning and servicing dense, well-located informal settlements were collaboratively developed by iQhaza Lethu between 2019 and 2022. There are large numbers of these settlements in the eThekweni Metro which have been designated as permanent and suitable for in-situ upgrading over time (i.e. category B1 settlements). They are often in prime locations and typically have good access to social facilities and employment opportunities. Most are well-established, usually dating back more than 20 years. Best-located category B1 settlements (located within the prime investment corridor or urban zone) constitute 35% of all settlements and 31% of all households residing in the City (97,113 households in 202 settlements out of a total of 587 settlements and 312,000 households). However, the high densities and steep land characteristic of these settlements makes them difficult to service and upgrade. There is little or no space to establish services inside the settlements which typically face high levels of vulnerabilities relating to fire, disease, overcrowding, uncontrolled solid waste and squalid living conditions. Conventional upgrading in these settlements (through formal housing, conventional services and township establishment) is not possible due to such factors as their high densities, the presence of non-qualifiers, a lack of alternative land to relocate those who cannot be accommodated on-site, steep slopes, challenging geotechnical conditions, and insufficient budget. These strategically-important settlements have therefore been developmentally 'locked' with no improvements possible and increasing densification and deterioration of living conditions.



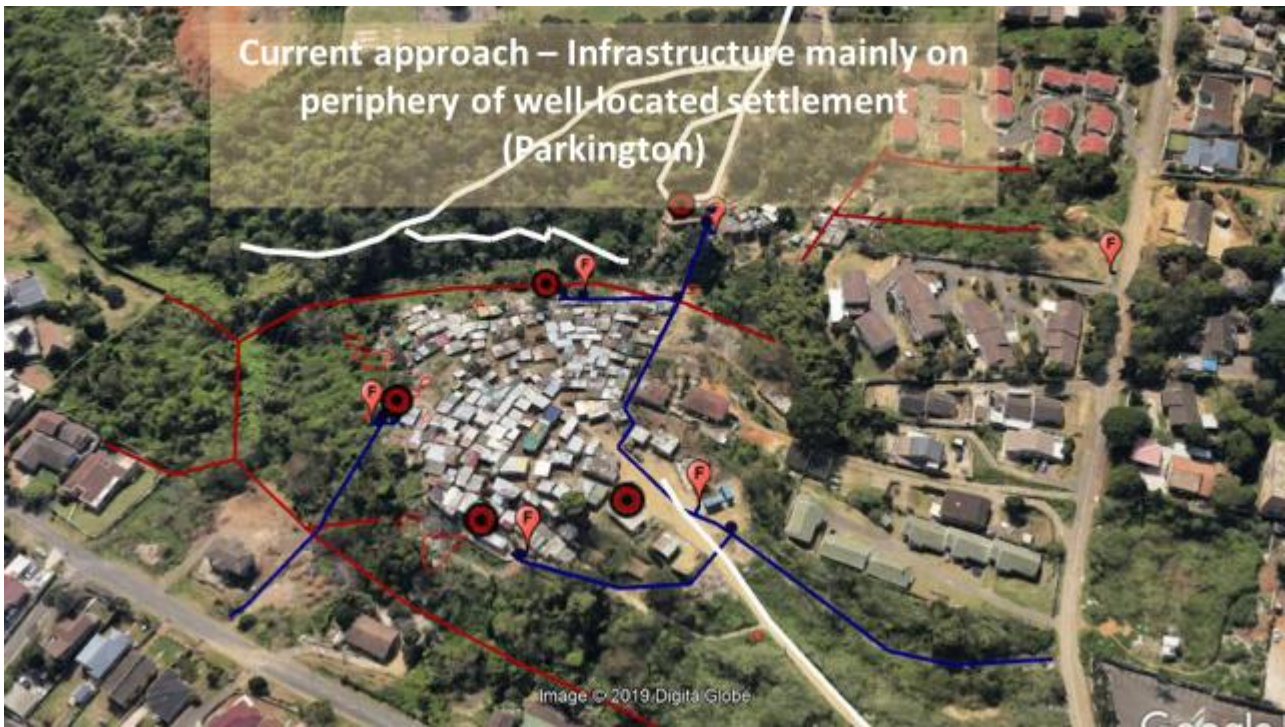
**Parkington Informal Settlement (Dec. 2020) showing high densities, steep slopes, good location and demonstration 'LIFT' housing unit**

## 1.2. Problems with the historical approach

Historically, basic services were provided by eThekweni Municipality to informal settlements as an interim or temporary solution. The servicing was generally undertaken in a rapid, reactive and non-integrated, fashion. Most of the shared services (such as water, sanitation, solid waste and fire hose points) were thus provided at the periphery of the settlements which meant limited access to residents. Although the Municipality was highly progressive and developmental in introducing its ground-breaking 'Interim Services Programme' in 2010, there was little or no systematic reworking of space and no incremental planning or individual tenure arrangements established. The initial thinking was that the services would be temporary (interim) in nature and that the provision of formal housing and formalisation would be the eventual solution. However, this is now recognised at both Metro and National levels, as being impossible due to acute funding, land, bulk services and other constraints. Conventional upgrading in these settlements (as noted, through formal housing, conventional services and township establishment), is therefore not possible due to the various factors indicated. The Municipality has also historically been hesitant to introduce services (especially water and sewer pipes) inside settlements due to a fear of uncontrolled illegal connections, although in the long run it is generally accepted that individual service connections (e.g. for toilets) are cheaper from an operation, maintenance and asset life cycle point of view compared to shared services (such as communal ablutions).

## 1.3. New theory of change

A different approach and theory of change is thus required for these strategically-important settlements and there is growing acceptance that such settlements will remain 'developmentally locked' unless the land is utilised more efficiently, optimised services provided and a better platform thereby established for residents to improve their own housing over time by means of incremental planning and alternative tenure arrangements. There are also additional environmental and other indirect costs of not improving the services within settlements (e.g. pollution of rivers and streams and blocking of municipal storm-water systems with unmanaged solid waste). These additional risks may outweigh the concerns over illegal connections, which can potentially be better managed by means of stronger social processes and more effective locally-managed and locally-accountable operating and maintenance solutions. In addition, the costs of interim services, both from a capital and maintenance point of view, have increased significantly over time to the point where they are no longer regarded as fiscally sustainable in their current form. It is broadly recognised that more permanent and sustainable solutions need to be found. A future needs to be envisioned where space is reworked over time and people have the planning and tenure security to invest in their own improved housing. Using improved services, incremental re-blocking, incremental planning arrangements with more flexible land-use arrangements, alternative forms of individual tenure, and accommodation of alternative housing approaches and typologies as incentives and points of leverage, it is anticipated that substantial change can be achieved over time in terms of spatial transformation, urban inclusion, the building of housing and land assets in the hands of the urban poor and ultimately a more functional relationship between the municipality and the urban poor, including the increased payment for services and more responsible citizenry.



## 2. Establishing a Services Frame

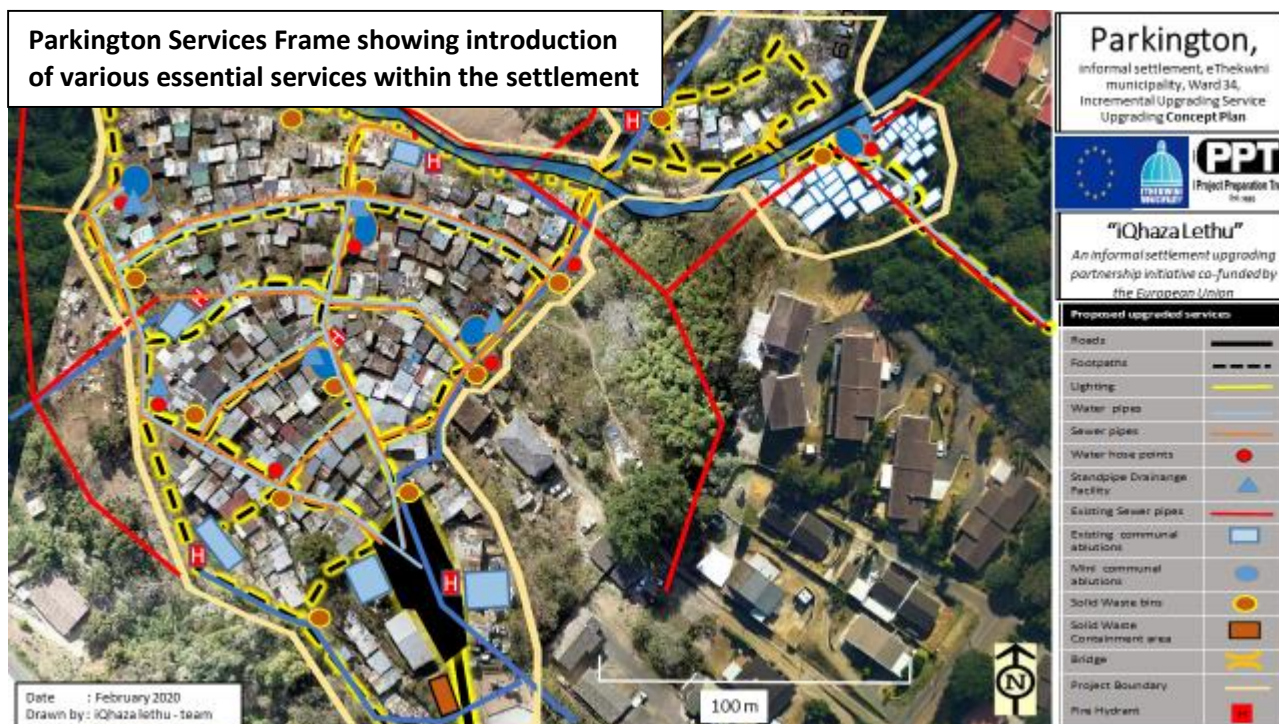
### 2.1. Overview of services frame

The new 'services frame' approach establishes service access ways inside the settlement which not only improves the proximity of essential services to residents but, importantly, also establishes a more functional urban form for the future, laying the platform for consolidation of sub-blocks over time and eventually individual services connections. The services frame breaks the settlement up into more manageable 'blocks' and brings essential services into the settlement so they are more accessible, instead of being located largely at the edges. The approach has been the subject of extensive engagement and negotiation with Municipal Line-Departments and communities and is now gaining substantial acceptance as a necessary and optimised way of servicing these settlements. It is soon to be piloted on three IL pilot projects (Parkington, Havelock, Ezimbeleni) along with partial relocations to make way for the frames and associated, adjacent relocation sites with services, pedestrianised layouts and alternative technology lightweight LIFT houses.

Typical services provided on the frame include: footpaths, storm-water controls, mini-communal ablutions, fire hose points, standpipe wash facilities, electricity, solid waste bins, and a solid waste containment and collection area at the roadside for municipal collection of waste. All services, except electricity, are initially communal. However, there is the potential for future individual water and sewer connections once sewer and water pipes are accessible and as owner-driven consolidation (improvement) of housing occurs, incremental planning arrangements are implemented and incremental forms of individual tenure are established. Informal structures are electrified once the services frame is established (except for houses in flood-lines or under power lines).



The services frame approach can potentially resolve many of the problems associated with well-located category B1 settlements, thereby unlocking a strategic opportunity for more inclusive city-building and laying the platform for a different and improved urban form in the future. Limited re-blocking, relocations and reworking of space is sufficient to establish the services frame (compared to conventional, formal upgrading where large scale relocations typically occur). Consolidation of intra-blocks can occur as a later phase along with owner-driven housing improvements and possible individual connections to water and sewers. The use of the alternative, lightweight, double story housing typologies, such as those being piloted by iQhaza Lethu, plays an important role in releasing the space needed for the services whilst at the same time enabling more functional owner-driven housing consolidation over time.

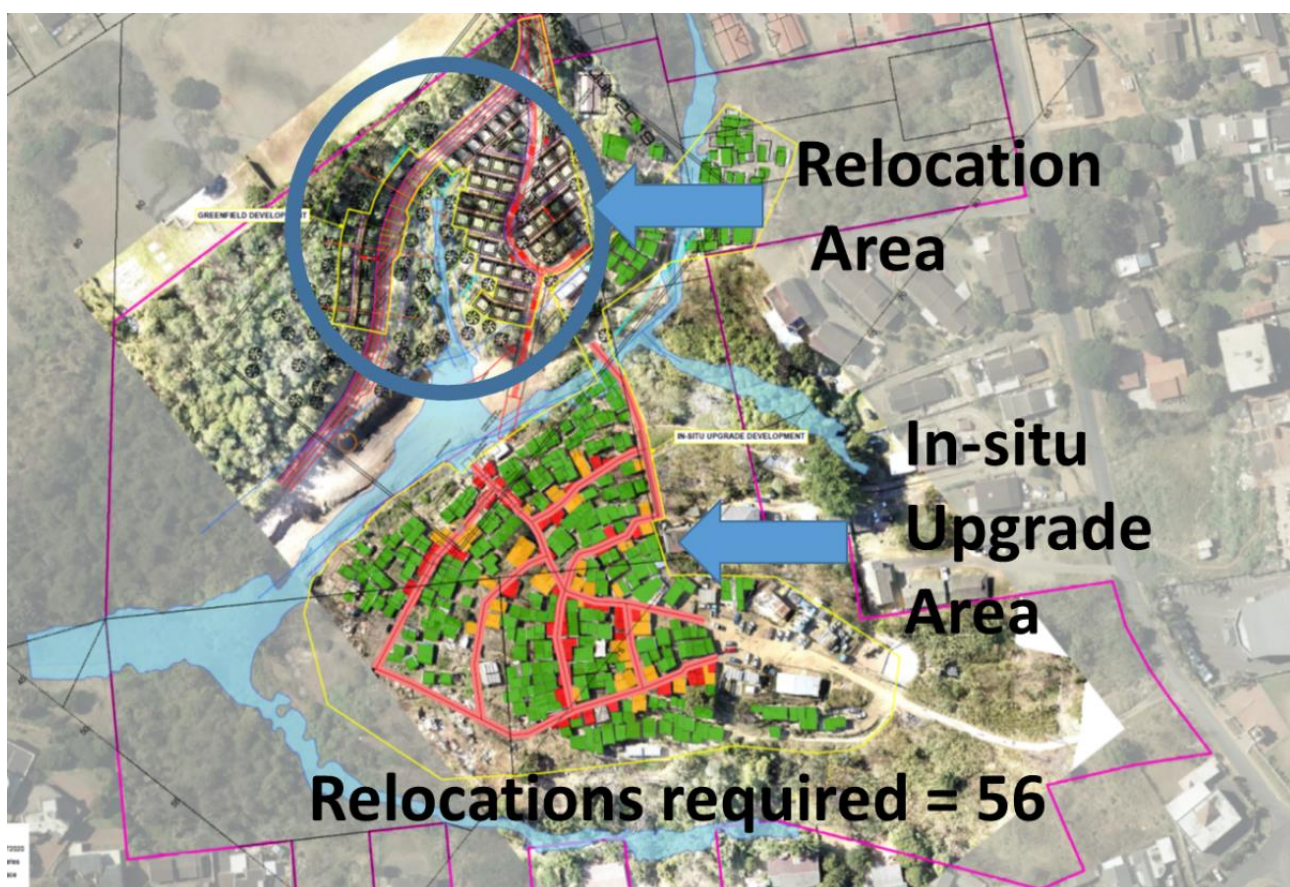


## 2.2. Partial re-blocking and relocations

In order to establish a services frame, a certain number of households typically need to be relocated or moved. This is known as partial re-blocking and releases sufficient space to enable the establishment of the services frame along key alignments within the settlement. Some of the affected households can usually be accommodated by re-aligning a structure or by moving it to another piece of vacant land within the settlement, but in most settlements, due to the high densities and limited space, some households also need to be moved to alternative land. When this is necessary, relocation to adjacent land (as is occurring in the three iQhaza Lethu relocation pilot projects) is by far the best solution, rather than moving households to other localities which results in significant disruptions to livelihoods and social networks. Across all three pilots, only 122 households need to be relocated to adjacent relocation sites in order to establish functional services frames in the three settlements.

### 2.3. Services frame and relocation pilot project sites

Three project sites were identified in 2019 for piloting the services frame approach at Parkington, Havelock and Ezimbeleni settlements. These settlements are all well-located and dense and improved services cannot be provided without partial 're-blocking' and the relocation of small numbers of households. Adjacent relocation sites were therefore identified and planned for each of the settlements in 2020. The construction of services and 122 alternative typology units on these three relocation sites will occur during 2021 and the construction of the three services frames on the adjacent settlements will occur during 2021 and 2022 thereby providing improved sanitation, solid waste management, fire controls, footpath access and electricity for the entire communities. All required environmental assessments, approvals and exemptions for the three relocation sites have been obtained and the land is already owned by the Municipality. Extensive engagement between the iQhaza Lethu / PPT team and various Metro service delivery line departments has occurred including those dealing with roads and footpaths, water and sanitation, solid waste and electricity.



The three relocation sites were placed on the national list of Covid-19 priority projects (having received special priority because of the drive during 2020 to de-densify certain settlements and open up space for services such as water and sanitation). It is however emphasised that the rationale for these three relocation sites predated Covid-19 and arose from the need for partial 're-blocking' and a limited number of relocations in order to open up space for improved services. There were significant delays with developing the relocation sites due principally to: slow procurement processes; delays in securing buyin to the new LIFT house typology; fiscal constraints; NIMBY issues relating to Havelock settlement which also indirectly impacted Parkington which is also in ward 34.

Unit type	Floor area (m2)	Total units	Parking ton	Ezimbeleni	Havelock
Intermediate single storey	15,6	66	15	21	30
Intermediate double storey -internal stair	30,7	46	32	14	0
Medium double storey – internal stair	34,4	8	8	0	0
Large double storey - internal stair	44,6	4	4	0	0
Large double storey semi-detached	50,0	22	0	0	22
		<b>146</b>	<b>59</b>	<b>35</b>	<b>52</b>

Settlement	Sub-area	Total	Tot reloc sites	Tot frames	15,6	30,7	34,4	44,6	50 semi
Parkington :	Relocation	59	59		15	32	8	4	0
	Frame	0		0	0	0	0	0	0
	<b>subtotal</b>	<b>59</b>	<b>59</b>	<b>0</b>	<b>15</b>	<b>32</b>	<b>8</b>	<b>4</b>	<b>0</b>
Havelock :	Relocation	37	37		15	0	0	0	22
	Frame	15		15	15	0	0	0	0
	<b>subtotal</b>	<b>52</b>	<b>37</b>	<b>15</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>
eZimbileni :	Relocation	25	25		15	10	0	0	0
	Frame	10		10	6	4	0	0	0
	<b>subtotal</b>	<b>35</b>	<b>25</b>	<b>10</b>	<b>21</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>Total&gt;</b>	<b>146</b>	<b>121</b>	<b>25</b>	<b>66</b>	<b>46</b>	<b>8</b>	<b>4</b>	<b>22</b>

## 2.4. Rethinking relocation sites as incremental development areas

The inclusion of the three relocation pilots on the national Covid-19 informal settlement de-densification priority list in 2020 afforded an opportunity to share important learning with the National Department of Human Settlements (NDHS) regarding a different and more appropriate approach to de-densification by means of partial re-blocking in order to enable optimised services establishment in accordance with UISP principles (i.e. incremental, in-situ upgrading with minimal relocations). There is a realisation that relocations sites are seldom temporary but instead typically become permanent settlements. The three iQhaza Lethu relocation sites have been designed with the long-term in mind with the housing unit and services being of a good standard, capable of future consolidation and improvement. There is the potential for all three sites to be transitioned to permanent status once incremental planning arrangements are in place at which time incremental tenure solutions can also be implemented.

### 3. Alternative 'LIFT' House Typology

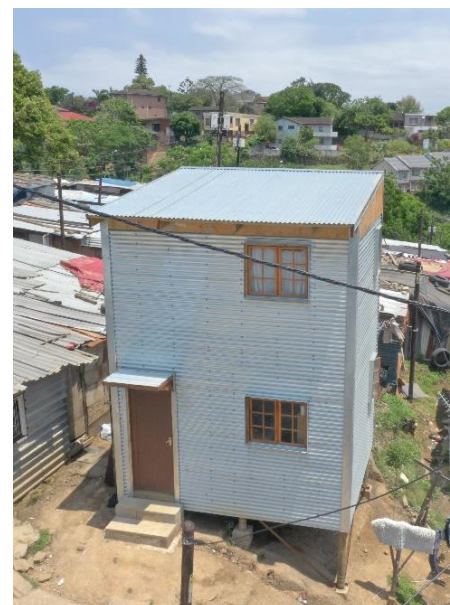
#### 3.1. Development of the typology

An innovative lightweight, low-cost, double-story housing typology was successfully developed by iQhaza Lethu, PPT and a team of architects, a structural Engineer and fire safety specialist working in collaboration with the Human Sciences Research Council (HSRC) in 2019/2020. DesigncoLab was the appointed architectural service provider. The unit type has been termed the 'LIFT' House type (this being the acronym for Light-weight, Improved, Fire-safe, Timber-frame) or 'Indlu-lamithi' in isiZulu (meaning 'the wood frame house which stands tall' and also the word for a giraffe). The house is compliant in all material respects with the building standards for a timber frame structure (SANs code 10082), is engineer-certified, and has been certified as safe from a fire safety point of view by an independent fire specialist. The house is lightweight with a timber frame, galvanised metal cladding, micro-pile foundations and internal gypsum cladding. Eight main sub-types of different sizes were developed, ranging from 15sqm to 45sqm, with single and double story variations.



#### 3.2. Key LIFT design principles

The LIFT house enables the safe utilisation of steep land, typical of eThekweni's best located informal settlements. It utilises materials which are low cost, available at local hardware stores, lightweight (and thus easy to carry into areas without vehicular access) and utilizes building methods which are familiar to local community builders. The units are designed so that a second floor can be added later to a single story unit. An addition semi-detached variation was also developed. It is hoped that residents of informal settlements will, over time, start building their own improved housing using LIFT-type building principles and methods as incremental planning and alternative tenure arrangements are put in place and improved municipal services are provided. LIFT is not intended as an alternative type of state-funded housing delivery.

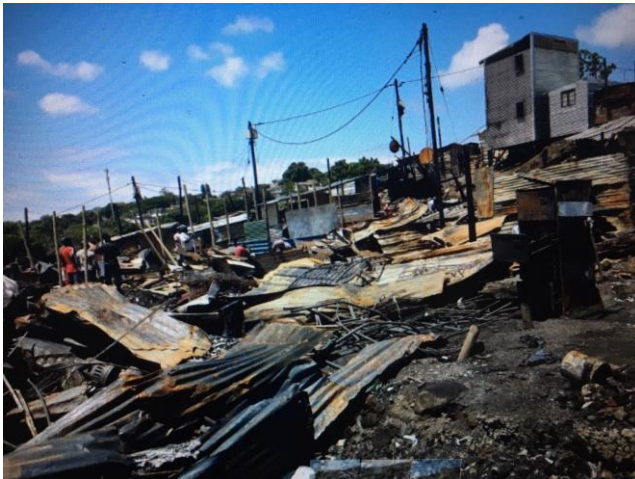


Indlu-lamithi housing units are designed to be suitable as a permanent housing solution and are of a high standard. Even though the units on the three pilot relocation sites will be delivered as part of an emergency housing response a transition to a permanent status is envisaged once eThekweni's incremental planning protocols are finalised and incremental planning and tenure arrangements have been implemented for the three relocation sites. As noted previously, the houses conform with SANs code 10082, are engineer-certified and their design has been informed inputs from two independent fire specialists and have been certified as fire-safe.



### 3.3. Demonstration unit at Parkington & fire event it survived

A successful demonstration LIFT unit was built at Parkington settlement in 2020. It was well received by the owner and other residents. The beneficiary, Mrs Lovina Khasa, was born in 1963 and has been a resident in Parkington for more than 30 years since 1990. Refinements to the design were subsequently made based on multi-stakeholder feedback. 146 of the houses (of various sizes) will be built on the Parkington, Havelock and Ezimbeleni relocation sites and related services frames in 2022/23 in order to open up space for essential services frames in the adjacent informal settlements. Furthermore, the unit survived a significant fire event in December 2021 in which the exterior of the structure was significantly scorched with damage to glazing and some singeing of window frames and substructure timbers and melting of some of the insulation between the external and internal cladding. However, the unit did not burn and was declared safe by the professional team's structural engineer with the damage being only superficial.



**Inside of the demonstration LIFT / 'Indlu-lamithi' house before and after occupation by Mrs Lovina Khasa (57 years). She has resided in Parkington for more than 30 years (since 1990). She is a grandmother and has not received an 'RDP' house.**

### 3.4. LIFT as a design solution to unlock steep, scarce, well-located land:

The LIFT house typology is a response to the need for an appropriate building solution for steep, densely-populated and well-located informal settlements in order to optimise scarce land, open up space for services and to enable residents to improve their own housing over time. The foundations and weight of conventional housing render it unviable on these sites because it will typically destabilise the steep slopes and will make poor use of the limited land available (unless unaffordable multi-story units with costly foundations are utilised). By contrast, these lightweight, low-cost units with micro-pile foundations do not require excavations, cut and fill or retaining walls and can function safely with minimal disturbance to the site. The units are thus specially designed to unlock well-located land which is otherwise undevelopable and extensive collaborative work has been undertaken over a period of more than a year to ensure that they fulfil this function in an appropriate and cost-effective fashion.

### 3.5. Key design features of LIFT units and design refinements:

Indlu-lamithi houses consist of: a treated, sawn-timber frame with extensive bracing making the units rigid and stable in severe weather events; micro-pile foundations which minimise site disturbance; suspended timber floors; galvanised metal exterior cladding and gypsum board internal cladding with mineral wool insulation in-between; with internal timber stairs. The 146 units to be built on the three pilot relocation sites will make use of mini-communal ablutions provided by the Municipality (using a new design utilising LIFT building methods and materials), but the LIFT units can all be modified later to include an inside toilet and hand-basin when and if water and sewer pipes become accessible. The design of the units enables a more functional alternative urban form on eThekweni's typically steep sites, including in respect of improved space utilisation, physical distancing and health and safety.



The demonstration LIFT unit at Parkington has been visited by municipal building inspectors, the Housing Development Agency and NHBRC amongst other stakeholders (in addition to the inputs provided by two fire specialists and professional team). Feedback received has resulted in various refinements to the design. Detailed designs for five sub-types of the typology have been finalised ranging from single story 15m<sup>2</sup> unit (mainly for single person households and which can be later extended upwards by adding a second floor) to a 45m<sup>2</sup> double story unit (refer to summary table on following page).

### 3.6.A localised, labour-intensive housing solution:

Indlu-lamithi houses are ‘low-tech’ and utilise materials which are readily available at local hardware stores. The materials and building methods are generally familiar to residents and local builders making it easier for the units to be replicated in the future by local residents as they improve their own housing over time. The units are labour intensive, thus creating significant local employment. It is hoped that the new building system (technology) will become embedded within local communities over time and result in improved building practices in future, including the construction of double-story houses which are safe and more space-efficient.

### 3.7. Cost of units:

The base cost of the 31m<sup>2</sup> LIFT double-storey house is approximately R106,830, at a per-square-meter cost of R3,806 (for materials and labour). The costs of other unit sub-types are contained in the table below. These are based on detailed bills of quantity (BOQs) by a Quantity Surveyor in 2021. Tender prices will be available in the near future. The cost of delivering the units in a project environment will vary depending on such factors as the number of units being built, local topographic and geotechnical conditions, site establishment and materials management factors, transport costs, and relocation costs where applicable. These additional costs are typically covered under P&Gs and contingencies on the project budget. The cost of informal settlement residents building their own Indlu-lamithi housing using local builders is expected to be significantly cheaper than this due to savings on labour costs.

<b>Overview of selected Alternative Typology LIFT Units shortlisted for three eThekweni Emergency Relocation Sites - Parkington, Havelock and Ezimbeleni Settlements</b>						
Sub-type	Cost (materials + labour, excl. P&G, VAT)	Materials	Labour	Enclosed floor area (m <sup>2</sup> )	Footprint area (m <sup>2</sup> )	Cost per (m <sup>2</sup> )
Intermediate single storey, 15m <sup>2</sup> <i>(single-person households, extendable upwards)</i>	58 506	40 369	18 137	15,4	15,4	3 806
Intermediate double storey -internal stair 31m <sup>2</sup>	106 830	73 713	33 117	30,7	15,4	3 475
Medium double storey – internal stair 34m <sup>2</sup>	111 125	76 676	34 449	34,4	17,9	3 230
Large double storey - internal stair 45m <sup>2</sup>	129 518	89 367	40 151	44,6	22,3	2 904

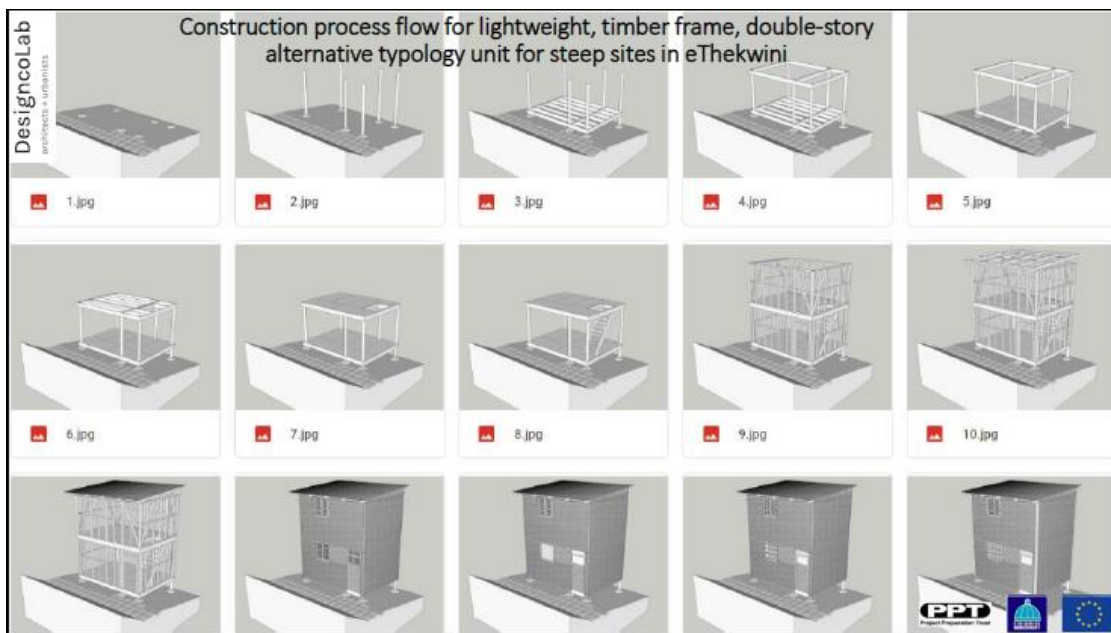
### 3.8. Value and cost-efficiency of units:

The principal value of the LIFT house type lies in its ability to unlock the more productive use of scarce, well-located land which cannot be developed using conventional low-cost housing methods. They thus enable significant ‘land value capture’ through releasing the necessary space in settlements (via partial ‘re-blocking’) to enable the establishment of a services frame which establishes an improved and more functional urban form for the future. The significant use of timber in the construction (which is a renewable resource) and the high labour content and job creation potential, are added benefits.

Care has been taken to ensure the Indlu-lamithi house type is as cost-efficient as possible whilst still being safe on steep and geotechnically-challenging terrain and meeting building and fire safety standards. A wide range of different materials, building systems and construction methods were considered in the research phase before the lightweight, timber-frame system was selected. Although the units cost a similar amount per square meter relative to conventional low income housing, it is emphasised that such housing is not a viable alternative on the afore-mentioned challenging sites.

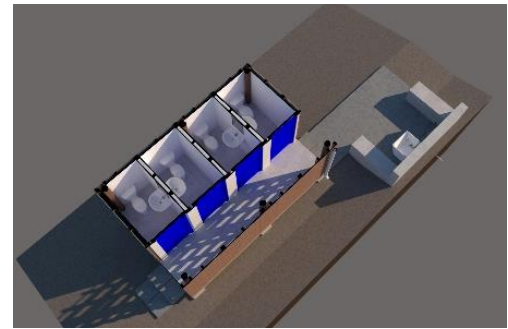


### 3.9. Labour intensive construction of units:



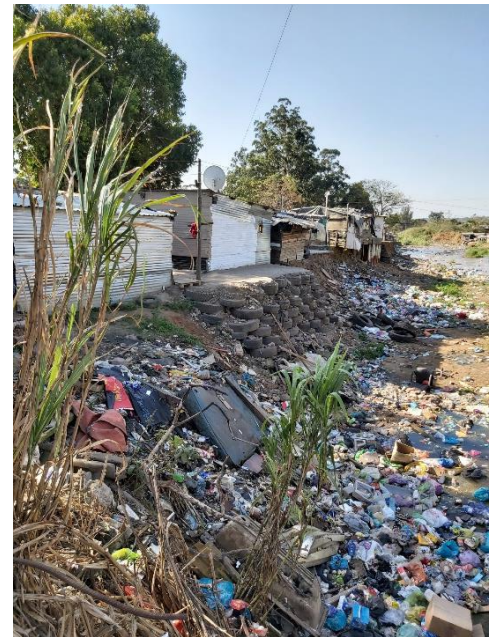
## 4. Mini-communal ablutions

In order to enable ablution facilities to be introduced inside settlements (along with services frames which include water and sewer pipes on the main alignments) innovation was required in respect of units where are significantly more compact in terms of overall footprint compared to the conventional CABs, which can function safely on steep slopes and which can be installed without vehicular access (i.e. utilising light materials which can be carried in by hand along footpaths). IL therefore commissioned the development of a mini-CAB utilising LIFT design principles. This was undertaken in consultation with eThekweni Water and Sanitation Department. The resultant unit will be piloted on two of the relocation sites (Parkington and Havelock) and potentially also in the main services frames at Parkington and Havelock. They are significantly more compact and less costly than conventional CABs. They provide four toilet pedestals and four hand-basins with an adjacent standpipe wash facility (in comparison with a conventional CAB which includes two separate male and female units with a combined 7 pedestals, 2 urinals, 4 showers, 4 hand-basins, 2 outside wash-basins<sup>1</sup>).



## 5. Optimised solid waste management

This was a key innovation of the project (also included in the City-wide Strategy) and noting that there is massive accumulation of solid waste in informal settlements (based on IL survey data, less than 50% of solid waste is removed from settlements with the rest mostly accumulating in the environment). This poses severe threats to residents, the environment, municipal infrastructure (e.g. storm-water controls and sewer pipes) and general public health including that of neighbouring formal communities. The solid waste solution consists of metal bins (raised above the ground) at regular points on the services frame within close access to all households (preferably within 30-50m) and a fenced solid waste containment area with a concrete slab and drainage for any leachate from which the municipality will collect waste on a weekly basis (both purpose-designed by IL). This needs to go hand-in-hand with a community-based maintenance solution consisting of a solid waste collector for every 200 households collecting waste approximately 2.5 days a week. For more information, refer to construction methods were considered in the research phase before the lightweight, timb



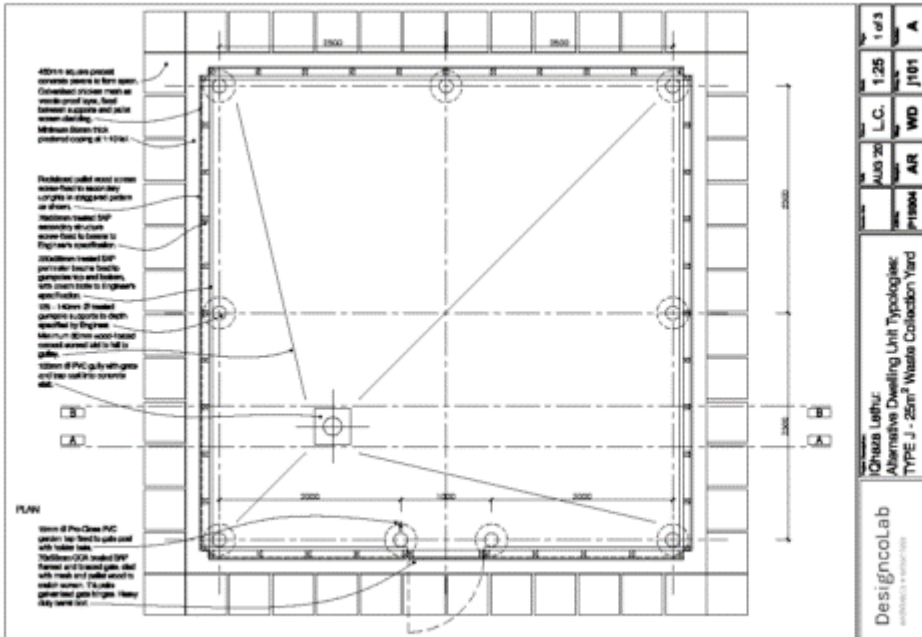
<sup>1</sup> Conventional CAB: Male unit - 3 toilets, 3 showers, 2 urinals, 2 handbasins, store room. Female - 4 toilets, 2showers, 2 handbasins. Usually outside wash trough. Cost approx.. R1.6million per pair - EWS can provide latest figures. Alternative typology mini CAB - 4 toilets, 4 handbasins, standpipe wash facility with wash trough and a tap on concrete platform - Cost approx. R200k. Initial eThekweni pedestal:hh ratio was 1:11 - 75hh per pair of CABs with 7 pedestals. There is an intention to try improve the ratio to 1:7 - 50hh per pair of CABs with 7 pedestals.



Solid waste bins inside the settlement (Quarry Rd test bins):

Cost approx. R7,5k excl. labour

Drain for leachate to be added on future bins



Improved Solid Waste containment & collection area:

Mesh fence, pallet wood screen, treated poles, gate entrance, concrete slab with drain for leachate.

Cost approx. R75k

### 6. Fire management

Fire currently poses the most serious risk to life and property in informal settlements, especially those which are dense (with a possible exception of flooding). The solution developed by IL (and included in the eThekweni City-wide Upgrading Strategy) consists of: the construction of fire hydrants within the settlement (e.g. on a services frame) and related fire training of residents (focusing both on prevention such as more responsible household energy practices, solid waste management and safer building materials as well as more effective fire detection and fire-fighting including trained fire marshals); settlement-specific fire



management plans; improved working relationships/co-operation between local fire marshals and municipal fire fighters in terms of more rapid, coordinated and effective response. It is noted that currently fire hydrants within settlements are frequently not working. There are also few hydrants inside the settlements, with most being around the edges. Poor access and lack of coordination with the local community make fighting fires even more difficult. Over the four-year period of the iQhaza Lethu Programme there were 34 known / major fire events in which over 860 structures were destroyed and 11 lives lost. Every settlement was effected.



Communities rebuild after a devastating fire in Parkington in 2021

Summary of fire events in iQhaza Lethu pilot informal settlements: Jan 2018 - Apr 2022								
No of fires	settlement name	No. of structures	Shacks destroyed	% Shacks destroyed	Household affected	No of Deaths	% deaths	Rebuild with city materials
3	Uganda Umlazi T	1 130	11	1,0%	11	0	0,00%	0
3	Dakota Beach	924	34	3,7%	39	1	0,11%	18
3	Quarry Road	1 119	137	12,2%	137	3	0,27%	0
6	Ezimbeleni	664	73	11,0%	73	2	0,30%	27
6	Bhambayi	1 500	29	1,9%	32	2	0,13%	0
2	Progress Place	537	7	1,3%	7	0	0,00%	0
4	Hololo City	406	9	2,2%	8	0	0,00%	0
1	Havelock	296	220	74,3%	220	0	0,00%	227
3	Parkington	324	180	55,6%	210	3	0,93%	60
3	Palmiet	1 135	163	14,4%	120	0	0,00%	108
<b>34</b>		<b>8 035</b>	<b>863</b>	<b>10,7%</b>	<b>857</b>	<b>11</b>	<b>0,14%</b>	<b>440</b>

## 7. Regulatory issues

Although the City-wide Upgrading Strategy adopted in June 2022 (with iQhaza Lethu assistance) identifies the key areas where regulatory flexibility is required, there is still a regulatory ‘vacuum’ which needs to be negotiated and the Municipality will now need to navigate how it moves into uncharted territory (i.e. the Municipality will be moving outside the existing statutory and regulatory ‘rules’). Although the issue of dealing with private land has been successfully resolved, there are several other key remaining areas to address and more work will be required such as in respect of the implementation of incremental land use areas, more flexible building and new services norms. For example: a) the LIFT housing unit, even though it meets national building regulations in all material respects, has not yet received official endorsement because it is a new design; b) owner-driven improved housing (within the means of low income households in informal settlements e.g. using LIFT principles) is unlikely to be conventional and/or meet all building

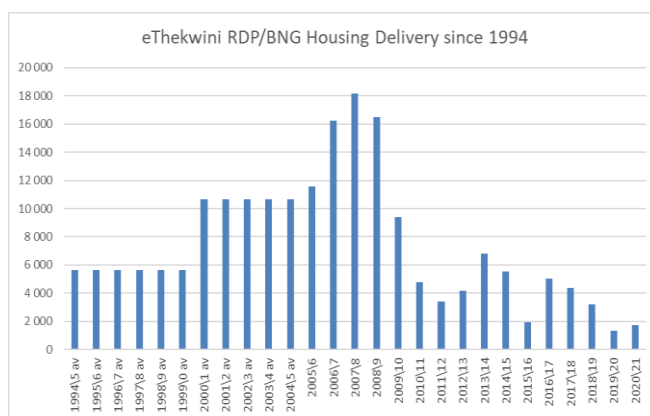
standards, yet it is important that the Municipality encourage and ‘leverage’ better quality housing and will need in some way to negotiate and agree some basic norms for what this means in practice; c) incremental land use areas (e.g. IDA1 and IDAs) will need to function by means of land use norms upheld principally via social process (as opposed to regulation) and will need to entail flexibility relative to the norms in a conventional township (e.g. in terms of no parking bays, smaller side spaces, higher site coverages etc.); d) establishing sewer pipes inside settlements will typically require shallower trenching, steeper gradients, and smaller bore pipes which fall outside of the normal design envelop.

## 8. Role of incremental planning and alternative arrangements

The optimised servicing approach needs to go hand-in-hand with appropriate incremental planning and alternative forms of individual tenure security. These are seen as critical in providing households with the confidence and incentives to start improving their own housing, building land and housing assets over time, and thus transforming informal settlements to functional communities. The adopted incremental planning framework includes the following key principles: (i) including informal settlements within the City’s planning frameworks (as required by the Spatial Management Land Use Act - SPLUMA); (ii) establishing clear planning trajectories and tenure security; and (iii) unlocking the potential for residents to start investing in their own housing. Informal settlement areas currently fall outside of all planning and regulatory frameworks since the underlying land is not yet proclaimed, subdivided and in many cases is also not yet owned by government (almost half of the land in informal settlements in eThekweni is still privately owned). iQhaza Lethu has therefore supported the development of innovative and ground-breaking solutions. A comprehensive Incremental Planning Framework has been developed and adopted as part of the City-wide Upgrading Strategy. This is the first time in South Africa, a Metropolitan Municipality has a draft framework of this kind in place. The Policy addresses all aspects of incremental upgrading and overcomes a range of barriers in order to unlock a more effective, city-wide upgrading approach. The intention is to test and pilot the new framework in certain of the iQhaza Lethu pilot settlements of Parkington, Havelock and Ezimbeleni. eThekweni has already recognised and reflected all informal settlements, as per their categorisation, in the Municipality’s 2022/23 Spatial Development Framework. Incremental development areas (IDAs) will now need to be established, and residents alternative forms of individual tenure security piloted (municipal certificates of occupation or tenure).

## 9. Owner-driven housing improvements

It is hoped that residents of informal settlements will, over time, start building their own improved housing using LIFT-type building principles and methods as incremental planning and alternative tenure arrangements are put in place and improved municipal services are provided. LIFT is not intended as an alternative type of state-funded housing delivery. As per the Municipality’s draft approach document to its next five-year housing plan, it is recognised that government cannot on its own meeting all housing needs. The historical



approach to housing premised on addressing housing needs only or principally by means of conventional, state-funded housing provision, is no longer sustainable. A key point of departure for the updated HSP is the need for government to transition to a more enabling approach to housing provision. This entails a shift away from the direct provision of state-funded housing (top-structures with full services and title deeds) as the



only focus, to an increasingly state-enabled approach, where the Municipality activates a range of strategic levers in order to achieve a significantly scaled-up and more sustainable housing response. This includes stimulating and incentivising the private sector and individual citizens to build or provide housing in its many forms. Housing ‘backlogs’ have grown despite large scale formal state-funded housing delivery. In eThekweni Municipality, between 1994 and 2021: 201,191 RDP / BNG houses have been delivered; 2,787 CRUs and 4,507 Social Housing Units built; and 6,567 pre-1994 housing units upgraded. Despite these significant and unprecedented achievements, housing backlogs within the Municipality (and elsewhere in South Africa) have grown since 1994, as evidenced by the growth in informal settlements. There are currently more than 587 informal settlements in eThekweni with a total population of more than 321,000 households. Given limited fiscal resources, supporting and empowering people to build their own improved housing is a strategic priority. Historically most PHP has been contractor-driven PHP supporting conventional housing delivery, whereas PHP is a much broader and empowering policy instrument, aimed at empowering communities in respect of playing a bigger role in planning and providing their own housing. LIFT-type housing represents a significant opportunity in this regard. The new housing typology has been received with interest by the NDHS as an innovative solution which enables more efficient space utilisation which importantly provides residents of informal settlements with an alternative way of building their own housing in the future, using better methods but with familiar materials which readily available at local hardware stores and lightweight (and thus easy to carry into areas without vehicular access).





## 10. Implications for the future – scaling up and pipeline planning

The optimised servicing approach plays an important role in establishing a more viable and appropriate future pipeline of upgrading projects in the eThekweni Municipality. As a result of the iQhaza Lethu services frame pilot projects, it is now recognised that a differentiated pipeline of upgrading projects is required, with a dedicated pipeline being established for best-located B1 informal settlements for the provision of integrated services and the reworking of space. Whilst there will still be a pipeline focussing on non-integrated basic services provision (to address most critical services deficits in all settlements), the B1 pipeline is regarded as strategic in terms of changing the urban form, optimising scarce-well located land, and laying a platform for a more inclusive city in the future. The use of the alternative housing typology plays an important role in enabling this to occur by releasing the space required to establish services within settlements.

