Of skips and scapegoats

Managing waste for the growing backyard housing sector

August 2023

BACKYARD MATTERS
ENABLING PEOPLE, PLACE & POLICY

ISANDLA
institute

Acknowledgements

Backyard Matters is a partnership initiative between the Development Action Group (DAG) and Isandla Institute. The project recognises that backyard housing is a community-driven response to housing shortages for many who fall through the cracks of state programming and unaffordable private rentals. Backyard housing, however, remains a neglected and sometimes invisible sector. The project is aimed at strengthening the backyard rental market and contributing towards well-managed, quality rental stock that provides affordable, dignified and safe housing solutions in thriving neighbourhoods. The project thus advocates for inclusive policy and programming that embraces the voice, needs and agency of backyard residents and landlords as an integral part of the municipal community. Backyard Matters is funded by Comic Relief.

Words: Lee Middleton

Cover image: Isandla Institute / Shaun Swingler

Isandla Institute, 2023

Email: admin@isandla.org.za

www.isandla.org.za

Illegal dumping: The canary in the coalmine

Navigating through any urban township these days, one is increasingly likely to encounter the mushrooming of two well-known South African practices: 'backyarding' and illegal dumping.

Taken together, these phenomena are among the most obvious physical manifestations of the challenging intertwined trend of rapid urbanisation and the inability of formal systems to keep pace with that growth.

The sense of the backyard sector as an expanding monolith makes it an easy scapegoat for municipalities battling to keep up with infrastructural stress and strain.

Box 1: Backyard housing: A diversifying sector

Originating under apartheid-era laws intended to restrict the number of black people in South Africa's cities, so-called "backyarding" began as an organic response to the need for accommodation under a repressive state. Arising to bypass racist restrictions on freedom of movement, and constituted mainly in the form of informal shacks, the practice was once imbued with connotations of the informal and illegal.

Backyarding now occurs for a combination of financial and pragmatic reasons, and these diversifying reasons are reflected in the resultant housing typologies, tenant demographics, and landlord types.

From expanding families in which children or parents move outside the main house to accommodate growth; to young professionals requiring better access to transport routes and services than exist in informal settlement contexts; to households seeking the enhanced security of familial or social connections – the motivations for choosing backyard housing are multifaceted.

Meeting those diversifying needs, landlord types have also evolved to encompass roughly four categories: 1) subsistence (renting parts of the property to generate income for basic household needs; 2) homeowner (rental income is supplementary to basic needs); 3) entrepreneurial and micro-developers (rent is the main source of income); 4) absent/abroad (rentals managed by an intermediary).

Meanwhile, despite the backyard housing market encompassing all these new types and forms, perceptions of the sector – especially outside of townships – remain largely negative.[1] In particular, the view of backyard residents as "poor" needs upending. While many backyard residents are indigent and in need of municipal assistance, a blanket view of backyard residents as unable and/or unwilling to pay is myopic. While many households turn to backyarding due to a lack of affordable private/formal market rentals in more central urban areas, anecdotal evidence suggests that a proportion of backyard dwellers are in fact willing and able to pay either fully or partially for services.

[1] *Isandla Institute, 2022*

Rising from the chasm between housing supply and demand is the largely unregulated and historically ignored (at times, even vilified) sector known as backyard housing (see Box 1). Despite growing recognition of the sector's critical role in supplying affordable rental housing, knowledge of its numbers and nature remains thin on the ground.[1] Meanwhile, the sense of the backyard sector as an expanding monolith makes it an easy scapegoat for municipalities battling to keep up with infrastructural stress and strain.

In fact, understanding the pressure that the sector is placing on infrastructure and service delivery is the first step to its relief. But given the complex challenges to simply enumerating this poorly understood sector, it is perhaps unsurprising that few municipalities acknowledge – much less explicitly include – backyard dwellers in service delivery estimations and planning processes.

Much as the formal building sector has remained skittish when it comes to catering to the housing needs of this "gap" market,[2] government has yet to find a way to quantify and register the backyard sector for the purpose of rendering the basic services it is obliged to supply. All of which begs the question: What is required to ensure basic services are supplied to South Africa's significant and ever-diversifying backyard housing population?

Through the highly visible lens of waste management practice in formal township areas where backyard populations are growing, this paper aims to:

- Gauge the extent to which backyard households are included in municipal waste service provision programmes;
- Explore barriers to increased roll-out of those programmes;
- Examine the consequences of insufficient waste management; and,
- Present opportunities to change the status quo.

Part of the Backyard Matters Project,[3] this research is intended to stimulate thought and advocacy action around waste management provision, thus advancing conversations around improved service provision to backyard residents more broadly. The choice of waste management **(see Box 2)** as a proxy for other public services (basic and social) that also fail to adequately account for backyard residents[4] is far from arbitrary.

First, it is one of the free basic services funded from local government's equitable share allocation,[5] of which 80% is intended to support basic services to economically vulnerable households within the municipal community, including backyard residents.[6]

	Allocation per household below affordability threshold (R per month)			Total allocation per service (R million)
	Operations	Maintenance	Total	
Energy	111.1	12.34	123.40	16 556
Water	162.7	18.08	180.79	24 256
Sanitation	109.7	12.19	121.90	16 355
Refuse removal	92.0	10.22	102.19	13 710
Total basic services	**475.5**	**52.83**	**528.29**	**70 878**

Table 1: Amounts per basic service allocated through the local government equitable share, 2023/24
Source: National Treasury

[1] *While the 2011 Census data indicated overall growth of the backyard sector, data-gathering across backyard housing populations is inconsistent, and a finer understanding of pace of growth is lacking.*

[2] *The "gap" here refers to households with a monthly income between R3,501 and R22,000; in other words, those who earn too much to qualify for subsidized housing or benefits, but not enough to qualify for an entry- level bond. Due to these circumstances, many turn to backyard housing as an affordable rental option.*

[3] *A collaboration between the Development Action Group (DAG) and Isandla Institute, the Backyard Matters Project aims to improve understanding of the realities and dynamics of backyard accommodation, so as to identify interventions that will enhance and foster this under-estimated and neglected affordable housing sector.*

Despite this clear financial provision, a recurring municipal response to lack of service for backyard dwellers has been that the legislative framework prohibits municipalities from making public infrastructure investments on private land. However, according to a legal opinion commissioned by Isandla Institute exploring this claim, not only is there no legal impediment, but in fact there exists a compelling directive to ensure that all vulnerable households have access to free basic services funded by the equitable share.[7]

Finally, legal opinions aside, waste management and refuse removal – functioning without the added complications of pipe and line installation through private property – sidestep questions of municipal infrastructure investment on private land. In other words, the service offers a less-contested entry point to productive reflection on how to work towards universal service delivery for backyard dwellers more generally.

Waste management offers a less-contested entry point to productive reflection on how to work towards universal service delivery for backyard dwellers more generally.

Box 2: The face of a city: The waste management context

The term "illegal dumping" conjures an illicit act of free will, akin to vandalism. But in the absence of legitimate waste receptacles – from branded bags and 240 litre wheelie bins, to municipal skips and licensed landfills – and reliable servicing of the same, what are people supposed to do? Unlike piped and wired services, waste will flow, regardless of a municipality's ability to capture or manage it.

Thus, while many people blame backyard dwellers for increased illegal dumping, the reality is that this practice is simply one of the more obvious manifestations of a larger crisis unrelated to backyard dwellers. The inescapable truth is that all of South Africa's landfill space is rapidly disappearing.[2] Meanwhile, aging fleets long-denied proper maintenance due to budget cuts mean that while the human population – and our waste – multiplies, the capacity to properly manage that waste diminishes. All of this is occurring in a period of global economic downturns, national budget cuts and infrastructure failings, making competition for resources fiercer than ever.

While the issue of unmanaged waste affects all South Africans, its consequences are disproportionately borne by historically marginalized neighbourhoods. In these areas, excess waste often ends up down already compromised sewage systems that power cuts are failing to pump regularly, or in the waterways of drought-prone landscapes.

Wreaking havoc on intertwined infrastructural systems, the waste management crisis is already compromising human health and the natural environment, thus further undermining municipalities' ability to deliver sustainable services in the medium to long term.

[2] *DEFF, 2020; CSIR 2020; World Bank 2023*

[4] *At the municipal and neighbourhood levels, the majority of social services (e.g., policing, educare-facilities, clinics, and social amenities like libraries) are only planned for 'formal residents' (CSIR, 2019), and hence fail to cater for the entire population in townships where backyard dwellings are ubiquitous (Lategan et al, 2020).*

[5] *Equitable share allocation: the unconditional share of revenue raised nationally and intended to enable each sphere of government to provide basic services and perform the functions allocated to it. (See: https://www.treasury.gov.za/documents/mtbps/1998/5.pdf and https://www.cogta.gov.za/index.php/2023/07/13/municipalities-received-their-first-tranche-of-the-local- government-equitable-share/)*

[6] *According to the Division of Revenue Bill [B2-2023] (p98), the total number of households in each municipality is adjusted every year to account for growth, directly impacting the amount each municipality is eligible to receive. However, the degree to which backyard households are included and accurately reflected in that number is questionable.*

[7] *Isandla Institute, 2021a.*

A problem of numbers

To understand the problems underpinning service provision to backyard dwellers, one must first consider how cities plan for waste management generally.

Moving targets

"The most important thing is the accuracy of waste-related data: it informs all aspects of planning," said Belinda Langenhoven, head of Waste Policy and Minimisation in the Western Cape's Department of Environmental Affairs and Development Planning.

To understand the problems underpinning service provision to backyard dwellers, one must first consider how cities plan for waste management generally. The entry point is population density:[8] the number of households within a given area provides an estimate of the volume of waste to be collected. But what do you do when there is no automatic or obligatory mechanism to register a large proportion of the population?

"It's a moving target," Langenhoven conceded of the shifting and often mysterious demographics, and how this uncertainty radically impacts all aspects of the municipality's ability to provide service. From an unknown but increasing number of dwellings, to questions around how to access collection points, addressing the complexities around service delivery in informal contexts requires forward-planning and highly proactive strategies.

"The nature of the waste service makes it difficult because you depend on physical verification. You don't have live data that you can rely on for your planning and budgeting," explained Louis Makhubele, acting director of Waste Removal Policies and Standards at the City of Tshwane. (By comparison, managers of metered services like water and electricity can accurately track consumption in real time, regardless of population estimates.)

Each municipality's waste management department employs its own approach to data inputs, pulling variously from statistics provided by Stats SA (National Census, Community Surveys and General Household Surveys); waste-specific national- and provincial-level databases;[9] and municipal-level information from planning departments, including Ratespayers and Indigent Registers. But the common thread linking all of these sources is that the numbers are "not as accurate as they should be," as Suzan Oelofse, Principal Researcher in Waste Management at CSIR, commented.

As a result, on collection day in neighbourhoods with big backyard populations **(see Box 3),** collectors are invariably faced with waste volumes in excess of the expectations and capacity of deployed collection vehicles per area. While municipalities rely on truck drivers to report discrepancies – the closest thing waste managers have to 'live data' – there is a lack of systematic accountability, with some municipalities saying the drivers may not always bother to report, and others acknowledging that it is in collectors' interest to "overstate what comes through". Given the financial incentives attached to the latter point, some municipalities may treat private contractor-sourced figures as inflated, thus declining to expand service accordingly.

[8] *More specifically, 'planned population density', based on population statistics that provide an assumed household size (Suzan Oelofse, personal communication).*

[9] *SAWIS (South African Waste Information System) is hosted by the national Department of Forestry, Fisheries and the Environment (DFFE), whereas the Western Cape and Gauteng each also host a provincial waste information system which data is then also fed into SAWIS. While these are the official data entry points for waste, "the data is only as good as what is provided or input by the various parties" (Saliem Haider, personal communication).*

Box 3: Waste collection in backyard-housing dense neighbourhoods: How does it function?

Research has shown that backyard rental agreements generally are inclusive of basic services, which piggyback off the 'main house' allotment.[3] In the case of waste, this means that on collection day, the owner of a residential stand will put out the stand's 240-litre bin (or a portion of its controlled supply of city-issued bags) and waste from backyard dwellers that doesn't fit in the bin will usually end up in various (unbranded and different-sized) bags surrounding the bin. Depending on the municipality and the type of collection service, those additional bags may or may not be taken away.

"Mixing bags and bins is problematic," explained CSIR's Suzan Oelofse, who was flummoxed by this when she first started researching backyard waste management in the City of Johannesburg. "The collection vehicle is often designed to lift and empty bins without an easy option to collect bags; i.e., top- or front-loading trucks. To collect bags in the same round means that collection staff must now also put the extra bags in bins, and then empty those into the truck, which is time-consuming and seen as not feasible. And it doesn't make financial sense to send in two different types of truck."

Although the particulars of collection vary – some municipalities only have bins, some only have bags; some say they will collect everything that is there, even if it clearly exceeds the stand's allotment, others say it depends on the driver or the truck – the result is the same: an excess volume that impacts the efficacy of the whole system. This means trucks fill faster and require more trips to the landfill where longer queues lead to longer wait times, all of which results in overtime, higher operating costs, and/or waste that goes uncollected and then scatters or is illegally dumped.

The seemingly obvious answer may be to provide more bins (or bags), but that is not so simple given the municipalities' reliance on waste management fee income. "Each stand has a unique site service number, so the owner of the property would need to go and declare that they've got additional dwellings to get a service stand number and bin for those," said Franklin Pieterse, former Group CEO of Tedcor (Waste Services). "But the vast majority do not."

The reasons for opting out vary. First, there is the additional cost to the households should they declare that they need another bin. Additionally, in the lower-income neighbourhoods that tend to host backyard populations, bins are often seen as "a scarce commodity" and frequently stolen, further disincentivizing owners or tenants from paying to acquire additional ones, as Gershwin Kohler of Blue Sky Recycling pointed out. Finally, there is a simple space issue: many stands lack a place to store additional wheelie bins.

Municipalities like eThekwini use black bags in lieu of bins, but face similar management challenges around bag distribution, non-payment for service, and inability to control volumes. "We distribute our branded bags on a quarterly basis per household. We don't issue separately for backyard dwellers unless they indicate to us they need additional bags, but then they have to purchase those bags from us, because we only collect branded bags to control volumes," explained Qaphile Gcwensa, City of eThekwini's Department Head of Operations Cleansing and Solid Waste.

However, Gcwensa conceded that the reality on collection day is curb-sides loaded with unbranded bags, often "hiding" under the branded ones, thus throwing out the volumes and "stressing the resources". (CSIR's Oelofse noted that, as with bins, bags are also frequently repurposed as storage.)

[3] Isandla Institute, 2021. p.22

Persuading homeowners to declare the additional households on their stands may be the only way to get accurate counts.

In an effort to reconcile the numbers, municipalities conduct audits, but limited human resources prevent the frequency and depth of analysis required to do the job well. And even when physical counts of households occur, results are not straightforward.

"It's a constant headache," affirmed Makhubele, noting that the City of Tshwane was in the midst of conducting a household count for a pilot project, but that deriving accurate counts of backyard dwellings was proving challenging. "I look at a stand and house as one household and note it as such. And I can note that there are backyard dwellings, but I have no idea how many people are on the property and how I then translate it in terms of how many bins are needed," he explained.

One solution to this problem would be to find a way to compel homeowners/landlords who rent to backyard tenants to declare that additional presence. But here we arrive at the crux of the problem, which is that in the case of backyard housing, registration – or entering the formal municipal system – is effectively optional and lacks a clear upside.

Because the cost (both in administrative hassle, as well as monthly charges) of entering the system outweighs the cost of doing nothing (you may not get all your waste collected, but that may happen anyway), it is unsurprising that people choose the path of least resistance, and thus remain under the radar. And yet persuading homeowners to declare the additional households on their stands may be the only way to get accurate counts. "The key pivot is the homeowner," affirmed Saliem Haider, Director of Waste Management for the Western Cape, and previous Circular Economy Programme Manager at GreenCape.

While the above problem is premised on individual households, and collective mechanisms such as strategically located skips and more frequent collection could alleviate some of the 'grey area' of inaccurate household counts, the fact remains that until municipalities can more accurately tally backyard households, the numbers will never add up.

Rethinking tariffs

Indeed, the number of households is not the only problematic figure in this equation. Even without factoring in the cost of servicing 'uncounted' backyard dwellers, municipalities are not charging existing clients enough to cover the actual cost of service.[10]

"We've done the costing of rendering service per service point, and it's way higher than what we recover from current tariffs, which keep being reduced because of affordability constraints within communities. We are running at a loss as a business, but we are a municipality, and so have to render [the service]," noted Qaphile Gcwensa of the City of eThekwini.

Gcwensa's observation speaks to the larger problem stymying a way forward: how to pay for the real cost of waste management, which frequently represents a city's single largest budgetary item?[11]

[10] *World Bank, 2023; CSIR, 2020.*

[11] *CSIR, 2020. p6.*

[12] *Note that the equitable share formula includes an institutional component and adjustment factor to ensure that municipalities with a low revenue-generating base can access a greater equitable share allocation: https://www.dffe.gov.za/sites/default/files/docs/national_treasury_funding_waste_services.pdf*

As one of the free basic services to indigent households, refuse removal is funded by a combination of municipal revenue (mainly property rates and service fees, which should cross-subsidise indigent users) plus a portion of the municipality's equitable share allocation.[12] Collectively these sources of revenue should (in theory) cover the funding required for those who cannot pay for the service. Practice reveals that this is not the case for a number of reasons. Refuse removal as one of the three free basic services funded by the equitable share consistently comprises the lowest budgetary allocation. (See Table 1 above) Furthermore, equitable share allocations are not ringfenced for particular services, so there is no guarantee that the amount allocated for waste management will be used exclusively for fulfilling the function, as cross-subsidisation of trading services is not uncommon.[13] According to the World Bank, most municipalities rely "mainly on service charges to fund the solid waste business", which, for various reasons, including poor payment and poor collection rates, are wholly inadequate.[14]

While legislation such as the MFMA and Municipal Systems Act emphasize the importance of setting cost-reflective tariffs to ensure 'credible municipal budgets',[15] Catherina Schenck, DST/NRF/CSIR SARChI Chair in Waste and Society at the University of the Western Cape argues that a financial management model that relies too heavily on peoples' ability to pay for services indicates a clear disconnect with South Africa's constitutionally enshrined right to basic services for all.

A financial management model that relies too heavily on peoples' ability to pay for services indicates a clear disconnect with South Africa's commitment to free basic services for all.

Isandla Institute / Shaun Swingler: Manenberg

[13] *Financial and Fiscal Commission, 2023. p.415.*

[14] *The waste management function receives less than 4% of total municipal expenditure, even though it is the 6th highest contributor to expenditure of the 16 metro functions (World Bank, 2023. p.28).*

[15] *National Treasury, 2023. Para 5.4, p.10.*

Municipalities refer to the indigent model, but that doesn't cover backyarders.

A manifestation of this 'disconnect' is demonstrated in recent research undertaken by the Public Affairs Research Institute (PARI), which examines, amongst others, the discrepancy between the number of households funded to receive free basic services in terms of the equitable share allocation, and the actual number of households receiving these services.[16]

In the 2019/2020 financial year PARI reports that whereas 10,109,607 households were budgeted to benefit from the refuse removal component of the equitable share, only 1,991,925 actually received it. This is a deficit of well over 8 million households, with an estimated value of R8.27 billion not accounted for.[17] While municipalities have the discretion to fund more or fewer households in terms of what is budgeted for and allocated in the equitable share, they must also be able to justify this decision. PARI argues that there does not appear to be accountability for this significant discrepancy.

Finally, and especially pertinent to this report, backyard dwellers are often ineligible to register as indigent due to prohibitive requirements,[18] and the general approach of financial austerity that is encouraged in targeting indigent households.

"Municipalities refer to the indigent model, but that doesn't cover backyarders," said Schenck, referring to the waste management service gap and excessive focus on the user-pay principle in relation to waste management services in particular.

Although in many instances the 'main house' of a stand with backyard dwellings may have access to the free basic services allotted to registered indigent households, the waste management service will be inadequate to extend to backyard renters if they themselves are not registered as indigent with the municipality.

For example, a recent MFMA circular from National Treasury warns that if "a municipality has any arrears on any of its bulk supplier's accounts, it must limit its provision of free basic services to registered indigent consumers only".[19]

This raises another key issue that needs unpacking when discussing backyard dwellers and basic services. That is, despite general perceptions of backyarders as 'poor', the sector's diversity **(see Box 1)** dictates that there is a proportion of backyard dwellers who are willing and able to pay for services. But again, more granular knowledge concerning how many would qualify as such is unknown.

[16] *Ledger, 2022.*

[17] *Ledger, 2022. p.13-14.*

[18] *Documents required to register as indigent include: Identity documents, Birth certificates, proof of residence, proof of income, letter of recommendation from recognized local structures or leaders, latest municipal accounts, sworn statements/affidavits or declaration from applicant, etc. And all such documents must be certified. See: https://www.cogta.gov.za/index.php/2019/05/11/do-you-qualify-for-free-basic-services/*

[19] *National Treasury, 2023. Para 5.7, p.13.*

[20] *SALGA, 2022.*

[21] *"South Africa Waste Management Landscape" https://www.wasterecyclingmea.com/news/wastemanagement/ south-africa-waste-management-landscape-an-overview; "Looming landfill crisis faces South Africa's largest metros" https://www.engineeringnews.co.za/article/looming-landfill-crisis-faces-south-africaslargest-metros-2021-09-14 ; "South Africa is Drowning in its Own Waste" https://award.org.za/index.php/2019/02/01/south-africa-is-drowning-in-its-own-waste-are-our-regulators-takingthis-crisis-seriously/*

"It's not just indigent households or the unemployed in backyards, so that's the other challenge. And the municipality may use that reasoning to say people can pay, they just don't want to. So that's something that needs further discussion, because it complicates how the city can fund backyard waste collection, when people who live there can afford it," noted Shingirai Nyakabawu, a research fellow in Schenck's Waste and Society research team at UWC.

Thus we circle back to the opening point about the need for a financially sustainable model for waste management. "First, we are trying to get the numbers right in terms of who is where, and how many there are. Second, how do you come up with tariffs that you can implement that will be affordable but speak to the costs of delivering the service? If we can get the two to talk to each other, then we would have a system that would work," said Tshwane's Makhubele. "I don't know of a single municipality that has found a system to address this problem. All of us are trying to find different ways of dealing with it, but no one has a winning system that we could duplicate. If there was one, I'd love to know."

It is evident that a review of the equitable share allocation is required, including more stringent regulation of how municipalities use their discretion in terms of targeting indigent households. (This is in line with SALGA's 2022 appeal to the Portfolio Committee on Forestry, Fisheries and the Environment "to support the lobbying for appropriate funding of waste services as compared to other basic services".)[20]

Finally, and fundamentally, is the need to move away from unsustainable models of waste disposal. As per all of South Africa's new waste management frameworks, municipalities must leverage waste to create additional revenue sources through a multiplicity of partnerships and circular economy initiatives.

It is evident that a review of the equitable share allocation is required, including more stringent regulation of how municipalities use their discretion in terms of targeting indigent households.

The real cost: Paying the bill

While the costs of South Africa's waste management problem are well-documented and growing,[21] they also offer glimpses of the efficiencies and opportunities that could be captured and capitalized on to provide a sustainable service to all.

To start with the financial: cleaning up illegal dumping costs as much as 30 times more than providing regular service to collect the same volume of waste.[22] Similarly, cutbacks of critical programmes (e.g., education and awareness, proper fleet maintenance) have exacerbated all waste management problems, increasing illegal dumping and the costs of addressing it. Such 'calculations' do not even begin to account for the environmental and health costs – both economically and in terms of quality of life and human suffering – exacted by inadequate waste management systems. From the disease-carrying vermin that waste attracts, to the toxicity of burning unsorted rubbish, to children playing in literal garbage, to the contamination of the air and scarce water resources, the combined health and environmental issues that result from poor waste management are mind-boggling, and if one were to monetize them, that value again would more than offset the cost of universal service.

[22] *Abel, 2014. p.8.*

This is real for millions of people who have to live in filth and continue to be dehumanized because we as a society don't have our act together.

Finally, there is the less quantifiable but equally critical question of how these continued patterns of degradation in under-serviced communities act as a visible sign of the exclusion and neglect of vulnerable neighbourhoods within the broader municipal community. "This is real for millions of people who have to live in filth and continue to be dehumanized because we as a society don't have our act together," noted Franklin Pieterse, former Group CEO of Tedcor (Waste Services).

Fortunately, against these seemingly insurmountable financial, environmental, health, and human costs, there is the tremendous potential of circular economy initiatives that could not only mitigate these same problems, but also start capturing the incredible value of waste.

Mining 'green gold'

"If you can put a value to waste, you won't see it lying around," noted Gershwin Kohler of Blue Sky Recycling, a Cape Town company founded to provide a market for informal waste pickers.

South Africa has long recognized the waste management hierarchy, and the country's National Waste Management Strategy 2020 places explicit and uncontested focus on the pivot to minimizing waste and maximizing the circular economy.[23] The strategy also clearly articulates the need to support "vulnerable groups, waste pickers and the informal sector" in addressing the circular economy.

With the country's ongoing energy crisis, investments in waste-to-energy systems also are an obvious area of investment. Meanwhile, as long ago as 2008, National Treasury identified municipal solid waste management as one of the areas of municipal function with the greatest potential for job creation, particularly with respect to semi- or unskilled labour.[24]

Returning to this report's focus on backyard waste management servicing, two areas of opportunity clearly emerge vis-à-vis circular economy initiatives. First, as transporting waste to landfills remains the greatest cost in waste management, establishing separation at source systems for recyclables should be an integral priority within solutions to better servicing backyard dwellers more generally. Second, given that organic matter remains the country's largest single waste type (food waste specifically being the largest waste type in townships), communal composting of organic/garden waste offers a low-tech beneficiation process that cannot be ignored – a literal low-hanging fruit.

[23] *DEFF, 2020.*

[24] *Environment Outlook Ch 13 (p. 281), citing National Treasury 2008.*

Box 4: Waste pickers: The original recyclers

Despite the national government prioritizing waste minimization and recycling since 2011,[4] the continued absence of formal systems for separation-at-source of recyclables means that an estimated 90% of the recyclables diverted from landfill continue to be collected by the informal sector.[5]

The original recyclers, some 60-90,000 waste pickers daily divert valuable resources to reuse and recycling, saving municipalities an estimated R700 million per year in collection and disposal costs.[6] However, waste picking remains a marginal and dangerous livelihood. Many waste pickers are homeless or live in informal settlements on or adjacent to landfills,[7] are increasingly exposed to harmful waste materials, and are regarded with distrust by homeowners, private sector actors, and municipal authorities alike.

Integrating waste pickers into the country's waste economy is a vital step to improving these critical role players' working conditions and livelihoods, while also maximizing the value recouped from collected materials. While important resources like the Waste Picker Integration Guideline (2020) are aiding this effort, some issues flagged by recent municipal efforts to integrate waste pickers include:

- **Location:** Waste pickers tend to frequent higher-income suburbs and central areas, where higher-value waste is more abundant and safety concerns less intense. These factors need consideration when establishing efforts to develop separation-at-source initiatives with waste pickers in townships where backyard housing is common.
- **Entrepreneurship:** Municipalities and Extended Producer Responsibility (EPR) programmes can support waste collectives by helping to incorporate and connect waste pickers with municipal collection services and buy-back/swap shop/ beneficiation projects located in townships with densifying backyard housing. An important consideration here is establishing buy-back centres very close to desired collection areas. Mobile buy-back options can also be a solution, but again, safety risks must be considered.
- **Terms of Reference/Legality:** Integrating waste pickers according to municipal bylaws has proven complicated in cities like Tshwane, where the municipality is currently in court with waste pickers who participated in integration programmes and subsequently sued for permanent employment. As such, integration programmes must be crystal clear with regards to the terms of employment they can offer, as well as eligibility requirements, as some waste pickers are undocumented/non-South Africans, which status can further complicate participation in such programmes.

Integrating waste pickers into the country's waste economy is a vital step to improving these critical role players' working conditions and livelihoods.

[4] *DEFF, 2011* [5] *DEFF, 2020. p.64* [6] *DEFF, 2020. p.55* [7] *DEFF, 2020, citing SoWR, 2018*

All hands on waste

The particularities of how you're supposed to service [informal settlements and backyarders] remains a grey area that is recognised, but no one really knows how to deal with it.

Only 64.7% of South African households have access to waste collection services[25] and despite national waste management strategies in place since 1999, some 90% of the 54 million tonnes of municipal waste produced annually is still being dumped in landfills that are nearly at capacity and mostly operating outside of legal compliance.[26]

The percentage of backyard residents with access to reliable waste collection services is unknown, but almost certainly far below the national average.

"Waste becomes an important indicator for a larger phenomenon where the lack of services is spinning out of control. We are responding to a crisis – a mix of housing, unemployment, etc. – which is made visible through the lack of waste services," noted ex-Tedcor CEO Pieterse.

But many of the main challenges to municipal waste management function[27] – an inadequate revenue base, data holes, and related operational bottlenecks such as lack of access roads, collection vehicles, infrastructure, central collection points, and staff capacity[28] – speak directly to the barriers preventing backyard servicing. That is, the solutions that will result in serving backyard residents will ultimately benefit South Africa's larger waste management service. That said, finding these solutions will require a paradigm shift, as the problems go well beyond any individual municipal's mandate around providing basic services.

"The particularities of how you're supposed to service [informal settlements and backyarders] remains a grey area that is recognized, but no one really knows how to deal with it. All these problems manifest in systems that are failing across all municipalities, and so we at the municipal level address the fruits of the problem but not the root," lamented the City of Tshwane's Makhubele. "But it is a burning issue that needs national-level attention to formulate policies, laws, and systems that can speak to backyard populations with the aim of bringing the violation of peoples' basic constitutional right to free basic services into the light."

In other words, the solutions that will address the systemic issues underpinning inadequate refuse removal in townships (and particularly for backyard tenants) will require a significant mindset shift that fundamentally rethinks municipal waste management systems, such that they fully activate waste minimization strategies and the circular economy's potential to mine the country's 'green gold'.

[25] *SALGA, 2022, citing StatsSA; Rasmeni & Madyira, 2019.*

[26] *S ALGA, 2022.*

[27] *Looming behind these service issues is the massive specter of landfill sites reaching capacity, with no suitable alternative land available.*

[28] *SALGA, 2022.*

In the interviews with municipality officials and waste management experts about improving waste management servicing to backyard dwellers and building a sustainable universal service, four key points emerged forcefully:

- The need for better data;
- The need to adequately fund Waste Act mandates;
- The necessity of a full pivot to waste minimization; and,
- The need for a mindset shift towards a more cooperative, interdisciplinary, holistic approach to this systems-level problem.

This last point is perhaps the most important, as the others cannot gain real traction without support from the top, and a broad recognition that everyone – from national leadership to the municipalities mandated with implementation to each and every person living in South Africa – must pitch in and take responsibility. It also speaks to the need to call out and banish the 'blame the victim' attitude that can still persist in the way challenges around enumerating and servicing backyard (and other informal) residents are met; as if they are somehow responsible for the shortcomings of the system that fails them rather than citizens whose basic rights government is there to secure.

As Pieterse noted: "If you can keep an area clean, that's the most basic thing government can do for society. It's the first step in restoring dignity to people."

"If you can keep an area clean, that's the most basic thing government can do for society. It's the first step in restoring dignity to people."

Isandla Institute / Shaun Swingler: Manenberg

Solutions and opportunities

The key is flexible thinking, continual iteration and observation, sincere engagement with communities and committed leadership.

Despite the myriad challenges, municipalities with the will to improve waste management for all citizens are finding ways to incrementally improve service options for backyard dwellers.

Much of the work is a process of trial and error, and of course limited budgets are a constraint to any of these. But the key is flexible thinking, continual iteration and observation, sincere engagement with communities and committed leadership. Interviewees stressed the need to simply start somewhere, suggesting the following:

Use organisational systems and processes as entry points

Bylaws
Bylaws that speak directly to backyard dwellers would provide the legal basis for action. The Drakenstein municipality approved a bylaw making homeowners responsible for obtaining a bin for their backyard tenants.[29] While a bylaw alone does not erase barriers to implementation (e.g., identifying the homeowner, determining who/how many renters are on the property, enforcement), it importantly provides a legal basis for service and billing.

- Here it is important to factor in a supportive clause for subsistent/indigent landlords/homeowners.
- SALGA's "model waste bylaw", developed to assist municipalities to improve their own waste management bylaws,[30] could be referred to and modified to speak to backyard-specific issues.

Indigent Policy[31]
It is within municipal authority to decide how to structure indigent policies. Inasmuch as municipalities have the discretion to justify why they provide fewer households with free basic services than those included in equitable share allocations, municipalities also have the discretion to tailor policies to cater to the unique contextual needs of a particular municipal community. As such, municipalities have leeway to simplify the indigent registration process, and to possibly consider ways to implement a sliding-scale fee structure for services to backyard dwellers who require partial subsidisation of basic services. Some municipalities, like Saldanha Bay and George have already undertaken these initiatives.

Planning
Use IDP and Integrated Waste Management Plan reviews as opportunities to engage with municipal managers about the need to service backyard populations.

- A critical point here is ensuring those plans align with budgeted actions.

[29] *Sonia Frans, Manager Solid Waste Planning, Drakenstein Municipality (personal communication).*

[30] *SALGA, 2022. p.11.*

[31] *DEA, 2011.*

Data
Start building data and knowledge where you can.

- **Low-tech solutions:** Some municipalities (e.g., Drakenstein, Knysna) have begun tagging bins with RFIDs (radio frequency identification devices) to more precisely verify billing with number of service points.
- **Research:** Waste characterization studies can reveal the types, quantities and seasonality of waste generated within a municipality to better plan for service point audits and understand quantities in relation to number of households.

Meet the need where it lies – flexibility is key.

Operations
Meet the need where it lies: flexibility is key.

- Don't sit in the office: Field-based monitoring and inspections (budget allowing) are essential to begin seeing where opportunities lie.
- Seek solutions for operating systems that can handle both bins and bags.
- Identify dumping hotspots to install targeted 'mini drop-offs' and/or communal skips.
  Factors to consider here:
  - Select high-density areas where illegal dumping is common.
  - Understand that lack of mobility is a major barrier to proper disposal of waste: ensure distances are walkable.
  - Ensure the physical container makes sense for the location and is easy to keep clean. Iterate and adjust based on how it is used.
  - Understand dynamics/physical limitations of those most likely to use the containers (e.g. children and women).
  - Expect NIMBYism and be ready to counter with education: By containing waste, we keep children safe; by transforming illegal dumping areas, we protect the value of surrounding homes and the dignity of the neighbourhood.
  - Work with the community on all of the above: Bring in the ward councillor and committees; assign local people to look after the site; host community clean-ups with local groups.
  - Absolutely critical: Once a site is established it is vital to keep it clean.

Engagement is key

Community First
Co-design methodologies and local systems that the community can be involved in.

- **Engagement:** Cities will never move the dial in terms of servicing backyard dwellers if they do not engage with communities to understand what they need and how services can be tailored to more appropriately meet those needs. For example, if there is an area frequently used for illegal dumping, meet with the community to find out what kind of solution they think would work best. "What was obvious from our study was that illegal dumping in any area is quite often not a result of lack of waste management service, but rather the service not meeting demands of the community," noted CSIR's Oelofse.
- **Identify homeowner/landlords:** Find ways to meet landlords (host a community meeting or focus group discussion) to start hearing their concerns and ideas vis-à-vis waste collection for their tenants.
- **Education & Awareness:** This component is absolutely vital, but tends to be the first cut when budgets are tight. Increasing understanding about household-level waste management (where it can be dumped and why), why separation at source is important (and how to do it), and explaining the health and environmental consequences of illegal dumping and burning waste are essential to inculcating the needed behaviour and culture shifts.
- **Recruit local subcontractors from the community as waste management employees:** Locals best understand area dynamics, and creating employment within the community builds good will and fosters ownership.

Illegal dumping is widely associated with backyard dwellers, but the problem comes not just from households.

Get the private sector and civil society onboard

Illegal dumping is widely associated with backyard dwellers, but the problem comes not just from households. Better understanding of how much illegal dumping comes from industry means better control.

- **Building rubble is the second largest general waste type (after biomass and organic waste):** [32] There is a need to engage with local builder and contractor associations to better understand how to prevent illegal dumping.
- **Extended producer responsibility:** Work with producers to assist with establishing PROs (producer responsibility organisations) that can assist in waste minimization projects, incentivize recycling, support beneficiation projects and address issues of builder rubble, all in proximity to areas with large backyard populations.
- **Dispensing systems:** Encourage and support retailers to provide dispensing systems to sell products in smaller amounts and with less (or zero) packaging.
- **Better data solutions:** Enlist help from CSIR, academia and private sector technology firms to specifically seek solutions to improved data collection for backyard populations.

Inter-governmental cooperation and support

- Provincial and national government to assist with extended producer responsibility (EPR) initiatives within neighbourhoods with large backyard populations.
- SALGA can serve as the voice of local government needs to create opportunities for municipalities to learn from each other, share challenges, and advocate for resolution of those challenges.
- Much as municipalities need to listen to communities, Province and National need to listen to municipalities about what they actually need. “We need conversations at levels higher than local government. But the challenge is their lack of understanding or appreciating the challenges at the local level, in terms of the details. So sometimes they want to come up with programmes that don’t speak to the problems,” a municipal official pointed out.
- Consider providing more flexibility in terms of how intergovernmental grants could be used to address backyard waste management.
- Develop a more holistic approach to budgeting, acknowledging the degree to which all services (and their failures) interlink.
- Review the equitable share allocation in terms of waste management services; in particular, the need for more stringent regulation of how municipalities use their discretion in terms of targeting indigent households.

[32] *DEFF, 2020.*

Explore/invest in circular economy opportunities

Capture value by creating markets/ buy-back centres close to backyard populations.

Recycling/separation at source (S@S)
For decades waste pickers have recycled high value items, so the need here is to better support that 'informal' collection, but also support individual households in starting their own waste minimization and recycling. Here the same issues that stymie 'regular' waste management system must be anticipated. Issues to consider:

- Supplying the means to separate (different coloured bins or bags);
- Providing drop-off locations and facilities for separation that are close, have adequate capacity and are regularly well-serviced;
- Consider lack of space in high density areas (work with Human Settlements to identify suitable locations);
- Integrate waste pickers into whatever system is devised.

Organic waste
Typically the biggest proportion of waste in backyard neighbourhoods, organic waste left to fester can become a health hazard (attracting vermin); but organic waste properly composted has great potential value ('green gold'), both in terms of waste minimization but also the creation of a valuable lowtech product that contributes to localized food security. The main challenges include:

- Locating adequate space;
- Proper management to avoid rats and flies;
- Keeping the compost uncontaminated (especially if it is to be used for gardening).

Beneficiating recyclables
Capture value by creating markets/buy-back centres close to backyard populations:

- Manufacture new goods closer to origins of waste/recycling areas: this requires political will and community intent;
- Support creation of swap-shops and deposit-return schemes;
- Support entrepreneurial possibilities, potentially bringing in producers/Extended Producer Responsibility (EPR) to invest.

Conclusion

Few municipalities acknowledge or even include backyard residents in service delivery estimations and planning processes.

A proxy for backyard dwellers' access to public services more generally, the waste management service – and the highly visible consequences of its absence – are a blatant reminder of what happens when a large proportion of people in a neighbourhood or municipality remain uncounted.

It is clear that the provision of solid waste removal services to backyard residents is insufficient. Given the numerous resultant downstream effects – illegal dumping, health and environmental impacts – it is critical for municipalities to address these inadequacies. However, few municipalities acknowledge or even include backyard residents in service delivery estimations and planning processes.

To start, municipalities require more reliable waste-management data. The current lack of such data affects not only the ability to accurately plan for waste management (including backyard residents), but also disables the ability to determine costs and tariffs, ultimately undermining the financial sustainability of the entire waste management service.

While better data is a critical tool, addressing the systemic issues underpinning inadequate refuse removal in townships (particularly to backyard residents) will more importantly require a fundamental rethink that puts waste minimization and the circular economy at the forefront of systems strategy. This rethink would also maximize the opportunities present in solid waste management, in terms of local economic development and employment, and the chance to shift to a more community-based orientation.

Because inadequate refuse removal provides a less-contested entry point to discussions on how to improve access to basic services for backyard residents more generally, action in this space could catalyse the larger conversations so desperately needed to improve all of the services so critical to creating dignified, well-functioning, liveable neighbourhoods.

Isandla Institute / Eric Miller: Hangberg

References

Abel, Debra Jean. 2014. Perceptions on Illegal Dumping in the eThekwini Municipality. Mini-dissertation submitted for Masters in Environmental Management, Faculty of Natural & Agricultural Sciences Centre for Environmental Management, University of Free State. Bloemfontein.

Brueckner, J.K., Rabe, C. & Selod, H. 2018. Backyarding in South Africa.

CSIR. 2020. South African Municipal Waste Management Systems: Challenges and Solutions.

CSIR (Department of Human Settlements). 2019. Red Book: The Neighbourhood Planning and Design Guide. https://www.ukesa.info/library/view/red-book.

Department of Environmental Affairs (DEA). 2011. National Policy for the Provision of Basic Refuse Removal Services to Indigent Households, October 2010. No. 34385. Government Gazette, 22 June 2011.

Department of Environment, Forestry and Fisheries. 2022. Status of Waste Management in South Africa. 18 February 2022.

Department Environment, Forestry and Fisheries (DEFF). 2020. National Waste Management Strategy 2020.

Department Environment, Forestry and Fisheries (DEFF). 2011. National Waste Management Strategy 2011.

Department of Environment, Forestry and Fisheries and Department of Science and Innovation. 2020. Waste picker integration guideline for South Africa: Building the Recycling Economy and Improving Livelihoods through Integration of the Informal Sector. DEFF and DST: Pretoria.

Financial and Fiscal Commission. 2023. 2024/25 Technical Report Submission for the Division of Revenue, p.415. Available at: https://www.ffc.co.za/_files/ugd/b8806a_fca44347e19a43ab9f5624ec65abeb09.pdf

Green Cape. 2022. 2022 Waste Market Intelligence Report. Cape Town.

Government of South Africa (GSA). 2011. National Policy for the Provision of Basic Refuse Removal Services to Indigent Households, October 2010. No. 34385. Government Gazette, 22 June 2011.

Isandla Institute. 2021. Backyarding: Understanding backyard rental markets better: A synthesis of research findings in eight neighbourhoods in Cape Town. Cape Town. https://isandla.org.za/en/resources/item/download/184_64b57f8ed1427ab82eafec8618c7bd12

Isandla Institute. 2021a. The obligations and powers of municipal governments to provide basic services for backyard dwellers on private land. Legal Opinion by Advocate Budlender, G SC. Available at: https://isandla.org.za/en/resources/item/download/244_4e9c0176c8666ba24fd88d2386d4f7f0

Isandla Institute. 2022. Extending water and sanitation services to backyard tenants: towards an evidence-based infrastructure strategy. Cape Town.

Lategan LG, Erasmus S, Zietsman M, Cilliers, EJ, Wolf M & Springer, C.A. 2020. Risking health for rental housing: Reviewing service access in the informal backyard rental sector' Jàmbá: Journal of Disaster Risk Studies 12(1), pp.1-11. Available at: https://doi.org/10.4102/jamba.v12i1.947

Ledger, T. 2022. Access to basic services: Enabling progressive transformation or entrenching poverty and inequality? Public Affairs Research Institute. pp.1-29. Available at: https://pari2.wpenginepowered.com/wp-content/uploads/2021/09/PARI-Short-Report-Access-to-Basic-Services-V3.pdf

National Treasury. 2023. Municipal Budget Circular for the 2023/24 MTREF.

Rasmeni, Z.Z. & Madyira, D.M. 2019. "A Review of the Current Municipal Solid Waste Management Practices in Johannesburg City Townships." Presented at the 2nd International Conference on Sustainable Materials Processing and Manufacturing (SMPM 2019).

SALGA. 2022. "Local Government Support Programme on Waste Management: Briefing the Portfolio Committee on Environment, Forestry & Fisheries" presentation delivered 15 February 2022. Available at: https://pmg.org.za/committee-meeting/34318/

World Bank. 2023. Waste Not, Want Not: A Diagnostic of Solid Waste Management in South African Metros.

This paper is based on literature review and interviews with key experts and practitioners that took place in June 2023. Isandla Institute expresses its appreciation to the following persons and their organisations:

Sonia Frans (Drakenstein Municipality)

Saliem Haider, Belinda Langenhoven & August Hoon (Western Cape Department of Environmental Affairs & Development Planning)

Gershwin Kohler (Blue Sky Recycling)

David Mahlangu, Mvuselelo Mathebula, Simphiwe Memela, Samukelisiwe Mkhize and Thami Zwane (City of Johannesburg)

Ramatsimele Alice Mphahlele & Louis Makhubele (City of Tshwane)

David Musango (Pikitup/ City of Johannesburg)

Nosive Ngcawe (Development Action Group)

Jimmy Ngcobo & Qaphile Gcwensa (eThekwini Metropolitan Municipality)

Suzan Oelofse (CSIR)

Franklin Pieterse (formerly with TedCor Waste Service)

Catherina Schenck & Shingirai Nyakabawu (University of the Western Cape)

Feroza Suleman (Built Environment Support Group)

Bafana Tshabalala (PlanAct)

Isandla Institute
Email: admin@isandla.org.za
www.isandla.org.za