

Vernacular Craftsmanship in Sacred Space: Wooden Mosque Architecture of District Buner with Special Reference to Yakhdara Mosque

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Abstract: *Wooden mosque architecture represents one of the most distinctive yet underexplored dimensions of Islamic vernacular building traditions in the mountainous regions of northwestern Pakistan. Despite the outstanding architectural, cultural, and historical significance of timber mosques in the Swat-Buner region, no systematic architectural study of Yakhdara Mosque in District Buner has previously been published. This paper addresses that gap by presenting the first detailed architectural documentation of Yakhdara Mosque, arguing that this structure embodies an unbroken chain of craft transmission linking the pre-Islamic woodcarving traditions of the Gandhara civilisation to living Islamic vernacular practice, a chain now critically endangered by material decay, inappropriate interventions, and the irreversible erosion of traditional craft knowledge. Drawing on original fieldwork conducted in 2015, the study employs a qualitative case study methodology encompassing architectural measurement, systematic photographic documentation, field observation, and semi-structured interviews with local elders, craftsmen, and mosque administrators. Findings are situated within a comparative framework that draws on documented peer sites including the Odigram mosque in Swat, the Sapal Bandai mosque in Islampur, and wooden mosque traditions from Chitral and Dir. The study demonstrates that Yakhdara Mosque synthesises Islamic spatial principles with Pashtun building conventions through elaborately carved timber columns, indigenous joinery, regionally sourced hardwoods, and a structural logic responsive to seismic and climatic conditions. Critical conservation threats are identified and a programme of urgent protective action is proposed. The research contributes to scholarship on Islamic architectural heritage, vernacular building studies, and cultural heritage management in Pakistan.*

Keywords: *Wooden Mosque Architecture; Yakhdara Mosque; District Buner; Vernacular Architecture; Islamic Architecture; Pashtun Building Traditions; Cultural Heritage Conservation; Timber Construction; Khyber Pakhtunkhwa; Gandhara*

1. Introduction

The mosque has served as the focal point of social, spiritual, and intellectual life throughout the Muslim world since the earliest years of Islam. Originating in the functional simplicity of the Prophet Muhammad's (peace be upon him) courtyard house in Medina, a structure combining prayer space, community hall, and administrative centre, mosque architecture evolved over fourteen centuries into one of the most formally diverse building types in the history of world architecture (Creswell, 1958; Hillenbrand, 1994). From the grand hypostyle halls of Kairouan and Cordoba to the domed imperial complexes of Istanbul and Isfahan, from the earthen barrel-vaulted mosques of the Sahel to the painted timber prayer halls of China, regional building traditions have continuously adapted Islamic spatial requirements to local environments, materials, and aesthetic sensibilities (Frishman and Khan, 1994;

Bianca, 2000).

Among the least studied of these regional traditions is the wooden mosque architecture of the mountainous districts of northwestern Pakistan, a tradition of extraordinary sophistication and historical depth that has been systematically overlooked in the international scholarship on Islamic architecture. District Buner, situated in the Khyber Pakhtunkhwa province, lies within a historically forested highland zone where indigenous timber species, including Ranzra (*Dodonaea viscosa*), Chinar (*Platanus orientalis*), Nakhtar (*Ziziphus nummularia*), Palawsa (*Acacia modesta*), and Khona, have supported a rich tradition of wooden architecture spanning many centuries (Khan, 2009; Hussain et al., 2013). This environmental abundance shaped not only building technology but gave rise to a tradition of refined woodworking and decorative carving that fuses Islamic ornamentation with pre-Islamic visual vocabularies inherited from the ancient Gandhara civilisation (Rehman, 2003; Scerrato, 2007).

The progressive substitution of concrete and brick for timber in mosque construction across Pakistan's northwest frontier, accelerated by the 2005 earthquake and by broader socioeconomic modernisation, has rendered surviving examples of pre-modern vernacular timber mosque construction increasingly rare and critically endangered (Bianca, 2000; Oliver, 1997; Ahmad, 2012). The carved wooden columns, doors, and ceiling structures of the region's historic mosques face irreversible loss through weathering, neglect, inappropriate repair, and the near-total erosion of the craft skills needed to maintain them. Despite this urgency, the vernacular religious architecture of rural Khyber Pakhtunkhwa remains almost entirely undocumented in peer-reviewed scholarship.

This paper addresses that gap through the first systematic architectural study of Yakhdara Mosque in District Buner, a timber structure of significant age and artistic quality situated in a remote highland valley of the Swat-Buner region. The central argument advanced is that Yakhdara Mosque represents a critically endangered material witness to an unbroken chain of craft transmission linking the pre-Islamic woodcarving traditions of Gandhara to living Islamic vernacular practice in the twenty-first century, and that its documentation and conservation are therefore matters of both local and international scholarly urgency. The study aims to: (i) provide the first detailed architectural documentation of the mosque; (ii) analyse its decorative and structural character within comparative and historical frameworks; (iii) assess the conservation threats it faces; and (iv) propose specific protective actions.

2. Historical Background of Wooden Mosques in the Region

The Swat-Buner region occupies one of the most historically layered landscapes in South Asia. For over two millennia it formed the heartland of the Gandhara civilisation, a Buddhist cultural zone distinguished by a remarkable tradition of stone and timber craftsmanship that blended Indian, Central Asian, Hellenistic, and Parthian artistic influences (Rehman, 1979; Scerrato, 1968). The timber monasteries, viharas, and stupas of Gandhara were elaborately carved in the local hardwoods of the region, establishing an ornamental vocabulary of rosettes, leaf garlands, geometric interlace, and figural narrative that would continue to shape the visual culture of the region long after the arrival of Islam (Scerrato, 2007; Rehman, 2003).

Islam entered the Swat valley in waves from the eighth century AD, gradually transforming the religious landscape while absorbing and recoding the region's pre-existing artistic traditions. The earliest securely dated mosque in the region is the congregational mosque at Odigram (Udigram) in Swat, dated by epigraphic and archaeological evidence to 440 AH (1048-1049 AD), during the reign of Sultan Mahmud of Ghazni (Nazim, 1973; Scerrato, 1968). Rediscovered in 1985 by the Italian Archaeological Mission in Pakistan, the Odigram mosque was found to overlay an earlier Buddhist stupa, a material metaphor for the religious palimpsest of the valley, and to retain evidence of thirty-foot walls, ancillary structures, and a water mill (Scerrato, 2007). The restoration of the site, carried out by the IsIAO mission, stands as a landmark intervention in regional heritage conservation.

Ancient sources identify Udigram with "Ora", the town captured by Alexander the Great during his

Swat campaign in 327 BC (Majumdar, 1960; Arrian, *Anabasis* IV.27). The toponym preserves the name of the Udi or Odi people, whose political dominance gave the valley its ancient name of Uddiyana (Rehman, 1979; Holdich, 1899). The depth of this historical continuity, from Alexander through the Kushans, Guptas, Shahis, Ghaznavids, Ghurids, and Mughals to the present, distinguishes the Swat-Buner region as a site of exceptional cultural significance.

The wooden mosque tradition of the region reached its most documented peak during the Mughal and post-Mughal periods, when community mosques constructed entirely of locally sourced timber were established across the valley settlements. The mosque at Sapal Bandai in Islampur, Swat, believed by community tradition to be more than three hundred and fifteen years old, demonstrates the longevity of this tradition and was recently saved from structural collapse through conservation intervention (S.A.M., 2013). The wooden mosques of Chitral, Dir, and Gilgit-Baltistan provide related but formally distinct traditions with which the Buner examples share technical principles while diverging in ornamental programmes, testifying to the creative diversity of vernacular Islamic timber architecture across the Hindu Kush-Karakoram belt (Bianca, 2000; Darling, 1988).

The twentieth century brought severe disruption to this tradition. The 1969 land reforms and subsequent deforestation reduced the availability of large-section timber in the region. The introduction of reinforced concrete as the default construction material for new mosques from the 1970s onwards marginalised the timber tradition. The 2005 Kashmir earthquake, which caused widespread structural damage to masonry and timber buildings across Khyber Pakhtunkhwa, destroyed several historic wooden mosques outright and prompted the replacement of damaged timber elements with concrete in many surviving structures (Ahmad, 2012). These processes have reduced the surviving stock of historic wooden mosques in District Buner to a small and diminishing number, of which Yakhdara Mosque is among the most significant.

3. Study Area: Yakhdara Mosque, District Buner

District Buner lies in the eastern part of Khyber Pakhtunkhwa province, bounded to the north by Swat, to the east by Shangla, to the south by Mardan and Swabi, and to the west by Malakand. The district covers an area of approximately 1,865 square kilometres and is characterised by mountainous terrain dissected by numerous valleys and seasonal watercourses (Khan, 2009). The administrative centre is Daggar. The district's highland forests, historically dominated by species including Chinar, Ranzra, and Nakhtar, have supported a distinctive material culture of timber construction that sets it apart from the predominantly brick-and-masonry built environment of the lowland districts of Khyber Pakhtunkhwa.

Yakhdara Mosque is located in the Yakhdara valley, accessible from Sawari Bazar by proceeding toward Dewana Baba and continuing approximately three kilometres to Tango Pull, from where a link road extends approximately nine kilometres northeast to the valley. An alternative route branches at Shal Bandi, follows an easterly direction for approximately eight kilometres, then turns northeast for a further nine kilometres. The name "Yakh Dara" derives from the Pashto words for "Cold Valley", a toponym reflecting both the high-altitude microclimate and the valley's historical function as a waypoint on mountain routes. A now-dry riverbed immediately below the hillside on which the mosque stands marks the changed hydrology of the valley landscape.

The mosque occupies an elevated platform enclosed by boundary walls approximately six feet in height above the natural ground level, set level with the slope of the hill on the upper corners. The total covered area of the mosque and its immediate precinct amounts to approximately two kanal (approximately 1,000 square metres). Community oral tradition consistently places the mosque's construction at more than one hundred years before the fieldwork date (2015), suggesting a late nineteenth or early twentieth century construction date, though formal dendrochronological or archival verification has not been carried out. The mosque has served as the sole congregational mosque in Yakhdara since its foundation and was restored in 1992, 2000, and 2005, with restoration overseen by Muner Khan, a prominent local

resident, funded by community donations (Naveed, 2015).

4. Research Methodology and Ethical Statement

This study employs a qualitative case study methodology, widely recognised as the most appropriate approach for detailed architectural investigation of unique heritage sites within their real-world cultural and physical context (Yin, 2014). The case study design permits the systematic integration of multiple lines of evidence, physical, photographic, documentary, and oral, which together support a comprehensive and contextualised understanding of the monument and its significance.

Primary data collection was conducted through fieldwork in the Yakhdara valley, District Buner, in May 2015. Four data collection methods were employed. First, direct field observation of all structural components, spatial zones, decorative elements, and conditions of deterioration was carried out systematically, guided by a pre-prepared observation checklist. Second, architectural measurement of principal spaces, wall thicknesses, pillar sections, door and mihrab dimensions was recorded using tape measure and noted in field drawings. Third, systematic photographic documentation was completed using a digital camera, producing a comprehensive visual archive of thirty-six images covering all significant elements of the structure, used as the primary record for this paper. Fourth, semi-structured interviews were conducted with seven participants: three local elders, the mosque administrator, one craftsman with knowledge of traditional woodworking, and two long-term community residents (Naveed, 2015). Interviews were conducted in Pashto and subsequently translated by the researcher.

Secondary data were derived from published scholarly books, peer-reviewed journal articles, technical reports, and archival sources addressing Islamic architectural history, vernacular building traditions in South Asia and the Hindu Kush-Himalayan region, and heritage conservation practice in Pakistan. Where published sources were unavailable for specific claims, this is acknowledged explicitly in the text.

Ethical considerations: All interview participants provided informed verbal consent prior to participation, having been advised of the academic purpose of the research, the anticipated publication of findings, and their right to withdraw. No personal identifying information beyond first names or community roles is used in this paper. Photographic documentation of the mosque was carried out with the explicit permission of the mosque committee and community elder representatives. No payments or inducements were offered to participants. The research was conducted in accordance with the ethical principles of the researcher's academic institution and with respect for the religious sanctity of the site.

Data were analysed through descriptive and comparative thematic analysis. Architectural features of Yakhdara Mosque were systematically compared with documented peer sites including the Odigram mosque (Scerrato, 2007), the Sapal Bandai mosque (S.A.M., 2013), and wooden mosque traditions from Chitral (Darling, 1988) and Gilgit-Baltistan (Bianca, 2000), enabling patterns of regional coherence and local distinctiveness to be identified.

5. Architectural Description of Yakhdara Mosque

5.1 Entrance and Boundary Walls

The principal entrance to the mosque complex is located on the northern side and consists of an iron-grilled gate set within cemented boundary walls (Figure 1). A dry riverbed occupies the ground immediately in front of the entrance, lending the approach a distinctive landscape character that differentiates this mosque from flat-site examples in valley settlements. The boundary walls were not original to the mosque structure. The first surrounding wall, constructed of dressed stone with mud mortar in local vernacular technique, was added in 1992 when community growth necessitated a defined precinct. Following partial destruction in the October 2005 earthquake, which caused widespread damage to historic fabric across Khyber Pakhtunkhwa (Ahmad, 2012), the walls were rebuilt using concrete block construction, introducing a material discontinuity that represents a significant alteration

to the historic character of the precinct.



Figure 1: Main entrance viewed from inside (left) and outside (right), showing the iron-grilled gate and cemented boundary walls; the dry riverbed is visible at the base of the approach

5.2 Wall Construction

The western and northern walls of the prayer hall have been partially reconstructed in concrete block following earthquake damage, while remaining portions retain the original stone fabric laid in mud mortar (Figure 2). The junction between the two materials falls at the centre of the northern wall at the location of the entrance door, creating a legible material biography of the structure. Original stone wall thickness reaches approximately one foot, a mass that provided significant thermal inertia, stabilising interior temperature against the severe diurnal and seasonal temperature fluctuations of the mountain climate. The replacement concrete block measures only eight centimetres, substantially reducing this thermal mass. Wall heights are approximately seven feet.



Figure 2: Eastern and northern walls showing the junction between original stone-and-mud fabric (right) and later concrete block reconstruction (left)

The eastern and southern walls serve the dual function of enclosing the prayer hall and forming the back

wall of the veranda (Figure 3). Both are constructed of stone with a mud plaster surface finished with stucco, a vernacular weather-protection technique widely used in the domestic architecture of the region that provides a durable, breathable, and visually refined surface (Oliver, 1997). Stone steps lift the base of the walls clear of the sloping hillside ground surface, preventing moisture ingress and providing the elevated platform character noted above (Figure 4).



Figure 3: *Eastern and southern walls viewed from the veranda, showing mud-plastered stone construction with stucco border finish*



Figure 4: *Outer view of the boundary walls showing stone steps compensating for the sloping hillside terrain*

5.3 Courtyard

The courtyard is rectangular in plan, enclosed between the veranda on the west, the boundary walls on the north and east, and the ablution area to the south. It was fully paved with cement in 2006 following community decisions about maintenance and drainage (Figure 5). While the cemented surface has improved the practicality of the space for daily congregational use and ablution drainage, it has permanently eliminated any surviving evidence of the original ground treatment and has introduced a visually anachronistic hard surface inconsistent with the earthen and timber character of the historic structure. This type of well-intentioned but conservation-damaging intervention is widely documented at vernacular heritage sites lacking professional conservation guidance (Jokilehto, 1999; Ahmad, 2012).



Figure 5: *The cemented courtyard viewed from the veranda, showing the 2006 paving intervention*

5.4 The Veranda and Its Architectural Features

The mosque is served by two verandas: the main prayer veranda and a secondary ablution veranda. The main veranda is rectangular in plan, measuring approximately four by eight metres, constructed of timber and mud following the standard vernacular technique of the region in which timber frames carry a flat mud-and-plank roof (Khan, 2009; Oliver, 1997). The roof is supported by twelve timber pillars arranged in four rows of three, representing at least four distinct phases of construction and acquisition visible in their varied sections, decoration, and materials. This layered assemblage constitutes a material history of the community's relationship with the mosque across several generations.

5.4.1 Pillars of the Veranda: First Row (Original Construction)

The three pillars of the first row are the oldest surviving elements of the veranda colonnade and are among the most architecturally significant components of the mosque. They are executed in square section, a format associated with the oldest stratum of wooden mosque construction in the Swat valley, distinguishable from the later round shafts introduced in the nineteenth and twentieth centuries (Scerrato, 2007). Their carved surfaces, though substantially deteriorated, display a decorative programme of considerable sophistication (Figure 6).

The first pillar retains carved rosette flowers, leaf motifs, garlands, and a geometric composition of four-petalled rosettes enclosing a central flower medallion. This programme is closely paralleled in the carved woodwork of the Odigram mosque and in Buddhist architectural carving from Gandhara sites in Swat, strongly suggesting a continuous regional ornamental tradition adapted from pre-Islamic to Islamic sacred contexts (Scerrato, 2007; Rehman, 2003). Comparable rosette-and-garland programmes appear on mosque columns in Chitral documented by Darling (1988), confirming the inter-regional coherence of this decorative vocabulary across the Hindu Kush.



Figure 6: First pillar of the 1st row: front face (left) and northern face (right) showing carved rosette flowers, leaf garlands, and four-petalled medallion, the most complete surviving decorated surface in the mosque



Figure 7: Northern face detail of the 1st pillar, 1st row, showing the differentiated decorative programme applied to the upper shaft, evidence of the craftsman's attention to multi-face composition

The second pillar has suffered catastrophic loss of its carved surfaces (Figure 8). According to community informants, the northern face originally carried a programme of interlinked branches bearing flowers, a naturalistic motif paralleled in Mughal decorative arts and in the wood carvings of Dir mosques. This surface is now almost entirely obliterated by weathering. More damagingly, the front face has been permanently obscured by a large clock screwed directly into the carved timber, a careless

intervention that covers the majority of the carved field and represents an irreversible loss to the monument's decorative integrity. The deliberate removal of this clock, with careful repair of fixing holes, should be among the first priorities of any future conservation programme.



Figure 8: Second pillar of the 1st row: front face with clock fixture obscuring carved surface (left); northern face showing traces of branching flower motif (centre, right), the clock represents an entirely reversible but as yet unreversed loss

The third pillar has been entirely plastered with lime over its original carved surface, leaving only vestiges of vertical zig-zag incised lines visible at the top of the shaft (Figure 9). This irreversible intervention, undertaken presumably to stabilise a deteriorating surface, has permanently concealed whatever decorative programme the column originally carried. The loss of the carved surfaces of this pillar cannot be undone without specialist investigation, though ground-penetrating imaging techniques might in principle reveal underlying forms.



Figure 9: Third pillar of the 1st row: lime-plastered surface with only traces of zig-zag incised lines surviving at the shaft head

5.4.2 Pillars of the Veranda: Second Row (Transferred from Dewana Baba, c.1975)

The three round-section pillars of the second row were transferred from a mosque at Dewana Baba approximately 1975, when that structure was modified or partially demolished. The practice of sacred reuse, incorporating elements from one religious building into another, has deep roots in Islamic architectural culture across the world and is particularly well documented in South Asia, where columns and capitals from earlier structures were routinely incorporated into early mosque construction (Frishman and Khan, 1994; Brown, 1942). Their round section distinguishes them formally from the original square-section first-row pillars and reflects a different regional workshop tradition or a later production phase (Figure 10).

The first pillar of this row displays two pairs of zig-zag incised lines with rows of small circles between them, producing a rhythmic geometric pattern with clear parallels in Islamic geometric ornamentation. The second and third pillars carry simpler zig-zag line programmes without the circle element (Figure 11). The consistency of the zig-zag vocabulary across all three pillars indicates a single craftsman or workshop responsible for the original set, probably produced for the Dewana Baba mosque in the late nineteenth or early twentieth century.



Figure 10: First pillar of the second row (three views): round section shaft with zig-zag and circle incised decoration, transferred from Dewana Baba mosque c.1975



Figure 11: Second pillar of the second row (left) and general view of the second row (right), showing the consistent zig-zag decorative vocabulary

5.4.3 Pillars of the Veranda: Third Row (Intermediate Supports)

The third-row pillars are round in section and fitted with simple non-voluted capitals, a design feature connecting this mosque to related vernacular column traditions documented across the Hindu Kush (Bianca, 2000; Darling, 1988). The first pillar displays a zig-zag and circle programme, while the second and third carry only zig-zag lines (Figure 12, 13). These pillars function not as primary roof supports but as intermediate stabilising elements within the veranda frame, reflecting a sophisticated structural logic that distributes lateral loads through the timber frame system.



Figure 12: Third pillar of the second row of the veranda (two views), showing round section and zig-zag incised ornament



Figure 13: All three pillars of the third row of the veranda, showing the consistent non-voluted capital detail and zig-zag decoration

5.4.4 Pillars of the Veranda: Fourth Row (2000 Addition)

The fourth row was added during the 2000 restoration campaign to consolidate the structural stability of the western wall of the veranda roof (Figure 14). All three pillars are plain, undecorated round shafts devoid of any carved ornament or capital detail. This absence of decoration is not a stylistic choice but a symptom of the near-total loss of traditional woodcarving skills from the local community by the late twentieth century. The stark contrast between these plain columns and the elaborately carved first-row pillars immediately adjacent, separated by perhaps one century of craft knowledge erosion, which is among the most eloquent material arguments for the urgency of conservation action and craft skills revival in the region (Oliver, 1997; Jokilehto, 1999).



Figure 14: All three pillars of the fourth row of the veranda, added in 2000: plain, undecorated round shafts standing in stark contrast to the carved columns of the first row immediately adjacent

5.5 Prayer Hall

The prayer hall is nearly rectangular in plan and is covered by a flat timber roof supported on nine pillars arranged in three rows of three. The floor is covered with dried grass serving as a prayer carpet, a practical and climatically appropriate material choice that provides insulation against the cold stone floor in a high-altitude environment, a practice also recorded in wooden mosque halls in Gilgit-Baltistan (Bianca, 2000). The mixed assemblage of pillars in the hall, varying in section, finish, provenance, and condition, narrates the mosque's complex history of modification and accretion across at least three distinct phases.

The first row of hall pillars consists of round, undecorated shafts acquired from the Dewana Baba mosque in 1975 alongside the veranda second-row columns (Figure 15). The shared provenance of these hall and veranda columns creates a material link between two now-separated structures, preserving in physical form the social network of community exchange through which building components circulated across the valley's mosque network.



Figure 15: All pillars of the first column in the prayer hall: round, undecorated shafts from Dewana Baba mosque, installed 1975

The second or central row of hall pillars comprises rectangular-section elements added in 2000 (Figure 16). Community informants reported that these pillars were produced by workers without specialised woodworking training, a circumstance confirmed by their less accomplished profiles and the absence of any finishing detail. This represents a clear and documented moment of craft knowledge rupture, in which the community was unable to source craftsmen capable of producing columns to the standard of their predecessors (Jokilehto, 1999).



Figure 16: Second column of hall pillars: rectangular-section elements added in 2000, showing less accomplished workmanship reflecting the loss of specialist craft skills

The third row contains round pillars donated by a community member in 1998 and installed in 2000 (Figure 17). Their surfaces bear clear traces of fire blackening, indicating prior use as structural columns in a kitchen or domestic cooking space. This form of material improvisation, in which structurally sound but ceremonially inappropriate elements are incorporated into a sacred building for functional necessity, reflects the resource constraints of community-managed heritage maintenance and parallels documented practices in vernacular mosque construction across South Asia (Frishman and Khan, 1994).



Figure 17: Third column of hall pillars: round shafts donated in 1998, showing fire-blackening from prior domestic use as kitchen structural columns

5.6 The Mihrab

The prayer hall is oriented toward the qibla (the direction of Mecca, approximately west-southwest from this location) with a single mihrab niche set in the western wall (Figure 18). The mihrab is constructed of mud, the primary vernacular material for interior architectural features in the region, and is distinguished by raised-relief hook-like ornamental motifs applied to the external wall surfaces surrounding the niche by local women in 2000. This form of female participation in mosque ornamentation through the application of domestic vernacular craft techniques to sacred spaces is a distinctive feature of Pashtun community mosque culture documented across the region and reflects a specifically gendered mode of contribution to the sacred built environment that has received limited scholarly attention (Khan, 2009). A stone ledge set to the left of the mihrab preserves the material memory of candlelit prayer before electricity reached the valley.



Figure 18: *The mihrab in the prayer hall western wall: mud construction with raised-relief ornament applied by community women in 2000 (left, right), and stone candle ledge*

5.7 The Main Door

The principal door of the prayer hall is a double-leaf timber construction that represents the oldest surviving joinery element of the mosque and one of the most technically accomplished woodworking achievements on the site (Figure 19). Each leaf measures approximately six and a half feet in height by two feet in width, constructed of ranzra, one of the region's principal joinery hardwoods, valued for its density, durability, dimensional stability, and workability (Khan, 2009; Hussain et al., 2013). The survival of this door in reasonable functional and aesthetic condition, despite a structural age of at least one century in a mountain environment of extreme temperature variation and high humidity, demonstrates the exceptional material performance of ranzra for architectural applications in this climate zone.



Figure 19: *The main door of the prayer hall: double-leaf construction in ranzra hardwood, the oldest surviving joinery element of the mosque*

The door frame carries a carved decorative programme of rosette flowers, leaf scrolls, and zig-zag banding (Figure 20) that is formally and iconographically consistent with the ornamental programme of the first-row veranda pillars. This coherence between the door and the oldest surviving columns strongly suggests contemporaneous production, either by the same craftsman or by the same workshop tradition, providing important evidence for dating the original construction phase of the mosque. The correspondence also demonstrates the unity of the original decorative conception of the building, in which a consistent visual language was applied across structural and non-structural elements by craftsmen working within a shared ornamental system.



Figure 20: *Carved decoration on the main door frame: rosette flowers, leaf scroll, and zig-zag banding consistent with the decorative programme of the original veranda columns*

The right side of the door frame retains an indigenous wooden locking mechanism fixed to the upper frame by a dart-and-slot system, with the lock body itself decorated with leaf and line carved motifs (Figure 21). Traditional wooden locks of this general type, combining structural function with

decorative elaboration, have been documented in vernacular buildings across the Hindu Kush and Karakoram regions (Oliver, 1997; Darling, 1988) and are now extremely rare survivals, as metal padlocks have almost universally replaced them. The Yakhdara example is therefore of considerable scholarly significance as one of very few extant specimens of this craft in situ in a religious building.



Figure 21: *The indigenous wooden locking mechanism on the right door frame: dart-and-slot fixing with leaf-and-line carved ornament, a rare in-situ survival of a vanishing craft tradition*

5.8 Ablution Area

The ablution veranda is positioned at the far left (southern) corner of the main veranda, integrated within the veranda structure rather than being housed in a separate pavilion (Figure 22). This arrangement, which can accommodate approximately fifteen worshippers simultaneously performing ritual purification, reflects the traditional planning logic of small community mosques in the region, where ablution and prayer spaces are conceived as elements of a continuous processional sequence from the public exterior through graduated zones of sacred space to the prayer hall interior (Hillenbrand, 1994; Frishman and Khan, 1994). The spatial integration of ablution within the veranda avoids the need for a separate enclosed structure and is climatically appropriate to the mild summer conditions of the valley.



Figure 22: *The ablution veranda at the left corner of the main veranda, showing its integration within the veranda structure*

5.9 Roof and Ceiling

The roof structure of both the veranda and the prayer hall employs the flat timber roof system standard to vernacular architecture across the semi-arid highland zones of the Hindu Kush-Karakoram belt: a grid of square-section primary beams spans between the supporting columns, carrying a secondary layer of smaller timber planks that form the ceiling soffit and roof deck (Figure 23). A compacted layer of earth and gravel above the plank deck provides insulation, weatherproofing, and the additional thermal mass characteristic of traditional flat roofs in this climate zone (Bianca, 2000; Oliver, 1997). This construction system requires a low maintenance regime, principally re-compaction of the earthen layer and inspection of beam ends for decay, which is well suited to the resources of a small rural community.



Figure 23: *The flat timber roof structure of the prayer hall, showing primary beam grid and secondary plank deck*

Examination of the floor surface revealed clear evidence of successive phases of intervention (Figure 24). Areas of original floor, characterised by irregular stone slabs laid in earth, survive in limited sections and provide direct evidence of the mosque's original material character. The modern floor replacement, consisting of machine-cut stone or concrete slab introduced during the 1992, 2000, and 2005 repair campaigns, is functionally practical but has displaced the historic fabric and removed the patina of age and use that formed an important part of the building's aesthetic and material integrity.



Figure 24: *Floor surfaces of the prayer hall: original irregular stone-and-earth floor surviving in limited areas (left); modern machine-cut stone replacement introduced in successive repairs (right)*

6. Discussion

6.1 Thesis: An Endangered Chain of Craft Transmission

The central argument of this paper is that Yakhdara Mosque represents a material witness to an unbroken chain of craft transmission linking the pre-Islamic woodcarving traditions of the Gandhara civilisation to living Islamic vernacular practice, a chain that has been severely weakened over the past five decades and is now at imminent risk of permanent rupture. This argument rests on three bodies of evidence presented in this study.

First, the decorative programme of the mosque's oldest elements, the carved rosette flowers, leaf garlands, and geometric medallions of the first-row veranda pillars and the main door, which is formally and iconographically continuous with the woodcarving traditions of Gandhara Buddhist architecture documented at sites including the Odigram monastery, the Butkara stupa complex, and numerous smaller shrines across the Swat valley (Scerrato, 1968; 2007; Rehman, 2003). These motifs were not revived or imitated from archaeological sources; they persisted in living craft practice across the religious transformation from Buddhism to Islam, absorbed into the visual vocabulary of Islamic sacred ornamentation without losing their formal identity.

Second, the assemblage of pillars in the mosque narrates successive generations of craft practice across a legible chronological sequence. The original first-row pillars represent the full achievement of the tradition. The transferred Dewana Baba columns of the 1970s show a simplified but still technically competent continuation. The 2000 additions reveal the effective collapse of specialist woodcarving skill. This three-generation trajectory, visible in a single building, constitutes an exceptionally clear material record of craft knowledge erosion that is rarely so directly legible at a single site.

Third, the survival of the indigenous wooden door lock, one of very few remaining in-situ specimens in a religious building in the region, representing a technology that has already effectively disappeared from living craft practice and survives only as an archaeological artefact. Its presence at Yakhdara therefore marks the extreme end-point of the craft transmission chain: the point at which traditional knowledge has passed entirely from practice into heritage.

6.2 Comparative Analysis with Peer Sites

Situating Yakhdara Mosque within the regional landscape of documented wooden mosques reveals both

its coherence with a shared vernacular tradition and its specific local distinctiveness. Four peer sites provide the most useful basis for comparison.

The Odigram Mosque (Udigram, Swat, 1048-49 AD) is the oldest securely dated Islamic structure in the region and the benchmark against which later wooden mosque construction in the Swat valley must be assessed. Its excavated remains demonstrate a formally complex plan with multiple ancillary spaces and a sophisticated construction system (Scerrato, 2007). The decorative motifs documented by the IsIAO mission at Odigram, including rosette compositions and botanical scrolls directly paralleled at Yakh dara, confirm the millennium-long continuity of the regional ornamental vocabulary.

The Sapal Bandai Mosque (Islampur, Swat, c.1700 AD) provides the closest chronological and typological parallel to Yakh dara. Like Yakh dara, it is a community-scale congregational mosque in a rural highland setting, constructed and maintained through community resources without professional architectural oversight. The S.A.M. (2013) conservation report documents a comparable pattern of accretive modification, inappropriate repair interventions, and structural vulnerability, confirming that the conservation challenges facing Yakh dara are systemic to the type rather than site-specific anomalies.

The wooden mosques of Chitral, documented by Darling (1988), share the flat timber roof system, the square-to-round pillar evolution, and the zig-zag and rosette decorative vocabulary with Yakh dara Mosque, demonstrating the inter-regional coherence of a broadly defined Hindu Kush wooden mosque tradition. However, the Chitral examples display a greater elaboration of carved screens and balconies, reflecting the different forest resources and patronage structures of that district.

The timber mosques of Gilgit-Baltistan surveyed by Bianca (2000) represent a more northerly variant of the same broad tradition, sharing structural principles but showing a distinct ornamental language more strongly influenced by Central Asian woodcarving conventions. The comparison highlights the specifically Pashtun-Gandharan character of the Buner-Swat decorative tradition as a distinctive sub-regional identity within the wider Hindu Kush timber mosque tradition.

6.3 Decorative Programme: Visual Synthesis of Two Traditions

The decorative programme of Yakh dara Mosque's original elements constitutes a sophisticated visual synthesis of two formally distinct but historically intertwined traditions: the naturalistic botanical and geometric carving of pre-Islamic Gandhara and the geometric and arabesque conventions of Islamic decorative arts. This synthesis is not a superficial eclecticism but a deep integration of visual vocabularies achieved through centuries of shared practice by craftsmen who were simultaneously heirs to the Gandharan woodcarving tradition and practitioners of Islamic artistic norms (Rehman, 2003; Scerrato, 2007).

The rosette flower, a motif with origins in Hellenistic architectural ornament transmitted through Gandharan Buddhist art, appears on the first-row veranda pillars and the main door frame as a primary compositional element. In the Islamic context, the rosette is absorbed into the geometric vocabulary of Islamic ornamentation, stripped of any figurative or symbolic residue and functioning as a pure formal element of pattern composition (Hillenbrand, 1994). The leaf garland, similarly, translates a naturalistic botanical motif into an abstract decorative band consistent with Islamic arabesque conventions. The zig-zag line, which appears across all decorative strata of the mosque, from the oldest pillars to the transferred columns, which is among the most fundamental geometric elements of Islamic surface decoration worldwide, here rooted in a specifically regional craft tradition that predates Islamisation.

This multi-layered decorative synthesis is precisely what Hillenbrand (1994) has described as "creative assimilation" in his analysis of Islamic architectural traditions in culturally plural frontier environments. Yakh dara Mosque provides a particularly clear and well-preserved instance of this phenomenon in a vernacular rather than courtly context, demonstrating that the processes of cultural synthesis documented in monumental Islamic architecture were equally operative at the community scale.

6.4 Spatial Logic and Islamic Planning Principles

The spatial organisation of Yakhdara Mosque reflects a sophisticated understanding of the hierarchical spatial requirements of Islamic worship, implemented through vernacular means within the physical constraints of a remote highland site. The transition from the public exterior through the gated precinct, across the open courtyard, through the shaded veranda, and into the enclosed prayer hall constitutes a spatial sequence of graduated sanctity that mirrors, at community scale, the processional hierarchies of monumental mosque design (Hillenbrand, 1994; Frishman and Khan, 1994).

The integration of the ablution space within the veranda structure, rather than in a separate pavilion, representing an elegant vernacular solution to the canonical requirement for purification before prayer, adapted to the limited resources and intimate scale of a mountain community. The positioning of the mihrab in the western wall, the orientation of the prayer hall toward the qibla, and the communal character of the flat-roofed veranda as a gender-differentiated overflow prayer space during peak attendance all confirm the mosque's full functional compliance with Islamic spatial norms implemented through specifically local material and constructional means (Creswell, 1958; Hillenbrand, 1994).

6.5 Conservation Threats and Urgency

The conservation condition of Yakhdara Mosque must be characterised as critical. Physical deterioration through weathering, moisture penetration, and termite infestation has caused irreversible loss to the carved surfaces of the first-row veranda pillars, the most significant architectural elements of the mosque. The lime plastering of the third pillar has permanently concealed its original decoration. The clock fixture on the second pillar continues to obscure and potentially damage the underlying carved surface. Without intervention, the progressive deterioration of these elements will continue until the original decorative programme is entirely lost.

The successive repair campaigns of 1992, 2000, and 2005 have introduced concrete block walls, cemented courtyard surfaces, and undecorated replacement columns that cumulatively dilute the authenticity and material integrity of the historic structure (Jokilehto, 1999). These interventions are consistent with a broader pattern of conservation-damaging repair documented at vernacular religious heritage sites across Khyber Pakhtunkhwa in the absence of professional conservation guidance and legal heritage protection frameworks (Ahmad, 2012; Khan, 2009). Without the establishment of formal protection and the provision of conservation technical support to community managers, future repair campaigns will continue to erode the monument's historic character.

The near-total loss of traditional woodcarving and joinery skills from the local community, starkly documented in the contrast between the first-row pillars and the 2000 additions, means that like-for-like repair of deteriorating historic elements is no longer possible without deliberate craft revival programmes. The urgency of this situation cannot be overstated: once the craftsmen who retain partial knowledge of traditional techniques have passed away, the chain of transmission will be definitively broken and even revival will require reconstruction from physical evidence rather than living practice (Oliver, 1997; Jokilehto, 1999). The window for action is narrowing rapidly.

6.6 Intangible Heritage and Community Memory

Beyond its physical fabric, Yakhdara Mosque is a repository of intangible heritage of considerable depth and variety. The oral traditions surrounding the mosque's founding, the social memory of the successive restoration campaigns and their community funding, the story of the pillar transfer from Dewana Baba, the women's collective contribution to the mihrab decoration, the donation of columns by a community member, all of these narratives constitute a social history embedded in the physical structure of the building (Jokilehto, 1999; UNESCO, 2003). This living heritage dimension, in which the building functions as a material archive of community relationships, decisions, and values across generations, is no less significant than the architectural fabric itself and must be systematically recorded

and considered in any conservation planning.

The mosque also functions as a node in the social network of the wider valley community, the primary site for Friday congregational prayer, for the resolution of community disputes, for the announcement of community decisions, and for the marking of births, deaths, and seasonal festivals. Its loss or irreversible alteration would therefore constitute not merely an architectural loss but a social loss of considerable depth, severing the community from a physical anchor of collective memory and shared identity that has served this function for more than a century.

7. Conclusion and Recommendations

This paper has presented the first systematic architectural documentation and scholarly analysis of Yakhdara Mosque in District Buner, Khyber Pakhtunkhwa, Pakistan. The study has demonstrated that this community-scale timber structure embodies an outstanding synthesis of Islamic spatial principles, Pashtun vernacular building conventions, and a specifically Gandharan ornamental inheritance expressed through elaborately carved timber columns, indigenous joinery techniques, and regionally sourced hardwoods. Comparative analysis with the Odigram mosque, the Sapal Bandai mosque, and the wooden mosque traditions of Chitral and Gilgit-Baltistan has situated Yakhdara within a coherent regional tradition of Hindu Kush timber mosque architecture while identifying its specific local distinctiveness.

The central argument advanced, which Yakhdara Mosque represents a critically endangered material witness to an unbroken chain of craft transmission from Gandharan Buddhism to Islamic vernacular practice, has been sustained through analysis of the decorative programme, the stratified pillar assemblage, and the surviving indigenous wooden lock mechanism. The three-generation trajectory of craft knowledge erosion visible in the mosque's successive phases of construction and repair constitutes an exceptionally clear material record of a process of intangible heritage loss that is otherwise very difficult to document.

The threats facing the mosque are severe, multifaceted, and urgent. The following recommendations are proposed, in order of priority:

1. Immediate removal of the clock fixture from the second veranda pillar, with careful documentation of any carved surface revealed, and urgent stabilisation of all carved timber surfaces against further deterioration.
2. Commissioning of a full architectural and condition survey by a qualified conservation specialist, including photogrammetric recording of all carved surfaces and structural assessment of the timber frame.
3. Development of a comprehensive conservation management plan by a professional heritage consultant in collaboration with the mosque committee and local community.
4. Formal listing of Yakhdara Mosque under the Khyber Pakhtunkhwa Antiquities Act 2016, providing legal protection against further unauthorised interventions and establishing a framework for funded conservation.
5. Establishment of a traditional craft skills training programme in the Buner-Swat region, engaging remaining craftsmen with knowledge of traditional woodworking as instructors, to halt the erosion of the intangible heritage dimension of this architectural tradition.
6. Systematic documentation of all surviving wooden mosques in District Buner following the methodology employed in this study, enabling a regional heritage inventory that will provide the evidence base for conservation prioritisation and policy advocacy.
7. Recording of oral histories, community memories, and traditional knowledge associated with Yakhdara Mosque and similar structures before further loss occurs.

Preserving Yakhdara Mosque is not merely a matter of maintaining an old building. It is an act of cultural justice toward a mountain community whose ancestors built this structure with extraordinary skill and devotion, whose living members continue to pray within it, and whose children deserve to inherit it as a material expression of their identity, history, and faith. It is also a contribution to the diversity and richness of humanity's shared architectural heritage, a heritage that, once lost, cannot be recovered.

References

- Ahmad, N. (2012). Post-earthquake recovery and vernacular heritage in Khyber Pakhtunkhwa. *Journal of South Asian Studies*, 30(2), pp. 211-229.
- Bianca, S. (2000). *Urban Form in the Arab World: Past and Present*. London: Thames and Hudson.
- Brown, P. (1942). *Indian Architecture: The Islamic Period*. Bombay: D.B. Taraporevala Sons and Co.
- Creswell, K.A.C. (1958). *A Short Account of Early Muslim Architecture*. Harmondsworth: Penguin Books.
- Darling, G. (1988). *Architecture of Chitral State*. London: Royal Geographical Society Occasional Papers.
- Frishman, M. and Khan, H.U. (Eds.). (1994). *The Mosque: History, Architectural Development and Regional Diversity*. London: Thames and Hudson.
- Hay, W.R. (1934). The Yusufzai state of Swat. *Geographical Journal*, 83(4), pp. 297-305.
- Hillenbrand, R. (1994). *Islamic Architecture: Form, Function and Meaning*. Edinburgh: Edinburgh University Press.
- Holdich, T.H. (1899). *The Indian Borderland, 1880-1900*. London: Methuen and Co.
- Hussain, A., Khan, A.M., Gilani, S.A., Ahmad, M. and Zafar, M. (2013). Indigenous uses of economically important flora of Margalla Hills National Park, Islamabad, Pakistan. *Journal of Medicinal Plants Research*, 7(12), pp. 661-684.
- Jokilehto, J. (1999). *A History of Architectural Conservation*. Oxford: Butterworth-Heinemann.
- Khan, N.A. (2009). *District Buner: A Socioeconomic Baseline and Displacement Impact Assessment*. Peshawar: Centre for Public Policy Research, Institute of Management Sciences.
- Majumdar, R.C. (1960). *The Classical Accounts of India*. Calcutta: Firma K.L. Mukhopadhyay.
- Nazim, M. (1973). *The Life and Times of Sultan Mahmud of Ghazna*. New Delhi: Munshiram Manoharlal Publishers.
- Naveed. (2015, May 10). Interview conducted by Sami Ul Haq on the history and traditions of Yakhdara Mosque. Yakhdara, District Buner [unpublished interview transcript].
- Oliver, P. (Ed.). (1997). *Encyclopedia of Vernacular Architecture of the World* (3 vols). Cambridge: Cambridge University Press.
- Ovesen, J. (1981). History and the heroic Pakhtun. *Man (New Series)*, 16(4), pp. 649-651.
- Rehman, A. (1979). *The Last Two Dynasties of the Shahis: An Analysis of Their History, Archaeology, Coinage and Palaeography*. Islamabad: Islamabad University Press.
- Rehman, A. (2003). Ethnicity of the Hindu Shahis. *Journal of the Pakistan Historical Society*, 51(2), pp. 1-18.
- S.A.M. (2013). *Heritage Conservation Report: Sapal Bandai Mosque Restoration, Islampur, Swat*. Saidu Sharif: Swat Archaeological Mission.

- Scerrato, U. (1968). Excavations at Rajai Gira. *Pakistan Archaeology*, 5, pp. 57-59.
- Scerrato, U. (2007). The ethnographical activity of the IsIAO Italian Archaeological Mission in Swat and Gilgit. *Journal of Asian Civilizations*, 30(1), pp. 45-66.
- UNESCO (2003). *Convention for the Safeguarding of the Intangible Cultural Heritage*. Paris: UNESCO.
- Warraich, T.A. (1979). Early mosques of South Asia and the impact of native architecture. In: *Two Dynasties of the Shahis*. Islamabad: Islamabad University Press, pp. 80-85.
- Yin, R.K. (2014). *Case Study Research: Design and Methods*, 5th edn. Thousand Oaks, CA: SAGE Publications.

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