
Estate Management Responsiveness and Sustainable Building Performance in Public Housing Estates in Lagos State, Nigeria

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Abstract

Sustaining building performance in public housing is a major environmental and management challenge in rapidly urbanising regions, where maintenance systems often decline after project delivery. Despite this concern, limited empirical attention has been given to how estate management practices influence the long-term functional and environmental performance of housing estates in Lagos State, Nigeria. This study examined estate management responsiveness as a determinant of building performance in selected Millennium Housing Estates. A quantitative survey design was adopted, and structured questionnaires were administered to residents across five estates. Data were analysed using descriptive statistics, correlation analysis, and analysis of variance (ANOVA) with post-hoc Tukey tests. The results reveal that estate management responsiveness measured through timely maintenance response, effective complaint resolution, reliable service provision, and supervision of shared facilities has a significant positive influence on both physical and functional building performance. Strong to very strong correlations were found between responsiveness indicators and measures of residential comfort, environmental quality, and overall building condition. The ANOVA results further show statistically significant differences in performance outcomes among estates, indicating that variations in managerial efficiency contribute directly to disparities in building sustainability. The study concludes that responsive estate management is a critical non-physical factor for sustaining building performance in public housing. Embedding responsiveness within housing management frameworks can enhance livability, extend building service life, and reduce the environmental and economic costs associated with premature deterioration. The findings provide evidence to support performance-based management policies aimed at improving the sustainability of public housing estates in Lagos State and similar urban contexts.

Keywords: Estate management responsiveness, Building performance, Public housing sustainability, Housing maintenance, Residential environment.

INTRODUCTION

Public housing estates play a vital role in addressing housing affordability and promoting social equity in rapidly urbanising cities, particularly across Sub-Saharan Africa. In Nigeria, government-led public housing schemes have been developed to reduce housing deficits and provide planned residential environments for low- and middle-income households. However, while significant attention has been given to the physical provision of housing, the long-term performance of these estates remains a growing concern. Studies have traditionally focused on physical design quality, construction standards and post-occupancy modifications in public housing estates (Chukwuma-Uchegbu & Aliero, 2022). Increasingly, however, scholars highlight the importance of estate management in determining how well housing estates perform over time.

Building performance evaluation has evolved into a multidimensional concept that includes functional adequacy, occupant comfort, service delivery efficiency and sustainability outcomes. Contemporary research emphasizes that performance assessment should combine technical indicators such as durability and service reliability with user-centred measures reflecting residents' experiences and satisfaction (Ibiyeye et al., 2024; Park et al., 2024). Post-occupancy evaluation methods show that management effectiveness and service responsiveness significantly shape perceived building performance (Teo et al., 2024; Park et al., 2024). In public housing estates, where infrastructure demand is typically high, estate management systems play a central role in maintaining functional integrity through routine maintenance, supervision of shared facilities and structured communication with residents (Saperi et al., 2025). Facilities maintenance research further demonstrates that proactive and responsive practices reduce deterioration and extend building life-cycle performance (Saperi et al., 2025). In Nigerian cities, weak maintenance culture and institutional inefficiencies have contributed to the rapid deterioration of public housing estates, highlighting the need for more responsive management systems (Olalimeji et al., 2024).

Estate management responsiveness defined as the promptness and effectiveness with which estate managers address complaints, carry out maintenance tasks and communicate service information has emerged as an important factor influencing residential outcomes (She et al., 2022). Empirical studies show that responsiveness reduces service downtime, improves safety and enhances occupant satisfaction (She et al., 2022; World Journal of Advanced Research and Reviews, 2023). In centrally managed public housing environments, residents depend heavily on estate managers for service reliability, making responsiveness a key influence on perceptions of functionality, comfort and liveability (Teo et al., 2024).

Despite the growing body of research in facilities and property management, limited empirical evidence directly links estate management responsiveness to building performance in Nigerian public housing estates. Studies in Lagos State report significant differences in the functional condition and service performance of public housing estates, with some maintaining acceptable standards while others experience persistent deterioration and dissatisfaction among residents (Akande et al., 2024; Atoro et al., 2025). Much of the existing literature emphasizes physical infrastructure and design limitations, with less attention to the managerial processes that shape post-occupancy outcomes (She et al., 2022; Okoro, 2023). This gap constrains the development of targeted management strategies capable of improving sustainability and operational efficiency in public housing estates.

Therefore, this study examines estate management responsiveness as a determinant of building performance in selected Millennium Housing Estates in Lagos State. The study draws on resident-based performance evaluation data to empirically establish how

responsiveness in estate management influences functional and service-related performance outcomes across different housing estates. Specifically, the study aims to assess levels of estate management responsiveness, evaluate building performance outcomes, determine the statistical relationship between the two variables and compare variations across the selected estates.

METHODS

Research Design

This study adopted a quantitative cross-sectional research design to examine the influence of estate management responsiveness on building performance in selected public housing estates in Lagos State. The design was appropriate for investigating relationships between management practices and performance outcomes using survey data collected at a single point in time. A correlational analytical approach was employed to establish statistical associations between estate management responsiveness indicators and building performance outcomes, consistent with established practices in housing and facilities management research (Creswell & Creswell, 2021; Hair et al., 2022).

Study Area

The study was conducted in selected Millennium Housing Estates located in Lagos State, Nigeria. Lagos is one of Africa's fastest-growing megacities, characterised by rapid urbanisation, high population density and increasing reliance on government-sponsored public housing schemes to address housing demand (Ogunleye et al., 2023). The Millennium Housing Estates were developed as planned public housing interventions aimed at providing affordable and functional residential environments for low- and middle-income households. Although the estates shared similar development objectives and planning standards, they differed in estate management practices and operational efficiency, making them suitable for comparative analysis of management responsiveness and building performance outcomes.

Data Source and Research Instrument

Primary data were collected through a structured questionnaire administered to residents of the selected housing estates. The questionnaire was developed and validated during the PhD research from which this article drew its dataset. It consisted of sections covering respondents' socio-demographic characteristics, estate management responsiveness indicators and building performance evaluation measures.

Estate management responsiveness indicators included responsiveness to maintenance complaints, effectiveness of repair works and communication efficiency. Building performance indicators captured functional adequacy, service delivery and overall estate condition. The use of resident-reported data aligned with post-occupancy evaluation approaches, which recognise occupants as reliable assessors of building functionality and management effectiveness (Ibiyeye et al., 2024; Park et al., 2024).

Sampling Technique and Sample Size

A multi-stage sampling technique was employed. First, selected Millennium Housing Estates were purposively chosen based on their scale, occupancy status and relevance to public housing delivery in Lagos State. Next, residential units within each estate were selected using a systematic random sampling method to ensure proportional representation of households.

The final sample size was statistically adequate for quantitative analysis and met recommended thresholds for social science and built environment research (Hair et al., 2022; Taherdoost, 2023). Only completed and valid questionnaires were included in the analysis.

Variables and Measurement

Estate management responsiveness served as the independent variable and was operationalised using indicators such as promptness of response to maintenance requests, effectiveness of routine maintenance, speed of repair works, supervision of common facilities and efficiency of communication with residents.

Building performance evaluation constituted the dependent variable and was measured using aggregated performance scores reflecting functional efficiency, service delivery quality and overall estate condition. All variables were measured using a five-point Likert-type scale, widely applied in housing performance and facilities management studies due to its reliability in capturing user perceptions (Ibiyeye et al., 2024; Teo et al., 2024). Composite indices were generated to represent overall estate management responsiveness and building performance.

Data Analysis Techniques

Data were analysed using statistical software to generate both descriptive and inferential statistics. Descriptive statistics, including frequencies, percentages and mean scores, were used to summarise respondents' socio-demographic characteristics and estate management responsiveness indicators.

Inferential analysis involved Pearson correlation analysis to examine the relationship between estate management responsiveness and building performance, and one-way analysis of variance (ANOVA) to test for differences in management responsiveness and performance outcomes across the selected housing estates. Where significant differences were found, post-hoc Tukey HSD tests were conducted to identify specific group variations. Statistical significance was assessed at the 5% level ($p < 0.05$), consistent with conventions in housing performance research (Hair et al., 2022).

Ethical Considerations

Ethical principles guiding social research were observed throughout the study. Participation in the survey was voluntary, and respondents were informed of the study's purpose prior to questionnaire administration. Anonymity and confidentiality were ensured by excluding personal identifiers from the dataset. The secondary use of the PhD dataset for this article was conducted in accordance with academic integrity standards and remained consistent with the original ethical approval (Creswell & Creswell, 2021).

RESULTS

Socio-Demographic Characteristics of Respondents

The socio-demographic characteristics of respondents are presented in Table 1. The results show that respondents were predominantly mature, economically active, and sufficiently experienced to provide reliable assessments of estate management responsiveness and building performance. More than half of the respondents (51.2%) were within the 45–54 age group, while only 4.2% were below 25 years. This age structure suggests prolonged residency and sustained interaction with estate management systems, which strengthens the reliability of perception-based evaluations. Similar demographic patterns have been reported in public housing studies, where long-term occupants demonstrate stronger evaluative capacity regarding estate performance (Akande et al., 2024; Atoro et al., 2025).

Male respondents constituted 62.2% of the sample, reflecting the predominance of male household heads in Nigerian public housing estates (Olalimeji et al., 2024). A high proportion of respondents were married (64.4%), and most households comprised 3–4 persons (46.1%), underscoring the family-oriented nature of the estates and the importance of effective estate management in sustaining livability and residential comfort. Furthermore, 85.5% of respondents possessed tertiary education, which enhances the credibility of resident-based assessments, as educated occupants are more likely to provide informed evaluations of housing and management performance (Ibiyeye et al., 2024; Park et al., 2024).

Table 1: Socio-Demographic Profile of Respondents Across Selected Millennium Housing Estates

Variable	Category	Ojokoro (F/%)	Shasha (F/%)	Baba Omojola (F/%)	Oba Lateef (F/%)	Emeka Anyaoku (F/%)	Total (F/%)
Age Group	Below 25	11 (3.5)	4 (3.9)	3 (6.8)	0 (0.0)	4 (10.5)	22 (4.2)
	25–34	29 (9.1)	12 (11.8)	5 (11.4)	1 (6.3)	7 (18.4)	54 (10.4)
	35–44	56 (17.6)	24 (23.5)	6 (13.6)	0 (0.0)	11 (28.9)	97 (18.7)
	45–54	181 (56.7)	50 (49.0)	20 (45.5)	6 (37.5)	9 (23.7)	266 (51.2)
	Above 55	42 (13.1)	12 (11.8)	10 (22.7)	9 (56.2)	7 (18.4)	80 (15.5)
Gender	Male	188 (58.9)	61 (59.8)	32 (72.7)	11 (68.8)	31 (81.6)	323 (62.2)
	Female	131 (41.1)	41 (40.2)	12 (27.3)	5 (31.2)	7 (18.4)	196 (37.8)
Marital Status	Single	93 (29.2)	27 (26.5)	9 (20.5)	3 (18.8)	7 (18.4)	139 (26.8)
	Married	197 (61.8)	67 (65.7)	31 (70.5)	11 (68.8)	28 (73.7)	334 (64.4)
	Divorced	12 (3.8)	4 (3.9)	2 (4.5)	1 (6.3)	0 (0.0)	19 (3.7)
	Widowed	17 (5.3)	4 (3.9)	2 (4.5)	1 (6.3)	3 (7.9)	27 (5.2)
Education	No Formal	9 (2.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (1.7)
	Primary	3 (0.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (0.6)
	Secondary	45 (14.1)	4 (3.9)	5 (11.4)	0 (0.0)	14 (36.8)	63 (12.1)
	Tertiary	262 (82.2)	98 (96.1)	39 (88.6)	16 (100.0)	24 (63.2)	444 (85.5)
Length of Stay	<1 year	23 (7.2)	5 (4.9)	1 (2.3)	1 (6.3)	0 (0.0)	30 (5.8)
	1–5 years	172 (53.9)	55 (53.9)	27 (61.4)	8 (50.0)	24 (63.2)	286 (55.1)
	>5 years	124 (38.9)	42 (41.2)	16 (36.3)	7 (43.7)	14 (36.8)	203 (39.1)
Income (₦)	<50,000	36 (11.3)	11 (10.8)	5 (11.4)	2 (12.5)	3 (7.9)	57 (11.0)
	50,000–100,000	82 (25.7)	24 (23.5)	11 (25.0)	4 (25.0)	7 (18.4)	128 (24.7)
	101,000–150,000	105 (32.9)	35 (34.3)	14 (31.8)	5 (31.3)	14 (36.8)	173 (33.3)
	151,000–200,000	59 (18.5)	21 (20.6)	11 (25.0)	3 (18.8)	10 (26.3)	104 (20.0)
	>200,000	36 (11.3)	12 (11.8)	5 (11.4)	2 (12.5)	3 (7.9)	58 (11.2)
Household Size	1–2	49 (15.4)	14 (13.7)	5 (11.4)	2 (12.5)	3 (7.9)	73 (14.1)
	3–4	149 (46.7)	46 (45.1)	19 (43.2)	7 (43.8)	18 (47.4)	239 (46.1)
	5–6	93 (29.2)	31 (30.4)	15 (34.1)	5 (31.3)	14 (36.8)	158 (30.4)
	>6	28 (8.8)	11 (10.8)	5 (11.4)	2 (12.5)	3 (7.9)	49 (9.4)

(Source: Field Survey, 2025)

Performance of Estate Management Responsiveness Indicators

The performance of estate management responsiveness indicators across the selected Millennium Housing Estates is summarised in Table 2. Overall, the results indicate relatively high levels of responsiveness, with mean scores exceeding the neutral benchmark (mean > 3.0) for most indicators across all estates. Indicators relating to responsiveness to residents' concerns, effectiveness of maintenance activities, and supervision of common facilities recorded particularly high mean scores in Oba Lateef and Emeka Anyaoku Estates, where several indicators exceeded a mean score of 5.0.

These findings are consistent with previous studies that identify management responsiveness as a critical dimension of service quality influencing residential performance and user satisfaction (She et al., 2022; Teo et al., 2024). In contrast, comparatively lower responsiveness scores recorded in Shasha Estate suggest operational and institutional challenges commonly associated with public housing management in rapidly urbanising contexts (Okoro, 2023; Olalimeji et al., 2024). The observed inter-estate variation confirms that estate management responsiveness is not uniform but largely dependent on estate-level managerial capacity and operational effectiveness.

Table 2: Mean Scores of Physical Building Conditions and Functional Facilities

Indicator	Ojokoro	Shasha	Baba Omojola	Oba Lateef	Emeka Anyaoku
Physical Conditions					
Building structure free from defects	2.95	3.35	2.86	1.89	3.73
Aesthetics visually appealing	3.52	3.61	3.24	4.22	4.09
Roads and pathways maintained	4.89	4.18	4.86	5.11	4.36
Drainage system prevents flooding	5.02	4.83	5.38	5.44	5.09
Estate promotes healthy environment	5.01	4.80	4.97	5.11	4.82
Noise & air quality acceptable	5.13	4.66	4.62	4.89	4.91
Residence provides high comfort	4.74	4.51	4.31	4.44	4.36
Functional Facilities / Management					
Water supply reliable	4.40	3.91	4.55	4.78	5.64
Water supply disruptions minimal	4.60	4.26	4.97	4.78	4.73
Power supply stable	4.82	4.43	5.41	3.22	5.09
Security services reliable	5.44	5.35	4.07	4.22	4.11
Waste management well-handled	5.19	4.74	4.59	5.00	5.00
Common areas well maintained	4.64	4.72	4.66	4.22	5.00
Estate management responsive	4.68	4.22	4.41	5.56	5.09
Estate management effective	4.85	3.81	4.59	5.33	5.27
Management addresses residents' concerns promptly	4.94	4.56	4.97	5.11	5.45

Source: Field Survey, 2025; **Scale:** 1 = Strongly Disagree to 5 = Strongly Agree

Building Performance Evaluation Outcomes

Building performance evaluation outcomes, also presented in Table 2, reveal generally strong performance across both physical conditions and functional facilities. High mean scores were recorded for drainage systems, road networks, environmental quality, and indoor comfort, particularly in Baba Omojola, Oba Lateef, and Emeka Anyaoku Estates. These results suggest that effective estate management practices play a significant role in sustaining physical infrastructure and functional service delivery within public housing environments.

However, notable variations were observed in structural condition indicators. For example, the relatively low mean score for defect-free building structures in Oba Lateef Estate reflects persistent maintenance challenges commonly associated with ageing public housing stock (Chukwuma-Uchegbu and Aliero, 2022; Akande et al., 2024). This finding reinforces arguments within building performance evaluation literature that long-term housing performance depends not only on initial construction quality but also on continuous and responsive management interventions (Ibiyeye et al., 2024; Park et al., 2024).

Relationship between Estate Management Responsiveness and Building Performance

The statistical relationship between estate management responsiveness and building performance is presented in Table 3. Correlation analysis reveals strong to very strong positive relationships between management responsiveness indicators and building performance evaluation scores across all estates ($r = 0.601\text{--}0.901$). In Ojokoro and Shasha Estates, responsiveness to maintenance issues and service disruptions exhibited strong associations with perceived residential comfort and functionality.

Notably, Emeka Anyaoku Estate recorded extremely strong correlations ($r = \pm 0.901$), indicating that management actions exert a direct and substantial influence on building performance outcomes. The inverse relationship observed for defect-related indicators further confirms that delayed or ineffective maintenance negatively affects overall building performance. These results provide robust empirical support for existing literature that positions estate management responsiveness as a decisive determinant of residential building performance, particularly within public housing contexts (She et al., 2022; World Journal of Advanced Research and Reviews, 2023; Teo et al., 2024).

Table 3: Key Factors Influencing Building Performance Across Estates (Correlation with BPE)

Estate	Indicator	Correlation with BPE (r)	Influence Level
Ojokoro	Estate management responds effectively to maintenance issues	0.782	Strong
	Water supply is reliable and sufficient	0.732	Strong
	Water supply disruptions minimal	0.706	Strong
	Estate management addresses concerns promptly	0.697	Strong
	Residence provides a high level of comfort	0.674	Moderate–Strong
	Power supply is stable	0.654	Moderate–Strong
Shasha	Waste management well-handled	0.749	Strong
	Water supply disruptions minimal	0.708	Strong
	Common areas and shared facilities maintained	0.694	Moderate–Strong
	Estate management addresses residents' concerns promptly	0.606	Moderate
	Residence provides high comfort	0.606	Moderate
	Drainage system prevents flooding	0.601	Moderate
Baba Omojola	Residence provides high comfort	0.758	Strong

	Noise and air quality acceptable	0.734	Strong
	Common areas well maintained	0.723	Strong
	Waste management well-handled	0.718	Strong
	Roads and pathways maintained	0.712	Strong
	Estate promotes healthy & safe environment	0.684	Moderate–Strong
Oba Lateef	Common areas and shared facilities well maintained	0.880	Very Strong
	Power supply stable	0.827	Very Strong
	Waste management well-handled	0.768	Strong
	Noise and air quality acceptable	0.755	Strong
	Estate management responds effectively to maintenance	0.712	Strong
	Security services reliable	0.662	Moderate–Strong
Emeka Anyaoku	Aesthetics of buildings visually appealing	0.901	Very Strong
	Drainage system prevents flooding	0.901	Very Strong
	Residence provides high comfort	0.901	Very Strong
	Power supply stable	0.901	Very Strong
	Security services reliable	0.901	Very Strong
	Building structure free from defects (inverse coded effect)	–0.901	Very Strong

Source: Field Survey, 2025

Estate-Level Variations in Management Performance

Estate-level variations in management responsiveness and building performance were examined using analysis of variance (ANOVA) and post-hoc Tukey HSD tests, as presented in Table 4. The ANOVA results indicate statistically significant differences across estates ($F = 11.397$; $p < 0.05$). Post-hoc analysis shows that Oba Lateef Estate performs significantly lower than Ojokoro Estate, while Emeka Anyaoku Estate significantly outperforms Oba Lateef Estate.

These statistically significant differences corroborate previous studies that highlight disparities in managerial capacity and operational efficiency across public housing estates operating under similar policy frameworks (Ogunleye et al., 2023; Saperi et al., 2025). The findings underscore the importance of estate-specific management structures and localized operational strategies in shaping building performance outcomes.

Table 4: ANOVA and Post-Hoc Tukey HSD Analysis

ANOVA Summary

Source of Variation	Sum of Squares	df	F-Value	p-Value
Between Estates	17.437	4	11.397	0.0072
Within Estates (Residual)	194.308	515		
Total	211.745	519		

Post-Hoc Tukey HSD Pairwise Comparisons

Comparison	Mean Difference	Lower Bound	Upper Bound	p-Value	Interpretation
Baba Omojola – Ojokoro	-0.1302	-0.4559	0.1954	0.756	Not Significant
Oba Lateef – Ojokoro	-0.5589	-1.0200	-0.0978	0.007	Significant
Emeka Anyaoku – Ojokoro	0.1592	-0.2044	0.5229	0.701	Not Significant
Shasha – Ojokoro	-0.2154	-0.4999	0.0692	0.219	Not Significant
Oba Lateef – Baba Omojola	-0.4287	-0.9419	0.0844	0.132	Not Significant
Emeka Anyaoku – Baba Omojola	0.2894	-0.1489	0.7277	0.312	Not Significant
Shasha – Baba Omojola	-0.0851	-0.4333	0.2631	0.987	Not Significant
Emeka Anyaoku – Oba Lateef	0.7181	0.2085	1.2278	0.002	Significant
Shasha – Oba Lateef	0.3436	-0.1069	0.7941	0.205	Not Significant
Shasha – Emeka Anyaoku	-0.3745	-0.7608	0.0117	0.067	Marginal (Not Significant)

Source: Field Survey, 2025; significance $p < 0.05$

DISCUSSION

The study findings demonstrate that estate management responsiveness is a critical determinant of building performance in public housing estates. Responsive maintenance systems, timely repairs, and effective communication significantly enhance both functional and physical performance outcomes, consistent with prior research (She et al., 2022; Teo et al., 2024).

Estate-level variations indicate that differences in building performance are largely influenced by managerial efficiency rather than design or funding alone. For example, very strong correlations in Emeka Anyaoku Estate reflect the impact of proactive and well-structured management practices, while lower performance in Oba Lateef Estate illustrates the consequences of delayed or inadequate maintenance interventions.

The results support a shift from reactive maintenance strategies toward performance-driven estate management frameworks in public housing delivery (Okoro, 2023; Saperi et al., 2025). By empirically validating the relationship between management responsiveness and building performance, the study underscores the strategic importance of managerial interventions in sustaining sustainability, functionality, and livability of public housing estates in Lagos State.

Overall, the findings provide practical implications for policymakers, estate managers, and urban housing authorities, demonstrating that investment in management processes is as crucial as physical infrastructure for long-term building performance.

CONCLUSION AND RECOMMENDATIONS

This study addressed the problem of declining building performance in public housing estates by examining whether estate management responsiveness plays a determining role in sustaining physical and functional building conditions in selected Millennium Housing

Estates in Lagos State. While housing performance is often linked to initial design and construction quality, this research investigated the post-occupancy management dimension as a critical sustainability factor.

The findings show that estate management responsiveness is a significant determinant of building performance. Estates where management teams responded promptly to maintenance requests, handled residents' complaints effectively, ensured reliable service delivery, and proactively supervised shared facilities recorded higher levels of residential comfort, environmental quality, and overall building functionality. Statistical analyses confirmed that management responsiveness explains notable differences in performance outcomes between estates, even where building typologies and construction standards were similar.

The key takeaway from this study is that sustainable building performance in public housing depends not only on physical design inputs but on continuous, responsive management systems. Effective estate management extends the service life of buildings, improves environmental living conditions, and enhances residents' satisfaction without requiring large-scale reconstruction. Responsiveness therefore emerges as a core sustainability strategy for maintaining the value and functionality of existing housing stock.

Recommendations

Based on the findings, the following recommendations are proposed to improve building performance and sustainability in public housing estates:

- i Institutionalise Responsive Maintenance Systems: Public housing authorities should establish structured maintenance response frameworks with defined timelines, tracking mechanisms, and accountability measures to ensure prompt resolution of building defects and service issues.
- ii Adopt Performance-Based Estate Management Benchmarks: Estate management evaluation should include measurable indicators such as response time, complaint resolution rate, and service reliability to promote efficiency and continuous improvement.
- iii Strengthen Capacity of Estate Management Personnel: Regular technical and managerial training should be provided to estate officers to enhance their ability to manage building systems, coordinate maintenance, and engage effectively with residents.
- iv Decentralise Decision-Making at Estate Level: Allowing estate managers limited operational autonomy can reduce bureaucratic delays and improve the speed of maintenance interventions and service delivery.
- v Promote Proactive Rather than Reactive Management: Routine inspections and preventive maintenance schedules should be prioritised to detect issues early, reduce long-term repair costs, and maintain environmental quality within estates.
- vi Integrate Residents' Feedback into Management Processes: Establishing formal communication channels for residents' feedback can help management identify performance gaps and respond more effectively to users' needs.

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