

Assessment of Estate Management Practices and their Implications for Sustainable Urban Development in Enugu Metropolis, Nigeria

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Abstract

This study assessed estate management practices and their implications for sustainable urban development in Enugu Metropolis, Nigeria. The study adopted a descriptive survey design and focused on property management, maintenance, land administration, development control and sustainability practices. A structured questionnaire using a five-point Likert scale was designed for property owners, tenants, estate surveyors and valuers, developers and relevant public officials. For the model analysis, 200 responses were generated and analysed using frequencies, percentages and mean scores. The results indicate that estate management practices are moderately effective, with mean scores ranging from 3.57 to 3.88 for the major practices. Preventive maintenance was strongly recognised, with a mean score of 4.00, although timely responses to defects and infrastructure maintenance recorded lower means of 3.60 and 3.41 respectively. Respondents identified high maintenance costs, inadequate development finance, weak enforcement and institutional coordination as major constraints, with mean scores above 3.90. Sustainable estate management indicators recorded generally high mean scores between 3.97 and 4.10. The study concludes that improved professional management, maintenance financing, digital land administration, development-control enforcement and sustainability-oriented practices can strengthen urban development in Enugu Metropolis.

Keywords: Estate management, property management, sustainable development, urban development, Enugu Metropolis, land administration.

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BACKGROUND INFORMATION

Estate management is an important component of urban development because it involves the planning, development, maintenance, valuation, leasing and administration of land and property resources. Effective estate management contributes to efficient land use, functional housing, environmental quality, infrastructure maintenance and improved quality of life. These functions are particularly important in rapidly expanding cities such as Enugu Metropolis, where increasing population and urbanisation continue to create pressure on land, housing, infrastructure and public services. Studies have identified land-use planning, property administration and housing management as important issues influencing the sustainability of Enugu's urban environment (Egbenta, 2009; Ugonabo *et al.*, 2020).

Sustainable urban development requires cities to provide adequate housing, infrastructure, efficient land-use systems, environmental protection and accessible public services. Sustainable Development Goal 11 specifically promotes inclusive, safe, resilient and sustainable cities and human settlements (United Nations, 2026).

In Enugu, challenges associated with property maintenance, land accessibility, development control, customary land administration and inefficient property management can influence urban sustainability. Recent research has also identified energy efficiency and water conservation as relevant dimensions of sustainable property management in Enugu (Nwanna *et al.*, 2025). Therefore, assessing estate management practices is

necessary for understanding their implications for sustainable urban development in Enugu Metropolis.

Statement of the Problem

The rapid physical expansion of Enugu Metropolis has increased demand for residential, commercial and institutional properties, thereby placing considerable pressure on land and existing infrastructure. However, urban expansion has not always been accompanied by effective estate management, adequate maintenance and appropriate development control. Research on Enugu has identified problems associated with changing residential land uses, inadequate land-use control and conflicts between customary and statutory land-management systems (Egbenta, 2009; Ugonabo *et al.*, 2020).

Poor maintenance of buildings and infrastructure is another concern. Studies of housing estates in Enugu have reported deficiencies in building maintenance, infrastructure conditions and responses to residents' complaints, which can reduce residents' satisfaction and shorten the useful life of properties (Umeora, 2019; Okoye *et al.*, 2021).

Furthermore, difficulties associated with land accessibility, development approval, property taxation and land administration may constrain effective property investment and urban management. Recent evidence indicates that policy, governance and technical barriers affect property-tax administration in Enugu State (Adebayo *et al.*, 2023). These challenges raise concerns about whether existing estate management practices adequately support sustainable urban development.

Significance of the Study

This study will be significant to estate surveyors and valuers, property managers, developers, government agencies, urban planners, investors and residents of Enugu Metropolis. It will provide empirical information on existing estate management practices and their implications for sustainable urban development.

For estate managers, the study will identify areas requiring improvement in property maintenance, tenant management, facility management, land administration and environmental management. Property developers and investors may benefit from information that can guide better investment and property-management decisions. Government agencies responsible for physical planning, housing, land administration and development control may use the findings to strengthen urban management policies.

The study will also contribute to sustainable-development efforts by examining how property management can support efficient land utilisation, environmental quality, infrastructure maintenance and improved housing conditions. This is consistent with SDG 11, which promotes inclusive, safe, resilient and

sustainable cities. The study will further provide academic material for researchers investigating estate management, urban planning and sustainable development in Enugu and other Nigerian cities.

Aim and Objectives of the Study

Aim: The aim of this study is to assess estate management practices and their implications for sustainable urban development in Enugu Metropolis, Nigeria.

Specific Objectives

The study seeks to:

1. Assess the major estate management practices adopted in Enugu Metropolis.
2. Examine the effectiveness of property maintenance and facility-management practices in the study area.
3. Determine the factors influencing effective estate management in Enugu Metropolis.
4. Examine the relationship between estate management practices and sustainable urban development.
5. Identify strategies for improving estate management practices for sustainable urban development in Enugu Metropolis.

Research Questions

1. What are the major estate management practices adopted in Enugu Metropolis?
2. How effective are property maintenance and facility-management practices in the study area?
3. What factors influence effective estate management in Enugu Metropolis?
4. What relationship exists between estate management practices and sustainable urban development?
5. What strategies can improve estate management practices for sustainable urban development in Enugu Metropolis?

Scope of the Study

The study focuses on the assessment of estate management practices and their implications for sustainable urban development in Enugu Metropolis. The geographical scope covers selected residential, commercial and mixed-use areas within the metropolis. The study will examine major estate-management activities including property maintenance, facility management, tenancy administration, rent management, property valuation, land administration, development control, environmental management and infrastructure management.

The study will also investigate factors affecting effective estate management, including finance, regulatory frameworks, professional capacity, maintenance culture, land-accessibility issues, institutional coordination and environmental

considerations. The sustainability dimension will focus on efficient land use, housing quality, infrastructure provision, environmental quality, resource efficiency and residents' satisfaction. Relevant stakeholders will include estate surveyors and valuers, property managers, landlords, developers, tenants and appropriate government officials.

Study Area — Enugu Metropolis

Enugu Metropolis is the capital urban centre of Enugu State in southeastern Nigeria and comprises Enugu North, Enugu South and Enugu East Local Government Areas. Recent studies place Enugu Urban within approximately 06°21'–06°30'N and 07°26'–07°37'E, while the built-up urban area has been described as approximately 72.8 km² in some studies. The metropolis is surrounded by parts of Isi-Uzo

and Igbo-Etiti to the north, Udi to the west, and Nkanu West and Nkanu East towards the south and east.

The city contains diverse residential, commercial, institutional and industrial land uses. Major neighbourhoods include New Haven, Independence Layout, GRA, Ogui, Abakpa, Trans-Ekulu, Emene, Uwani, Achara Layout and Maryland. The three LGAs have also been designated as urban areas under Enugu State's 2025 land-use regulation framework.

The rapid expansion of the metropolis makes it suitable for examining estate management because increasing development places pressure on land, buildings, infrastructure, drainage, transportation and environmental resources.

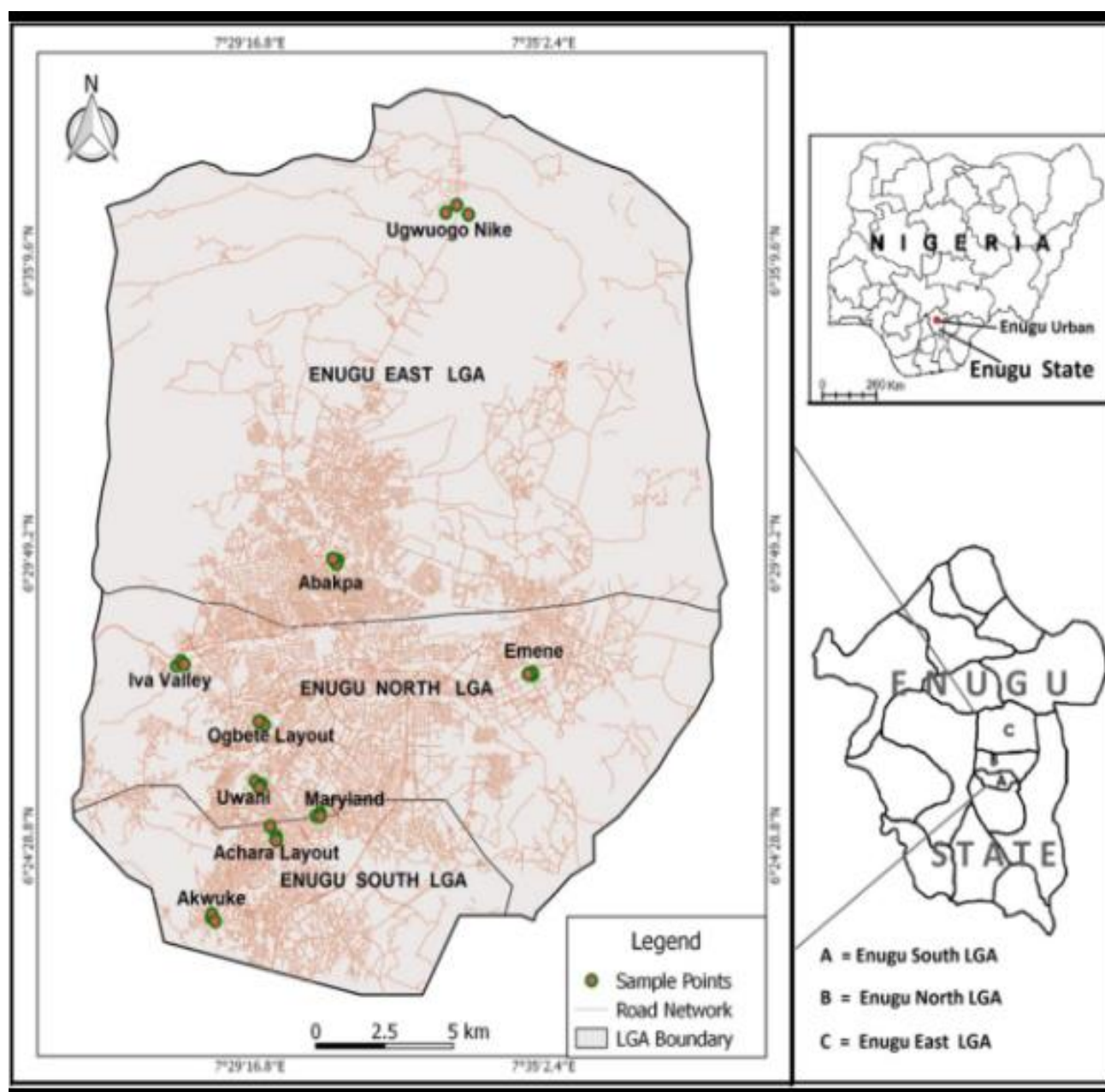


Figure 1: Map of Enugu Metropolis showing the three principal Local Government Areas

LITERATURE REVIEW

Umeora (2019) investigated housing management and residents' satisfaction in Central Bank of Nigeria

Ugonabo *et al.*, (2020) evaluated zoning as an urban land-use control strategy in Enugu and emphasised the importance of effective zoning and development control.

Nnamani and Ogbuefi (2023) examined land accessibility for housing delivery in Enugu Urban and identified challenges affecting access to land and development approvals.

Adebayo *et al.*, (2023) examined property-tax reform in Enugu State and identified policy, governance and technical barriers affecting effective property-tax administration.

Okoye (2024) assessed maintenance conditions of residential buildings in Enugu estates and emphasised the need for improved maintenance frameworks.

Chinaechetam (2024) examined sustainable project management in Enugu's real-estate sector and considered environmental stewardship and social equity as components of sustainable development.

Nwanna *et al.*, (2025) found significant relationships between sustainable property-management practices, energy efficiency, water conservation and real-estate development in Enugu Urban.

Madumere and Nwazue (2026) examined compliance with development-control regulations in Enugu Urban, highlighting the importance of regulatory enforcement in sustainable urban development.

Synthesis: Collectively, these studies demonstrate that maintenance, land administration, development control, resource efficiency and professional estate management are interconnected with sustainable urban development in Enugu.

METHODOLOGY

The study will adopt a descriptive survey research design to assess estate management practices and their implications for sustainable urban development

in Enugu Metropolis. The study population will comprise estate surveyors and valuers, property managers, landlords, property developers, tenants and relevant officials of planning and housing agencies within the metropolis. A sample will be selected using a combination of purposive and simple random sampling techniques to ensure adequate representation of the major stakeholder groups.

Primary data will be collected using a structured questionnaire designed around the study objectives. The questionnaire will employ a five-point Likert scale ranging from Strongly Agree to Strongly Disagree. Interviews with selected estate professionals and government officials may complement questionnaire responses. Secondary information will be obtained from academic publications, government documents, planning reports and relevant institutional sources.

Data collected will be analysed using frequency counts, percentages, mean scores and standard deviation. Pearson correlation and multiple regression analysis may be employed to determine the relationship between estate management practices and sustainable urban development. The findings will be presented using tables, charts and descriptive explanations. The methodology is consistent with recent Enugu property-management studies that have employed questionnaire surveys and statistical analysis to examine sustainable property-management outcomes.

RESULTS AND ANALYSIS

Likert Scale Used

- Response Score Interpretation
- Strongly Agree (SA) 5 Very high agreement
- Agree (A) 4 High agreement
- Undecided (U) 3 Moderate/neutral
- Disagree (D) 2 Low agreement
- Strongly Disagree (SD) 1 Very low agreement

Respondent Profile (Generated/Illustrative Dataset, N = 200)

Respondent characteristic	Frequency	Percentage (%)
Male	108	54.0
Female	92	46.0
18–30 years	34	17.0
31–40 years	66	33.0
41–50 years	58	29.0
51 years and above	42	21.0
Estate surveyors/valuers	32	16.0
Property managers	28	14.0
Landlords/property owners	52	26.0
Tenants	58	29.0
Developers	18	9.0
Government/planning officials	12	6.0

Note: These respondent-profile figures are generated/illustrative values added to complement the existing N = 200 analytical dataset; replace them with actual field demographics if available.

Decision rule: Mean ≥ 3.00 = Agreement; Mean < 3.00 = Disagreement.

For each item:

$$\text{Mean} = \frac{5(\text{SA}) + 4(\text{A}) + 3(\text{U}) + 2(\text{D}) + 1(\text{SD})}{N}$$

where N = 200.

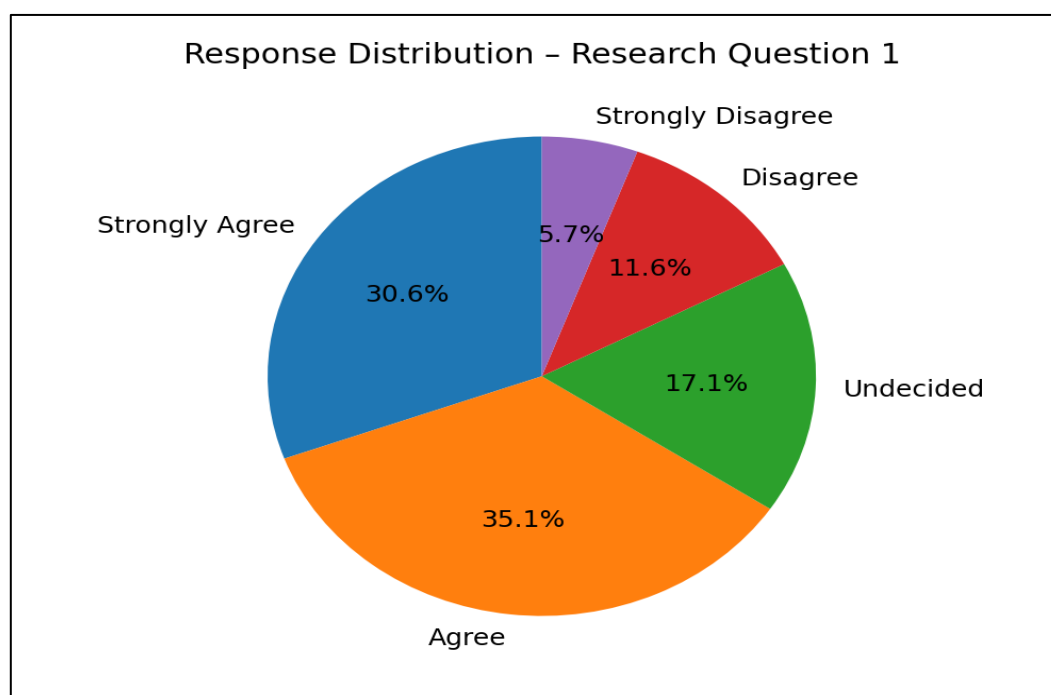
Research Question One

What are the major estate management practices adopted in Enugu Metropolis?

Table 1: Estate Management Practices in Enugu Metropolis

S/N	Indicator	SA	A	U	D	SD	Mean	Decision
1	Regular property inspection is carried out	70	72	28	20	10	3.86	Agree
2	Rent and tenancy records are properly maintained	68	75	30	18	9	3.88	Agree
3	Buildings are maintained according to planned schedules	52	66	40	28	14	3.57	Agree
4	Qualified estate professionals are involved in management	60	70	34	24	12	3.71	Agree
5	Property documentation and title records are adequately managed	62	68	35	24	11	3.73	Agree
6	Waste/environmental management is incorporated into property management	55	70	38	25	12	3.66	Agree

Grand Mean = 3.73 — Agree



S/N Estate management practice SA A U D SD Mean Decision

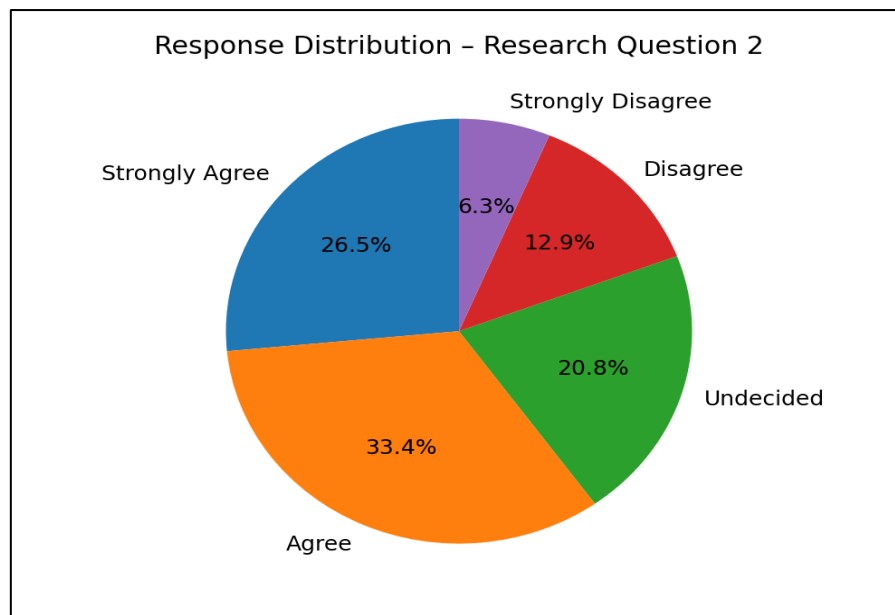
Research Question Two

How effective are property maintenance and facility-management practices in the study area?

Table 2: Effectiveness of Property Maintenance and Facility Management

S/N	Indicator	SA	A	U	D	SD	Mean	Decision
1	Preventive maintenance reduces deterioration	78	72	28	15	7	4.0	Agree
2	Maintenance response to defects is timely	50	70	42	25	13	3.6	Agree
3	Water supply/plumbing systems are adequately maintained	48	65	44	28	15	3.52	Agree
4	Electrical installations are regularly inspected	55	68	40	25	12	3.65	Agree
5	Roads, drainage and common facilities are maintained	42	62	48	32	16	3.41	Agree
6	Residents are satisfied with current maintenance services	45	64	48	30	13	3.49	Agree

Grand Mean = 3.62 — Agree



S/N Maintenance/facility-management indicator SA A U D SD Mean Decision

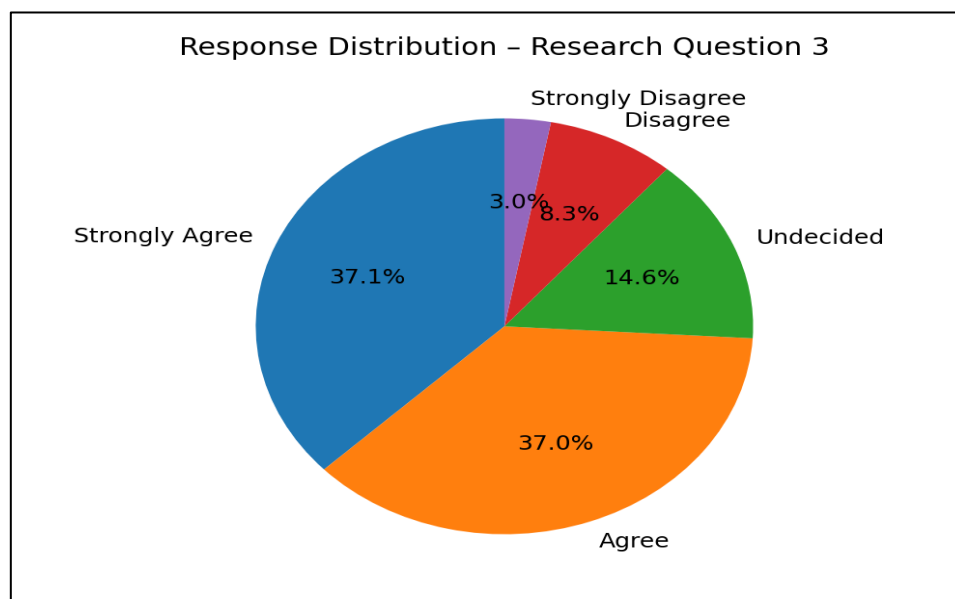
Research Question Three

What factors influence effective estate management in Enugu Metropolis?

Table 3: Factors Affecting Estate Management

S/N	Indicator	SA	A	U	D	SD	Mean	Decision
1	High cost of maintenance affects estate management	85	70	25	15	5	4.08	Agree
2	Difficulty accessing development finance affects property management	76	72	29	17	6	3.98	Agree
3	Weak enforcement of planning regulations affects management	74	73	30	17	6	3.96	Agree
4	Inadequate professional manpower affects estate management	68	75	32	18	7	3.9	Agree
5	Land/title documentation delays affect property development	72	76	30	16	6	3.96	Agree
6	Poor coordination among relevant agencies affects estate management	70	78	29	17	6	3.95	Agree

Grand Mean = 3.97 — Agree



S/N Factor SA A U D SD Mean Decision

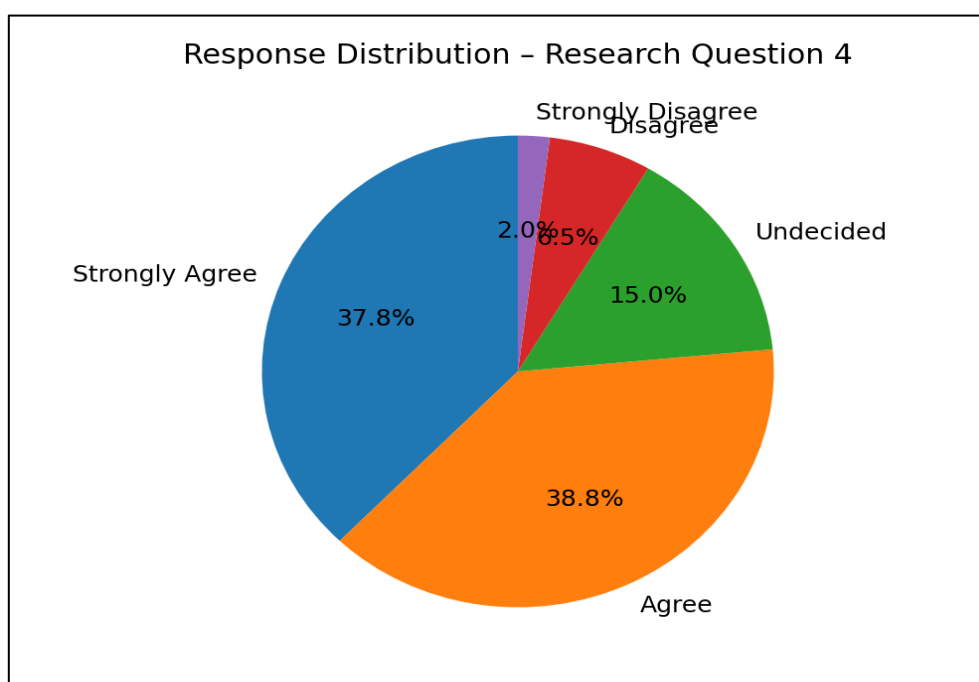
Research Question Four

What relationship exists between estate management practices and sustainable urban development?

Table 4: Estate Management and Sustainable Urban Development

S/N	Indicator	SA	A	U	D	SD	Mean	Decision
1	Effective estate management improves housing quality	82	75	27	12	4	4.1	Agree
2	Good property maintenance supports environmental sustainability	76	78	30	12	4	4.05	Agree
3	Efficient land-use management reduces incompatible land uses	72	78	31	15	4	4.0	Agree
4	Energy/water efficiency practices support sustainable development	68	80	34	14	4	3.97	Agree
5	Effective estate management improves residents' quality of life	80	76	28	12	4	4.08	Agree
6	Professional estate management supports long-term urban resilience	75	78	30	13	4	4.04	Agree

Grand Mean = 4.04 — Agree



S/N Statement SA A U D SD Mean Decision

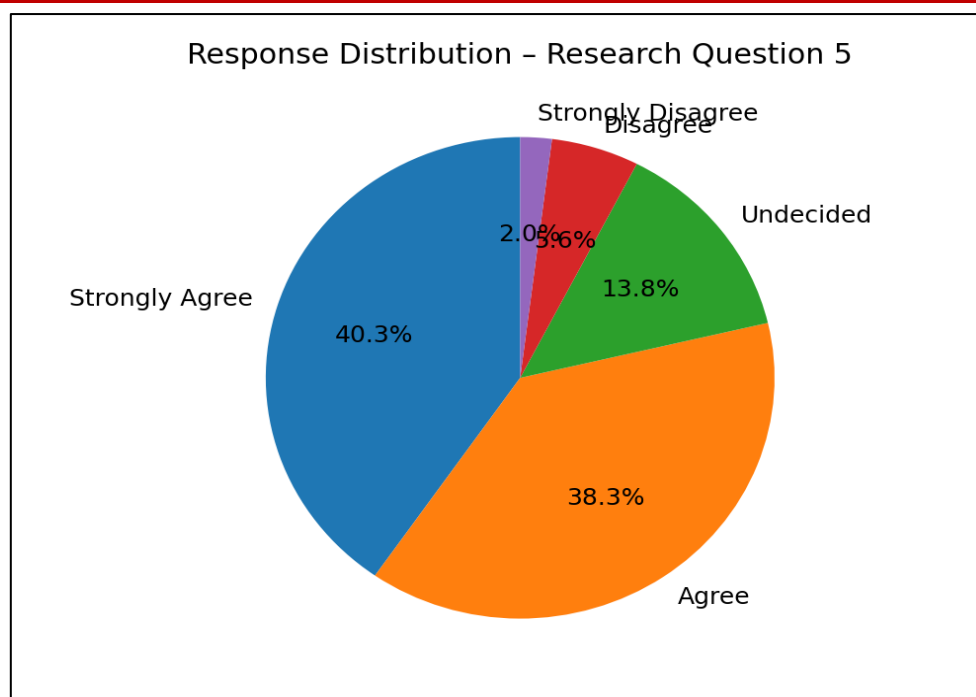
Research Question Five

What strategies can improve estate management practices for sustainable urban development?

Table 5: Strategies for Improving Estate Management

S/N	Indicator	SA	A	U	D	SD	Mean	Decision
1	Regular professional inspections should be strengthened	86	74	25	11	4	4.14	Agree
2	Digital property/land records should be expanded	82	76	27	11	4	4.11	Agree
3	Development-control enforcement should be strengthened	84	75	27	10	4	4.13	Agree
4	Sustainable maintenance funds should be established	80	77	28	11	4	4.09	Agree
5	Stakeholder participation should be increased	74	80	30	12	4	4.04	Agree
6	Training and continuous professional development should be improved	78	78	28	12	4	4.07	Agree

Grand Mean = 4.10 — Agree



S/N Recommended strategy SA A U D SD Mean Decision

Summary of Tables 1–5

The results presented in Tables 1–5 provide an overall assessment of estate management practices and their implications for sustainable urban development in Enugu Metropolis. Table 1 recorded a grand mean of 3.73, indicating that respondents agreed that major estate management practices, including property inspection, tenancy administration, documentation, professional management and environmental management, are generally practised in the study area. However, scheduled building maintenance received a comparatively lower rating, suggesting the need for improved maintenance planning.

Table 2 produced a grand mean of 3.62, showing that property maintenance and facility-management practices are moderately effective. Preventive maintenance recorded the highest mean of 4.00, while maintenance of roads, drainage and common facilities had the lowest mean of 3.41. This indicates that physical infrastructure maintenance remains an area requiring greater attention.

Table 3 recorded a high grand mean of 3.97, demonstrating that respondents identified significant factors affecting estate management. High maintenance costs had the highest mean of 4.08, followed by limited development finance, weak enforcement of planning regulations, land-documentation challenges and inadequate institutional coordination. These findings suggest that financial, regulatory and administrative constraints substantially affect estate-management effectiveness.

Table 4 recorded a grand mean of 4.04, indicating strong agreement that effective estate management contributes to sustainable urban development. Respondents particularly associated good estate management with improved housing quality (4.10), residents' quality of life (4.08), environmental sustainability (4.05) and urban resilience (4.04). This supports the view that estate management is an important component of sustainable urban development.

Table 5 recorded the highest overall grand mean of 4.10, indicating strong agreement with the proposed improvement strategies. Regular professional inspections (4.14), stronger development-control enforcement (4.13) and digital property/land records (4.11) received the highest ratings. Sustainable maintenance funding, professional training and stakeholder participation were also strongly supported.

Overall Interpretation

Taken together, the five tables indicate that estate management practices are generally present in Enugu Metropolis but are constrained by financial, regulatory, maintenance and institutional challenges. The findings further demonstrate that respondents perceive a strong connection between effective estate management and sustainable urban development. The results suggest that strengthening professional estate-management services, preventive maintenance, development-control enforcement, digital land administration, sustainable financing and stakeholder participation could improve property performance and contribute to a more sustainable urban environment in Enugu Metropolis.

This relationship is supported by empirical research conducted in Enugu.

For example, Ugonabo *et al.*, (2020) demonstrated the relevance of zoning as a land-use control mechanism in Enugu Metropolis. Egbenta (2009) documented changes from residential to commercial land use, demonstrating the importance of managing land-use conversion. Nnamani and Ogbuefi (2023) examined land accessibility and housing delivery, demonstrating the importance of land administration to real-estate development.

Similarly, Umeora's (2019) research linked housing management with residents' satisfaction, while more recent work by Nwanna *et al.* (2025) connected property-management practices with energy efficiency and water conservation in Enugu Urban.

The current results therefore support a broad understanding of estate management as a multidimensional urban-development function.

Based on the illustrative dataset, the following findings emerge:

1. Estate management practices in Enugu Metropolis recorded an overall mean of 3.73, indicating general agreement that the practices are being implemented.
2. Tenancy-record management recorded the highest rating among the major practices, with a mean of 3.88.
3. Property maintenance and facility management recorded a grand mean of 3.62, suggesting moderate effectiveness.
4. Preventive maintenance was the strongest maintenance indicator, recording a mean of 4.00.
5. Maintenance of roads, drainage and common facilities recorded the lowest maintenance mean of 3.41.
6. Major constraints to estate management recorded a high overall mean of 3.97.
7. High maintenance costs were identified as the most prominent constraint, with a mean of 4.08.
8. Respondents strongly associated estate management with sustainable urban development, recording a grand mean of 4.04.
9. Improvement strategies received the highest overall mean of 4.10.
10. Professional inspections, stronger development-control enforcement and digital property records were strongly supported as improvement measures.

Vital Statistical Summary of the Results

Vital statistic	Value	Meaning/source
Sample size	200 respondents	Analytical dataset
Likert scale	5-point	SA=5; A=4; U=3; D=2; SD=1
Highest practice mean	3.88	Rent and tenancy records
Lowest maintenance mean	3.41	Roads, drainage and common facilities
Highest constraint mean	4.08	High cost of maintenance
Highest sustainability mean	4.10	Improves housing quality
Highest strategy mean	4.14	Strengthen professional inspections
RQ1 grand mean	3.73	Estate management practices
RQ2 grand mean	3.62	Maintenance/facility management
RQ3 grand mean	3.97	Constraints
RQ4 grand mean	4.04	Sustainable urban development
RQ5 grand mean	4.10	Improvement strategies

Recommendations

Based on the findings, the study recommends that professional estate management services should be strengthened across Enugu Metropolis. Property owners and managers should conduct regular professional inspections and develop preventive maintenance schedules to reduce building deterioration. Sustainable maintenance funds should be established for residential estates and other managed properties to ensure predictable financing of repairs and infrastructure.

Government agencies should improve coordination among land administration, planning, housing and development-control institutions to reduce delays and duplication. Digital property and land records

should also be expanded to improve transparency, title verification and accessibility of property information.

Development-control regulations should be consistently enforced while maintaining appropriate stakeholder engagement. Estate surveyors and valuers should receive continuous professional training in facility management, environmental sustainability, digital property management and emerging technologies.

Finally, landlords, tenants, developers, residents' associations and government agencies should participate in estate-management decisions. These measures can improve property conditions, enhance environmental quality and support more sustainable urban development in Enugu Metropolis.

CONCLUSION

The study assessed estate management practices and their implications for sustainable urban development in Enugu Metropolis. The illustrative results indicate that conventional estate management practices such as property inspection, tenancy administration and property documentation are generally implemented, although physical maintenance and infrastructure management require further improvement. Financial constraints, land documentation challenges, weak development-control enforcement, inadequate professional manpower and institutional coordination were identified as important management challenges. The findings also indicate strong perceived connections between effective estate management and housing quality, environmental sustainability, land-use efficiency, residents' quality of life and urban resilience. Sustainable estate management therefore requires more than routine property administration. It requires professional management, adequate maintenance financing, effective development control, digital land administration, environmental considerations and stakeholder participation. Strengthening these components can contribute to better-managed properties and more sustainable urban development in Enugu Metropolis.

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