



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

Solid Waste Management Solutions for Informal Settlements (Feb. 2021)

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Purpose:

Improved solid waste management for informal settlements in eThekweni is a priority given the severe solid waste challenges in all settlements which pose public health as well as environmental DANGERS.

eThekweni is currently running out of landfill space and has recently closed of two long-standing landfill waste sites. Therefore the Cleaning and Solid Waste (CSW) department of the Metro, have confirmed their support for initiatives within informal settlements that reduce the amount of waste that is transported to its limited landfill sites by developing innovative solutions including initiatives such as streaming waste and maximising recycling.



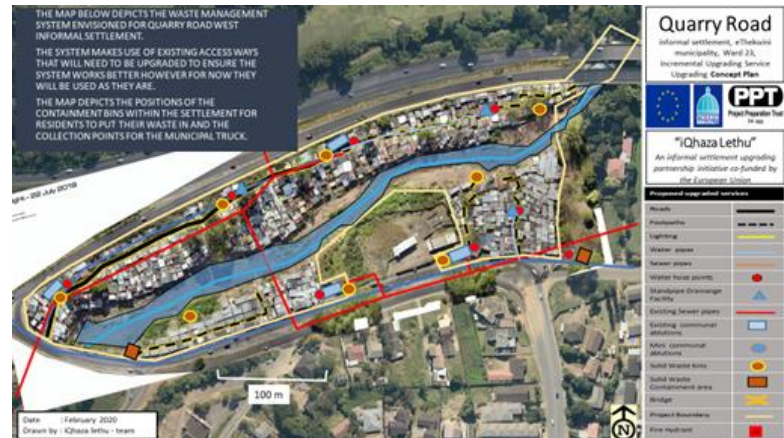
Photo 1: Quarry road: Waste thrown into the river

Informal settlements are characterised by poor municipal waste management primarily due to access restrictions because of high densities. As such municipal vehicles cannot provide an effective and efficient service. The environment and infrastructure takes a beating as waste tends to be thrown into streams, rivers and storm water systems. Constant growth of settlements requires constant monitoring and evaluation of effectiveness of service and equipment provided.

The current municipal service provided to collect and dispose waste is not adequate due to various limiting factors i.e. access and infrastructure. All service departments need to elevate their roles and responsibilities to informal settlements in order to improve waste management. For a solid waste system to work it needs active involvement from several stakeholders and the community for it to yield results. Residents also need to play a more active role to ensure communities are kept clean and hygienic.

The main objectives of an improved and optimised approach are:

- a) establishment of decentralised solid waste collection and containment points within the settlement.
- b) improvement of the main collection points from which municipal solid waste trucks collect waste.
- c) establish or at least encourage separation of waste (organic versus recyclable waste) from point of household disposal, to enable more effective processing and recycling of solid waste, noting the severe pressure on municipal landfill sites.



The solid waste solution proposed in iQhaza Lethu pilots therefore involves several containment bins placed around the settlement. Waste is placed into the bins by families that reside in a particular radius to the bin. The bins can hold approximately 60 refuse bags. Bags are then moved from the decentralised containment bins to Municipal Waste Collection points on refuse collection days. The IL Engineers have provided a new design for an improved and contained concrete Municipal Waste collection point, which has been submitted to CSW.

The bins are made of steel with a mesh wire at the bottom to allow for liquids/rain to seep out at the bottom. Sufficient and regular supply of plastic refuse bags is required if the system is to be effective.

For the system to work residents need to play an active role in packaging the waste in bags and placing them in the bins. While local community waste workers are needed to move the waste out of the containment bins to the municipal collection points where the municipal vehicle can remove them.

The IL program is currently perusing option for the payment of these waste workers with funding applications submitted to Treasury as part of the Public Employment Programs and ongoing discussions with eThekweni’s finance and other relevant line departments.



Progress

- Solid waste operation and maintenance plans developed for each settlement and captured in the Settlement upgrading plans.
- Allocation of solid waste budget to ten IL settlements
- PEP funding applications

- Meetings and coordination between IL, CSW, HSG, etc. and relevant line departments inc. Finance to develop a city funded locally based waste management model
- Development of designs and costings for decentralised bins and solid waste containment areas
- Meetings with SW stakeholders
- Meetings with CSW
- Meetings with eThekweni HSG, finance etc. and developing Proposals for PEP and Proposals for O M
- A pilot in Quarry road is currently being implemented in partnership with Durban Green Corridors and Ocean Products which are plastic paving, soil stabilisation and other recycled plastic products produced from the waste beneficiation plants in Umlazi and KwaMashu.
- It is expected that this recycling initiative will be extended to all of the IL settlements.

Learning

Solid waste management is often prioritised as an easy aspect to solve indicating that this, 'low hanging fruit' should be prioritised and resolved relatively easily. However the complexities of waste management in informal settlements is not so easy to resolve. As existing households do not have the luxury of leaving their waste out on the curb for collection the movement of the waste from inside the settlement to the outside area where it is normally collected by the Municipal Waste trucks is ineffective and households will often choose the easier option of throwing the household waste in to open areas, bushes or rivers. While the city is happy to remove waste from designated areas usually on the settlements periphery, the additional responsibility and cost of removing internal waste to these points becomes contentious.

An interesting example is Hololo City informal settlement, in the southern portion of the settlement a main road borders the settlement. This allows these residents to drop their waste bags on the tar road which are then collected via the cities refuse trucks. While the southern area is relatively clean the northern area is not as here residents are not able to walk a few meters to remove their household waste, waste is dumped in the local river and around house and in open areas.

Way forward

The proposed model for a locally based waste collection and CAB maintenance model is currently being discussed and refined for funding allocation and implementation from the city.