

The project was commissioned to establish an accurate, integrated municipal property base by aligning cadastral, deeds, land use, valuation, and billing data.



Data coverage snapshot

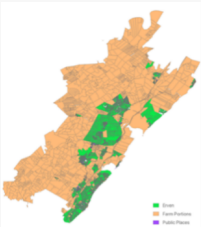
Dataset	Coverage
Land parcels analysed	44 357
Deeds analysed (cleaned)	51 395
Field-verified parcels	9 535
Buildings identified	142 975
Estimated households	±96 000
Valuation roll comparison	Entire municipal roll



Scope of work

Full municipal land parcel audit (SG cadastre)	Deeds data analysis and cleansing
Desktop land use audit (entire municipality)	Field verification of land uses (pilot areas)
Building structure and household analysis	Valuation Roll and billing register reconciliation
Identification and quantification of revenue leakages	Practical recommendations for corrective action

The project provides KwaDukuza Local Municipality with a verified, defensible property base and a clear roadmap to close revenue leakages, improve billing fairness, and strengthen long-term financial sustainability.

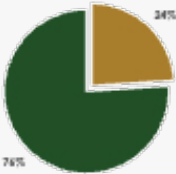


76% of land parcels are linked to concluded deeds



Key findings

24% (10 589 parcels) are registered at SG but not concluded in the Deeds Office



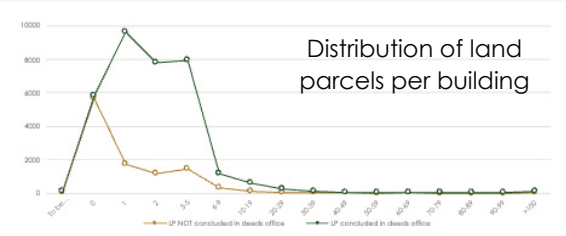
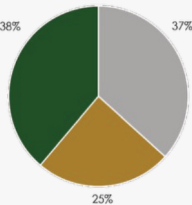
The analysis indicates that the municipality has a

total of 96 000 households

There is a total of 7 283 deeds that aren't included in the municipal valuation roll.

Following the analysis and data-cleaning process, it was found and recorded that 13 105 of the 33 768

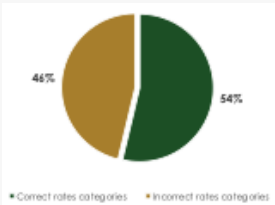
deeds (38%) now have fully identified street address information.



Revenue leakage overview

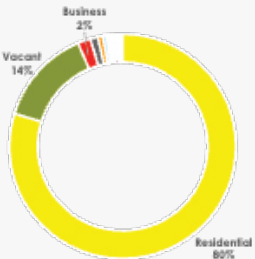
Leakage 1: Cadastral discrepancies	9% mismatch between deeds and SG records (4 691 of 51 395 parcels), driven by consolidations, unregistered subdivisions, and encumbrances-impacting billing and land-use control.
Leakage 2: Unbilled services	1 821 of 33 768 deeded parcels are missing from the billing register.
Leakage 3: Underbilling of multi-dwelling parcels	16 631 residential parcels contain multiple structures; 16 199 are privately owned and likely underbilled.
Leakage 4: MVR omitted owners	7 283 deeded owners are excluded from the valuation roll (6 431 full title, 943 sectional title).
Leakage 5: Incorrect rating categories	12 073 billed parcels are misclassified when compared to actual land use.
Leakage 6: Non-compliant land uses (LUS)	Of 31 947 billed parcels, 6 575 are non-compliant with the land-use scheme; 86 lack land-use data.
Leakage 7: SG-registered but not deeded parcels	10 598 parcels not concluded at Deeds Office, including vacant land and RDP housing; 2 339 require investigation.
Leakage 8: Potential undervaluation	6 625 parcels identified as potentially undervalued based on land-use audit.

36% of land parcels are incorrectly rated in terms of the general municipal valuation roll and the supplementary valuation roll.



Out of the 33 768 land parcels concluded at the deeds office, 22 535 (67%) have land use rights (zoning) that are compliant when compared against the land uses captured in the land use audit

92% accuracy achieved in desktop land use audit (validated through



KwaDukuza Local Municipality Land Audit

December 2025

Key Information:

The Cadre Group was appointed by SekelaXabiso CA Incorporated (SkX) to support KwaDukuza Local Municipality with a data cleansing and revenue enhancement initiative.

Acting as the Town Planning and Valuation Lead, The Cadre Group undertook a land use audit, GIS analysis, and municipal billing system review to identify potential revenue losses and improve data integrity.

The scope of work included analysis of the valuation roll, property ratings, tariffs, and municipal service charges, with a focus on verifying land use rights, approved building plans, service coverage, and tariff application. This involved distinguishing between registered and approved properties, identifying discrepancies between approved plans and actual developments, and assessing compliance with the Land Use Management System.

The project applied advanced data analytics, GIS-supported data cleansing, and exception reporting, informed by satellite imagery, building footprint analysis, neighbourhood liveability indexing, and change detection technology. Title Deed, municipal, and Surveyor-General datasets were integrated to compile a verified land register for the pilot area, supported by desktop analysis and field-based ground truthing to confirm land uses and identify commercial activity.

The outcome was a verified and reliable property dataset, improved billing accuracy, and clear, implementable recommendations to support municipal revenue optimisation and land use compliance.

Project Details:

Location:	KwaZulu-Natal
Time-frame:	12 months
Project lead:	Reinier Minny
Key Support:	Ayrrion Appels Phillip Moyo
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Client: SkX Protiviti

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