

From heritage recognition to value reproduction: making cultural value legible in Hong Kong heritage management

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Abstract

Heritage grading can recognise social and cultural significance at the point of formal recognition, yet adaptive reuse subsequently reshapes the conditions through which heritage meanings are sustained. This article develops value legibility as an analytical concept for examining the gap between formal recognition and the subsequent reproduction of cultural value. Stephenson's Forms-Relationships-Practices (FRP) framework is operationalised at building scale and combined with an Analytic Hierarchy Process (AHP) and cross-case profiling of 18 heritage buildings and adaptive-reuse projects in Hong Kong. Experts assigned comparable importance to Forms (0.311), Relationships (0.338) and Practices (0.351), yet case profiles were systematically stronger for Forms than for Relationships or Practices (Friedman $\chi^2(2) = 29.78$, $p < 0.001$). The overall pattern remained stable under alternative weighting and leave-one-rater-out sensitivity analyses, while lower inter-rater agreement for Relationships indicated greater variation in expert judgments, potentially reflecting the more context-dependent and contested interpretation of relational meanings. The findings reveal a temporal-operational legibility gap, whereby physical forms remain more readily assessable than the relational and practice-based dimensions through which cultural value is reproduced under changing use conditions. FRP-AHP profiling therefore provides a structured and repeatable baseline for periodic reassessment, supporting deliberative evaluation of how recognised cultural meanings are sustained or reconfigured over time rather than producing a definitive ranking of cultural value.

Introduction

Across heritage studies, cultural value is increasingly understood not as an intrinsic property of fabric but as a socially produced and negotiated configuration of meanings connecting heritage to memory, identity and place (Plevoets and Van Cleempoel, 2011; Arfa et al., 2022). Built heritage therefore operates not only as a material resource but also as a setting in which belonging, attachment and everyday cultural life are performed, debated and sometimes contested (Smith, 2009; Della Spina, 2019; Zhang, 2024). This position is especially consequential under adaptive reuse, where new functions, publics and operating arrangements can preserve a building while changing the conditions through which its meanings are encountered. The analytical problem is therefore not simply whether non-material values are acknowledged, but how different forms of value remain visible and reviewable as management conditions change.

Hong Kong illustrates this distinction clearly. The Antiquities Advisory Board's administrative grading system evaluates historic buildings using six criteria, including social value and local interest alongside historical interest, architectural merit, group value, authenticity and rarity; official guidance explicitly links social value with local identity and collective memory (AAB, 2015, 2022). Grade 1–3 status should therefore not be treated as evidence that social value is institutionally absent. At the same time, administrative grading is legally distinct from declaration as a monument under the Antiquities and Monuments Ordinance, which provides statutory protection (AMO, n.d.). These distinctions shift the research problem from a simple material-versus-social dichotomy towards a temporal and operational question: values may be recognised at assessment, yet their continued reproduction after designation depends on use, access, programming and stewardship.

To examine this problem, this article develops value legibility as a diagnostic concept. Value legibility refers to the extent to which different dimensions of heritage meaning become institutionally visible, nameable, comparable and reviewable within systems of assessment and management. The concept draws on wider

social-science work showing that administrative systems make complex realities governable by rendering selected attributes legible (Scott, 1998), auditable (Power, 1997) and commensurable (Espeland and Stevens, 1998). Legibility is therefore not neutral: the categories and evidence formats used in evaluation influence what can be justified, monitored and acted upon. In heritage management, the critical issue is not that social or practice-based meanings are necessarily excluded from formal criteria, but that they are more difficult to stabilise and periodically reassess because they are distributed across groups and enacted through changing everyday practices.

This problem becomes acute under adaptive reuse and multi-actor operation. Reuse introduces new functions, publics and partnerships, changing not only physical fabric but also opening hours, pricing, spatial permeability, programming capacity and opportunities for repeated encounters (Vafaie et al., 2023; Wang and Liu, 2021). Consequently, designation-stage recognition does not guarantee post-designation continuity. A building can retain recognised historical and architectural significance while relational attachments or recurring cultural practices weaken, intensify or change. Existing evaluation frameworks are generally better at recording significance at a point in time than at providing a comparable building-scale structure for periodic review of these post-designation conditions.

Hong Kong provides an analytically useful setting because a mature grading system coexists with intensive redevelopment pressures and diverse adaptive-reuse arrangements involving government agencies, NGOs/NPOs, private enterprises and hybrid partnerships (Hou and Wu, 2020; Yung and Chan, 2012). This institutional diversity allows comparison of how expert-recognised cultural-value dimensions appear across buildings with different operating and reuse conditions without assuming that grading itself is a purely material instrument.

The study mobilises Stephenson's Forms-Relationships-Practices (FRP) framework as a building-scale grammar and combines it with expert weighting and cross-case profiling. The purpose is not to estimate an objective quantity of cultural value or to produce a definitive league table. Rather, profiling makes professional valuation assumptions explicit and provides a structured basis for identifying where Forms, Relationships and Practices are strong, thin or contested. The cross-sectional evidence is used to formulate, rather than causally test, propositions about the governance-use conditions under which relational and practice-based value may be reproduced.

The article addresses three research questions:

- (1) How do professionals prioritise FRP dimensions, and what does this reveal about the institutional legibility of different value domains?
- (2) How do expert-evaluated FRP profiles differ across 18 heritage cases when Relationships and Practices are assessed alongside Forms?
- (3) What governance-use configurations are associated with stronger or weaker relational and practice-based profiles, and what interpretive propositions do these contrasts suggest for periodic heritage management?

Taken together, these questions support three contributions. Theoretically, the article shifts attention from whether heritage value is formally recognised to how recognised meanings remain legible, are reconfigured, or

become less visible after designation and under changing use conditions. It thereby conceptualises value legibility as a post-recognition problem linking formal recognition to the continuing reproduction of cultural value. Methodologically, it operationalises Stephenson's Forms–Relationships–Practices framework at the building scale as a transparent, profile-based diagnostic approach, incorporating explicit treatment of missing data, assessment of inter-rater agreement and sensitivity testing. Practically, it proposes periodic FRP profiling as a form of deliberative infrastructure for heritage management, helping to identify dimensions that warrant further qualitative inquiry or management attention rather than functioning as an automated decision rule.

Conceptual framework: from recognition to reproduction

From significance recognition to living cultural value

Since the early 2000s, values-based conservation has shifted heritage assessment from singular intrinsic significance towards plural, socially situated values (Ahmad, 2006; De La Torre, 2013; Judson and Iyer-Raniga, 2010). Classical value typologies and twentieth-century conservation doctrine created powerful professional grammars for documenting age, historical significance, artistic merit, authenticity and integrity, while later frameworks expanded cultural significance to include social and spiritual dimensions (Australia ICOMOS, 2013). The result is not a simple transition from material to non-material value, but an increasingly plural field in which different kinds of evidence have unequal degrees of administrative stability and comparability.

Policy and scholarship now explicitly recognise living and relational dimensions. UNESCO's Convention for the Safeguarding of the Intangible Cultural Heritage foregrounds practices and continual enactment (UNESCO, 2003), while the Historic Urban Landscape Recommendation integrates social, cultural and environmental processes into urban heritage management (UNESCO, 2011). Critical heritage research has likewise highlighted authority, legitimacy and uneven recognition across groups (Mydland and Grahn, 2012; Smith, 2009; Waterton and Smith, 2010). Hong Kong's grading criteria are consistent with this expansion because they explicitly include social value and local interest (AAB, 2015, 2022). The remaining management problem is temporal: designation records significance, whereas adaptive reuse continuously reorganises the circumstances under which social ties, memories and practices are reproduced.

Much evaluation nevertheless remains organised as a snapshot. Social and intangible values may be documented at assessment or consultation, but they are less often translated into reviewable evidence structures that can be revisited after operational conditions change. This produces a temporal-operational legibility gap. The gap concerns neither the intrinsic superiority of material evidence nor the complete absence of social-value criteria; it concerns the uneven capacity of management systems to track value dimensions whose expression depends on repeated encounters, access, programming and care. A periodic review framework therefore needs to preserve plural meanings while avoiding the false precision of treating them as fixed quantities. Table 1 summarises the evolution of major heritage value frameworks and assessment approaches, highlighting a gradual shift from monument-centred and expert-defined value categories towards more plural, stakeholder-oriented and process-sensitive understandings of heritage value. However, it also shows that the temporal and operational reviewability of these values remains comparatively underdeveloped.

Table 1
Evolution of heritage value models and assessment approaches

Model / Framework/Process	Origin / Key Authors	Core Value Categories	Key Features / Contribution
Riegl's Values (1903)	Alois Riegl, <i>Modern Cult of Monuments</i>	Age, Historical, Use, Newness, Commemorative	Early systematic value typology; recognised both memorial and present-day use value
UNESCO / ICOMOS Charters	20th C., Venice Charter (1964), Nara (1994), Burra Charter (1979, rev. 2013)	Historical, Aesthetic, Scientific/Technical, Social, Spiritual	International conservation framework; combines material authenticity with broader cultural meanings
Getty Conservation Institute Value-based approach (2000)	Getty Conservation Institute Avrami, Mason and de la Torre (2000)	1.Cultural: historical, artistic, scientific, social, and spiritual dimensions 2. Economic: Refers to heritage's capacity for generating benefits.	Stakeholder-centred assessment; links value identification to planning and management
Cultural Capital Model (2001)	Throsby (2001)	Symbolic, Spiritual, Social, Aesthetic, Historical (as "cultural capital")	Connects cultural significance with economic and public value
Intangible Cultural Heritage	UNESCO 2003	Oral traditions and expressions; performing arts; social practices, rituals, and festive events; knowledge and practices concerning nature and the universe; traditional craftsmanship.	Expands heritage beyond material fabric; emphasises living and continuously recreated heritage
English Heritage Framework (2008)	English Heritage (2008)	Evidential, Historical, Aesthetic, Communal	Clear and practice-oriented; explicitly includes community meaning
FRP Framework (Forms-Relationships-Practices)	Landscape	Forms (physical/material), Relationships (social/spatial/symbolic), Practices (rituals, uses, performances)	Dynamic and relational model; integrates tangible and intangible dimensions
Social Value Models (Burra Charter practice guides)	Australia ICOMOS	Aesthetic, historic, scientific, social or spiritual value, linking values to fabric, setting, use, meanings, and associations. Community attachment, local identity, lived experience	Strong participatory focus; foregrounds community-driven significance

Model / Framework/Process	Origin / Key Authors	Core Value Categories	Key Features / Contribution
AHP & MCDM-Based Models	2000s–present, applied worldwide	Historical, Aesthetic, Scientific, Social/Community, Economic	Quantifies and weights values; supports transparent decision-making
Heritage Impact Assessment (HIA) for World Heritage	ICOMOS	Heritage site's Outstanding Universal Value (OUV) Social and Cultural values	Preventive tool for evaluating development impacts on heritage
Culture & Heritage Capital	UK's Department for Digital, Culture, Media and Sport (DCMS)	Economic, non-market-based social value, cultural value, etc	Treats heritage as capital stock generating benefits over time

FRP as a grammar of reviewable cultural value

Stephenson's (2008) Forms-Relationships-Practices (FRP) model provides a concise grammar for analysing this temporal problem. It conceptualises cultural value as a configuration produced through the interaction of material forms, social and symbolic relationships, and lived practices. Forms offer relatively stable attributes that are readily documented. Relationships capture affective, symbolic and identity-related bonds that may vary across groups. Practices capture recurrent uses, rituals, skills and performances through which heritage is enacted. FRP therefore accommodates both persistence and change: material attributes can remain comparatively stable while relationships and practices are reconfigured by new operating contexts.

For institutional analysis, FRP is useful because its three domains differ in their conditions of legibility. Forms typically fit established documentary and compliance formats. Relationships rely more heavily on situated experience, memory and attachment, which are difficult to compress without loss. Practices are observable when they recur, but their continuity depends on opportunities for enactment. In Scott's (1998) terms, evaluation necessarily simplifies; in Power's (1997) terms, what is reviewable depends on what can be made auditable; and in Espeland and Stevens' (1998) terms, quantification creates commensurability while also transforming what is compared. The purpose of FRP profiling is therefore not to dissolve these differences into a single truth, but to expose them for structured deliberation.

Operationalising FRP at building scale requires a parsimonious structure that remains feasible for expert elicitation while retaining conceptual distinctions. The profile is used here as a comparative representation of professional judgement. It can indicate where evidence is relatively strong or thin and where expert agreement is low, but it cannot substitute for community testimony or longitudinal observation. This distinction is especially important for Relationships, for which disagreement may be substantively meaningful rather than merely statistical noise.

From post-designation monitoring to periodic value reassessment

Designation and grading provide an essential baseline for heritage recognition, while post-designation management in Hong Kong already includes mechanisms for monitoring building condition, conservation compliance and the operation of revitalisation projects. Under the Revitalising Historic Buildings through Partnership Scheme, heritage conservation is combined with adaptive reuse, social-enterprise operation and continuing government oversight; project assessment and management explicitly consider historical significance, social value, financial viability and management capability (Development Bureau, 2022; Cheung and Chan 2012, 2014). Research on Hong Kong's revitalisation practice has likewise highlighted the importance of public–non-profit partnerships, operational viability, stakeholder coordination and facilities management in sustaining reused historic buildings (Hou and Wu, 2019). These mechanisms are important for safeguarding physical fabric and maintaining viable operation, but they perform a different function from the systematic reassessment of cultural-value reproduction. Relational meanings, collective attachments and recurrent cultural practices may change as access, programming, stewardship and patterns of use evolve, yet such changes are not readily captured through building-condition or project-performance monitoring alone. The relevant gap is therefore not an absence of post-designation monitoring, but the limited institutionalisation of a repeatable and comparable framework for revisiting how recognised cultural meanings are sustained, weakened or reconfigured under changing use conditions. Periodic FRP profiling is proposed as a complement to, rather than a replacement for, existing conservation and operational monitoring.

Multi-criteria methods can support such reassessment by making valuation assumptions explicit, but they also risk implying greater precision than the underlying evidence warrants (Haroun et al., 2019; Yau, 2009). In this study, AHP is therefore used only to elicit the relative importance that professionals assign to FRP criteria, while case outputs are interpreted as expert-evaluated profiles rather than objective measurements of cultural value. The weighted profile index provides a compact comparative summary, but substantive interpretation prioritises the separate Forms, Relationships and Practices domains, together with the uncertainty and disagreement associated with them. In this way, profiling is used to identify dimensions that may warrant further investigation rather than to produce a definitive ranking of heritage value. Within this framing, cultural and social sustainability refers to the capacity for heritage meanings, attachments and practices to remain reproducible under changing urban and management conditions. It does not refer to measured energy performance, carbon reduction or environmental sustainability. Because the present study is cross-sectional, it does not directly observe cultural-value change through time. Instead, it establishes a structured baseline and repeatable profiling protocol that can support future periodic reassessment. Cross-case contrasts are used to identify current differences and formulate propositions about the operational conditions under which relational and practice-based meanings may be sustained or reconfigured; these propositions require longitudinal and multi-stakeholder evidence for subsequent testing.

Research design and methods

FRP-AHP as a legibility device

Figure 1 summarises the research design. The analysis proceeds from conceptual operationalisation of FRP, to AHP weighting, valid-response case profiling, reliability and robustness assessment, and finally an interpretive comparison of governance-use conditions. The design deliberately separates weighting from causal inference: AHP makes professional priority structures explicit, whereas case ratings generate descriptive profiles.

Governance and use descriptors are then used to formulate interpretive propositions rather than to estimate causal effects.

[Figure 1 near here]

Criteria hierarchy and scoring anchors

Each FRP domain was operationalised into two sub-criteria, forming a balanced 3 x 2 structure (Table 2). Criteria were triangulated from international heritage instruments and guidance (ICOMOS, 1964, 1994; UNESCO, 2003, 2011; Australia ICOMOS, 2013), Hong Kong's heritage assessment context (AAB, 2015, 2022), and scholarship on adaptive reuse and value assessment (Bullen and Love, 2011; Plevoets and Van Cleempoel, 2011; Yang et al., 2022). The six criteria are Historical significance (F1), Architectural and aesthetic significance (F2), Social significance (R1), Spiritual/symbolic significance (R2), Intangible cultural heritage (P1), and Protective and stewardship activities (P2).

Each sub-criterion was evaluated using a five-point rating scale guided by criterion-specific descriptive anchors. The scale translated the conceptual definitions in Table 2 into observable case-level judgements, ranging from very low (1) to very high (5). The corresponding scoring anchors are presented in Table 3.

Table 2
FRP criteria and operational definitions used for expert evaluation

Object	Criteria	Sub- Criteria	Description
Cultural Value of Heritage Buildings	Forms	Historical significance (F1) (De La Torre 2013; Chen et al. 2018; Vafaie et al. 2023; AMO, n.d.)	Captures the role of a building as a material witness to urban and social history, including its age, stratified historical layers, associations with important events or periods and its contribution to local historical narratives.
		Architectural and Aesthetic Significance (F2) (Ashrafi et al. 2021; Vafaie et al. 2023; NCC, 2015)	Focuses on the formal and visual qualities of the building, its style, composition, craftsmanship, construction techniques and material authenticity, as well as its visual contribution to the streetscape and wider urban landscape.
	Relationships	Social Significance (R1) (Chen et al. 2018; Robson 2023; Vafaie et al. 2023; Abdurahiman et al. 2024)	Refers to the role of heritage buildings in structuring everyday social life, sustaining community networks and underpinning place-based identities.
	Practices	Spiritual Significance (R2) (Abdul Huq and Puthuvayi 2024; Verschuuren, 2006; UNESCO World Heritage Centre, 2003)	Encompasses not only explicitly religious meanings, but also symbolic, memorial and identity-related values attached to heritage buildings.
		Intangible Cultural Heritage (P1) (Kapp 2019; Abdul Huq and Puthuvayi 2024; Djabarouti 2024)	Encompasses the living practices, skills, rituals, narratives and everyday ways of life associated with historic buildings, including traditional crafts and building techniques, local festivals and customs, and oral histories and stories linked to the site.
		Protective and stewardship activities (P2) (Mısırlısoy and Günçe, 2016; Chen, Chiu and Tsai, 2018; Vafaie, Remøy and Gruis, 2023; Du et al., 2025)	Capture the spectrum of conservation actions from technical interventions and restoration methods to management, monitoring and participatory governance that sustain or transform heritage values over time.

Table 3
Structured expert rating rubric for the six FRP sub-criteria

Indicator for Grading	Score				
	1	2	3	4	5
	Very Low	Low	Moderate	High	Very High
Historical Significance	Not associated with any Historical events, figures, periods, or activities. With no significance to Hong Kong's historical development				Very strong connection to any historical event, figure, period, or activity. Holds significant importance for the historical development of Hong Kong.
Architectural and Aesthetic Significance	Lacking Value as Architectural style, function, design and aesthetic value.		Good examples		Excellent examples as Architectural style, function, design and aesthetic value.
Social Significance	Lacking Collective Memory Cultural Identity and Sense of Place	Small Group Meaning	Residents community	Regional /district level	Hong Kong's Collective Memory Cultural Identity and Sense of Place
Spiritual Significance	No Connection with Beliefs and Religious Practices Emotional Attachment and Spiritual Comfort				Become a spiritual symbol
Intangible Cultural Heritage	No Connection to ICH.				It is the core space for the inheritance of national intangible cultural heritage, carrying unique skills or rituals.
Protective Activities	Without implementing the following protective measures, • Daily Use and Maintenance • Building Functional Adaptation and Spatial Environment Optimization • Cultural Content Reproduction • Cultural Event Organisation and				All of the measures have been systematically implemented with remarkable results . Conservation activities set an example for the industry.

Indicator for Grading	Score				
	1	2	3	4	5
	Very Low	Low	Moderate	High	Very High
Management					

Two interpretive safeguards are important. First, R2 extends beyond formal religion to include symbolic, memorial and identity-related meanings, consistent with the rubric used in the survey. Second, P2 is treated as an indicator of protective and stewardship activity within the Practices profile. Because P2 itself contains management content, it is not subsequently used as independent evidence that governance causes higher cultural value. External descriptors such as operator type and reuse orientation are considered separately and only for interpretive comparison.

Cases and data sources

Eighteen cases were purposively selected to capture variation in location, administrative grading, statutory monument status, operating entity and reuse orientation (Table 4; Fig. 2). The sample includes government-, NGO/NPO- and privately operated sites and a range of educational/exhibition, community and commercial uses. Grade 1–3 labels are treated as administrative gradings, while declared-monument status is treated separately as statutory protection. Case descriptions were compiled from official heritage records and publicly available project and management documentation. The design is comparative rather than population-representative; its purpose is to examine profile variation across deliberately heterogeneous management settings.

Table 4
Selected heritage buildings and adaptive reuse cases.

NO	Heritage Building	Adaptive Reuse Projects	Location	Owner	Operator	Heritage status	Alternatives
1	Former Tai O Police Station	Tai O Heritage Hotel	New Territories	Gov't	HK Heritage Conservation Foundation	Grade 2	Commercial use, Education and exhibition, Community activities
2	Former Central Police Station	Tai Kwun	Hong Kong Island	Private	The Jockey Club CPS Limited ("JCCPS")	Grade 1	Commercial use, Education and exhibition, Community activities
3	Former Marine Police Headquarters	1881	Kowloon	Private	CK Asset Holdings Limited	Declared monument	Commercial use, Community activities
4	Private Single owned Tong Lau	Lui Seng Chun	Kowloon		Hong Kong Baptist University, HKBU	Grade 1 Declared monument	Commercial use, Education and exhibition
5	Private & Govt Tong Lau	Blue House	Hong Kong Island	Gov't	St. James' Settlement	Grade 1	Commercial use, Education and exhibition, Community activities
6	Private & Govt Tong Lau	7 Mallory Street	Hong Kong Island	URA	Urban Renewal Authority, URA	Grade 1	Commercial use, Education and exhibition, Community activities
7	Kom Tong Hall	Dr Sun Yat-Sen Museum	Hong Kong Island	Gov't	Leisure and Cultural Services Department, LCSD	Grade 1 Declared monument	Education and exhibition, Community activities
8	Old Pathological Institute	HK Museum of Medical Science	Hong Kong Island	Private	HK Museum of Medical Science Society	Grade 1	Commercial use, Education and exhibition

NO	Heritage Building	Adaptive Reuse Projects	Location	Owner	Operator	Heritage status	Alternatives
9	Private Mansion	Haw Par Mansion	Hong Kong Island	Gov't	Antiquities and Monuments Office, AMO	Grade 1	Education and exhibition
10	Quarantine depot and Slaughterhouse	Cattle Depot Artist Village	Kowloon	Gov't	Development Bureau	Grade 2	Commercial use, Education and exhibition, Community activities
11	Shek Kip Mei Factory Estate	Jockey Club Creative Arts Centre (JCCAC)	Kowloon	Gov't	Hong Kong Baptist University,	None	Commercial use, Education and exhibition
12	Chai Wan Factory Estate	Wah Ha Estate	Hong Kong Island	Gov't	Creative Property Services Consultants Ltd.	Grade 2	Commercial use
13	Private Industrial Building	The Mills	New Territories	Private	Nan Fung Group	None	Commercial use, Education and exhibition, Community activities
14	Former Public Wet-Market Bldg	Central Market	Hong Kong Island	URA	CHINACHEM GROUP	Grade 3	Commercial use, Education and exhibition, Community activities
15	Former Bunker	Crown Wine Cellars	Hong Kong Island	Private	Crown Wine Cellars Limited	Grade 3	Commercial use
16	Former Barrack	Lei Yue Mun Park	Hong Kong Island	Gov't	Leisure and Cultural Services Department, LCSD	Grade 1 Declared monument	Community activities
17	Former explosives magazine	Asia Society Hong Kong	Hong Kong Island	Gov't	Asia Society	Grade 1	Commercial use, Education and

NO	Heritage Building	Adaptive Reuse Projects	Location	Owner	Operator	Heritage status	Alternatives
		Center (ASHK)					exhibition, Community activities
18	Lei Yue Mun Fort	HK Museum of the War Resistance and Coastal Defence	Hong Kong Island	Gov't	Leisure and Cultural Services Department, LCSD	Declared monument	Education and exhibition, Community activities

[Figure 2 near here]

Discussion

From recognition and monitoring to temporal-operational legibility

The findings suggest that formal heritage recognition, post-revitalisation monitoring and the ongoing reproduction of cultural value are related but analytically distinct. Hong Kong’s grading system already recognises social value, local interest, identity and collective memory, while post-revitalisation management includes mechanisms for monitoring building condition, conservation compliance and project operation (AAB, 2015, 2022). The issue identified here is therefore not an absence of recognition or subsequent monitoring. Rather, it concerns the limited institutionalisation of a repeatable and comparable process for reassessing how relational and practice-based cultural meanings are sustained under changing conditions of use, access, programming and stewardship. The temporal-operational legibility gap refers to this distinction between monitoring heritage assets and periodically revisiting the cultural meanings reproduced through their continued use.

The contrast between professional priorities and case profiles sharpens this distinction. Experts assigned broadly comparable importance to Forms, Relationships and Practices, yet the 18 cases exhibited systematically stronger Forms profiles. This pattern is consistent with the greater stability and documentability of historical and architectural attributes within professional assessment, although the present study does not directly measure documentary availability or institutional reporting practices. More directly, the lower inter-rater agreement for Relationships indicates that professional judgements of relational value are less consistent than those of Forms or Practices. Such disagreement may reflect the situated and plural character of attachment, memory and identity, but may also arise from differences in evidence availability and interpretation. Value legibility should therefore make uncertainty and disagreement visible rather than subsuming them within a single aggregate score.

These findings reposition the problem from initial recognition to periodic reassessment. The relevant question is not simply whether social and cultural meanings appear in formal heritage criteria, but whether the same

dimensions can be revisited consistently as operating conditions change. FRP profiling offers a complementary layer of review by providing a common structure through which Forms, Relationships and Practices can be reassessed alongside existing conservation and operational monitoring. The present cross-sectional study establishes a baseline for such reassessment rather than demonstrating temporal change itself.

Operational conditions of cultural-value reproduction

A value-legibility perspective also clarifies what “resilience without identity loss” may mean in operational terms. Heritage resilience cannot be inferred from formal recognition or physical conservation alone; it also depends on whether recognised meanings remain encounterable, enacted and socially embedded as buildings acquire new functions and publics. The cross-case contrasts suggest that conditions such as access, programmability and stewardship continuity may be particularly relevant because they shape opportunities for recurrent practices and repeated encounters through which relational meanings can be sustained.

These relationships should, however, be interpreted as propositions rather than established causal mechanisms. Access, programmability and stewardship were not independently measured as continuous variables, and the study is cross-sectional. The observed profiles therefore indicate where Forms, Relationships and Practices differ under contrasting governance-use configurations, but do not demonstrate that particular management arrangements caused those differences.

Within these limits, the findings support a practical review sequence. Formal grading and statutory protection can remain the recognition and conservation baseline; FRP profiles can then identify relatively weak or uncertain relational and practice-based dimensions; these dimensions can trigger closer examination of site-specific conditions such as accessibility, programming continuity, stakeholder participation and stewardship; and the same profile structure can subsequently be reapplied to examine whether the evidence has changed. In this sense, FRP profiling functions less as a prescriptive decision rule than as a structured mechanism for directing management attention.

Profiling as participatory and deliberative infrastructure

Treating FRP-AHP as a legibility device rather than a mechanised decision rule also clarifies the epistemic limits of profiling. Any attempt to render cultural value comparable necessarily simplifies meanings that may be contested, transient or unevenly documented. Expert-based indicators may therefore privilege values that are more readily articulated within professional frameworks, while informal practices, minority attachments or everyday forms of significance remain less visible.

The comparatively low agreement observed for Relationships makes this limitation especially important. Expert disagreement should not automatically be treated either as measurement failure or as proof of contested value; it may signal substantive plurality, incomplete evidence or ambiguity in interpretation. FRP profiles are therefore better understood as prompts for further inquiry than as authoritative statements of cultural value. Expert elicitation can make professional priorities and blind spots explicit, but it cannot substitute for community, operator or user perspectives.

A participatory extension of the framework could proceed incrementally. An expert baseline can first establish a consistent structure for comparison; subsequent review rounds can incorporate operators, residents,

community organisations and users, together with complementary evidence from interviews, ethnographic observation, participatory mapping or public discourse. Repeated application of the same FRP structure would then allow changes in professional and stakeholder assessments to be examined over time. Longitudinal deployment is required to test whether changes in access, programming and stewardship are associated with the persistence, weakening or reconfiguration of relational and practice-based meanings. Cross-city comparison could further establish how different institutional arrangements shape what becomes visible and reviewable as cultural value.

Conclusion

This study reframes heritage-value legibility as a problem of reassessment rather than initial recognition. In Hong Kong, social and cultural significance is already incorporated into formal heritage recognition, while post-revitalisation management monitors conservation condition and project operation. The remaining challenge is to make relational and practice-based meanings sufficiently visible and reviewable as use conditions change. The distinction is therefore not between recognition and neglect, but between recognising significance and repeatedly reassessing how that significance is reproduced in practice.

The study shows that FRP can provide a common analytical structure for this task while retaining important differences among value domains. Forms, Relationships and Practices should not be collapsed into a single measure: variation in profile strength and professional agreement is itself informative, particularly where relational meanings are uncertain or contested. FRP-AHP profiling is therefore best understood as a deliberative review infrastructure that can identify dimensions requiring further qualitative or stakeholder inquiry, rather than as an objective ranking of cultural value.

Its practical contribution lies in complementing existing conservation and operational monitoring with a cultural-value reassessment layer. Repeated application of the same profiling structure could allow managers to examine whether recognised meanings remain visible, enacted and socially embedded as access, programming and stewardship conditions change. The present cross-sectional study establishes the baseline and analytical protocol for such review, but does not itself demonstrate temporal change or causal effects. Future longitudinal and multi-stakeholder applications are needed to examine how cultural meanings persist, weaken, intensify or reconfigure over time.

Declarations

Competing interests

The authors declare no competing interests.

Author Contribution

C.M. conceptualised and designed the study, developed the research methodology, conducted the main investigation and analysis, interpreted the results, and wrote the original manuscript. B.Q. contributed to the recruitment of experts and the collection of expert pairwise-comparison data for the analytic hierarchy process

(AHP). J.Z. curated, cleaned and organised the AHP data and assisted with its analysis. T.K. supervised the study, provided critical intellectual input, reviewed and edited the manuscript, and served as the corresponding author. All authors reviewed and approved the final version of the manuscript.

Data Availability

The datasets generated and analysed during the current study are not publicly available due to participant confidentiality and ethical considerations but are available from the corresponding author on reasonable request.

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Figures

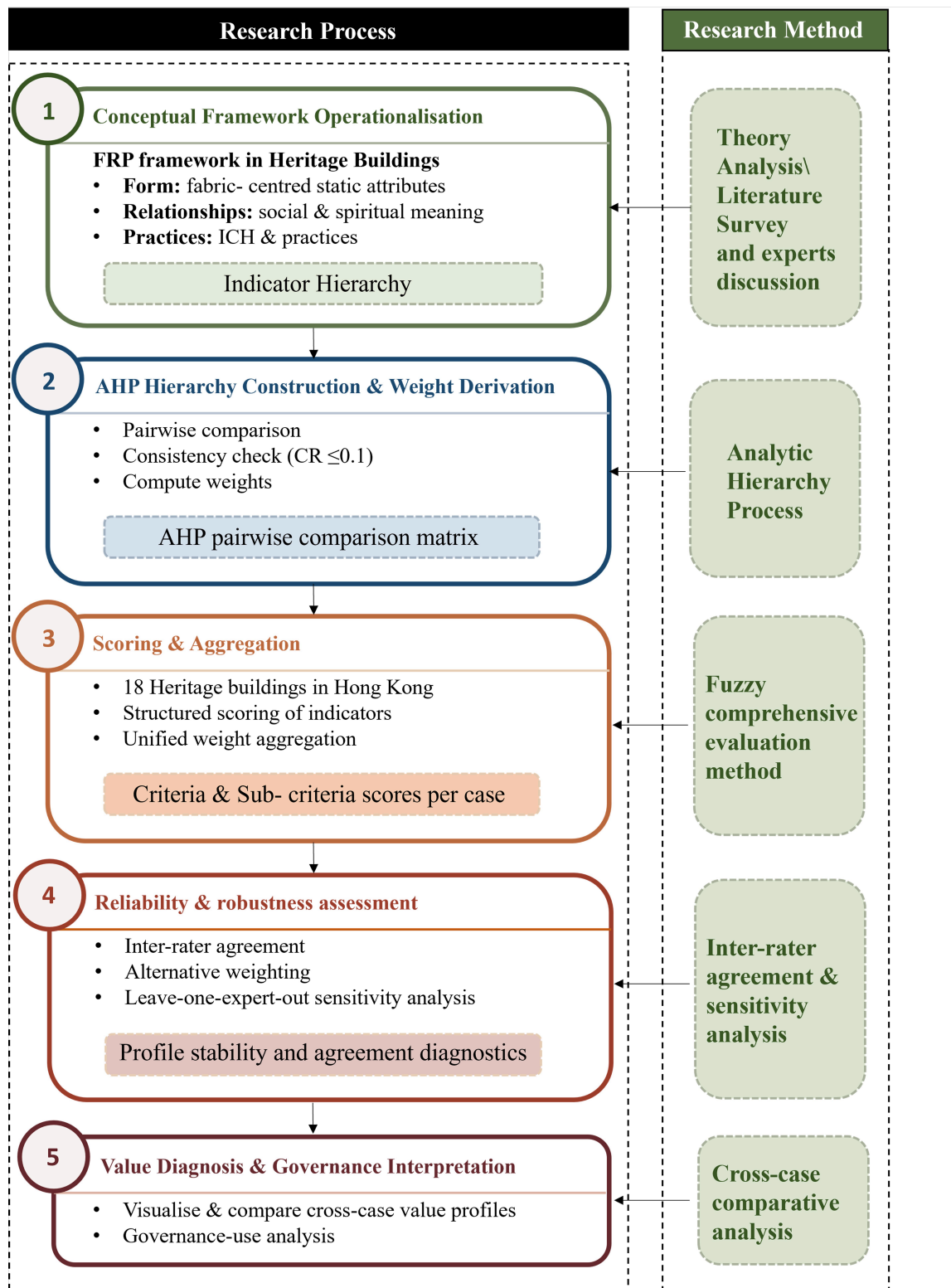


Figure 1

Research process with relative research methods.

Overview of the study design, showing the progression from FRP conceptual operationalisation and AHP-based weighting to expert case profiling, reliability and robustness assessment, and cross-case governance-use interpretation. The corresponding analytical methods are shown alongside each research stage.

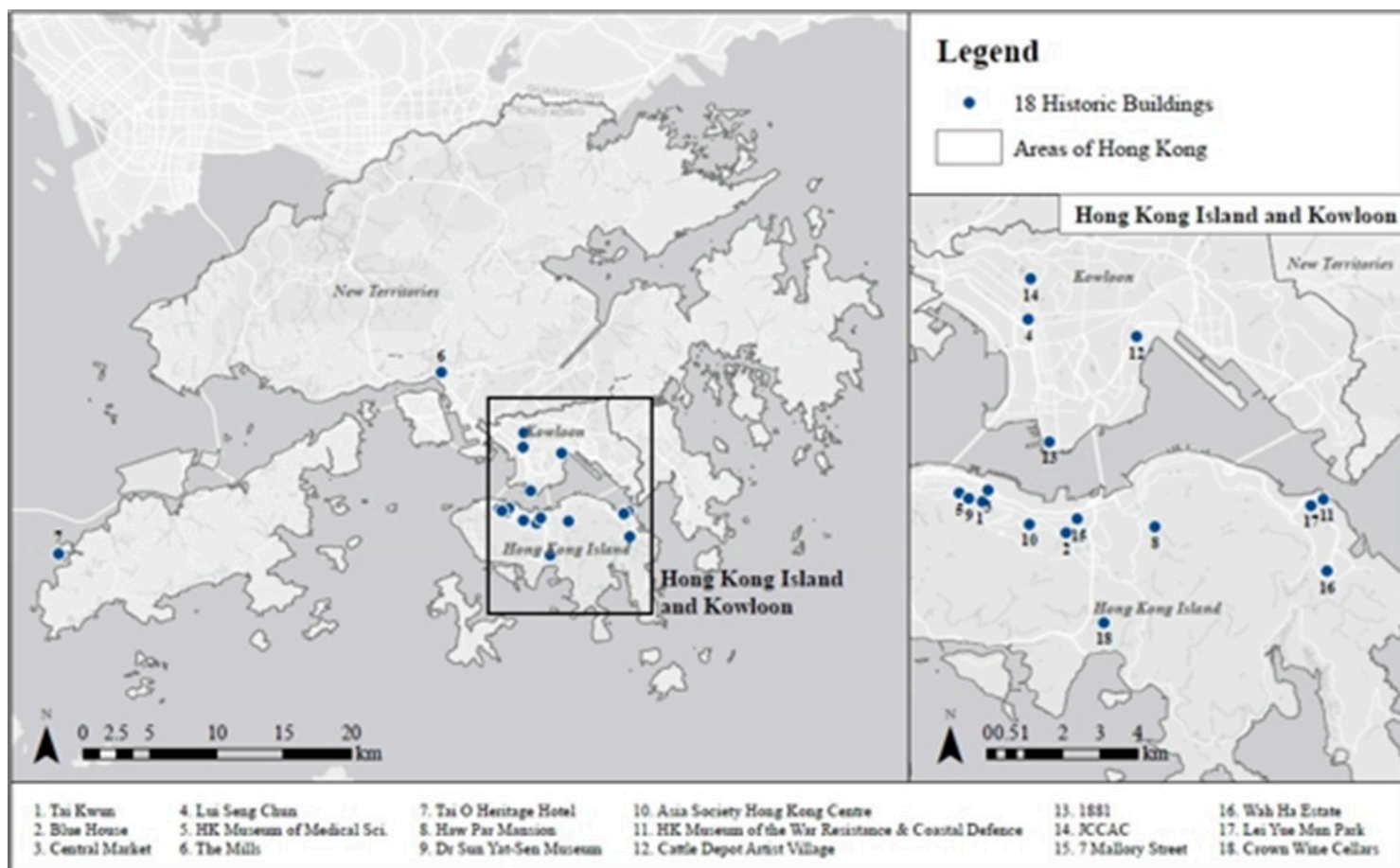


Figure 2

Spatial distribution of the 18 historic buildings in Hong Kong

Locations of the 18 purposively selected heritage buildings and adaptive-reuse cases included in the study. The sample covers cases across Hong Kong Island, Kowloon and the New Territories and includes different heritage statuses, operator types and reuse orientations.

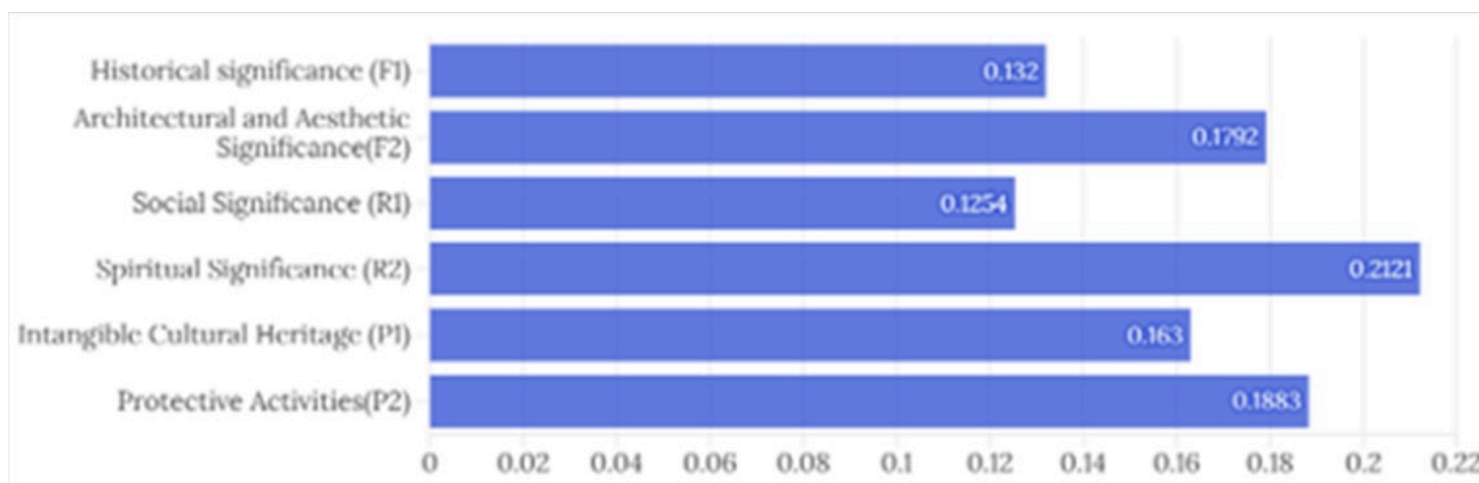


Figure 3

Normalised (global) weights for criteria and sub-criteria in the FRP-based evaluation framework.

Global weights derived from the AHP analysis for the six sub-criteria nested within the Forms, Relationships and Practices domains. The weights represent the relative importance assigned by the consistency-qualified expert panel and should be interpreted as professional priority structures rather than as direct measures of case performance.

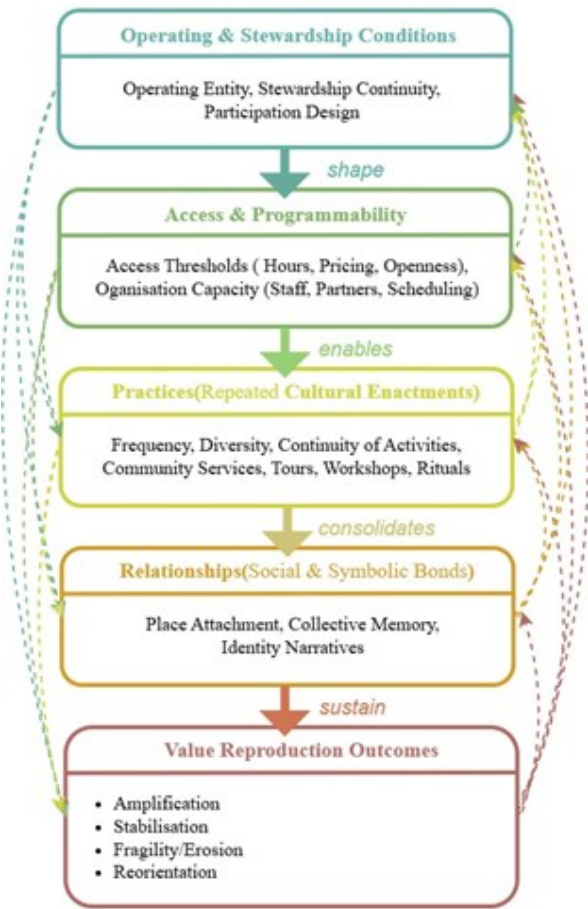


Figure 4

Proposed governance–use pathway for post-designation cultural-value reproduction.

Interpretive proposition linking operating and stewardship conditions, access and programmability, repeated cultural practices, relational and symbolic bonds, and potential value-reproduction outcomes. The arrows indicate hypothesised links derived from the cross-case comparison and are intended for future longitudinal or mixed-method testing rather than as empirically established causal effects.

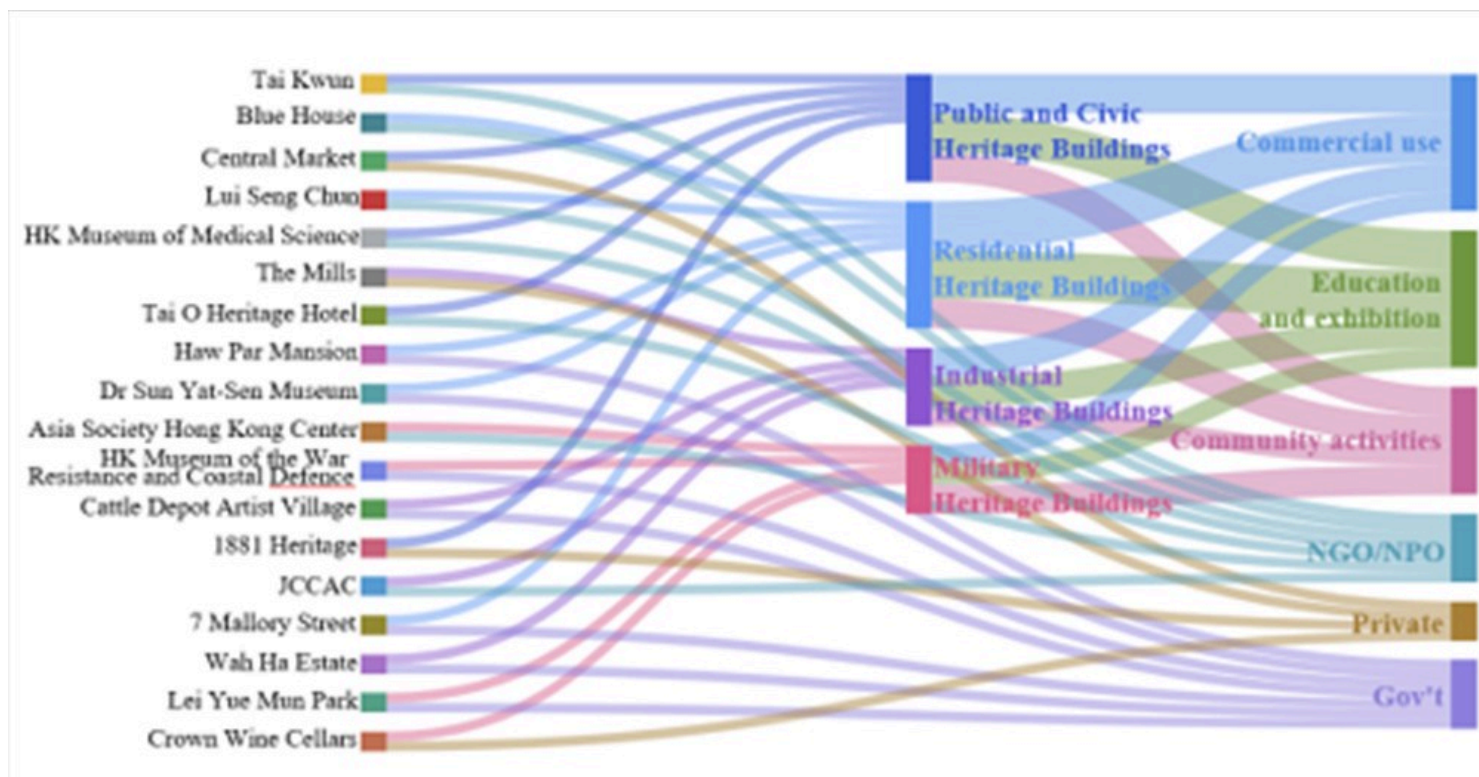


Figure 5

Type-use-operator pathways for 18 heritage buildings in Hong Kong.

Sankey representation of the relationships among the 18 heritage cases, heritage-building types, reuse orientations and operator categories. The diagram visualises cross-case configurations and heterogeneity in governance and use arrangements; the flows are descriptive and should not be interpreted as causal pathways or measures of relative performance.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [surveyAHPanonymised.pdf](#)
- [SupplementaryDataWorkbook.xlsx](#)