

# Analyzing the Architecture of All Saints Cathedral at Allahabad, India: Building Study and Heritage Potential

Mohammad Arif Kamal<sup>1,\*</sup>, Achala Tiwari<sup>2</sup>, Mohd Afzal Khan<sup>3</sup>, Sukriti Setia<sup>3</sup>

<sup>1</sup> Architecture Section, Aligarh Muslim University, Aligarh, India

<sup>2</sup> Department of Architecture & Planning, IIT Roorkee, Roorkee, India

<sup>3</sup> Department of Architecture, Jamia Millia Islamia, New Delhi, India

Corresponding Author: architectarif@gmail.com

DOI: 10.32629/aes.v5i1.1830

**Abstract:** Heritage conservation is a major factor in promoting tourism. It helps to understand previous tradition, used materials, architecture style and evolution process. The link between heritage and tourism is the most visible aspect of the contribution of culture to local development. Due to the preservation of heritage many new jobs can be generated in the tourism sector. When heritage tourism is done right the biggest beneficiaries not the visitors only but the local residents who experience a renewable appreciation in for and pride in their local city and its history. Art and architecture have the ability to transport us into different time and place it allows us to gain historical perspective and understanding. The All-Saints' Cathedral in Allahabad stands as an epitome of architectural brilliance, religious heritage, and cultural significance. This research delves into the profound architectural attributes of the cathedral, offering insights into its historical context, structural design, and socio-cultural impact. Drawing upon architectural analysis and historical documentation, the study examines the evolution of the cathedral's design, from its inception to its present form. Through a comparative analysis of architectural elements, including facade, interior layout, and ornamentation, the research delineates the cathedral's adherence to prevailing architectural styles and its unique deviations. In conclusion, this research underscores the All Saints' Cathedral in Allahabad as not merely a physical structure but a testament to architectural innovation, cultural heritage, and spiritual resilience. By elucidating its architectural intricacies and socio-cultural implications, the study contributes to a deeper understanding of the cathedral's enduring legacy in the architectural landscape of Allahabad. This study explores the transformative impact of architectural elements on the spiritual experience within All Saints' Cathedral, Allahabad. Analyzing furniture, lighting, flooring, ceiling, fans, and roofing, it unveils how these components contribute to the cathedral's upliftment of worshippers. Through a nuanced examination, it elucidates the intricate balance between structural design and spiritual elevation, shedding light on the cathedral's role as a sacred haven in the hearts of believers.

**Keywords:** architecture, design, cathedral, heritage, conservation, Allahabad, India

## 1. Introduction

All Saints' Cathedral, also known as Patthar ka Girja (Church of Stones) is an Anglican cathedral located in the civil lines area of the Prayagraj city. Built in the memory of Bishop Clifford, the church is considered to be the finest Anglican Cathedral in Asia. Inspired by the Gothic style of churches that were constructed during the 13th century, the cathedral was designed by the well-known British architect, Sir William Emerson. The church is one among the few Gothic Revival buildings that were built by the British during their rule in India. The design for this cathedral was started off in 1887 and construction was over by 1891. November 1st, the anniversary of this church is celebrated as 'All Saints Day' and belongs to the Church of North India Society. The church is constructed in a large open space at the intersection points of two of the biggest roads of Allahabad, M.G. Marg (Canning Road) and S.N. Marg formerly Queen's Road. Cannington and Canning Road is named after Lord Canning, Governor-General of India from 1856 to 1862.

## 2. The Historical Context

The idea behind the design of the church was based on the thirteenth-century choir of Canterbury Cathedral in which was conceptualized during 1871. The Lieutenant Governor of North Western Provinces, Sir William Muir donated the land for construction of the church. It was on April 10th 1871 that the foundation stone for the structure was laid by Elizabeth Huntly Wemyss, wife of Sir William Muir. This cathedral was modelled after 13th century Gothic style churches, among the Gothic Revival buildings built by the British during their rule in India. Famous architect from Britain, Sir William Emerson was chosen to design the structure of this cathedral, He designed the cathedral in 1871. It consecrated in 1887 and was com-

pleted four years later. He had already designed the Crawford Market of Bombay and the Muir Central College in Allahabad (University of Allahabad) and later Victoria Memorial in Kolkata. Allahabad was first thought to be a very small city; with the developed railway network, Allahabad grew by leaps and bounds and now is big enough to accommodate a big choral group. In some circles of city, it is believed that the cathedral was actually planned to be raised in Australia but due to a postal lapse it got assigned to Allahabad, simply by chance. However, it is an incomplete church, as the building never received its intended twin towers on the main entrance, although a tower over the crossing was completed. It was consecrated in 1887 but it took another 40 years for it to be completed. The cathedral's nave is about 40 feet wide and 130 feet long, the total length of the church is about 240 feet and the internal width is about 56 feet. Cathedral, designed to accommodate 300 to 400 persons. Saint All Cathedral Prayagraj, a remarkable example of the architecture of colonial in India (Pilgrimstays, 2021). (Figure 1)



Figure 1. Entrance of All Saint's Cathedral

### 3. Brief Background of the Cathedral

Figure 2 below shows the location of the state of Uttar Pradesh in India and the location of Allahabad in Uttar Pradesh (Navrangindia, 2019). (Figure 2)

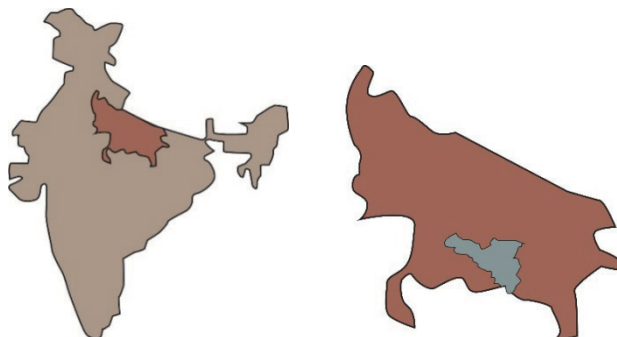


Figure 2. Location of the Allahabad in the map of India

#### 3.1 Outdoor and Indoor Connectivity

The connectivity of the building in context of indoor as well as outdoor connectivity to the site is well defined in its optimum way. The outdoor connectivity of the building is pretty optimum accessible through all the surrounding building in the Cathedral campus as well as through surrounding roads from all four sides. One can easily find out the building in the campus. (Figure 3-6)



Figure 3. Accessibility to the Cathedral from west side



Figure 4. Accessibility to the Cathedral from the East side

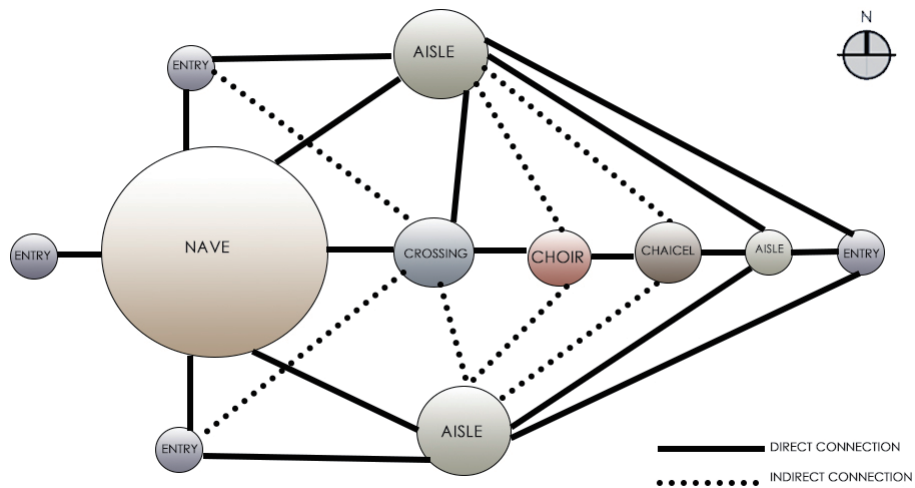


Figure 5. The Internal circulation diagram of the Cathedral





Figure 6. The view of the Nave

### 3.2 Landscaping around the Cathedral

In Civil lines, the climate is warm and temperate in summer. In summer, there is average rain fall in Allahabad than in winter. This location is classified as industrial, shopping market as well as dense residential area. In Allahabad, the average annual Temperatures  $25.8^{\circ}\text{C}$ . The rainfall here averages 1042 mm. The local climate of the site is very much affected by the site landscaping and vegetation. The Cathedral campus is rich in vegetation that's why the entire campus feels less degree of temperature than the outside. The Cathedrals surrounded by the beautiful landscaping elements like small plants, bushes, and trees. (Figure 7-8)



Figure 7. Aerial view of the vegetation surrounding the Cathedral



Figure 8. The Palm trees around the cathedral

### 3.3 Architectural Drawings of the Cathedral

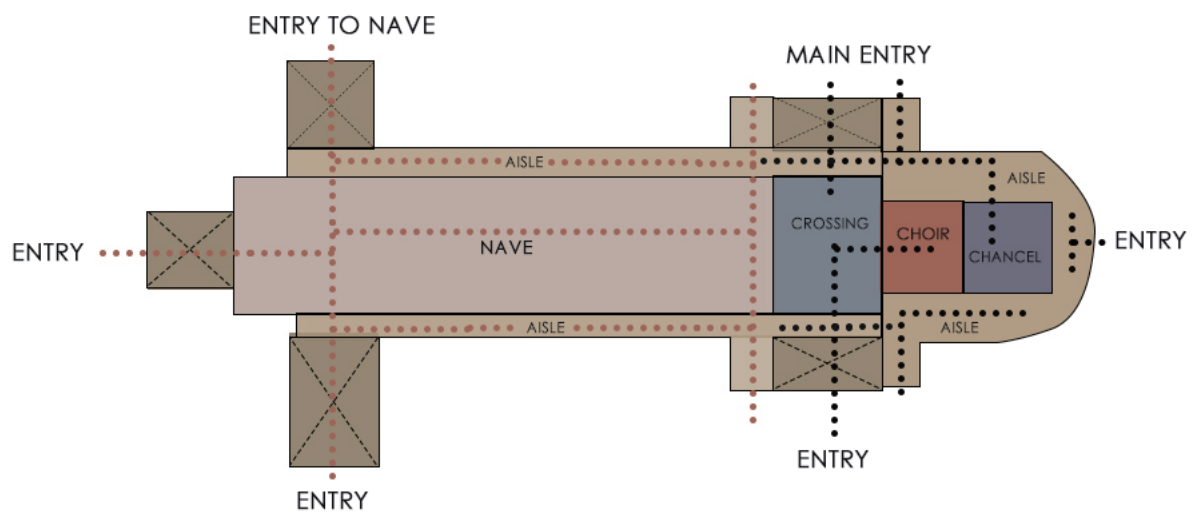


Figure 9. The zoning plan of the Cathedral

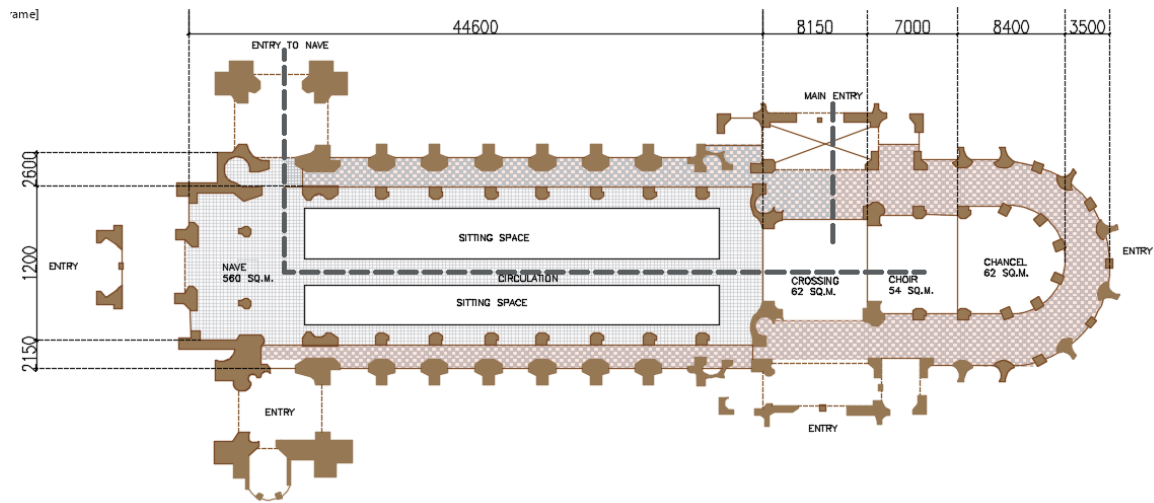


Figure 10. Ground Floor Plan of the Cathedral

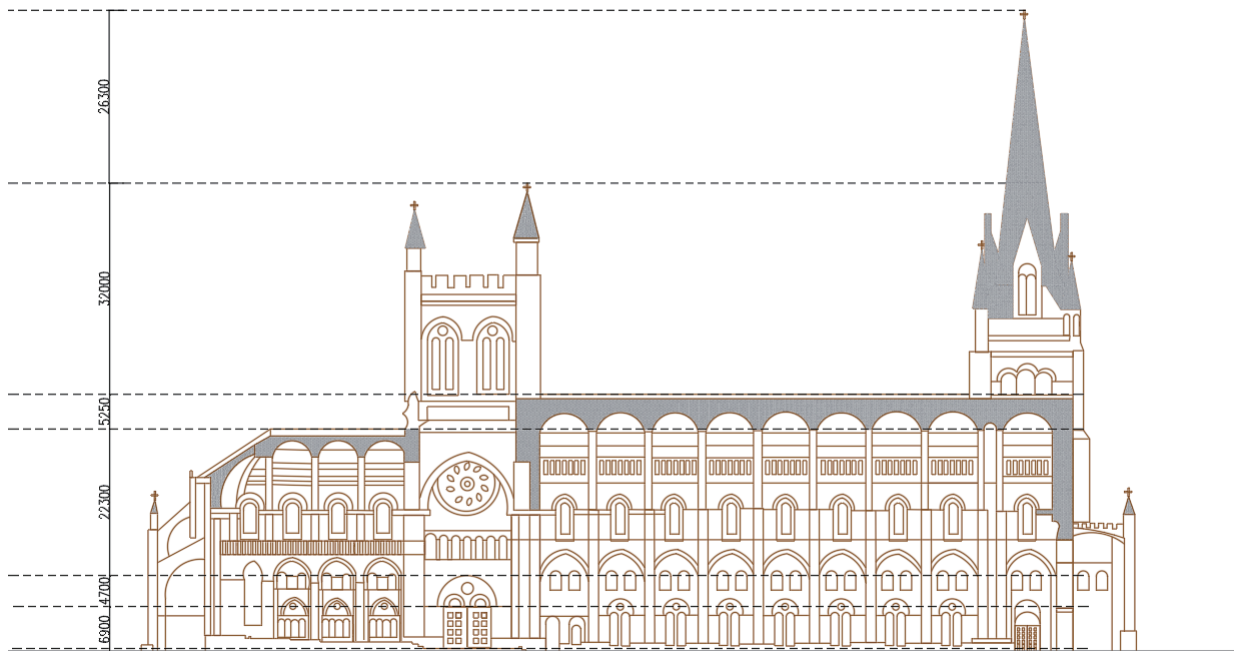


Figure 11. Elevation of Cathedral from the North Side

## 4. Architectural Analysis of All Saint Cathedral

The architectural analysis of All Saint Cathedral has been summarized as per the architectural design and the building technology and material used at the time of constructing the cathedral (Britanica, 2022).

### 4.1 Rib Vaults

The rib vault plays the role of ribs in anatomy of building structure as the body's skeletal structure supporting muscles. Ribbed vaulting column used to support the weight, and it delineated the vaults and gave sense of unity to the structure. Arches are usually three piers per rectangular bay running diagonally. The cross ribs act together with outer frame to create a complete armature of arches along the edges and main folds of the vault. (Figure 12)





Figure 12. View of ribbed vaults in cathedral

#### 4.2 The Flying Buttress

Flying Buttress, affected by powerful external arches swung above the side aisles and the ambulatory. It absorbs and channel disruptive forces such as wind and weight, safely to the ground. And arches rise from colossal free-standing piers. In order to prevent the upward collapse of the arches, Gothic Architects began using a revolutionary flying buttress system. Freestanding stone support was attached to the exterior walls by an arch or half arch. Towering piers could be erected without much affecting the Nave or choir interior.

#### 4.3 Gargoyles

Gargoyles, usually an elongated fantastic animal because the length of the gargoyles determines how far water thrown from the wall. Here two type of animal used, Camel and Lion as Gargoyles. Gargoyles were decorative monstrous little creatures that sat along the roof and battlements of gothic castles and buildings. Gargoyles have two purposes, and one was to drain off rainwater off the roof, gushing through their mouth then plummeting to the ground, and another purpose was to strike fear in the ill-educated peasants and scare them into the gothic cathedral or church.

#### 4.4 The Pulpit

The pulpit is an elevated and enclosed platform from which the sermon delivered the service during the prayer. it locates on Northern side of cathedral, and attached to aisle. Pulpit totally made up with marble. It locates around 2000mm Height from the ground. Connected through stair each step has approx 300 mm risers. (Figure 13)



Figure 13. View of the crossing in the cathedral

#### 4.5 Chancel

Chancel, a place around the altar and it placed in Eastern end of cathedral. It contains the choir, usually house of the credence table and seat for officiating and assisting ministers. entrance gate divided into two part of 1500mm each. And riser size around 100mm each. (Figure 14)



Figure 14. The view of the Chancel in the cathedral

#### 4.6 Aisle

South side aisle is used for storage of old furniture and equipment's. it offers easy circulation for worshipers without any trouble. Width of aisle is around 1000mm it connects nave, chancel, choir, etc. aisle, enclosed with colonnade and arcades.

#### 4.7 Stained Glass windows

Featuring meticulously cut colored glass, Huge stained-glass windows and profusion of smaller windows created the effect of lightness and space and this allowed them to let in more dazzling light to cathedral. Gothic buildings could include large areas of glass. Multicoloured 'lancet' windows and round 'rose' windows are similar to other types of churches. (Figure 15-16)



Figure 15. View of stained glass arched window



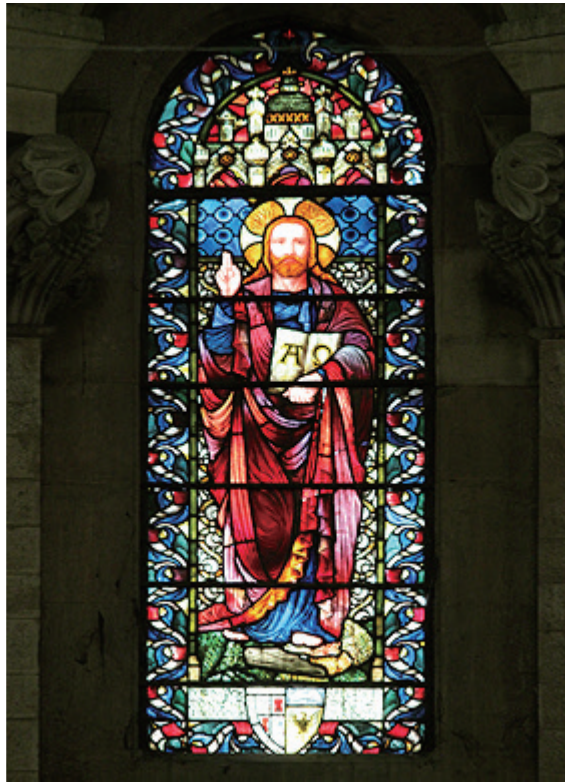


Figure 16. View from the Choir window

#### 4.8 Pointed Arch

The Gothic style brought innovative construction techniques that allow cathedral reach great heights. One important innovation was the use of pointed arches. During the gothic era Architect discovered that pointed arches would give structures amazing strength and stability. (Figure 17-18)



Figure 17. Pointed arch on entrance gate of nave



Figure 18. Series of pointed arch on nave

#### 4.9 Rose window

Rose window aid great importance in gothic cathedral, it provides attractiveness to cathedral and their function have fill the interior with mystical colored light, that represent the holy spirit and also demonstrate the story of the “Bible” for the large majority of the worshipers who could not read. Rose window made up with stone and stained glass. Rose window wheel dived into 12 equal parts. (Figure 19-20)



Figure 19. Exterior view of rose window in Nave



Figure 20. Interior view of rose window in Nave

#### 4.10 The Nave

The intricate artistry of the marble altar and the stained-glass panels at the cathedral pretentiously replicates the magnificence of the colonial aesthetics even after 125 years of its glorious past. While the famous alabaster pulpit (the Bishop's throne) within the edifices engraved in the style of the Lahore School of Art and regarded as a remarkable piece of workmanship by Mr. Nicholls of Lambeth. In addition to this the Church houses many plaques and tablets depicting the death of several British nationals during their rule in India. (Britanica, 2022) The cathedral's nave is about 40 feet wide and 130 feet long, the total length of the church, about 240 feet and the internal width 56 feet. Cathedral, designed to accommodate 300 to 400 persons. Saint All Cathedral Prayagraj, a remarkable example of the architecture of colonial in India. Marble, Sandstone, Tile, Stained glass are used for making this. (Figure 21-22)



Figure 21. View of the Nave from Crossing



Figure 22. Pointed arch rest on decorated colonnade



#### 4.11 The Choir

The Choir is the place of worship surrounded with aisle from north and south direction and with crossing from west direction. Platform of choir is made up with marble and on that carved the story of Bible. It is surrounded with Jaali that inspired from Mughal architecture. Riser size of choir, 75mm. flooring covered with red carpet and is decorated with natural and artificial light both. (Figure 23-24)



Figure 23. View of the choir in the Cathedral



Figure 24. The Motifs on the Choir

#### 4.12 Timber Furniture

The Cathedral is adorned with ornate wooden furniture, including intricately carved pews and altars, providing a dignified setting for worshipers to gather and pray. (Figure 25)



Figure 25. Timber seating benches from 1910 AD

#### 4.13 Flooring

All the flooring in cathedral, finished up with plain concrete and elegant surface for congregants to tread upon as they move through the sacred space, symbolizing purity and sanctity. (Figure 26-27)



Figure 26. Stone tiles flooring in the Aisle



Figure 27. Stone tiles flooring in the nave

#### 4.14 Ceiling

Wood, stone and metal are used for construction of the ceiling. The cathedral's soaring ceiling features stunning architectural details and intricate frescoes depicting biblical scenes, inspiring awe to those who gaze upward, reminding them of the divine presence above. (Figure 28-29)



Figure 28. Timber Ceiling over ribbed arches in the Nave



Figure 29. Timber Ceiling in the Crossing of the Cathedral

#### 4.15 Crossing

The crossing is space between Nave and Choir that connects these areas, and it attaches from outside with Aisle from both the side and a gate from outside with 2.4m of size 100 mm riser of step of crossing from Nave.

#### 4.16 Roofing

The cathedral's sturdy roof, constructed from durable materials, serves as a protective shield against the elements, safeguarding the sacred interior and symbolizing the enduring strength of faith amidst worldly challenges. (Figure 30)



Figure 30. The Terracotta Tiles of the inclined roof on the nave

### 5. Conclusions

This paper presented the colonial cathedral design concept, architectural interventions, planning, Gothic architectural elements, decoration and style of 18th century in India. Heritage conservation is a major factor in promoting tourism. It helps to understand previous tradition, used materials, Architecture style and evolution process but Due to historical site some areas be conserved and restricted for public. And it opens only on Sunday and some important vocations. That troubles the new visitors. Structure surrounded by flying buttress from 3 side to back lateral thrust of the roof. Rose windows can be seen in each façade of the cathedral. Upon entering the western façade, we can see long nave with the wooden seats and chairs. Some Indianized features present in this cathedral, include the addition of Jaali panels due to the influence of the Islamic architecture and barrel vault roofing because of the extreme summer condition can be seen on the cathedral as an adaptive innovation due to the climatic and cultural status of the city. Because of their purity of material, it stands from long time without any defect. White sandstone transport from the Surajpur that used in construction of cathedral, also red and white marble use in it. Red tile uses for ornamentation of roof, that give appealing look to cathedral and it highlight from the distance. Structure cover with white patches on four sides. Flanking can be seen in some of the patches causing the wall to fragmentation (Mulchandani, 2022). The link between heritage and tourism is the most visible aspect of contribution of culture to local development because of heritage tourism the biggest beneficiaries are not only for the visitors but the local residents who experience a renewable appreciation in for and pride in their local city and its history. The cathedral is lavish with gothic architecture motifs. Art and architecture can transport us into different time and place it allows us to gain historical perspective and understanding, but the rapid urbanization in the city is destroying provincial colonial architecture. There is a need for architectural heritage intervention of this Cathedral and the Archaeological survey of India should look into the deteriorating condition of the mosque. The local people also need to be aware and should be taught about the importance of heritage, and do not let this Cathedral loses its originality, so that such iconic architecture can be preserved for future generations.

### References

- [1] Pilgrimstays (2021). All Saints Cathedral, Allahabad [Online]; Accessed on 6th December 2023, Available. <https://pilgrimstays.com/listing/all-saints-cathedral-allahabad/>
- [2] Britannica. (2022). [Online]; Accessed on 5th March 2024, Available. [britannica.com: https://www.britannica.com/topic/nave](https://www.britannica.com/topic/nave)
- [3] Navarang India. (2019). [Online]; Accessed on 15th January 2024, Available. <https://navrangindia.blogspot.com/2019/11/all-saints-cathedral-allahabad-up.html>
- [4] Mulchandani, A. M. (2022). All Saints Cathedral. Times of India Travel, [Online]; Accessed on 2nd March 2024, Available. <https://timesofindia.indiatimes.com/travel/allahabad/all-saints-cathedral/ps50352920.cms>