

Exploratory Visitor Evaluation of Landscape and Public-Space Attributes at Tebet Eco Park

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ABSTRACT

Tebet Eco Park is a 7.3 ha revitalized urban park integrating ecological, social, educational, and recreational functions. This exploratory pilot study describes how repeat visitors evaluated its landscape and public-space attributes using Kaplan's preference matrix: coherence, complexity, mystery, and legibility. An on-site quantitative survey was conducted from 5 to 11 January 2026 across weekdays and the weekend. Forty visitors completed a 56 item questionnaire on a five-point Likert scale. Because the instrument had not been validated on an independent sample, corrected item-total correlations and Cronbach's alpha were used only as preliminary post hoc checks of item consistency. Thirteen items with correlations at or below 0.312 were excluded from retained-item score calculations, leaving 43 items. Preliminary internal consistency was acceptable for coherence ($\alpha=0.866$), legibility ($\alpha=0.815$), mystery ($\alpha=0.797$), and complexity ($\alpha=0.746$). Coherence obtained the highest mean ($M=4.11$, $SD=0.47$), whereas mystery obtained the lowest ($M=3.72$, $SD=0.52$); complexity ($M=3.81$, $SD=0.47$) and legibility ($M=3.80$, $SD=0.50$) were nearly identical. Descriptive attribute indexes were highest for environmental control ($M=4.05$) and lowest for character and city identity ($M=3.63$), although these indexes contained unequal retained-item compositions and should not be interpreted as validated scales. Respondents particularly valued green lawns, shade, cleanliness, and compatible activities. Park management should preserve spatial coherence while improving wayfinding, identity cues, and opportunities for exploration. The findings are limited to the 40 repeat visitors surveyed and require confirmation using a larger, independent sample.

INTRODUCTION

Urban parks function as ecological infrastructure, recreational settings, and everyday contact points with nature (Taylor *et al.* 2020; Chitrakar *et al.* 2022). Visitors value shade, accessibility, activity support, comfort, and social inclusiveness, while spatial management determines whether public spaces remain usable and inclusive (Amores *et al.* 2023; Dollah *et al.* 2023). Their role in supporting outdoor activity and social recovery has become increasingly visible since the COVID-19 pandemic (Arifin *et al.* 2021; Rahmatika *et al.* 2025).

User-centered evaluation therefore needs to connect physical performance with perception. Indonesian studies show that vegetation, circulation, cleanliness, and facilities shape users' assessments of urban green spaces (Nadhifa *et al.* 2024; Febiola *et al.* 2024). Microclimate and visual composition also influence how visitors judge comfort and environmental quality. Eye-tracking studies indicate that objective greenness does not automatically produce positive evaluations of aesthetics or safety (Pamungkas *et al.* 2025), while greenery-measurement research reports a similar gap between measured greenness and perceived quality (Septiantoro *et al.* 2025). Preference-based evidence can consequently guide which attributes should be retained or improved (Ramadhan and Fatimah 2024).

Tebet Eco Park is a 7.3 ha public park in South Jakarta created by integrating and revitalizing the former north and south Tebet parks (Tampi and Mustika 2022; Suryantari *et al.* 2022). Its eight zones combine ecological restoration with social, educational, and recreational functions, including the

Infinity Link Bridge, community and children's spaces, thematic planting, and a wetland boardwalk (Suryantari *et al.* 2022; Putri *et al.* 2023). Previous studies identify the site as an important green open space and healthy-city asset, while noting continuing needs related to accessibility, facilities, information, crowd management, ecological maintenance, and links with the surrounding urban fabric (Tampi and Mustika 2022; Putri *et al.* 2023).

Urban-park use varies by time, location, and visitor group (Chuang *et al.* 2022; Hu *et al.* 2023). Family facilities, lawns, recreation amenities, and commercial support affect visitor density and activity patterns (van Vliet *et al.* 2021; Yang *et al.* 2023). Vegetation, landmarks, paths, seating, and social spaces also shape diversity and behavior in public parks (Chuang *et al.* 2022; Hu *et al.* 2023). Visitor experience further depends on perceived value and environmental knowledge (Kaswanto *et al.* 2024), as well as a park's ability to communicate ecological meaning (Rahmafritia and Kaswanto 2024).

Kaplan's preference matrix organizes environmental preference into coherence, complexity, mystery, and legibility (Kaplan and Kaplan 1989). Coherence concerns order and compatibility, while complexity concerns richness and variety. Mystery indicates the promise of further information, whereas legibility concerns orientation and a clear mental representation. Recent studies confirm that visual order and vegetation density influence coherence and complexity (Lai *et al.* 2020; Zhang *et al.* 2021). Openness, naturalness, topography, and distinctive cues contribute to mystery and legibility (Uebel *et al.* 2021; Ríos-Rodríguez *et al.*

2021). Perceived care, soundscape, and environmental quality can also alter the relative contribution of these dimensions (Lis *et al.* 2022; Shayestefar *et al.* 2022; Pardela *et al.* 2025).

Recent Indonesian landscape-management research has linked ecological and visual quality with community activity, maintenance, accessibility, and continuity of landscape services (Anwar and Kaswanto 2021; Fitriana *et al.* 2023). At Tebet Eco Park, previous studies have examined the ecological concept, healthy-city role, accessibility, facilities, and visitor pull factors (Tampi and Mustika 2022; Suryantari *et al.* 2022; Putri *et al.* 2023). However, these studies have not provided an integrated visitor-based assessment of how the park is perceived through coherence, complexity, mystery, and legibility across its operational landscape and public-space attributes. This leaves a practical research problem: managers have limited evidence for distinguishing whether weaker visitor evaluations arise from spatial order, variety, exploratory interest, orientation, or specific physical attributes.

Repeat visitors provide a useful perspective for an exploratory park evaluation because their judgments are informed by more than a single visual encounter. They can compare circulation, comfort, maintenance, activity support, and environmental character across visits, even though their responses remain subjective and cannot represent all users. This perspective is relevant at Tebet Eco Park, where ecological restoration, recreation, and social use occur within one connected public landscape. Studies of park use show that visitor experience emerges from the interaction of spatial configuration, amenities, vegetation, and patterns of activity rather than from an isolated design feature (Chuang *et al.* 2022; Hu *et al.* 2023; van Vliet *et al.* 2021).

The four preference dimensions also offer complementary diagnostic value. A place may be coherent but insufficiently varied, complex but difficult to understand, legible but unable to invite further exploration, or mysterious

without providing adequate orientation. Reading the dimensions together avoids treating a high score as a complete measure of park quality. It also supports a more precise interpretation of management priorities: coherence relates to compatibility, complexity to organized variety, legibility to spatial understanding, and mystery to the promise of additional information. Previous preference research similarly links visual order, openness, vegetation density, and informational qualities with environmental appraisal (Zhang *et al.* 2021; Lis *et al.* 2022; Shayestefar *et al.* 2022).

To address this gap, the study uses Kaplan's preference matrix as a descriptive diagnostic framework and connects its four dimensions with seven operational park-attribute domains. The contribution is not a population-level ranking or causal model, but a structured pilot diagnosis that can separate favorable ecological-functional evaluations from attributes requiring clearer identity, interpretation, wayfinding, or exploratory cues. The pilot status is retained throughout so that post hoc item screening is not presented as independent scale validation.

Accordingly, this exploratory pilot study has three explicit objectives: (1) to describe repeat visitors' evaluations of Tebet Eco Park through coherence, complexity, mystery, and legibility; (2) to conduct preliminary post hoc screening of item consistency and internal reliability; and (3) to identify descriptive patterns across the four preference dimensions and seven park-attribute indexes. The study does not test causal relationships, validate a final measurement instrument, or generalize its findings to all park users.

METHODS

Research design and location

An exploratory quantitative descriptive survey was conducted at Tebet Eco Park, South Jakarta, from 5 to 11 January 2026. Data collection covered weekdays and the



Figure 1. Research location of Tebet Eco Park, South Jakarta
Source: Author's map based on Google Satellite Imagery (2026)

weekend so that visitors encountered under different visitation conditions could be included. Questionnaires were distributed directly on site, and photographic documentation of vegetation, facilities, pedestrian access, recreational spaces, and physical conditions was used to support interpretation of the descriptive results. Figure 1 shows the research location.

Participants and survey procedure

Forty visitors completed the questionnaire, and all cases were analyzed because no item-level responses were missing. Visitors encountered in the park who agreed to participate were recruited through a non-probability on-site intercept approach. The archived respondent profile showed that every participant had visited the park previously: 50.0% reported visiting at least once a week, 32.5% at least once every two weeks, and 17.5% less frequently. The sample therefore represents repeat visitors rather than first-time users and is treated as a pilot sample.

Measurement framework

The initial questionnaire comprised 56 statements arranged as a cross-classification of seven park-attribute domains and four preference dimensions. The domains were environmental control; multifunctional recreation; character and city identity; accessibility; facility management and physical quality; facility variety and completeness; and the relationship with the surrounding environment. Each domain contained two items for coherence, complexity, mystery, and legibility, producing 7 domains $\times$ 4 dimensions $\times$ 2 items. Responses used a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Table 1 summarizes the operational framework, and Figure 2 presents the non-causal descriptive measurement map.

Cross-classifying the seven domains with the four preference dimensions was intended to capture how a physical attribute was experienced, not merely whether it was present. For example, vegetation could contribute to compatibility under coherence, visual richness under complexity, partial concealment under mystery, or orientation under legibility. The same logic was applied to circulation, facilities, surrounding support, and identity-related features. This structure made it possible to examine whether favorable

evaluations were concentrated in one dimension or appeared across several ways of reading the park. It also exposed items whose wording or conceptual placement did not behave consistently in the small pilot dataset.

The operational framework was designed to keep the unit of interpretation close to observable park conditions. Statements referred to landscape or public-space attributes that visitors could encounter during an ordinary visit, while the four dimensions described the informational and experiential quality attached to those attributes. This approach supports communication between visitor evaluation and design action: a score can be traced back to vegetation, circulation, facilities, surroundings, recreation, or identity rather than remaining only at the level of an abstract psychological construct. The framework is exploratory, however, and does not establish that all domain-dimension combinations are equally strong measures.

All statements used the same five-point response format so that retained-item scores could be summarized on a common metric. Domain and dimension means were calculated only after the preliminary item screening described below. Consequently, each reported index represents the items retained for that particular grouping and not the complete initial set of statements. The indexes are useful for descriptive comparison within this sample, but unequal item counts and unequal representation of the four dimensions prevent them from being interpreted as equivalent standardized scales. This distinction is important when considering small numerical differences between domains.

Data analysis

To ensure direct correspondence between the analytical procedures and the three research objectives, the analysis was organized in objective-linked stages. Respondent characteristics were first summarized using frequencies and percentages to describe the pilot sample. For Objective 1, respondent-level means and sample standard deviations were calculated for the four preference dimensions after preliminary item screening. For Objective 2, corrected item-total correlations were calculated within each preference dimension as an exploratory post hoc consistency check; with $n=40$ and $df=38$, 0.312 was used as a screening rule rather than evidence

Table 1. Operational framework for visitor evaluation

Component	Code	Operational coverage	Initial items
Preference dimension: Coherence	COH	Perceived order, compatibility, harmony, and functional fit among landscape elements and activities	14
Preference dimension: Complexity	COM	Perceived variety, richness, differentiation, and diversity of physical or activity elements	14
Preference dimension: Mystery	MYS	Curiosity and the expectation that further exploration will reveal additional information or experience	14
Preference dimension: Legibility	LEG	Ease of recognizing, understanding, navigating, and finding routes or facilities	14
Park attribute domain: Environmental control	KL	Vegetation, lawns, shade, cleanliness, visual comfort, and ecological qualities	8
Park attribute domain: Multifunctional recreation	RP	Coexistence of activities, lighting, seating, and recreational uses	8
Park attribute domain: Character and city identity	KI	Infinity Link Bridge, distinctiveness, landmark quality, and city-park identity	8
Park attribute domain: Accessibility	AK	Vehicle and pedestrian access, visibility, circulation, commercial support, and parking	8
Park attribute domain: Facility management and physical quality	MF	Lighting, lawns, cleanliness, shade, seating, toilets, and maintained facilities	8
Park attribute domain: Facility variety and completeness	VF	Range of landscaped areas, seating, play, sport, plaza, and other facilities	8
Park attribute domain: Supportive surrounding environment	LM	Relationship between the park and surrounding offices, shops, culinary uses, and buildings	8

Non-causal descriptive framework

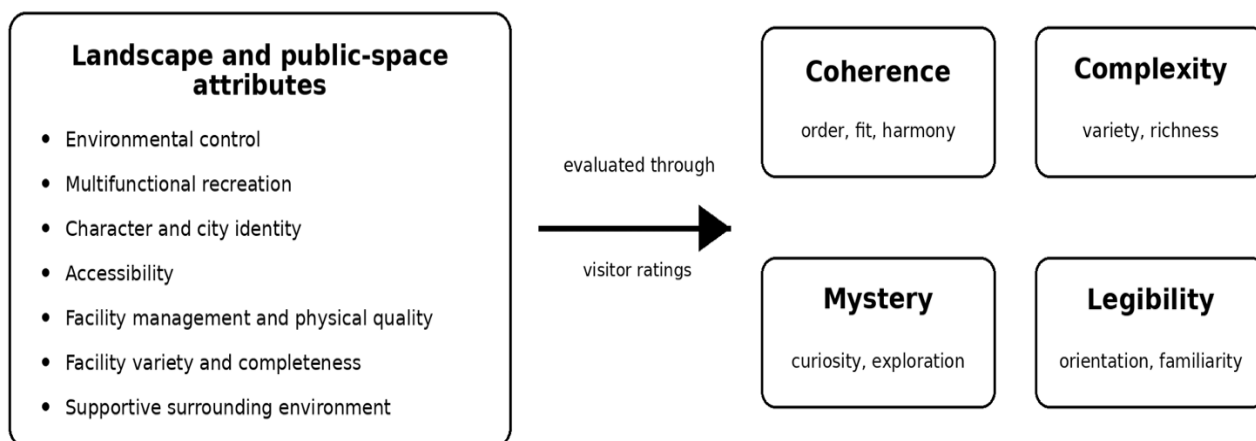


Figure 2. Exploratory non-causal framework for descriptive evaluation of park attributes
Source: Developed by the authors based on Kaplan and Kaplan (1989) and the study questionnaire

of construct validity, and Cronbach's alpha was reported before and after screening using $\alpha \geq 0.70$ as a descriptive internal-consistency benchmark (DeVellis and Thorpe 2021). For Objective 3, retained-item means were summarized across the four preference dimensions and seven park-attribute indexes, with the latter interpreted only as descriptive indexes because retained-item counts and dimension compositions differed. No causal, correlational, inferential, or factor-analytic claims were made.

The screening threshold was used as a practical pilot-study rule for reviewing item behavior, not as proof of construct validity. Corrected item-total correlation indicates whether an item moves consistently with the remaining items in its proposed grouping, while Cronbach's alpha summarizes preliminary internal consistency. Neither statistic demonstrates content validity, factorial structure, temporal stability, or measurement invariance. For that reason, the analysis reports both retained-item results and the limitations created by post hoc deletion. A later validation study should define the measurement model in advance and test it with a larger independent sample (DeVellis and Thorpe 2021).

Interpretation followed the magnitude and pattern of the descriptive scores rather than formal significance testing. Means were read together with standard deviations, retained-item counts, respondent characteristics, and the content represented by each grouping. No causal path, difference between dimensions, or effect of a single park attribute was estimated. Accordingly, statements such as "higher," "lower," or "nearly identical" describe the observed sample values only. This analytical boundary prevents small score differences from being overstated and keeps the management implications proportional to the exploratory design.

RESULTS AND DISCUSSION

Respondent characteristics

The respondent profile is summarized in Table 2. Men represented 57.5% of the sample and women 42.5%. The largest age group was 41–50 years (42.5%), followed by 26–40 years (27.5%). Half of the respondents lived within the city but farther from the park, while 35.0% lived nearby and 15.0% came from outside the city. Family visits were the most common form of visitation (47.5%). The profile indicates that the data largely represent experienced, family-oriented repeat visitors.

The profile suggests that the survey primarily represents adult repeat users who were already familiar with the park. Their evaluations are valuable for identifying recurring impressions of comfort, order, accessibility, and maintenance. At the same time, the composition provides limited evidence about first-time visitors, adolescents, older adults with specific mobility needs, or users who avoid the park because of access or crowding concerns. The results should therefore be read as an account of the participating repeat visitors rather than a demographic portrait of the entire visitor population.

Familiarity may also shape how individual attributes are judged. Repeat visitors can recognize changes in maintenance and compare different parts of the park, but familiar routes may reduce attention to identity cues or exploratory opportunities that are more noticeable to a first-time visitor. Conversely, a new visitor may value novelty while having insufficient experience to assess recurring cleanliness, crowding, or facility performance. Future sampling should record visit frequency in greater detail and compare these groups before attributing score differences only to physical design.

Exploratory item evaluation and reliability

Thirteen of the 56 initial items did not meet the corrected item-total correlation screening rule and were excluded from retained-item score calculations. The resulting structure contained 43 items: 12 coherence items, 10 complexity items, 9 mystery items, and 12 legibility items. Table 3 reports the initial and post-screening reliability coefficients. Cronbach's alpha values after screening ranged from 0.746 to 0.866. These coefficients indicate acceptable preliminary internal consistency within this pilot sample, but they do not establish construct validity or a final instrument structure.

The screening results also indicated potential content overlap among several indicators. Some excluded items addressed facility finding, commercial support, familiarity, spaciousness, or visual appeal although they had been assigned to complexity or mystery. Item wording was not altered after data collection. The exclusions are therefore reported transparently as post hoc screening decisions, and the 43-item structure requires independent content review and retesting with a larger sample.

Table 2. Selected characteristics of respondents (N=40)

Variable	Category	n	%
Gender	Male	23	57.5
	Female	17	42.5
Age	18–25 years	7	17.5
	26–40 years	11	27.5
	41–50 years	17	42.5
	51–60 years	3	7.5
	Above 60 years	2	5.0
Residence	Within city, near the park	14	35.0
	Within city, farther from the park	20	50.0
	Outside the city	6	15.0
Visit frequency	At least once a week	20	50.0
	At least once every two weeks	13	32.5
	Less frequent / more than one month	7	17.5
Visit company	Alone	8	20.0
	Friends, partner, or relatives	9	22.5
	Family	19	47.5
	Other	4	10.0
Primary purpose	Recreation and enjoying the park	12	30.0
	Photography or painting	1	2.5
	Sport	2	5.0
	Recreation for children/grandchildren	7	17.5
	Gathering with friends/relatives	8	20.0
	Other	10	25.0

The exclusion of 13 items reduced the immediate contribution of those statements to the dimension and domain means, but it did not establish that the associated landscape attributes were unimportant. A low item-total correlation may result from ambiguous wording, a reversed direction, restricted response variation, more than one idea within a statement, or placement under a grouping that does not match the way respondents understood it. Items concerning familiarity and spaciousness, for example, may be interpreted favorably or unfavorably depending on whether respondents associate them with comfort, monotony, openness, or lack of enclosure. Such items require conceptual review before deletion from a future instrument.

The retained alphas indicate that the four provisional dimension groupings achieved acceptable internal consistency after screening, with coherence showing the strongest value. These coefficients should nevertheless be interpreted cautiously because item deletion and alpha were evaluated using the same 40 responses. Post hoc improvement can make a scale appear more consistent within one dataset than it will be in another. The appropriate next step is not additional deletion from the present responses, but revision of wording followed by a new survey that evaluates the full measurement structure independently.

Score dispersion provides an additional descriptive check. The standard deviations for the four dimension means were relatively close, ranging from 0.47 to 0.52, so no

dimension displayed a substantially different level of response spread in this sample. This clustering supports a cautious comparison of the observed means but does not show that the distributions or paired differences are statistically equivalent. Item-level response distributions should be examined in a future study to identify ceiling effects, limited variance, and statements that invite socially desirable agreement.

Overall preference dimensions

Coherence had the highest sample mean ($M=4.11$, $SD=0.47$), suggesting favorable evaluations of harmony, compatibility, and functional integration among vegetation, lawns, facilities, activities, and the surrounding setting. Complexity ($M=3.81$, $SD=0.47$) and legibility ($M=3.80$, $SD=0.50$) were nearly identical; their 0.01 difference is descriptively negligible and was not statistically tested. Mystery had the lowest mean ($M=3.72$, $SD=0.52$), although it remained above the neutral midpoint. Table 4 summarizes the retained-item dimension scores.

Coherence can be interpreted as the clearest strength of the surveyed visitor experience. The finding indicates that vegetation, lawns, paths, facilities, lighting, and activities were generally perceived as belonging to an understandable whole. For management, preserving this quality requires attention to relationships among features rather than maintaining each feature separately. Replacement planting, new signs, temporary events, vending arrangements, or added facilities may weaken coherence when their scale, location, material, or visual language is incompatible with the existing park composition. Ecological maintenance and visual maintenance should consequently be coordinated as connected tasks (Anwar and Kaswanto 2021; Putri *et al.* 2023).

Complexity and legibility produced almost the same sample mean. This pairing is important because variety is beneficial only when visitors can continue to understand routes, activity areas, and transitions. Tebet Eco Park appears to offer multiple visual and functional elements without producing a correspondingly low evaluation of spatial readability. Future additions should retain that balance. Planting diversity, public activities, and facility choice may be expanded through clear zoning, unobstructed decision points, consistent signs, and visible connections between destinations. Research on urban parks likewise shows that spatial features influence both movement and the distribution of visitor activity (Chuang *et al.* 2022; Hu *et al.* 2023).

Mystery received the lowest dimension mean, although its value remained above the midpoint of the five-point scale. This result is better read as a comparatively weaker invitation to explore than as an unfavorable evaluation. Mystery can be supported by partial views, gradual revelation, sequential planting, changes in enclosure, and cues that suggest another experience beyond the current viewpoint. Excessive concealment should be avoided because it may reduce perceived safety and legibility. Design intervention should seek controlled visual depth and curiosity while retaining surveillance, accessible paths, and recognizable destinations (Lis *et al.* 2022; Pardela *et al.* 2025).

Table 3. Post hoc item screening and preliminary internal consistency

Dimension	Initial items	Retained items	Excluded item codes	Initial α	Post-screening α
Coherence	14	12	RP_COH2; LM_COH2	0.811	0.866
Complexity	14	10	KL_COM2; MF_COM1; VF_COM1; LM_COM1	0.710	0.746
Mystery	14	9	KL_MYS2; RP_MYS2; VF_MYS2; LM_MYS1; LM_MYS2	0.792	0.797
Legibility	14	12	KL_LEG2; MF_LEG2	0.758	0.815
Total	56	43	13 items excluded	—	—

Table 4. Preliminary retained-item preference-dimension score

Dimension	Retained items	Mean	SD	Order
Coherence	12	4.11	0.47	1
Complexity	10	3.81	0.47	2
Legibility	12	3.80	0.50	3
Mystery	9	3.72	0.52	4

The higher coherence mean suggests that the surveyed repeat visitors responded favorably to an understandable and compatible whole. Preference-matrix studies associate visual order and compatibility with environmental preference (Zhang *et al.* 2021; Shayestefar *et al.* 2022). At Tebet Eco Park, the observed pattern is consistent with the integrated arrangement of mature trees, lawns, paths, lighting, and activities. Indonesian park evaluations likewise connect circulation, vegetation, visual composition, and thermal-aesthetic comfort with favorable user assessments (Nadhifa *et al.* 2024; Pamungkas *et al.* 2025).

The near-identical complexity and legibility means suggest that variety and spatial readability coexisted in respondents' evaluations, although the study did not test whether the dimensions differed. Vegetation richness and exploratory interest can support preference, while excessive density or blocked views may weaken openness and orientation (Lis *et al.* 2022; Pardela *et al.* 2025). Paths, facilities, activity zones, vegetation configuration, and landmarks also shape park use and spatial understanding (van Vliet *et al.* 2021; Chuang *et al.* 2022; Hu *et al.* 2023; Yang *et al.* 2023).

The pattern further indicates that park evaluation was not based on greenery quantity alone. Shade, cleanliness, safety, accessibility, sensory quality, and perceived care are commonly evaluated together (Lai *et al.* 2020; Uebel *et al.* 2021). Soundscape and clear spatial organization also affect environmental appraisal (Ríos-Rodríguez *et al.* 2021), while computational greenness may differ from perceived environmental quality (Septiantoro *et al.* 2025).

Descriptive park-attribute indexes

The seven park-attribute indexes were recalculated using only retained items (Table 5). Environmental control had the highest descriptive mean ($M=4.05$), followed by accessibility ($M=3.96$), facility management and physical quality ($M=3.93$), and multifunctional recreation ($M=3.93$). Character and city identity had the lowest descriptive mean ($M=3.63$). These values summarize the retained items, but they should not be interpreted as equivalent validated scale comparisons because the indexes contained different numbers of items and unequal coverage of the four preference dimensions. The environmental-control index was the highest among the seven descriptive indexes. Its strongest retained item concerned green lawns creating a more beautiful and cooler environment ($M=4.48$). Tebet Eco Park's ecological design intent emphasizes vegetation and environmental performance (Anwar and Kaswanto 2021; Putri *et al.* 2023). Indonesian studies also associate cleanliness,

circulation, ecological maintenance, and microclimate with favorable park evaluations (Febiola *et al.* 2024; Septiantoro *et al.* 2025).

Accessibility also obtained a relatively high descriptive index. Items concerning sightlines, traffic flow, pedestrian access, commercial support, and parking were rated favorably, although the study did not estimate their separate effects on the visit. Easy access and facilities have previously been identified as pull factors at Tebet Eco Park, while peak-period crowding remains relevant (Suryantari *et al.* 2022). Accessibility also involves openness, readable entrances, and opportunities for different groups to use public space (Taylor *et al.* 2020; Chitrakar *et al.* 2022; Chuang *et al.* 2022). The survey covered weekdays and a weekend, but temporal differences were not tested.

Character and city identity produced the lowest descriptive index. This pattern does not indicate rejection of the Infinity Link Bridge; recognition of the landmark and its exploratory appeal were simply less consistent than ratings of greenery and functional harmony. Because all respondents were repeat visitors, reduced novelty is one plausible interpretation, but it was not tested. Distinctive elements may become stronger identity cues when connected to spatial sequence, environmental narrative, wayfinding, and memorable experience (Ríos-Rodríguez *et al.* 2021; Pamungkas *et al.* 2025; Pardela *et al.* 2025).

The domain results reveal a distinction between attributes that support immediate use and those that communicate meaning. Environmental control, accessibility, facility management, and multifunctional recreation directly affect whether visitors can enter, move through, remain in, and enjoy the park. Their relatively favorable means are consistent with the park's role as an ecological and social public space. Character and city identity depend on a different process: visitors must recognize why the place is distinctive and connect visible features with a broader story. A landmark alone may not produce that connection when interpretation, sequencing, and supporting visual cues are limited.

Environmental control should be protected as a management baseline. The highly rated lawn item connects visual quality with the perception of a cooler environment, illustrating how one landscape feature can support aesthetic, microclimatic, and recreational experience at the same time. Maintaining canopy health, lawn condition, shade distribution, drainage, and cleanliness can preserve this integrated benefit. Perceived greenness should also be monitored directly because computational measures of vegetation do not always correspond with visitors' judgments of quality, safety, or attractiveness (Pamungkas *et al.* 2025; Septiantoro *et al.* 2025).

The lower identity-related score points to an opportunity for interpretive design rather than a need for large new structures. Information about the park's ecological restoration, wetland functions, planting strategy, and connection between the former north and south parks could be communicated through concise signs, route-based stories, seasonal programs, and viewpoints that frame recognizable

Table 5. Descriptive retained-item indexes by park-attribute domain

Park-attribute domain	Retained items	Mean	SD	Order
Environmental control	6	4.05	0.52	1
Accessibility	8	3.96	0.47	2
Facility management and physical quality	6	3.93	0.54	3
Multifunctional recreation	6	3.93	0.56	4
Supportive surrounding environment	4	3.88	0.51	5
Facility variety and completeness	6	3.76	0.51	6

Note: Indexes contain unequal retained-item counts and dimension coverage

features. These measures can strengthen place recognition while preserving the coherence that visitors already value. Any identity program should be tested for clarity, accessibility, and compatibility with the landscape rather than evaluated only by visual prominence.

Accessibility and facility quality should be assessed as connected visitor journeys. A route may be physically available yet difficult to use when entrances are unclear, surfaces change abruptly, resting opportunities are poorly distributed, or destination information is missing. Similarly, a facility may be well maintained but contribute little to the overall experience when its location is difficult to understand. Reviewing arrival, orientation, movement, rest, activity, and departure as one sequence can reveal gaps that are hidden when each facility is inspected separately. Such a review should include users with different ages and mobility requirements.

The combined pattern also illustrates why management should avoid pursuing one dimension in isolation. Increasing planting density may enrich complexity and mystery but reduce sightlines, thermal airflow, or perceived safety. Adding signs may improve legibility while introducing visual clutter that weakens coherence. New activity areas may support multifunctional recreation but create noise or circulation

conflicts when they are poorly located. Each intervention should be reviewed against the four preference dimensions and the seven operational domains so that an improvement in one quality does not produce an unexamined loss elsewhere.

The relationship among environmental control, supporting surroundings, and facility management also extends beyond the park boundary. Arrival routes, pedestrian connections, parking interfaces, commercial activity, and edge conditions influence the first and last stages of a visit. Clear coordination at entrances and edges can reinforce the favorable accessibility assessment while reducing conflicts between through-movement, waiting, informal activity, and park access. These areas should be reviewed during both ordinary and high-demand periods because their performance may change more quickly than conditions within the central landscape.

Figure 3 provides a visual counterpart to the descriptive questionnaire findings. The vegetation and lawn scene (Figure 3A) illustrates the green structure associated with the highest environmental-control index and the highly rated lawn/coherence items. The recreational area and plaza/supporting facilities (Figure 3B and 3D) correspond to favorable evaluations of multifunctional recreation and facility

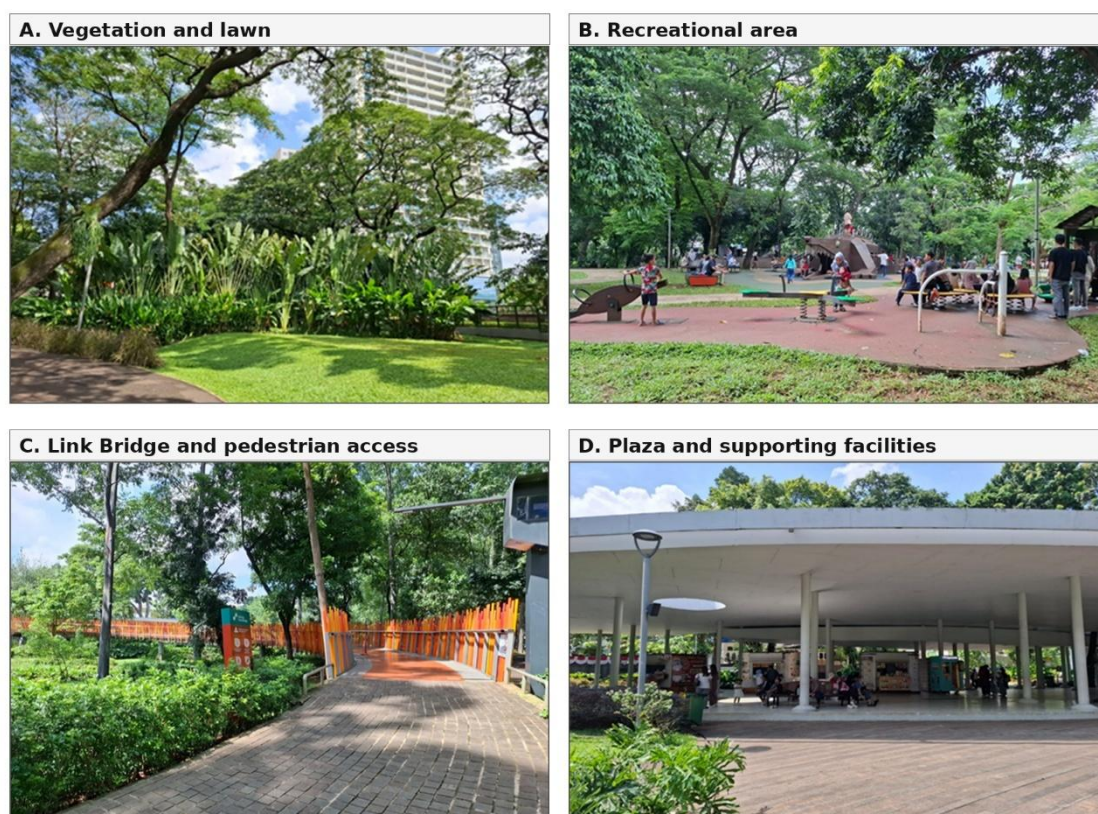


Figure 3. Selected landscape and public-space attributes evaluated by visitors
Source: Author documentation, 5–11 January 2026

Table 6. Highest- and lowest-rated retained questionnaire items

Position	Code	Short item description	Mean	SD
Highest	KL_COH2	Green lawns support a more beautiful and cooler environment	4.48	0.60
	RP_COH1	Other visitors' recreational activities do not disturb the respondent	4.28	0.68
	VF_COH1	Landscaped areas support the visual quality of Tebet Eco Park	4.28	0.60
	MF_COH2	Green lawns and cleanliness are pleasing to view and experience	4.20	0.72
	KI_COH2	Pride in using Tebet Eco Park as a distinctive South Jakarta city park	4.18	0.71
Lowest	KI_MYS1	The Link Bridge appearance functions as an icon of Tebet Eco Park	3.30	0.99
	VF_COM2	Preference for additional children's play facilities	3.30	1.24
	VF_LEG1	Ease of finding preferred recreational-activity spaces	3.38	0.98
	KI_MYS2	The Link Bridge is a unique icon found only at Tebet Eco Park	3.48	0.99
	KI_LEG1	The Link Bridge immediately recalls Tebet Eco Park	3.48	1.06

management. Figure 3C shows the Link Bridge and pedestrian access: the route is physically readable and is consistent with the highest- and lowest-rated retained items that support this visual interpretation are summarized in Table 6. The relatively favorable accessibility result, while the lower character-and-city-identity index and Link Bridge item scores in Table 6 indicate that physical presence alone did not translate into equally strong landmark recognition or exploratory appeal. These photographs are used only to contextualize the questionnaire patterns and are not treated as independent measurements.

Integrated interpretation

At the sample level, ecological-functional attributes received relatively favorable evaluations, whereas symbolic-exploratory attributes were more moderate. Environmental control, accessibility, facility management, and multifunctional recreation represent immediate visitor concerns related to shade, comfort, movement, seating, cleanliness, and compatible activities (Amores *et al.* 2023; Fitriana *et al.* 2023; Febiola *et al.* 2024). The results suggest that character, identity, and mystery may benefit from clearer distinctive cues and interpretive information. Environmental interpretation can connect ecological knowledge with visitor experience (Kaswanto *et al.* 2024; Rahmafitria and Kaswanto 2024).

The item-level and index-level findings support the same general reading. Visitors gave their strongest evaluations to tangible qualities that can be experienced directly during a visit, including green lawns, shade, cleanliness, environmental comfort, and compatible activities. Lower evaluations were associated with distinctiveness, identity cues, and the invitation to discover additional information. This consistency across levels strengthens the descriptive interpretation, although it does not remove the limitations of the sample or the post hoc screening procedure.

Planning and design implications

Four priorities are supported by the descriptive findings. First, preserve coherence by maintaining the visual continuity of lawns, canopy trees, paths, lighting, seating, and activity areas (Arifin *et al.* 2021; Fitriana *et al.* 2023). New additions should remain compatible with the park's ecological and spatial character (Rahmatika *et al.* 2025).

Second, maintain variety in planting, activities, and facilities without reducing spatial readability. Readable entrances, route markers, facility signs, and consistent visual cues can connect the park's eight zones, while shade and green infrastructure can improve comfort without disrupting spatial clarity (van Vliet *et al.* 2021; Shayestefar *et al.* 2022; Amores *et al.* 2023; Yang *et al.* 2023).

Third, identity and exploratory interest may be strengthened through ecological interpretation, seasonal planting narratives, sequential views, and clearer explanations of the wetland, renaturalized waterway, and Link Bridge. These options should be tested with visitors before implementation because the present survey did not evaluate individual design interventions (Kaswanto *et al.* 2024).

Fourth, maintain seating, children's facilities, shaded gathering areas, toilets, and safe circulation for repeat and family visitors. Inclusive public-space research shows that these facilities support diverse user needs (Taylor *et al.* 2020; Dollah *et al.* 2023). Future evaluations should use larger samples stratified by age, visit purpose, weekday or weekend use, and first-time or repeat visitation.

Implementation can be organized as a sequence of maintenance, targeted improvement, and evaluation. Routine work should protect lawns, canopy, cleanliness, lighting,

paths, and facilities that support the favorable ecological-functional assessment. Targeted improvement can then address route information, identity, and exploratory experience through small, compatible interventions. Visitor feedback should be collected after implementation using revised and pretested items so that changes in perception can be compared across periods. This sequence reduces the risk that highly visible additions undermine established strengths.

Management evaluation should also distinguish ordinary days from crowded periods. Accessibility, comfort, legibility, and perceived care may change when visitor density increases, temporary activities occupy circulation areas, or facilities experience heavier demand. Repeated measurement across time would help identify whether lower ratings reflect permanent design conditions or operational pressures at particular hours and days. Such evidence would support more precise decisions about maintenance schedules, activity placement, information services, and crowd management.

A practical monitoring record can combine routine condition checks with a short visitor feedback instrument. Condition checks may cover canopy and lawn health, path continuity, lighting, seating, toilets, signs, cleanliness, drainage, and temporary obstructions. Visitor feedback can focus on clarity, comfort, safety, variety, identity, and interest in further exploration. Reviewing the two sources together would help managers distinguish a physical defect from a communication problem or a peak-use operational issue. The indicators should remain concise and stable enough to support comparison over time.

CONCLUSION AND RECOMMENDATION

Conclusion

With respect to Objective 1, repeat visitors evaluated coherence most favorably ($M=4.11$, $SD=0.47$), while complexity ($M=3.81$, $SD=0.47$) and legibility ($M=3.80$, $SD=0.50$) were nearly identical and mystery was lowest ($M=3.72$, $SD=0.52$). The observed pattern indicates that the surveyed visitors perceived the park as relatively orderly and compatible, while the invitation to discover additional information or experiences was comparatively weaker.

For Objective 2, the preliminary post hoc screening excluded 13 of the 56 initial items, leaving 43 retained items. Post-screening Cronbach's alpha values were 0.866 for coherence, 0.746 for complexity, 0.797 for mystery, and 0.815 for legibility. These results indicate acceptable preliminary internal consistency within this pilot sample, but they do not establish construct validity or a final instrument structure because screening and reliability estimation used the same 40 responses.

For Objective 3, environmental control produced the highest descriptive park-attribute index ($M=4.05$), followed by accessibility ($M=3.96$), facility management and physical quality ($M=3.93$), and multifunctional recreation ($M=3.93$), whereas character and city identity was lowest ($M=3.63$). At item level, green lawns, shade, cleanliness, landscaped visual quality, and compatible activities were among the strongest evaluations, while Link Bridge identity cues, exploratory appeal, and ease of finding some recreational spaces were weaker. Because the seven indexes contain unequal retained-item counts and dimension coverage, these domain values should be interpreted as descriptive patterns rather than equivalent validated-scale rankings.

Recommendation

Park management should preserve the integrated green structure while strengthening wayfinding, identity cues, ecological interpretation, and opportunities for exploration.

The findings apply only to the 40 surveyed repeat visitors and should be treated as preliminary. Future research should revise the conceptually overlapping items, establish content validity, retest the instrument with a larger independent sample, and compare visitor groups and time periods.

Priority should be given to interventions that improve weaker attributes without reducing established strengths. Wayfinding and interpretation can be integrated with existing paths, planting, and facilities; identity can be strengthened through ecological narratives and recognizable sequences; and opportunities for exploration can be created through controlled views and gradual revelation. These actions should remain visually compatible, safe, inclusive, and easy to maintain.

For research development, the revised instrument should be administered to an independent and more diverse sample before any scale is treated as validated. Confirmatory assessment should examine dimensional structure, reliability, convergent and discriminant validity, and the stability of results across visitor groups and visitation periods. The present findings can serve as a pilot basis for that process, but they should not be used to claim causal effects or population-wide rankings.

Management priorities can be reviewed with visitors and operational staff before permanent design changes are made. Small prototypes of route signs, interpretation panels, planting sequences, or activity layouts can be observed under normal use and adjusted when they create confusion, visual clutter, maintenance burdens, or circulation conflicts. This incremental process is consistent with the exploratory status of the evidence and allows the park to improve weaker qualities while protecting the coherence and environmental performance valued by respondents.

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