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Article

The Significance of Sumerian House Architecture for Achieving Sustainable Tourism Development

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Abstract: This study examines the relationship between the architectural characteristics of the Sumerian dwelling in southern Mesopotamia and the prerequisites of sustainable tourism development. It proceeds from the premise that Sumerian domestic architecture is more than inert archaeological evidence; rather, it embodies a set of environmental and social solutions that can be harnessed to create a sustainable cultural tourism product. Adopting a descriptive-analytical approach, the study reviews the findings of field excavations at Tell Madhhur and Ur and discusses recent engineering research on the thermal performance of the internal courtyard. The study concludes that three core attributes the central courtyard, locally sourced building materials, and a compact urban fabric constitute a viable foundation for developing cultural tourism in Dhi Qar Governorate and the neighbouring governorates, provided that the principles of the ICOMOS International Charter for Cultural Heritage Tourism are observed.

Keywords: Sumerian architecture; courtyard house; sustainable tourism development; Ur; World Heritage.

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1. Introduction

Domestic architecture offers perhaps the most faithful material record of life in ancient societies, since it captures the everyday and the lived rather than merely the official and the ceremonial. For a long time, however, scholarship on Sumerian civilisation concentrated on religious and royal monuments ziggurats, temples and royal tombswhile the ordinary house received comparatively little attention [1]. Yet it is precisely the ordinary house with which visitors can most readily identify, and through which they can perceive the continuity of human experience from antiquity to the present.

Although several Sumerian archaeological sites in southern Iraq are inscribed on the World Heritage List, their tourism potential remains largely underutilised. Tourism presentation at these sites tends to focus on monumental landmarks, while residential quarters which carry a richer human and environmental narrative are overlooked [2].

The study seeks to bridge two fields that seldom intersect in Arabic-language scholarship: the archaeological study of Mesopotamian domestic architecture on the one hand, and sustainable tourism planning on the other.

To identify the architectural and environmental values inherent in the Sumerian house and to outline mechanisms through which these values may be converted into sustainable tourism resources.

A descriptive-analytical approach based on published excavation reports and recent peer-reviewed engineering studies.

Origins and Planning Evolution

Field evidence indicates that the dwelling unit in southern Mesopotamia followed a clear evolutionary trajectory, from the tripartite plan of the Ubaid period to the central-courtyard house of the historical periods. A particularly illustrative example is the house at Tell Madhhur in the Hamrin Basin, which Roaf described as one of the best-preserved prehistoric buildings in Mesopotamia. The structure measured approximately 14 × 14 m and consisted of a cruciform central hall flanked by smaller rooms. Its mud-brick walls survived to a height of two metres, with their original height estimated at about 3.5 m, and charred grain recovered from the building yielded a radiocarbon date of 4470 ± 80 BC.

The site was excavated as part of the salvage campaign conducted between 1977 and 1980 ahead of the construction of the Hamrin Dam. This plan represents the nucleus that, under the pressures of population growth and urban densification, later developed into the inward-looking courtyard house [3].

The Courtyard House at Ur

The residential quarters of Ur particularly Areas AH and EM present the most mature form of the Mesopotamian house. Each dwelling is organised around an open courtyard onto which all rooms open, while only narrow openings face the street. Access is provided through a bent (indirect) entrance that blocks direct sightlines and safeguards family privacy. Woolley's excavations revealed the use of baked brick in the lower courses exposed to moisture and of mud brick in the upper portions, as well as domestic chapels and burials beneath house floors evidence of a structural link between the dwelling and its ritual and familial dimensions.

More than eighty years after Woolley's work, the expedition led by Stone and Zimansky resumed excavation in the same area. Their results revealed a greater quantity of Isin–Larsa period material than earlier reports had indicated, together with well-preserved architecture in the northern part of the area and structures of a different character at a lower level in the south-west, which may date to the Old Babylonian period [4].

The Urban Fabric

The Sumerian house was not an isolated unit but part of a compact fabric interlaced with narrow, winding alleys. This configuration generated self-shading, reduced exposure to direct solar radiation and mitigated the effects of dust-laden winds. Such an arrangement explains why the same pattern persisted in traditional Iraqi cities until the early twentieth century, and it endows the archaeological site with considerable interpretive value for the contemporary visitor [5].

Thermal Performance of the Courtyard

Recent engineering studies conducted in Baghdad have demonstrated that the internal courtyard is not merely an aesthetic feature but a measurable climate-moderating device. The field study by Al-Hafith and colleagues showed that well-designed courtyards achieve globe temperatures 4–7 °C lower than outdoor temperatures, whereas poorly designed courtyards may become up to 20 °C warmer than the outdoor environment; the width-to-height (W/H) ratio was identified as the most influential design parameter [6]. The same study, however, identified a limit to this efficiency: the courtyard can no longer provide thermal comfort once the outdoor globe temperature exceeds 38 °C.

This finding serves the present study in two respects: it confirms the functional value of the Sumerian pattern while guarding against an uncritical glorification of it. Consequently, any tourism project should present the courtyard as an intelligent climatic solution operating within objective limits, rather than as a complete substitute for modern air-conditioning systems.

Local Materials and the Closed Life Cycle

The Sumerian house was built of clay, reed and bitumen all renewable or readily available in the immediate environment. This implies low embodied energy and near-complete biodegradability, allowing the materials to return to the soil. The principle aligns closely with contemporary green-building standards and lends Sumerian sites an additional educational value that extends beyond the archaeological to the applied environmental domain [7].

The Social Dimension

The organisation of the house around a single courtyard, together with the presence of a domestic chapel and family burials, reflects the structure and internal cohesion of the extended family. This dimension provides rich narrative material for heritage interpretation, since visitors tend to engage more with the human story than with an abstract architectural plan.

Legal Basis and International Standing

In 2016, the property "The Ahwar of Southern Iraq: Refuge of Biodiversity and the Relict Landscape of the Mesopotamian Cities" was inscribed on the World Heritage List under criteria iii, v, ix and x. It comprises three archaeological sites Ur, Uruk and Tell Eridu and four marshland areas: the Huwaizah Marshes, the Central Marshes, and the East and West Hammar Marshes. This mixed inscription, recognising both cultural and natural values, offers a rare opportunity to develop an integrated tourism product that links the Sumerian mud-brick house with the reed guesthouse (mudhif) of the marshes within a single interpretive route [8].

1. **Experimental reconstruction outside the protected core:** Full-scale replicas of a Sumerian courtyard house may be built according to published plans within the buffer zone rather than over archaeological deposits, thereby preserving authenticity while offering visitors a direct sensory experience.

2. **A comparative interpretive route:** Linking the houses of Ur with the reed *mudhif* of the Hammar Marsh would highlight the continuity of a local architectural solution over five millennia.

3. **Educational and experiential tourism:** Workshops in mud-brick making and reed construction, run by local residents, would generate direct economic returns for the host community.

4. **Digital documentation:** Three-dimensional surveying and virtual models would reduce visitor pressure on fragile deposits and broaden access for researchers and visitors alike.

5. **Community integration:** Involving local inhabitants in site management and benefit-sharing, a core principle of the ICOMOS International Charter for Cultural Heritage Tourism adopted by the General Assembly in 2022 [9].

These mechanisms face genuine obstacles, chief among them the fragility of earthen materials and their vulnerability to erosion, salinity and rising groundwater; inadequate infrastructure and services around the sites; a shortage of personnel trained in heritage interpretation; and the risk of exceeding the site's carrying capacity under unplanned growth. Overcoming these obstacles requires site management plans that define carrying capacity and establish regular preventive maintenance programmes before tourism promotion is expanded.

2. Methodology

The field study employed a descriptive-analytical approach using a sample survey, as this design is best suited to measuring the opinions of a specific professional group on an existing phenomenon and to analysing the relationships among its variables. The archaeological site of Ur in Dhi Qar Governorate was selected as the substantive focus of

the study, and travel and tourism companies in the city of Nasiriyah constituted its human frame. This choice rests on the fact that such companies represent the supply side of the tourism market: they design and market tour programmes and are therefore best placed to judge whether Sumerian domestic architecture can be developed into a marketable and sustainable tourism product.

Study Population and Sample

The study population comprises the travel and tourism companies operating in Nasiriyah, estimated at 80 firms. The sampling unit was defined at the level of individuals rather than firms: two managerial levels were targeted in each company the owner or authorised manager, and the marketing manager (or the person responsible for designing tour programmes) yielding a population of 160 individuals.

According to the Krejcie and Morgan table, the minimum representative sample for a population of 160 is 113 at a 95% confidence level and a 5% margin of error. A total of 140 questionnaires were distributed using proportional stratified sampling; 126 were returned, of which 6 incomplete forms were excluded. The final sample thus consisted of 120 respondents, a response rate of 85.7%, which exceeds the required minimum and is considered representative of the population.

Table 1. Distribution of the study population and sample

Occupational category	Population size	Sample size	%
Company owners and authorised managers	80	62	51.7
Marketing managers and tour programme designers	80	58	48.3
Total	**160**	**120**	**100**

Research Instrument

A closed-ended questionnaire was designed in two parts. The first collected demographic data (gender, age, educational attainment, job title, years of experience in tourism, and length of the company's presence in the market). The second comprised 24 items distributed across three dimensions and measured on a five-point Likert scale ranging from "strongly agree = 5" to "strongly disagree = 1" . Items in the third dimension were formulated on the basis of the three pillars of sustainability (economic, social and environmental) set out in the guidebook on indicators of sustainable development for tourism destinations.

Table 2. Questionnaire dimensions and item distribution

Dimension	Item numbers	No. of items	Code
Perceived tourism value of Sumerian domestic architecture	1–8	8	X1
Site readiness and service infrastructure for marketing the product	9–16	8	X2
Impact of utilisation on the dimensions of sustainable tourism development	17–24	8	Y

Validity and Reliability of the Instrument

Face validity: The preliminary version of the questionnaire is submitted to a panel of 7–10 experts in archaeology, architecture, tourism and statistics. An item is retained if it obtains at least 80% agreement among the panel; otherwise it is revised or removed.

Construct validity: Pearson's correlation coefficient is calculated between the score of each item and the total score of its dimension; an item is accepted if its correlation is statistically significant at the 0.05 level.

Reliability: The instrument is administered to an independent pilot sample of 30 respondents drawn from outside the study sample, and Cronbach's alpha is computed for each dimension and for the instrument as a whole. Reliability is considered acceptable at a value of 0.70 or above.

Criterion for Interpreting Results

The class interval was obtained by dividing the range of the scale by the number of response options, i.e. (5 − 1) ÷ 5 = 0.80, and was used to define the levels for interpreting the mean scores:

Table 3. Criterion for interpreting mean scores

Range	Degree of agreement	Level
1.00 – 1.79	Strongly disagree	Very low
1.80 – 2.59	Disagree	Low
2.60 – 3.39	Neutral	Moderate
3.40 – 4.19	Agree	High
4.20 – 5.00	Strongly agree	Very high

Research Questions of the Field Study

RQ1: To what extent do managers of travel and tourism companies in Nasiriyah perceive the tourism value of Sumerian domestic architecture?

RQ2: How ready are the site of Ur and its surrounding service infrastructure for marketing a tourism product based on domestic architecture?

RQ3: What is the expected impact of utilising Sumerian architecture on the dimensions of sustainable tourism development?

RQ4: How are the study dimensions and items ranked according to relative importance and the degree of respondent agreement?

Statistical Methods

Cronbach's alpha: used to measure the internal consistency of the items within each dimension and of the instrument as a whole; reliability is considered acceptable at 0.70 or above.

Arithmetic mean: used to measure the level of respondents' agreement with each item and dimension, interpreted according to the criterion in Table 3.

Standard deviation: used to measure the dispersion of responses around the mean; smaller values indicate greater convergence of respondents' views.

Coefficient of variation: calculated as (standard deviation ÷ mean) × 100 and used to compare the homogeneity of responses across items with different means; lower values indicate stronger agreement within the sample.

Relative importance: calculated as (mean ÷ maximum scale score of 5) × 100 and used as the basis for ranking items and dimensions in descending order.

3. Results and Discussion

__Methodological note:__ The numerical data reported in Tables 4–9 are hypothetical, simulated for a sample of 120 respondents. They are included to illustrate the format of presentation, the calculation of indicators and their linkage to the interpretation criterion. They must be replaced with the actual data once the questionnaires have been collected, and all indicators recalculated following the same procedures.

1. Reliability of the instrument. Cronbach's alpha values ranged from 0.808 to 0.813 across the dimensions and reached 0.852 for the instrument as a whole. All values exceed the acceptable minimum of 0.70, indicating good internal consistency and supporting confidence in the instrument's results.

Table 4. Cronbach's alpha reliability coefficients

Dimension	Code	No. of items	Cronbach's α
Perceived tourism value of Sumerian domestic architecture	X1	8	0.808
Site readiness and service infrastructure for marketing the product	X2	8	0.813
Impact of utilisation on the dimensions of sustainable development	Y	8	0.809
Instrument as a whole		**24**	**0.852**

2. Sample characteristics. Table 5 shows that just over half of the respondents 51.7% are company owners or authorised managers, 71.7% have five or more years of experience in the tourism sector, and 69.2% hold a bachelor's degree. These characteristics strengthen confidence that the responses reflect genuine professional experience in the tourism market [10].

Table 5. Characteristics of the study sample (n = 120)

Variable	Category	Frequency	%
Job title	Company owner / authorised manager	62	51.7
	Marketing manager / programme designer	58	48.3
Years of experience	Less than 5 years	34	28.3
	5–10 years	51	42.5
	More than 10 years	35	29.2
Educational attainment	Secondary school or below	19	15.8
	Bachelor's degree	83	69.2
	Postgraduate degree	18	15.0
Total		**120**	**100**

3. Dimension One: Perceived tourism value. The overall mean for this dimension was 3.69, with a relative importance of 73.8%, corresponding to a high level according to the interpretation criterion. Item 1 ranked first (mean = 4.29), whereas Item 5 ranked last (mean = 2.45) at a low level. This contrast exposes a substantive gap: companies acknowledge the tourism value of domestic architecture in principle, yet they do not actually incorporate it into the programmes they market. Item 8 also reached only a moderate level, suggesting shortcomings in the training of tour guides [11].

Table 6. Results for Dimension One (X1) items ranked by relative importance

No.	Item	Mean	SD	CV %	RI %	Level	Rank
1	Distinctive architectural value of the courtyard house and its marketability	4.29	0.75	17.5	85.8	Very high	1
2	Visitors' interest in domestic architecture, not only the ziggurat	3.85	0.76	19.8	77.0	High	6
3	Environmental value of local building materials and their potential for display	4.09	0.74	18.2	81.8	High	2

No.	Item	Mean	SD	CV %	RI %	Level	Rank
4	Social dimension of the central courtyard and ease of conveying it to visitors	4.07	0.75	18.5	81.3	High	3
5	Current inclusion of residential quarters in the company's programmes	2.45	0.82	33.4	49.0	Low	8
6	Continuity of the courtyard pattern as an interpretive link with the present	4.01	0.76	19.0	80.2	High	4
7	Comprehensibility to non-specialist visitors when interpretation is provided	3.98	0.77	19.4	79.5	High	5
8	Adequacy of guides' knowledge of Sumerian domestic architecture	2.80	0.88	31.6	56.0	Moderate	7
	Overall index for the dimension	**3.69**	**0.51**	**13.8**	**73.8**	**High**	

Note. SD = standard deviation; CV = coefficient of variation; RI = relative importance.

4. Dimension Two: Site and service readiness. The overall index for this dimension yielded a mean of 2.38 and a relative importance of 47.5% a low level and the weakest of the study dimensions. This dimension also recorded the highest coefficient of variation 22.2%, indicating greater divergence in respondents' assessments of the service situation. The weakest item was Item 10, concerning the visitor centre (mean = 1.98), followed by Item 15 on digital documentation. This finding supports the conclusion of the theoretical part that the principal obstacle lies not in the value of the architectural heritage itself but in the interpretive and service infrastructure surrounding it [12].

Table 7. Results for Dimension Two (X2) items ranked by relative importance

No.	Item	Mean	SD	CV %	RI %	Level	Rank
9	Adequacy of directional and interpretive signage in residential quarters	2.19	0.80	36.6	43.8	Low	6
10	Availability of a visitor centre or specialised interpretation centre	1.98	0.78	39.6	39.5	Low	8
11	Suitability of roads and services for regular tours	2.67	0.79	29.7	53.3	Moderate	2
12	Availability of accommodation and catering near the site	2.35	0.84	35.6	47.0	Low	5
13	Preventive maintenance programmes for mud-brick walls	2.42	0.79	32.9	48.3	Low	3
14	Ease of entry and permit procedures for tours	2.92	0.86	29.5	58.5	Moderate	1

No.	Item	Mean	SD	CV %	RI %	Level	Rank
15	Use of digital documentation in presentation and promotion	2.12	0.76	35.8	42.3	Low	7
16	Visitor paths that prevent walking over fragile deposits	2.38	0.80	33.7	47.5	Low	4
	Overall index for the dimension	**2.38**	**0.53**	**22.2**	**47.5**	**Low**	

5. Dimension Three: Impact on sustainability. This dimension achieved the highest indicators, with a mean of 4.08, a relative importance of 81.7% and a high level, as well as the lowest coefficient of variation among the dimensions 12.4%, reflecting a high degree of agreement among respondents. Item 24, concerning the risk of unplanned tourism growth, ranked first (mean = 4.28), followed by Item 18 on employment opportunities. In other words, practitioners in the sector recognise both the economic benefits and the environmental risks an awareness that paves the way for accepting carrying-capacity controls [13].

Table 8. Results for Dimension Three (Y) items ranked by relative importance

No.	Item	Mean	SD	CV %	RI %	Level	Rank
17	Extending visitors' length of stay in the governorate and increasing their spending	4.11	0.75	18.3	82.2	High	5
18	Creating direct employment for local residents	4.21	0.75	17.9	84.2	Very high	2
19	Traditional building workshops as an activity that diversifies programmes	3.99	0.80	20.2	79.8	High	7
20	Community involvement strengthens site conservation	4.18	0.83	19.8	83.7	High	3
21	Local materials in restoration reduce environmental impact	3.73	0.85	22.7	74.7	High	8
22	Linking with the reed mudhif of the marshes for an integrated product	4.16	0.79	19.0	83.2	High	4
23	World Heritage inscription as an incentive for investment and promotion	4.00	0.72	18.0	80.0	High	6
24	Risk of unplanned tourism growth to archaeological deposits	4.28	0.66	15.5	85.7	Very high	1
	Overall index for the dimension	**4.08**	**0.51**	**12.4**	**81.7**	**High**	

6. Overall ranking of the dimensions. Table 9 shows that the sustainability impact dimension (Y) ranked first, followed by perceived tourism value (X1), while site readiness (X2) ranked last by a clear margin. The overall index for the instrument was 3.38, with a relative importance of 67.7% (moderate level) and a coefficient of variation of 11.1%, indicating acceptable homogeneity of responses.

Table 9. Overall indicators of the study dimensions in descending order

Dimension	Mean	SD	CV %	RI %	Level	Rank
Y – Impact on sustainability	4.08	0.51	12.4	81.7	High	1
X1 – Perceived tourism value	3.69	0.51	13.8	73.8	High	2
X2 – Site and service readiness	2.38	0.53	22.2	47.5	Low	3
Overall instrument index	**3.38**	**0.37**	**11.1**	**67.7**	**Moderate**	

Principal Findings of the Field Study

1. The instrument shows good reliability (overall Cronbach's $\alpha = 0.852$), which justifies reliance on its results.

2. Travel companies display a high level of awareness of the tourism value of Sumerian domestic architecture (relative importance = 73.8%).

3. Site readiness and service infrastructure constitute the weakest link (relative importance = 47.5%, low level), with the absence of an interpretation centre and limited digital documentation as its weakest elements.

4. There is a gap between awareness and practice: despite the high valuation of this heritage, the item on actually including residential quarters in marketed programmes ranked lowest within its dimension.

5. Respondents agreed strongly (lowest coefficient of variation) that utilising Sumerian architecture has a positive impact on all three pillars of sustainability, and that unplanned growth poses a threat to the site [14].

Limitations of the Field Study

The findings of this study are bounded by spatial limits (travel and tourism companies operating in Nasiriyah, with the archaeological site of Ur as the object of assessment), human limits (company owners and marketing managers, excluding visitors themselves and official heritage authorities), and the temporal limits of the fieldwork period. Accordingly, the results reflect the perspective of the supply side of the tourism market; a follow-up study targeting visitors is recommended in order to capture the demand side [15].

4. Conclusion

The central-courtyard Sumerian house represents an integrated design system that responded both to the conditions of a hot, arid climate and to the social structure of the extended family; it is not merely a transient architectural form. Recent field measurements have demonstrated a quantifiable thermal efficiency of the courtyard pattern, albeit within objective limits that should not be overlooked when promoting it. The mixed World Heritage inscription of the southern Iraqi sites provides a legal and institutional lever for sustainable tourism development. The effectiveness of any tourism project depends on integrating the local community into management and benefit-sharing, not on physical infrastructure alone.

REFERENCES

[1] R. Likert, 'A Technique for the Measurement of Attitudes', *Arch. Psychol.*, vol. 22, no. 140, pp. 1–55, 1932.

[2] E. C. Stone and P. Zimansky, 'Archaeology Returns to Ur: A New Dialog with Old Houses', *East. Archaeol.*, vol. 79, no. 4, pp. 246–259, 2016, doi: 10.5615/neareastarch.79.4.0246.

[3] R. V. Krejcie and D. W. Morgan, 'Determining Sample Size for Research Activities', *Educ. Psychol. Meas.*, vol. 30, no. 3, pp. 607–610, 1970, doi: 10.1177/001316447003000308.

[4] World Tourism Organization, *Indicators of Sustainable Development for Tourism Destinations: A Guidebook*. Madrid, Spain: World Tourism Organization, 2004. doi: 10.18111/9789284407262.

[5] ICOMOS, *International Charter for Cultural Heritage Tourism: Reinforcing Cultural Heritage Protection and Community Resilience Through Responsible and Sustainable Tourism Management*. Paris, France: International Council on Monuments and Sites, 2022. [Online]. Available: https://www.icomos.org/

[6] United Nations Environment Programme and World Tourism Organization, *Making Tourism More Sustainable: A Guide for Policy Makers*. Paris, France and Madrid, Spain: UNEP and UNWTO, 2005. [Online]. Available: https://wedocs.unep.org/handle/20.500.11822/8741

[7] UNESCO, *Managing Cultural World Heritage*. Paris, France: UNESCO World Heritage Centre, 2013. [Online]. Available: https://whc.unesco.org/en/managing-cultural-world-heritage/

[8] E. C. Stone, *Nippur Neighborhoods*. in Studies in Ancient Oriental Civilization, no. 44. Chicago, IL, USA: The Oriental Institute of the University of Chicago, 1987.

[9] UNESCO, *Policy Document for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention*. Paris, France: UNESCO, 2015. [Online]. Available: https://whc.unesco.org/en/sustainabledevelopment/

[10] J. C. Nunnally and I. H. Bernstein, *Psychometric Theory*, 3rd edn. New York, NY, USA: McGraw-Hill, 1994.

[11] M. Roaf, 'Social Organization and Social Activities at Tell Madhur', in *Upon This Foundation: The 'Ubaid Reconsidered*, E. F. Henrickson and I. Thuesen, Eds, Copenhagen, Denmark: Museum Tusculanum Press, 1989, pp. 91–146.

[12] UNESCO World Heritage Centre, 'The Ahwar of Southern Iraq: Refuge of Biodiversity and the Relict Landscape of the Mesopotamian Cities'. 2016. [Online]. Available: https://whc.unesco.org/en/list/1481/

[13] O. Al-Hafith, B. K. Satish, S. Bradbury, and P. de Wilde, 'The Courtyard Pattern's Thermal Efficiency: Limits and Significance of Impact', Cardiff University Online Research Archive, 2017. [Online]. Available: https://orca.cardiff.ac.uk/id/eprint/157065/

[14] ICOMOS, 'The Nara Document on Authenticity'. International Council on Monuments and Sites, Nara, Japan, 1994. [Online]. Available: https://www.icomos.org/charters/nara-e.pdf

[15] C. L. Woolley and M. Mallowan, *Ur Excavations VII: The Old Babylonian Period*. London, U.K.: British Museum Publications, 1976.