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COIMBRA

Erica Ann de Mello

LAYERS OF RUIN AND REHABILITATION:
THE CASES OF CHIMBEL AND GRAÇA
(GOA, INDIA)

Thesis in the Master's degree in the rehabilitation of edifices, in the area of
Non-Structural Rehabilitation of Edifices, supervised by Professors Marcela Maciel
Santana and Walter Rossa and presented to the Department of Civil
Engineering of the Faculty of Science and Technology of the University of Coimbra

September 2023

Faculty of Science and Technology of the University of Coimbra
Department of Civil Engineering

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Summary

Acknowledgments

Abstract

It underscores the latent potential within the existing historic monuments in Goa for rejuvenation. This thesis will analyse the heritage and cultural tourism and the need for the site's users. The potential of the area in terms of proximity for a sustainable heritage conservation at urban level management for socio-economic development.

Divided into distinct levels of study, this thesis encompasses a comprehension of the zone at three levels. At the macro or urbanistic & suburban level, the exploration of the region's history, natural and cultural landscapes is conducted. By understanding the historical development and timeline of the town until its current state, insights can be gained into the underlying factors that have shaped its evolution. The intermediate or street level goes through the intricate layers that constitute the fabric of the old city. It encompasses an examination of an example of a street, namely *Rua Direita* in Old Goa to observe overall morphology of the built environment, including residential areas, public spaces, boundaries, linkages, and main streets. A sketch and illustrative analysis is conducted, contrasting the present-day situation with its former peak unising present day illustrations and old illustrative references and a brief revitalization proposal is discussed. Lastly, at the micro or edifice level, two specific sites within the region's ruins namely, Church and Convent of Our Lady of Mount Carmel, Chimbel and the Church and Convent of St Augustine, Old Goa are selected for investigation. A diagnostic assessment is undertaken to ascertain the factors that have led to its ruin and its state of conservation. Finally, opportunities and proposals are discussed and put forth to revive and revitalise the site to fit the needs of today.

Conclusions and findings from this study aims to display the potential and opportunity of revitalising built heritage in Goa.

Keywords: cultural heritages, landscape, contested heritages, ruin, rehabilitation, Goa

[1] Introduction

Through a study and analysis of settlement patterns, it becomes evident that individuals carry their distinct identities and cultures wherever they go. Over time, they adapt to their new surroundings, merging and creating a dynamic relationship between people and place. It is imperative to recognize that a region goes beyond mere geographic location; rather, it encompasses multifaceted elements, including the collective traits of its inhabitants, the physical environment, and important historical junctures. In the context of colonial settlers, their influence extended beyond the mere transmission of their culture; it often entailed the imposition of their own customs and values upon the indigenous populations. This deliberate action served as a means of subjugating the native peoples and securing the settlers' footholds in these territories. The impact of this historical presence manifests itself visibly in the religion, language, cuisine, architectural forms and cultural practices that have come to define the region.

India, its map seen in Fig. 1, is rich with historic structures built with distinct functional requirements and architectural forms that represent the unique cultures and traditions of different eras. The building expressions for these ancient architects were a fusion of Turkish, Persian, Hindu, and Islamic architecture (Asher, 1992). Religion plays a significant role in many of these historical structures with structural systems catered to the needs of different faiths including Hinduism, Islam, Christianity, Buddhism, Jainism, and other religions. Numerous factors, such as historical events, increased traffic, urban expansion, abandonment, overgrown vegetation, drainage problems, and exposure to environmental elements, contribute to the deterioration of these historical edifices. Given their immense cultural value, it is imperative to restore, rehabilitate, and preserve these structures. Specialised measures are essential for their conservation, emphasising a meticulous focus on their original designs and material choices to facilitate proper rehabilitation and repair techniques.

Figure 1: Map of India, Google maps, Retrieved in the year 2023

1.1 The Theme

This thesis emphasises the necessity for heritage management and the delicate restoration and revitalization of heritage of Portuguese influence sites in Goa, India. It systematically examines the aspects of decay and ruination on two distinct levels: an urbanistic level and a building level. This dual level of study highlights the profound impact of losing historically significant monuments and structures, affecting both the fabric of the landscape of the selected location and individual cases of structures in ruin .

The urbanistic level scrutinises 'former Goa'[1], tracing its zenith and subsequent decline to become 'Old City of Goa' or 'Old Goa'[2]. All three of these names are seen in Fig. 2 and explained in its corresponding caption. This level underscores the latent potential within the existing historic monuments in Old Goa for comprehensive rejuvenation.

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[1] 'Former Goa' refers to the Portuguese city of Goa which was the settlement of 'Portuguese Goa' along the river Mandovi marked in Fig. 2 as 'CIDADE'

[2] The terms 'The Old City of Goa' and 'Old Goa' are used to identify the location the capital shift to 'Nova Goa' (Panjim)

Figure 2: The initial settlement was established in *Goa Velha*, translated to 'Goa the Old', located approximately in the middle of the southern part of the island, on the right bank of the Zuari River. It was referred to as '*GOEM*', a name derived from its old native name, *Orden Goen*, signifying Great Goa. Subsequently, the settlement migrated towards the northeast of the island, settling on the left bank of the Mandovi River, and was named Goa Nova, translating to Goa the New. You can observe the layout of Goa Nova on a map, faintly marked with the name CIDADE. As time passed, the capital gradually shifted westward to Panjim, indicated as PANGIN on the map, where it presently stands as Nova Goa, also known as New Goa or Panjim. The former Goa Nova is now referred to as Velha Goa, meaning Old Goa.

At an Edifice level, two cases of ruin are selected as the focus of the study. Some archaeological work has been conducted at both sites, either on a basic level or in cordoned zones of the site but are in need for conservation and have the potential for adaptive reuse. This thesis will analyse the heritage and cultural tourism potential of the area in terms of proximity for a sustainable heritage conservation at urban level management for socio-economic development.

After this a critical analysis will be carried out on both sites that will lead to the basis for a general strategy to preserve and revitalise the sites. Further proposals will be put forth to support the adaptive reuse of these two sites.

1.2 The object & objectives

The two main levels to this study are the macro level or a street level and a micro level or building level.

The historic monuments that still stand within Old Goa possess untapped potential for comprehensive revitalization and restoration through the establishment of a city-level organisation dedicated to this purpose. Taking an example of a street within this city with the objective of contrasting the present-day situation with its former peak using present day illustrations and old illustrative references, the spatial and dimensional dimension differences in their usage today will be reinforced.

On a building level, monuments in ruin, namely Church of Our Lady of Grace and its adjoining Convent of St Augustine, Old Goa and Church and Convent of Our Lady of Carmo, Chimbel will be selected to be focused on with the objective of a comprehensive diagnostic assessment to reveal the conservation status of the sites and identify factors contributing to their deterioration will be conducted. Following this, conservation and revitalization proposals will be made on both these sites with the objective of showing the historic importance, value and potential new usage.

1.3 Lost monuments of Goa

Over centuries, Goa's landscape has undergone substantial transformations, characterised by history, time, destruction and dismantling, not limited to Old Goa but extending across the entire territory. The process of dismantling monuments wasn't confined to the city alone but extended to the surrounding islands, as demonstrated by the expressive case of the Seminary of Chorão which can be observed in Fig. 3. This remarkable complex, considered one of the largest European-built structures in early modern Asia, has regrettably vanished (Gomes, 2011). Following a decision made in 1859 by Governor Count of Torres Novas, the Seminary was systematically dismantled after a prolonged 50-year debate regarding the suitability of Chorão Island for human habitation due to sanitary and health concerns (Gomes, 2011).

Today, all that remains of this once magnificent monument is an unassuming and insignificant foundation obscured by overgrown vegetation as seen in Fig. 4. The Chapel

of Saint Jerome, constructed prior to the Seminary in 1558, stands as a solitary reminder of its former grandeur.

Figure 3: Seminary of *Chorão*, engraving by Antonio Lopes Mendes in the book, A India Portugueza (Lisboa : Fundação Oriente, 1992)

Figure 4: Seminary of *Chorão*, 2022

From a macro perspective, envisioning the Seminary still standing raises intriguing questions about the impact it would have had on the charming village of Chorão.

How would its presence have shaped the overall character and development of the village and island of Chorão?

Zooming into a micro level, the architectural expression and construction techniques employed in the construction of this grand monument offer valuable insights into the evolution of Goan architecture. By examining the Seminary's design of elements and expressions in the illustration in Fig. 3, we could understand how it influenced and contributed to the distinctive Goan architectural style that emerged over time.

1.4 **Problems** or **Defies?**

While a set of 'Churches and Convents of Old Goa' has been recognized as a UNESCO World Heritage site since 1986[3], the recurring issues highlighted in UNESCO state of conservation reports of 1998[4] revolve around the lack of a heritage management plan. Fig. 5 shows the reporting trend based on the frequency at which the World Heritage Committee has deliberated over this property over the past 15 years where 0 = minimum reports, 100 = maximum reports. The Archaeological Survey of India (ASI) acknowledges these monuments and has its own set of regulations. Additionally, local construction laws are in place, dividing the location into different zones demarcated in Fig. 6. The red zone comprises the monuments, while buffer zones of 100 and 200 metres surround them.
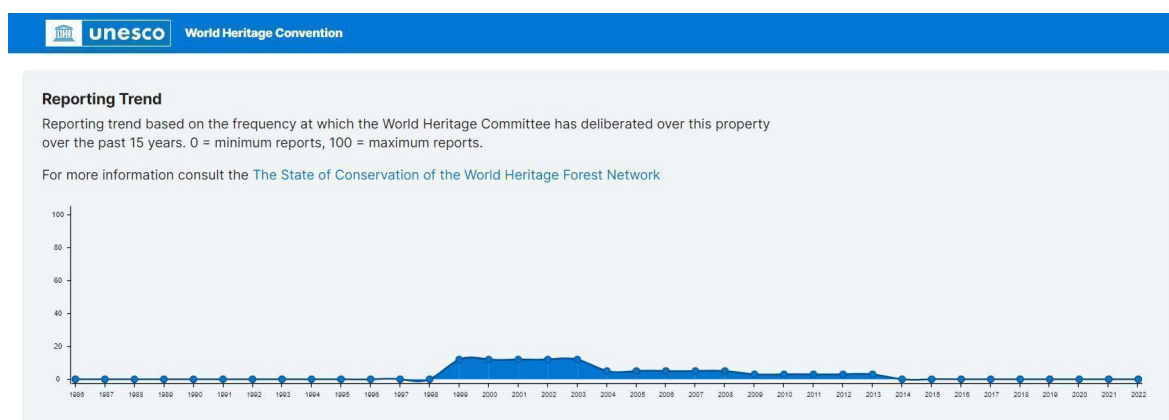
Figure 5: Frequency of reporting trends of 'Churches and Convents of Goa', UNESCO WHC, 2022

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[3] https://whc.unesco.org/en/list/234/
[4] https://whc.unesco.org/en/soc/2342

However, in recent times, illegal permanent constructions have emerged within the red zones. These plots were acquired and developed, and managed to obtain construction permission documents. One particular structure can be noticed in Fig. 7: Images from the river Mandovi, to the left by Rossa (1997) and to the right showing the illegal construction by TOI (2021), is a ground-plus-one villa with a tiled roof, stands between the Mandovi River and St. Cajetan Church, near the Viceroy's Arch in Old Goa's heritage precinct.
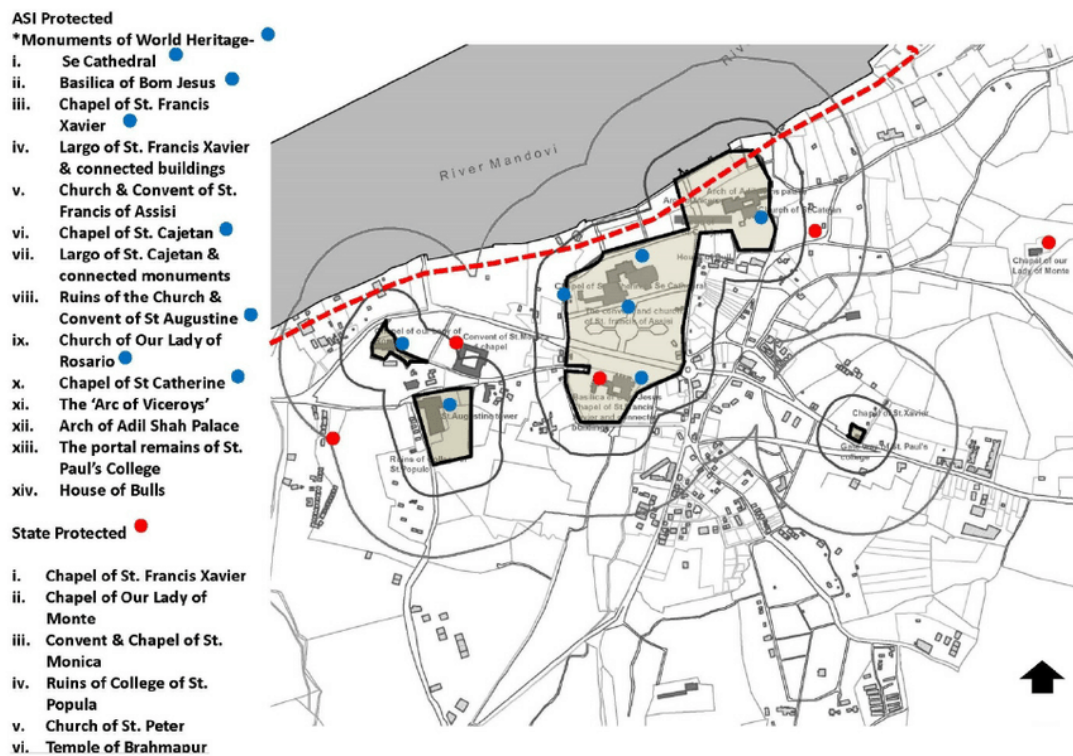
Figure 6: Old Goa Map showing control lines, 50m, 100m, 200 m Source: CCF study on Old Goa

Figure 7: Images from the river Mandovi, to the left by Rossa (1997) and to the right showing the illegal construction by TOI (2021)

Despite protests seen in Fig. 8 by locals persisting for over 200 days and news reports indicating the potential demolition of the villa, the usual pattern suggests that the uproar will eventually subside, and no lawful action will be taken. This unfortunate situation arises from the lack of recognition and protection that these sites genuinely deserve.

Figure 8: Protest by locals against illegal construction in Old Goa, (Goa Times of India, 2021)

The absence of visible markers indicating protected areas gives rise to two critical concerns. Firstly, this lack of recognition impedes the identification of potential architectural gems and significant contributions to heritage, which could offer valuable avenues for research. Secondly, it brings attention to the alarming problem of

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unregulated, illicit construction activities in Goa. Corrupt systems facilitate unauthorised construction through bribery, potentially leading to the permanent erection of illegal structures on sites of historical significance, including the Palace of Viceroys.

There is an overwhelming sense of pride in the abundant architectural heritage of Goa, and generally, the local community is cognizant of the importance of its preservation. However, when it comes to the actual conservation efforts, there is often a perspective adopted that poses a significant threat to the very existence of these valuable assets. Many individuals perceive "reconstruction" and "restoration" as interchangeable concepts, lacking awareness of the intricacies and principles involved in the process of conservation. The role of a conservation architect is often deemed unnecessary, and various patrons prioritise expediency and cost-efficiency over the virtues of patience and authenticity. Regrettably, numerous instances can be cited where the architectural significance of monuments has been entirely obliterated under the guise of facelifting.

1.5 Conservation principles

Preserving and passing down what we value to future generations is a fundamental aspect of human development, deeply ingrained in cultures worldwide. In modern times, the concepts of heritage and conservation have emerged as essential components in safeguarding the cultural identity of communities and have become integral to national culture. The term "International Principles of Conservation and Preservation" commonly refers to globally recognized and collaboratively developed doctrines and standards for the protection, care, and treatment of heritage resources, whether they are movable or immovable (Jokilehto 2002).

Heritage is seen from various perspectives, but the concern and need to preserve them is well defended. Cultural heritage management and knowledge dissemination projects should align with established traditions and historical knowledge dissemination practices. Heritage serves as a platform for innovating and testing approaches that highlight its significance in sustainable development (UNESCO, 2018). Heritage recognition by and

policies like UNESCO Cultural protection Act[5] 1999, Venice Charter[6] 1964, Declaration of Amsterdam[7] 1975 can support and guide respective responsible heritage organisations or government sectors to create protection and management mechanisms to hold the heritage in focus to a standard and care it requires to be protected.

Once the need is seen that the respective heritage in question has value to the society, users and members of a larger community who recognise or identify with it, has potential to be preserved and conserved, there are many obstacles that are to be faced following the path to preservation. During the round table discussion at the Heritages of Portuguese Influence Winter Seminar 2023 Sybille Frank discussed the following points under the topic of, 'Shared heritages, Contested Heritages'- The field of heritage encounters a range of challenges that necessitate careful consideration. She states that it is important to acknowledge that heritage is a plural term, encompassing diverse forms and manifestations. However, the definition and understanding of heritage can be subject to contestation and debate, with varying perspectives and interpretations. Heritages are essentially shared products, reflecting the collective identity and history of a community or society. Nevertheless, there is a tendency for institutionalised heritages to receive disproportionate attention and recognition, potentially overshadowing marginalised or non-mainstream forms of heritage. She further mentions that this bias towards certain heritages can perpetuate inequalities and exclusionary practices within the field. Moreover, conflicts may arise within the context of homogeneous state ideologies, where the notion of heritage becomes intertwined with broader political and social narratives. These conflicts necessitate a nuanced and inclusive approach to heritage management and preservation, with a focus on fostering dialogue, inclusivity, and the recognition of multiple heritage perspectives.

These points were found relevant to the sites in this study as they are indeed shared heritages as well as contested. The Goan cultural heritage faces challenges stemming primarily from its colonial history (Rossa, 2022). Its past inhibits its contemporary potential for reuse, particularly within the broader context of global, integrated, and

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[5] https://en.unesco.org/sites/default/files/slov_cultural_heritage_protection_act_engtof.pdf

[6] https://www.icomos.org/en/participer/179-articles-en-francais/ressources/charters-and-standards/157-thevenice-charter

[7] https://www.icomos.org/en/and/169-the-declaration-of-amsterdam

sustainable development. From her book, Uses of Heritage (2006), Laurajane Smith states that 'heritage' is not a 'thing', it is not a 'site', building or other material object but rather, heritage is what goes on at these sites, and while this does not mean that a sense of physical place is not important for these activities or plays some role in them, the physical place or 'site' is not the full story of what heritage may be. Heritage, she suggests, is a cultural process that engages with acts of remembering that work to create ways to understand and engage with the present, and the sites themselves are cultural tools that can facilitate, but are not necessarily vital for, this process (Smith, 2006).

The transformative process unfolds in two distinct stages: de-contextualization, involving both physical and symbolic detachment from the surrounding elements, followed by re-contextualization. For example, the partial conversion of a rural church into a museum bestows upon it a new context within an artistic and monumental hierarchy, ascribing value and historical significance. The recognition of heritage necessitates the establishment of dedicated spaces that house designated objects and elements, often within the confines of museums, natural parks, boundaries of protected sites and areas, buffer zones, or comparable environments. The exhibition function inherent to heritage designation frequently supersedes other functionalities, emphasising its heritage status and rendering it visible and accessible to visitors.

The inherent cultural characteristics and historical backgrounds of architectural heritage structures introduce various complexities in their diagnosis and restoration, which constrain the direct application of contemporary legal codes and building standards. The values that have been recognized in the heritage in discussion by the communities that associate and identify with it play an important role in the decision making of the use. It has to be approached from various perspectives, and it is imperative to formulate recommendations that facilitate both rational analytical approaches and culturally suitable methods for repair, ensuring the preservation of these structures within their specific cultural context.

In accordance with the ICOMOS Charter[8] - Principles for the Analysis, Conservation, and Structural Restoration of Architectural Heritage (2003)[9]- It is essential to adhere to certain principles of intervention. It states that a multidisciplinary approach is demanded by the conservation, reinforcement, and restoration of architectural heritage, with the recognition of the need for expertise from various fields. The determination of the value and authenticity of architectural heritage cannot be solely reliant on fixed criteria. The consideration of the physical heritage within its cultural context is essential to uphold respect for all cultures. The Nara Document on Authenticity[10] (1994)[11] is a document that addresses the need for a broader understanding of cultural diversity and cultural heritage in relation to conservation in order to evaluate the value and authenticity of cultural property more objectively.

The significance of tangible heritage is not solely derived from its visual appearance, but also from the integrity of all its components, which represent a distinctive product of the specific building techniques employed during its time. The preservation criteria do not align with the sole preservation of façades while removing inner structures. When contemplating any change in use or function, careful consideration must be given to all conservation requirements and safety conditions. International principles on preservation and conservation try to build a bridge for conservation efforts worldwide and aim to establish a common understanding on what to preserve and how, and more generally, on the meaning of heritage for society as a whole.

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[8]

https://www.icomos.org/en/about-the-centre/179-articles-en-francais/ressources/charters-and-standards/165-icomos-charter-principles-for-the-analysis-conservation-and-structural-restoration-of-architectural-heritage

[9] Principles for the Analysis, Conservation, and Structural Restoration of Architectural Heritage (2003) was ratified by the ICOMOS 14th General Assembly, in Victoria Falls, Zimbabwe, October 2003 -
[10].https://www.icomos.org/en/charters-and-texts/179-articles-en-francais/ressources/charters-and-standards/386-the-nara-document-on-authenticity-1994

[11] The Nara Document on Authenticity was drafted by the 45 participants at the Nara Conference on Authenticity in Relation to the World Heritage Convention, held at Nara, Japan, from 1-6 November 1994, at the invitation of the Agency for Cultural Affairs (Government of Japan) and the Nara Prefecture. The Agency organised the Nara Conference in cooperation with UNESCO, ICCROM and ICOMOS.

1.6 The method

It is seen that the present urban fabric of the Old City of Goa is the result of successive generations of settlers and resettlers who left their mark in physical structures as well as political, economic and social and religious institutions. Spaces in former Goa changed their importance and meaning within city structure. It is a process where spaces are transformed or as further mentioned de-transform in response to new necessities through the course of time. The important phase in this evolution is the stage of decline. Spaces become useless losing their utility and meaning and as a consequence the importance within the city. The city is now regrowing, forming a new network and rewriting the narrative of the networks of former Goa and then Old Goa.

If spaces lose their meaning, why then think about reviving them?
The details of this course of history will be discussed later. But, interestingly enough, even after the decline of the Old city of Goa there came a time when these spaces were revisited, religious and cultural functions and events were held and celebrated and this movement continued and increased gradually.

Taking into consideration the need to focus the research on a specific location, the city of Old Goa serves as an ideal choice. This city witnessed significant deconstruction within the defined area of the city and a time frame of around 70 years. Although a set of Churches and Convents of Goa are designated as a UNESCO World Heritage site, the preservation efforts are limited, and even those may not be adequately protected or presented to the public. This raises concerns about the unknown number of lost sites that remain unmarked and unrecognised. A comparative study of the Old city of Goa and former Goa will be done and its potential opportunity to be revived will be discussed from a street level perspective.

Considering historical, political, and urgent factors mentioned in the previous chapter that defines the need for this study, the objective of study aims to investigate sites that are currently in a state of decline, gradually approaching the same fate as those that have already been lost. By focusing on sites from the 16th and 17th centuries, valuable insights can be gained into the transitional processes that ultimately led to the establishment of the

first Goan church (Gomes, 2011). In the following chapters, two cases of ruin have been selected for examination: one in the City of Old Goa and one in the village of Chimbel. The latter, the village Chimbel among others that are marked in Fig. 9 developed over a span of 70 years during the gradual shift of the capital from former Goa to Panjim.
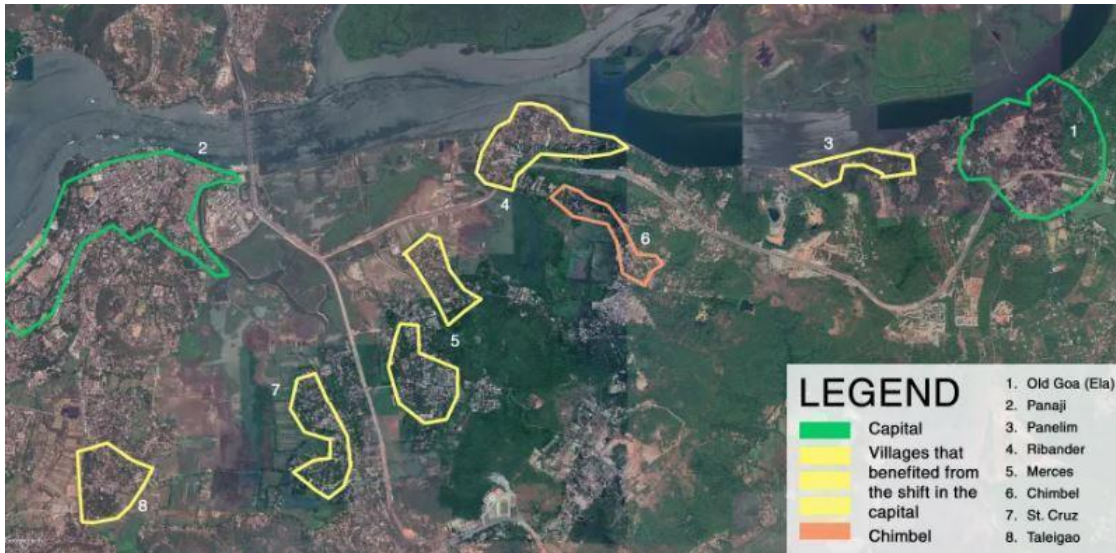

Figure 9: Villages of Panelim (3), Ribandar (4), Merces (5), Chimbel (6), St. Cruz (7) and Taleigao (8) that are located between the two capitals Old Goa (1) and Panaji (2), (Goa: CCF, 2022)

It becomes evident that the present urban landscape of the Old City of Goa bears the indelible imprints of successive generations of settlers and resettlers, who have left their enduring legacies not only in physical structures but also in political, economic, social, and religious institutions. Over the course of its history, the city has undergone a series of transformations, whereby spaces within its structure have witnessed shifts in their significance and meaning. This dissertation will look into how the spaces in Old Goa have been transformed according to time and need ranging from a regional level in the urban setting of Old Goa and the suburban setting of Chimbel. It is necessary to view this transformation to reinforce the need at a macro level.

This ongoing process entails the constant adaptation or, as further exploration will reveal, de-transformation of spaces to meet new necessities dictated by the passage of time. Of particular significance in this evolutionary journey is the phase of decline, wherein spaces lose their utility and meaning, consequently diminishing in importance within the urban

fabric. However, these spaces may also undergo adaptive reuse to cater to new needs. A discussion of a proposal will be discussed on a macro or street level in the main street of former Goa, which today is not seen as a principal road in Old Goa.

The study will be more comprehensive at the micro level where it will select two cases in ruin, one in Old Goa and the other in Chimbel. The study will treat this site, after proving it is endangered and diagnose various factors that are presently threatening it.

This dissertation aims to examine the transformations of spaces within Old Goa, encompassing a comprehensive analysis ranging from a regional to structure level. It will approach the site as an endangered locale, identifying various factors that currently pose threats to its preservation and integrity. Divided into distinct levels of analysis, this study encompasses a comprehension of the Old City of Goa, India:

Level 1: Macro Level : Regional level

At this macro level, an exploration of the region's history, natural and cultural landscapes is conducted. By understanding the historical development and timeline of the city until its current state, insights can be gained into the underlying factors that have shaped its evolution.

Level 2: Intermediate Level

This level goes through the intricate layers that constitute the fabric of the old city. It encompasses an examination of the overall morphology of the built environment, including residential areas, public spaces, boundaries, linkages, and main streets. A sketch and illustrative analysis is conducted, contrasting the present-day situation with its former peak unising present day illustrations and old illustrative references. The street, *Rua Direita*, will be selected to show the monuments lost along the street and its changed fabric today. It will open up a brief discussion about its potential to be revitalised.

Level 3: Micro Level: Two cases of ruin

At this micro level, two specific sites within the region's ruins namely, Church and Convent of Our Lady of Mount Carmel, Chimbel and the Church and Convent of St Augustine, Old Goa are selected for investigation. This involves a meticulous study of its

history, particularly its contributions to the realm of "Goan Architecture." Additionally, a diagnostic assessment is undertaken to ascertain the factors that have led to its ruin. Finally, proposals are put forth to revive and restore the site to its former glory.

Gathering historical data, encompassing photographs, illustrations, documents, architectural drawings, and newspaper articles, will involve site-specific research. This compilation will encompass historical timelines, the structural rise and decline, and the present ruinous condition. Subsequently, site photographs will be employed to diagnose and assess the conservation status. Leveraging insights acquired during this Master's program[12], a critical analysis report will be produced. Integrating both the site's conservation needs and its potential for new functions, a comprehensive strategy for rehabilitation will be formulated. Proposal sketches will be created to visually illustrate the proposed uses.

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[12] Master's in Rehabilitation on Edifices, University of Coimbra, Portugal.

[2] Geo-historical context
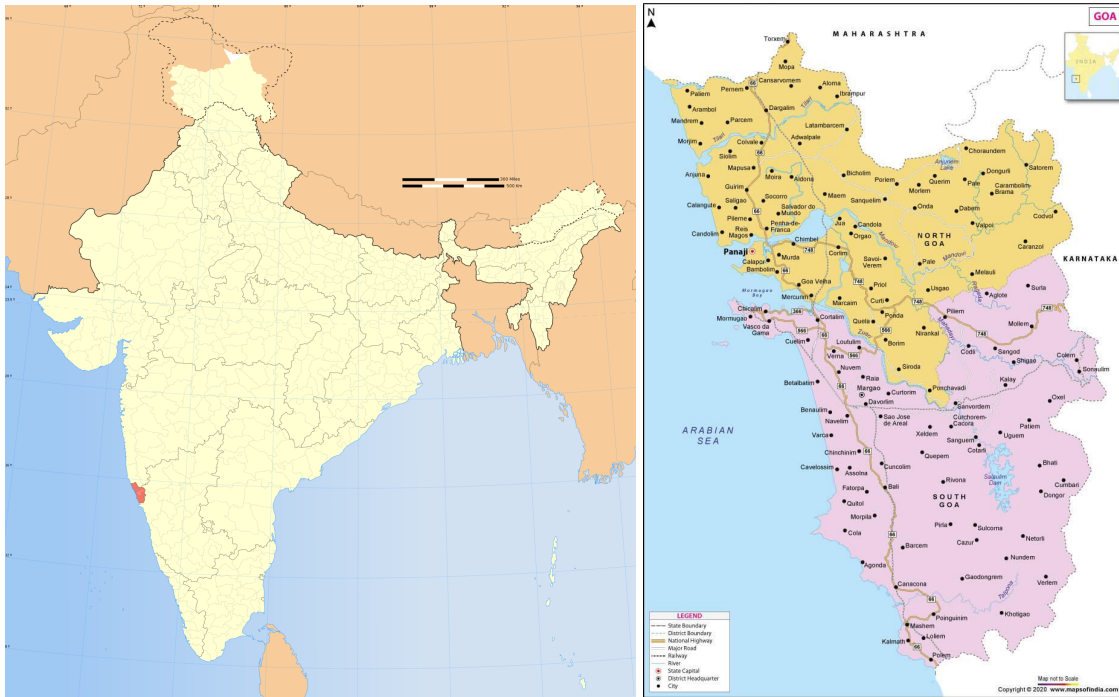
Figure 10 : Map of India with its smallest province, Goa marked in red and a map of Goa with North and South districts marked in ochre and purple. (India : Maps of India, 2020)

Goa, as marked in Fig. 10, is the smallest state of India, comprising a mainland district on the country's southwestern coast and an offshore island. It is located about 250 miles (400 km) south of Mumbai. It is bounded by the states of Maharashtra on the north and Karnataka on the east and south and by the Arabian Sea on the west. The capital is Panjim, on the north-central coast of the mainland district. Formerly a Portuguese possession, it became a part of India in 1961 and attained statehood in 1987. Area 1,429 square miles (3,702 square km) Population 1,457,723 (Indian National Census, 2011).

GEOGRAPHY: Goa lies between the Northern Latitudes of 14°53′54″ and 15°40′00″ and Eastern longitudes of 73°40′33″ and 74°20′13″. Most of Goa is a part of the coastal

country known as the Konkan, which is an escarpment rising up to the Western Ghats range of mountains, which separates it from the Deccan Plateau.

CLIMATE: Goa has a tropical climate, with hot, humid weather for most of the year. In summer the temperatures can reach as high as 91F (33°C) and there are continuous south west monsoon rains from June to September. Goa has a short winter, lasting only from December to February, with temperatures averaging around 77F (25°C).

2.1 History

The expansion of Goa, encompassing the acquisition of new territories known as Novas Conquistas, marked in Figure 11 spanned several decades to finalise and another century to stabilise. This expansion played a pivotal role in shaping the present-day "Goa," incorporating the surrounding regions into its framework. The first city of Goa (Velha Goa) was situated on the north bank of the Zuari, the second was on the south bank of the Mandovi, but both were inside the headland. The third city (Nova Goa) was, as we shall see, institutionally located on the south bank of the Zuari headland (Mormugão) and is on the south bank of the Mandovi headland (Pangim). This chapter will narrate the history of former Goa.

Figure 11 : Map of Goa showing the *Velhas Conquistas* of the Portuguese rule in Goa (India : Maps of India, 2020)
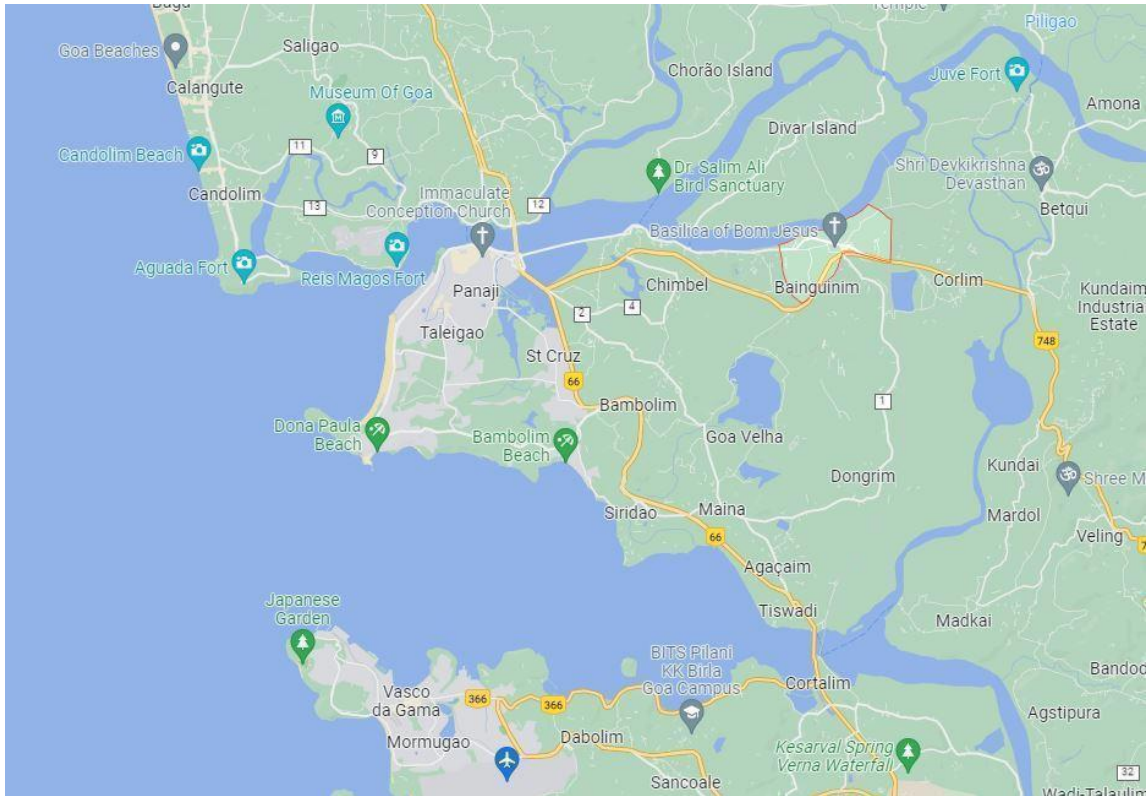
Figure 12 : Map showing the boundaries of Old Goa Google maps, Retrieved in the year 2023

On November 25, 1510, on St. Catherine's Day, an assault was launched and Albuquerque had successfully taken control of Portugal's oldest and most significant territory in Asia. This city replaced Cochin as the official capital of the Estado da India in 1530, rapidly developed into a metropolis, and has been the centre of the Portuguese Empire in the Orient for over four centuries (Penrose, 1960). This city is what is referred to as former Goa and is demarcated in Fig. 12.

Upon conquering Goa, Afonso de Albuquerque discovered a somewhat organised city, although the quality of its buildings was generally poor. Witnesses reported signs of urban development, including a surrounding ditch and wall with towers. Streets, squares, and gardens adorned with attractive structures, such as mosques and temples, were present. Among these, the "*Palácio do Sabaio[13]*" stood out. This was expected, given that Goa had served as the second city of the Sultan of Bijapur for twenty-five years before its

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[13] Palácio do Sabaio de Mateus do Couto / Inquisição
https://acasasenhorial.org/acs/index.php/pt/fontes-documentais/plantas-antigas/286-palacio-do-sabaio-de-mateus-do-couto-inquisicao

conquest. Albuquerque took measures to improve the city, including founding a hospital and a mint, restoring damaged defensive structures, and erecting the chapel of Santa Catarina near the gate where the final violent attack occurred, commemorating this significant event. (Penrose, 1960)

Between Albuquerque's death and João de Castro's era, construction in Goa progressed significantly. Notable infrastructure like *Rua Direita*, the *Misericordia*, the Hospital of St. Lazarus, the Convent of St. Francis, and the College of St. Paul all originated during this period. A crucial architectural influence during this time was the Portuguese acquisition of Bassein in 1534 (Rossa, 1997). This concession provided an abundance of high-quality, marble-like limestone ideal for grand tropical buildings. Additionally, a severe cholera epidemic in 1543 heightened religious fervour in Goa, resulting in the construction of churches like N. S. da Luz, N. S. do Rosário, and St. Peter's, as well as the Hospital of All Saints (Penrose, 1960).
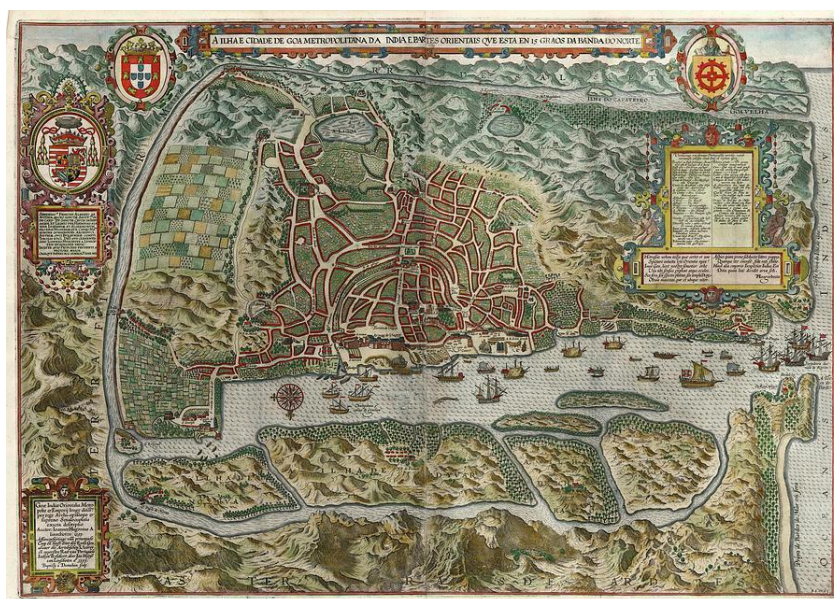

Figure 13: Journey or navigation to the East India's by Jan Huyghen van Linschoten with North pointing downward. (Amsterdam , 1596)

Linschoten resided in Goa from 1583 to 1588, and the *Itinerario* was first published in Amsterdam in 1596. In the foreground of Fig. 13, you can see four significant compounds. In Ribeira Grande, the Mint (*A Moeda*) and the Church of Cinco Chagas are

visible. On St. Catherine's Quay, you'll find the Royal Hospital (*Sprital del Rey*) and the unnamed Aljube prison to the right and moving eastward, we notice the Ribr. das galés. On the Viceroys' Quay, the map marks the Palace, along with the Arch of the Viceroy's on the right, alongside the Tronco prison, the *Alfandega* or Custom House, and the Pezo or weigh house. Across the creek, you can notice the Grand Bazaar and the *Bangaçal* or great godown. South of the Palace lies the great square or *Terreiro do Paço* (referred to as *Terreiro do Vizorei* on the map), with *Rua Direita* extending south from its right-hand side. Along *Rua Direita* or *O Leilão,* you'll spot A *Misericórdia* and *N. S. da Serra* projecting into the street. Further down are the Old and New Pillories, and ultimately the Church of *N. S. da Luz.* The Cathedral area is to the right of *Rua Direita,* housing the Inquisition, the Senate House (*A Camara*), and notably on the west side of *Terreno de Sabaio*—the Cathedral or *Sé* itself. To the North and Northwest are the Treasury (*Os Contos*), the Archbishop's Palace, and the Franciscan Convent. Slightly south of the latter is *Terr dos gallos*, Cockpit Square, with the Church of Bom Jesus (*Bo Jhs*) on its west side. The map's distinctive feature is its semi-circular street plan, along with the spacious gardens located behind the houses (Penrose, 1960).

2.1.1 Goan Architecture?

Here we take a pause in the historic description of the city and speak about the unique architectural expression of Goa. The systematic utilisation of the term "Indo-Portuguese architecture" to describe Catholic churches in Southeast Asia emerged primarily in the latter half of the 20th century, approximately a century after its establishment concerning art objects. This apparent "delay" can be attributed to the fact that European observers, including the Portuguese themselves, primarily relied on the monumental structures erected in Old Goa during the 16th and 17th centuries to gauge the extent of Portuguese influence in India. These edifices easily led to the assumption that they were of European architectural origin. However, in the 19th century, scholarly investigations confronted the reality that there existed diverse types of churches in Catholic India, alongside the communities surrounding them (Gomes, 2011).

Homi K. Bhabha's theory of hybridity revolves around the existence of a space where cultural boundaries intersect, giving rise to a new hybrid culture that blends their

characteristics and reconciles their differences. This notion of hybridity emerges as a consequence of complex economic, social, and political circumstances, coupled with limited spatial resources. Hybrid architecture, in this context, is not predetermined by typology but rather emerges from the hybrid relationship between spatial or semantic elements and symbols. The buildings serve as a bridge between Indian and Portuguese influences and do not conform to any particular architectural style, hence the adoption of the term "Indo-Portuguese" architecture.

Architectural researchers such as Paulo Varela Gomes and Walter Rossa have concluded that the churches represent a true hybrid architecture, born out of the transformation of European models introduced by various Catholic orders from Portugal, Spain, and Italy and realised by Goans. However, it is important to recognize that the Catholic churches cannot be viewed simply as a synthesis of cultures. This is because the Catholic Indian culture exists autonomously within the context of India and Portugal. Catholics in India have been practising this religion and community traditions for over two centuries, making them no longer "alien" or "foreign." The same can be said for the architecture—it was introduced and integrated, rather than imposed. It stands as its own distinct model, and the concept of hybridity does not fully apply to it (Gomes, 2011).

The historical significance of these buildings, combined with the everyday cultural practices surrounding them, helps explain their integration when viewed from an external perspective. They embody neither a purely "Indian" nor a purely "Western" identity. However, tangible heritage, including architectural, urbanistic, and artistic elements, is susceptible to conflicts, deliberate destruction and erosion over time. Heritage represents what survives opposing interests driven by various processes and political agendas. In India, heritage demands ethical and political contemplation because it is a social construct that holds symbolic value for different social groups (Rossa, 2013).
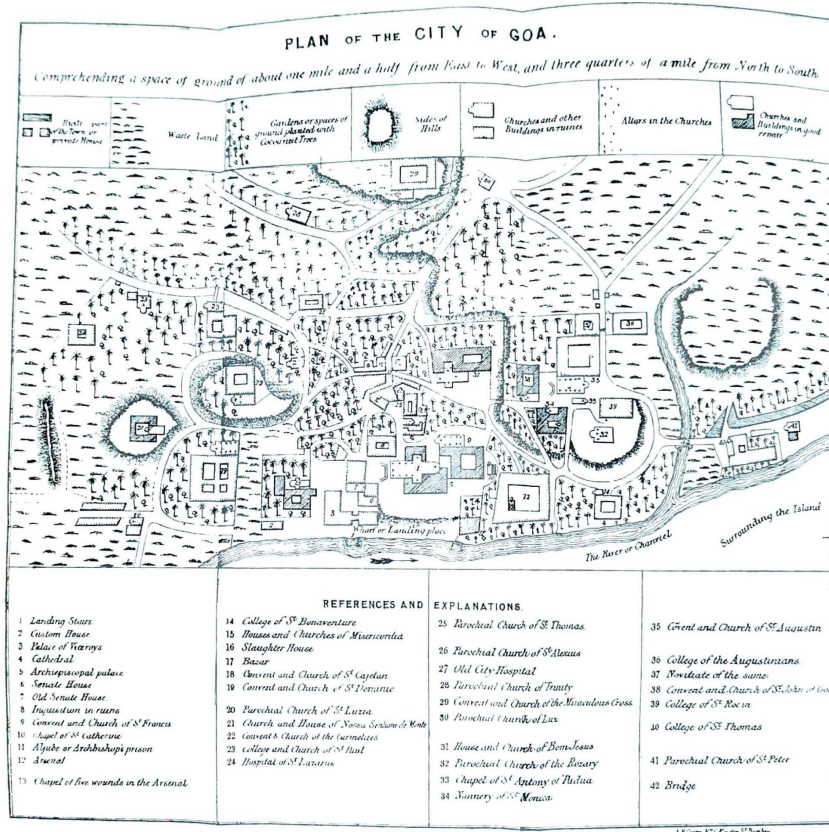
Figure 14: Plan of the city of Goa from An Historical and Archeological Sketch of The City of Goa (Fonseca, 1878)

Resuming the history of the city, we move onto its decline. In the 17th century, the decline of the city of Goa witnessed devastating epidemics of Malaria and Cholera, leading to its systematic abandonment. As the inhabitants fled the city drawn out in Fig. 14 the once bustling inner streets and main thoroughfares became deserted. However, they did not leave empty-handed. Recognizing the inevitable decay of the city, they dismantled the roofs of their houses, allowing the rains of the prolonged south-west monsoon, which lasts for six months and brings constant rainfall, to hasten the degradation of the remaining walls. Stone by stone, buildings were disassembled and repurposed to construct new houses in areas away from the deteriorating city (Gomes, 2011).

The Old City of Goa now lies approximately 10 kilometres east of the present state capital, Pangin. With the passage of time, combined with natural causes and overgrown

vegetation, abandoned sites have become engulfed and hidden from view . Once-majestic palaces, convents, artillery installations, churches, and monuments have vanished, leaving no trace visible to passersby who may not fathom the presence of these remarkable structures that once stood in their midst.

Figure 15: View of the churches of Old Goa from the river Mandovi (Goa, 2019)
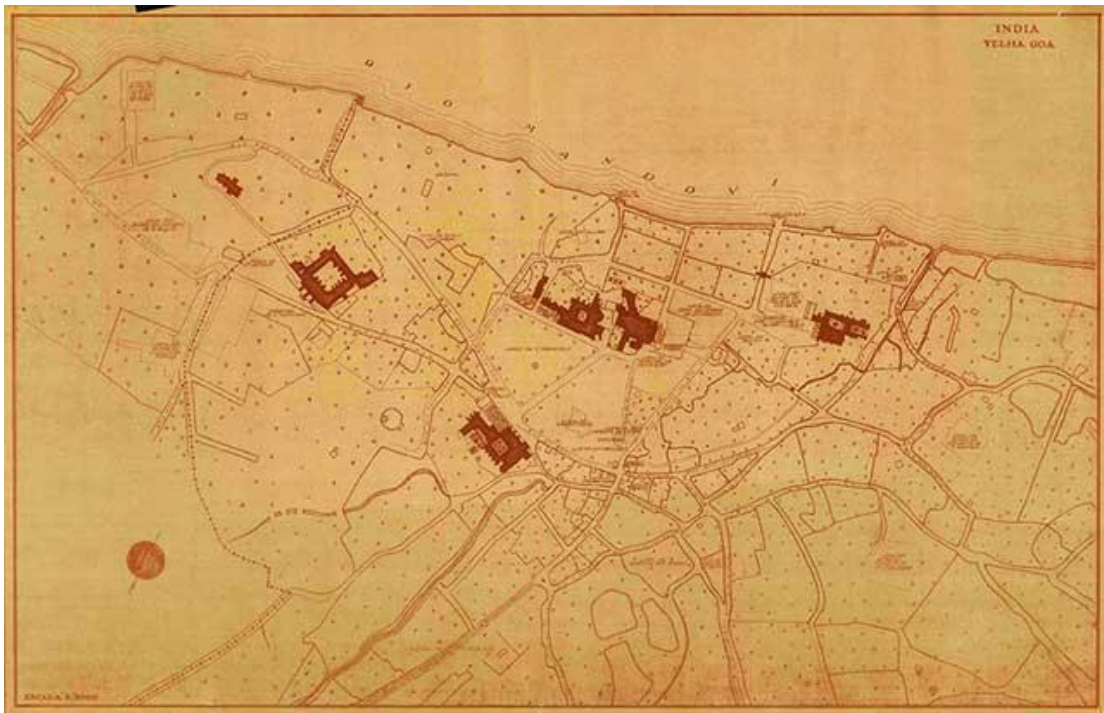

Figure 16:   Map of Old Goa with the Church of Our Lady of Rosary, the Convent of Sta. Monica, the Se cathedral of Goa, the Church and Convent of St. Francis of Assisi, the Basilica of Bom Jesus and the Chapel of St. Cajetan highlighted. (Arquivo Nacional da Torre do Tombo, fonds 'Luís Benavente', box 79 'India (diversos)', file 548, doc. nr. 18, 1951)

The photograph, Fig. 15 shows a view of what was the Old City of Goa from the river Mandovi and the map Fig. 16 and Fig. 19 reflects to show the surviving churches and convents in Goa are the Chapel of St. Catherine (1510), which was raised to the status of cathedral by Pope Paul III in 1534; the Church and Convent of St. Francis of Assisi (1517; rebuilt in 1521 and 1661), with elements in the Manueline, Gothic, and Baroque styles; the Church of Our Lady of Rosary (1549), the earliest of the existing churches built in the Manueline style; Sé Cathedral (1652), with its Tuscan style exterior and Classical orders; the Church of St. Augustine (1602), a complex that fell into ruins, with only one-third of the bell tower standing; the Basilica of Bom Jesus (1605), with its prominent Classical orders; and the Chapel of St. Cajetan (1661), modelled on the original design of St. Peter's Church in Rome

[1] Old City of Goa

The study now delves into the selected region's history, natural and cultural landscapes, focusing first on the macro or urbanistic level. It aims to comprehend the town's historical development and timeline in brief, offering insights into the factors shaping its evolution over time. This exploration aims to emphasise the transformations and decline experienced to volumes of the urban fabric by this once bustling city.

The intermediate level will delve deeper into the layers constituting the fabric of the old city. Specifically, it will examine 'Rua Direita' as a representative street, offering insights into the overall urban morphology. This examination encompasses residential areas, public spaces, boundaries, and the historical context of this prominent thoroughfare in former Goa. It will employ old maps of the street, comparing them with contemporary satellite imagery of Old Goa. This analysis at the street level underscores the loss of monumental structures along this principal road, a consequence of the city's deconstruction. Notably, it narrates the transformation of the street because of the 'Lost Monuments.'[14]

This chapter aims to reinforce the substantial loss of monumental volumes, which start at the building level but impact a user's street experiences. This street is taken as an example as it was a principal street of former Goa and the availability of documentation of structures along it. The analysis involves using sketches and illustrative comparisons to contrast the present-day conditions with their historical zenith, drawing from both contemporary illustrations and historical references.

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[14] As the monuments no longer exist, the term 'Lost Monuments' has been adopted as an alternative to the term - 'Invisible Monument' from bibliography reference : GOMES, Paulo Varela, 2011. As igrejas invisíveis de Goa. Goa: Passado e Presente. Lisboa: CEPCEP da Universidade Católica Portuguesa e CHAM da Universidade Nova de Lisboa. vol. 1. 2012: 101-124

3.1 Old City of Goa
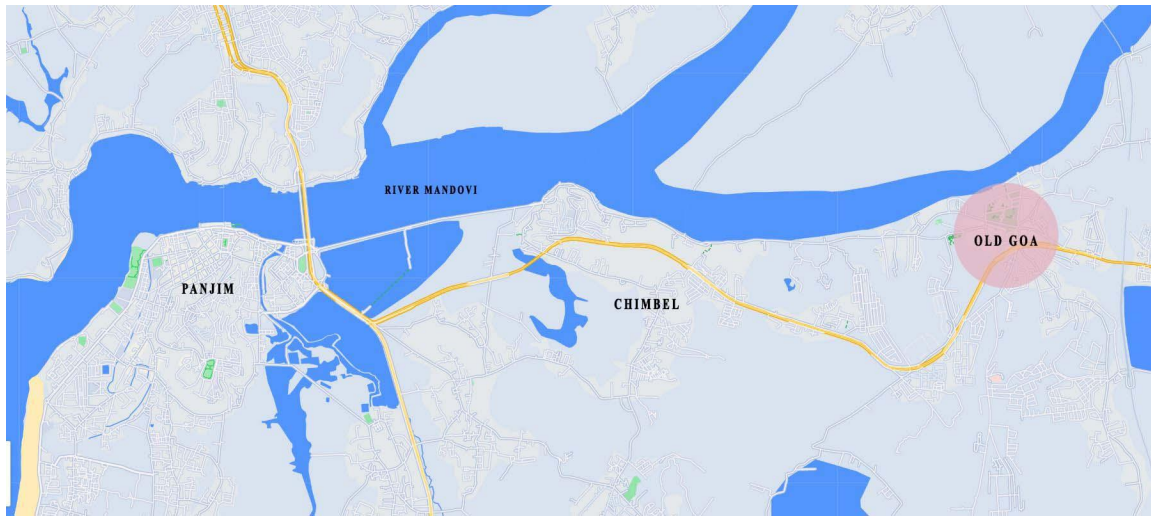
Figure 17 : Map showing Old goa with relation to the present capital of Goa, Panjim

As mentioned before, during the 16th century, starting from the conquest of 1510, former Goa emerged as the main site where significant churches were constructed. However, as the 17th and 18th centuries unfolded, the city experienced a period of decline. Today, the location marked in Fig. 17 is characterised by a dense palm grove, gracefully undulating across a vibrant topography that slopes gently towards the old terrace and the stream along the banks of the River Mandovi. The central area, which encompasses a majority of the old town's structures, predominantly churches and convents, has been preserved as a spacious esplanade. Notably, due to a deliberate intervention in 1959, the urban design of this area Fig. 18 has deviated significantly from the original road network, retaining only minimal remnants of its original form.

Figure 18 : 'Project for the new City of Goa by tence of a la José de Morais Antas Machado, Chief Infantry Sergeant, serving as an engineer, last quarter of 18th century". (Lisbon : GEAEM, 1775)

Figure 19 : Illustration of Old Goa by Antonio Lopes Mendes from the book, A India Portugueza (Lisbon : Fundação Oriente, 1992)

Analysing Old Goa

STRENGTH

The Old Goa encompasses a remarkable collection of approximately fifty monuments and sites, comprising individual heritage buildings of exceptional architectural value, as well as archaeological remains, ruins, and monuments. This rich tangible heritage represents an integral part of the region's cultural legacy, symbolising the dynamic interplay of various cultures. Among its prominent features, the Old Goa boasts numerous churches and convents, many of which were constructed in the 16th century and stand as exemplary specimens of Manueline and Gothic architecture. These churches showcase intricate detailing and ornate embellishments, offering insights into the bygone era and serving as vital sources for understanding ancient culture, lifestyles, architectural practices, developmental achievements, construction techniques, artistic expressions, and various other aspects of society during specific periods. Hence, it becomes imperative to assess and acknowledge the significance of these heritage structures, which necessitates their careful preservation, conservation, and management.

In 1968, the Archaeological Survey of India (ASI) established an office in Old Goa and identified 21 monuments of national importance in Goa, with 14 of them located in the Old Goa region. Subsequently, in 1978, the Goa Ancient Monuments and Archaeological Sites and Remains Act was enacted, designating six monuments in Old Goa as of regional importance.

Furthermore, in 1986, seven out of the fourteen designated monuments were adopted by UNESCO as a "Group of Monuments" of World Heritage. The selected UNESCO sites in Old Goa include the Sé Cathedral, Basílica of Bom Jesus, Convent of St. Francis of Assisi, Chapel of St. Cajetan, Ruins of the Convent of St. Augustine, Church of Our Lady of Rosario, and Chapel of St. Catherine. Currently, Goa possesses one World Heritage site, comprising these seven monuments, along with 21 monuments protected by the Archaeological Survey of India (ASI), and an additional 51 monuments under state protection. Notably, all seven UNESCO sites are located exclusively in Old Goa, in addition to over 40 other structures of significant heritage value (UNESCO,1986).

WEAKNESS

Numerous sites and monuments have regrettably succumbed to the play of history, weathering, and neglect. Insufficient financial resources allocated towards excavation and maintenance have resulted in their abandonment, leading to their gradual engulfment by vegetation. Compounding the issue further is the absence of well-defined designations for these sites, which has opened the door to unauthorised construction encroaching upon their sacred grounds.

OPPORTUNITY

The prospect of harnessing heritage as an economic asset in Goa is not a novel idea, although it has predominantly unfolded within the sector of private endeavours. Numerous heritage residences have undergone conversion to cater to the tourism industry in Goa. However, the sites within Old Goa possess untapped potential for comprehensive revitalization and restoration through the establishment of a city-level organisation dedicated to this purpose.

While heritage tours do exist in the vicinity of the Old City, they often limit their itineraries to the UNESCO protected sites, inadvertently bypassing locations that once housed magnificent monuments of historical significance.

THREATS

Like many heritage sites worldwide, Old Goa is currently confronting threats arising from urbanisation and climate change. Despite being a small state with a diverse spatial structure, Goa relies on tourism and mining as its main sources of income. Goa boasts breathtaking beaches and revered places of worship, attracting numerous domestic and international tourists each year. The Churches of Old Goa, apart from the captivating beaches, hold great allure. However, there are several significant risks and threats associated with the preservation of Old Goa's heritage, which cumulatively impact its safeguarding. Old Goa lacks a sustainable tourism plan, leading to chaotic conditions at the site, including high traffic congestion, mismanaged vehicular parking, and inadequate waste disposal. The pollution resulting from heavy traffic surrounding the heritage

structures directly affects their integrity. Moreover, the absence of a buffer zone for vehicular movement allows vehicles to park adjacent to these monuments, exacerbating the risks.

Figure 20: Drone images showing the newly constructed highway (far left) within the buffer zone of the UNESCO protected Heritage sites. (India : 123RF, 2021)

The new regional plan of Goa, RPG-2021, exacerbates the pressure on the surrounding areas by converting agricultural land into settlement areas, thereby opening doors to further development possibilities. The expansion of settlement areas in the Tiswadi taluka, where Old Goa is situated, is particularly concerning. With no buffer zone allocated for the heritage area and only limited buffers around the heritage structures, the increasing settlements exert high pressure on the heritage site. Consequently, the indirect effects of these settlements, such as pollution, traffic pressure, and urbanisation, will gradually deteriorate the condition of the nearby heritage structures.

Adding to the threats, the vicinity of an established Industrial Estate in Corlim poses significant pollution risks to Old Goa's heritage. This industrial estate, set up by Goa's

Directorate of Industries, Trade & Commerce in 1965-66, comprises over 100 small, medium, and large industries engaged in the production of plastic bottles, paints, flooring tiles, batteries, and more. The cumulative pollution generated by these industries poses an additional risk to the heritage structures in the surrounding area. The industrial estate covers an approximate area of 0.5 km² and is located just 1.5 km away from the Old Goa heritage area, as measured on Google Maps.

3.2 *Rua Direita*: Street Level Perspective

In Fig. 21 we observe the remaining structures that still dominate the skyline of old Goa. However, as previously noted, numerous monuments were dismantled during the capital's relocation to Panjim. Over time, many of these monuments were eroded by monsoons and concealed by overgrown vegetation. These excavated sites have been largely forgotten. One could easily pass by what is now a 'Lost Monument' without ever suspecting that a grand, imposing structure once stood there.

Figure 21: Old Goa drone image showing the ruins of the Church and Convent of St Augustine with other Voluminous structures that still exist in Old Goa. (India : 123RF, 2021)

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While it's acknowledged that the deliberate deconstruction of Old Goa and the city's closure were inevitable historical developments (Gomes, 2012), the concerning issue extends beyond the loss of grand architectural volumes. Of greater concern is the ongoing deterioration over time. Reports, as highlighted in the rationale for this study, indicate instances of illegal construction within the buffer zones of UNESCO-protected heritage sites. There's a strong likelihood that these illegal structures have encroached upon areas that should have been excavated or protected. Despite subsequent government orders for their demolition following protests, the damage has already been inflicted. Using '*Rua Direita*' as a representative example, we will analyse the contemporary urban layout of this once-major thoroughfare. This assessment will encompass residential areas, public spaces, boundaries, and consider the historical context within the Old City of Goa.

Figure 22 : Detail of "Project for the new City of Goa by José de Morais Antas Machado, Chief Infantry Sergeant, serving as an engineer, last quarter of 18th century". (Lisbon : GEAEM, 1775)

This 1775 map, seen in Fig. 22, reveals the layout of Rua Direita, which began in the north with the expansive Old Viceroy's Palace [R]. To the east, the road passed by the Church of Our Lady of Divine Providence and the St. Cajetan Convent [I]. Further south, smaller structures lined both sides of the street. Moving to the west, it opened up to the courtyard of the Sé Cathedral of Goa [A], with [T] denoting 'casas que foram da Inquisição' or houses formerly belonging to the Inquisition. The Inquisition's palace

occupied a significant portion of *Rua Direita*, spanning nearly one-fourth of the street. The street was flanked by structures and terminated at the Igreja da Misericórdia [O] and the Recolhimento da Nossa Senhora da Serra building [M].

Utilising the 1775 Map as a foundation, selected excerpts and illustrations will be juxtaposed to reconstruct the visual representation of this street. Subsequently, a contemporary narrative will provide insights into the current state of the street, emphasising the presence of 'Lost Monuments' and the absence of their architectural volumes. Since this text is to concentrate on the architectural urban Fabric of the city, the description of 'life' on *Rua Direita* from the book Goa-Queen of the East by Boies Penrose (1960) can be found Appendix A.

"- a short way down the Rua Direita, one entered the Cathedral Quarter, which lay behind the Ribeira das Galés and St. Catherine's Quay, and contained some of the most important buildings in the whole of Goa. On the left-hand side, and extending all the way to 0 Leilão, was the large and imposing building of the Inquisition, Towards the end of this grim structure the street opened out into the Terreiro do Sabaio, another memento of old Adil Shah's occupancy of Goa. On the western side of this square was the Cathedral of St. Catherine, or the Sé Primacial, as it was called" (Penrose, 1960)

This excerpt from 'Goa- Queen of the east' by Boies Penrose gives a sense of the magnitude of the Palace of Inquisition. There are names of locations like '0 Leilão' & ' Terreiro do Sabaio' that were marked on the Map, this also gives us the perspective on the street level. These locations have been illustrated in one of the earliest widely circulated images, seen in Fig. 23 is a view of the *Rua Direita* in Goa published by Jan Huygen Van Linschoten (1579-1596). To align this illustration to the Map of 1775, details from the illustration have been taken out to show locations marked which coincide with the map.

Figure 23: *Rua Direita na Cidade de Goa. Século XVI, Descrição da viagem do navegante Jan Huygen van Linschoten às Índias Orientais Portuguesas, 1579 - 1592. (Amsterdam, 1596)*

Figure 24: Detail of the *Igreja da Misericórdia* **which** *Rua Direta* **terminated in the south. [O] (Map). (***Rua Direita na Cidade de Goa. Século XVI, Descrição da viagem do navegante Jan Huygen van Linschoten às Índias Orientais Portuguesas, 1579 - 1592.* **Amsterdam, 1596)**

In Fig. 25 flat fronted mostly two to three storied masonry houses are seen with steep tiled roofs with overhanging eaves. The windows and doors have prominent but plain framing in flat lintels and door and window posts the same conventional and familiar cantoneira elements to be found in Portuguese buildings almost everywhere. On the upper floors, the windows have balconies or more likely screens, some of them with carpets hanging below. These would have afforded privacy to those in the upper stories.

Figure 25 : Detail of two storied houses that lined the eastern side of *Rua Direita*. (also seen marked in the Map)
***Rua Direita na Cidade de Goa. Século XVI, Descrição da viagem do navegante Jan Huygen van Linschoten às Índias Orientais Portuguesas*, 1579 - 1592. (Amsterdam, 1596)**

"The portion of the street between the Terreiro do Paço and the Misericórdia was '0 Leilão', or literally ―the auction, since public sales were noisily and frequently held there The horse market and the slave market were both in this part of the road. François Pyrard de Laval wrote that ―this street is very handsome and broad, full of shops of jewellers, goldsmiths, lapidaries, carpet weavers, silk merchants,and other artisans. While the market is afoot, there is such a great crowd in the street that one can hardly pass. In short one sees there the wealth of the Indies in all kinds, and jewels the finest that can be seen." (Penrose, 1960)
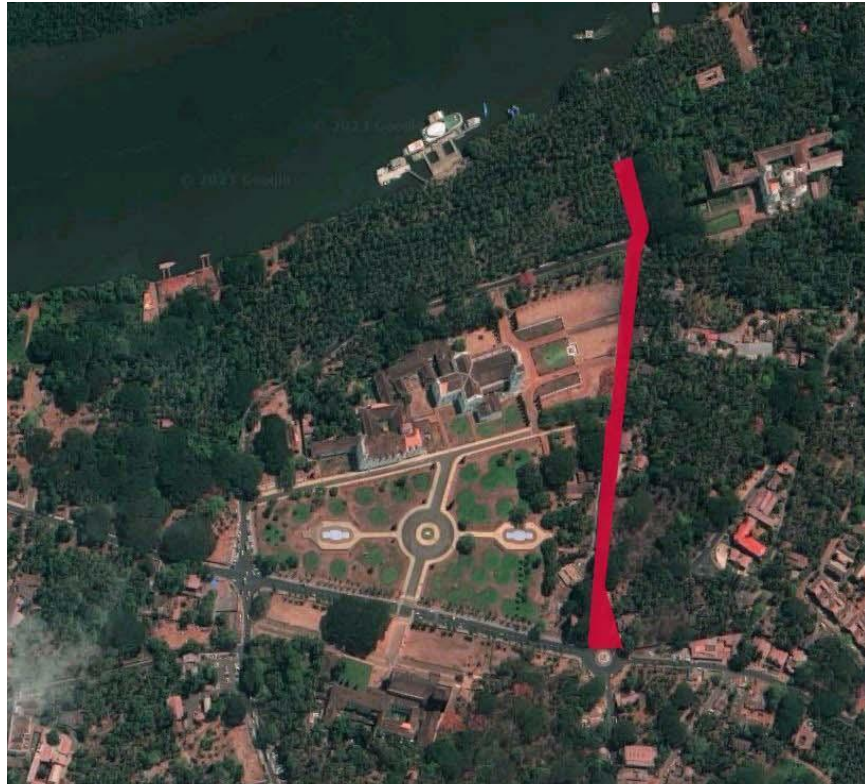
Figure 26: Satellite image with Rua Direita marked in the City of Old Goa. At its north lies the river Mandovi and the northern end of the road stands the remains of the Viceroy's Archway. Along its west lies the Se Cathedral of Goa. Its western face is lined with land that has dense vegetation overgrown and a few random structures. The road ends in the south with the 'Gandhi circle' which is a junction of four roads. A few commercial structures have been constructed at this junction. (Google Satellite Imagery, 2023)

Aligning the description of '*0 Leilão'*-'the auction market place by Pyrad and Penrose with Linschoten's famous illustration, '*Rua Direita na Cidade de Goa. Século XVI*' we can conclude that this urban space was full of life, colour, trade and wealth. Comparing it with the present day situation, a very different visual is seen. The road still exists as marked in Fig. 26, still stretching from the Viceroy's arch until 'Gandhi circle' which is an intersection area of four roads. The houses and the Misericordia, seen in the illustration no longer exist and their plots have been engulfed in vegetation. Around this circle there have sprouted temporary commercial spaces- tyre repair shops, food stalls, among other shops that have turned permanent over time. This could be seen as the present day bazaar space.
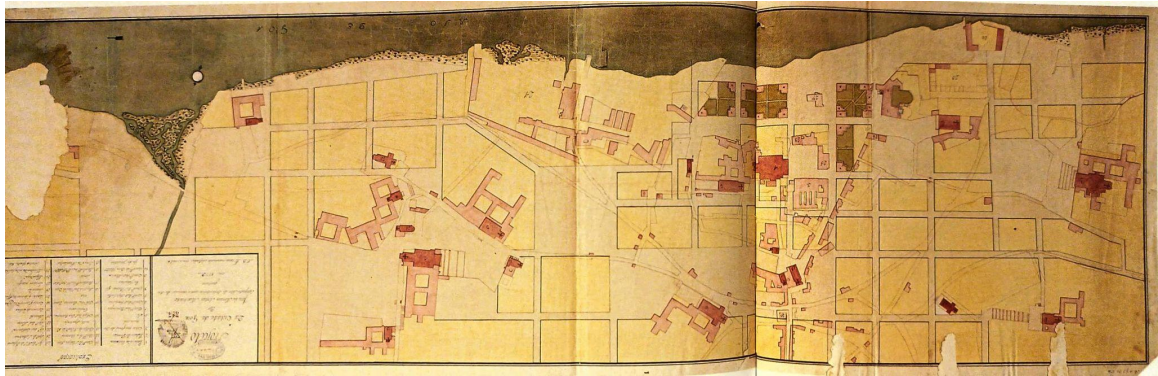
Figure 27 : Project for the City of Goa by José de Morais Antas Machado, Chief Infantry Sergeant, serving as an engineer in 1775". (Lisbon : GEAEM, 1775)

Figure 28 : Superimposition of Project for the City of Goa by José de Morais Antas Machado, Chief Infantry Sergeant, serving as an engineer in 1775". (Lisbon : GEAEM, 1775 onto Google Satellite Image, 2023)

Palácio da Fortaleza dos Vice Reis

Figure 29: 'Location of the *Palácio da Fortaleza dos Vice Reis*' (Superimposition of Project for the City of Goa by José de Morais Antas Machado - Lisbon : GEAEM, 1775 onto Google Satellite Image, 2023)

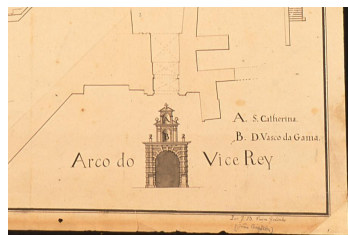Figure 30: (Google Earth Satellite Imagery, 2023)

Figure 31: 'Survey Drawings of Palácio dos Vice-Reis em Goa, Índia'. J.B. Vieira Godinho [Assin.], c.1770. Tinta-da-china com aguada. Ms.1185x433 cm (Biblioteca da Sociedade de Geografia de Lisboa, Des. 6-e-5)

Figure 32: Location of the Viceroy's Palace, Goa. Above: Google Street View Imagery, 2022 ; Below: (TOI :Goa,2021)
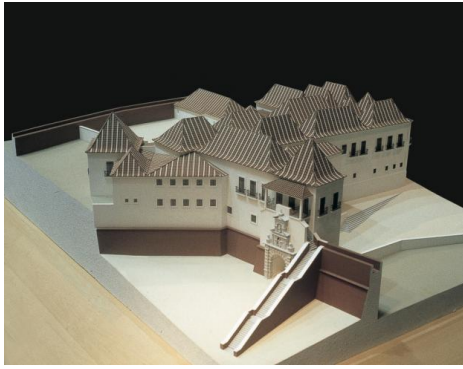
| Figure 33: 'Virtual model of Palácio da Fortaleza dos Vice Reis ' (Carita : Lisbon, 1995) | Figure 34: Remains of the Viceroy's arch, Old Goa (Google Street View Imagery, 2022) |

This survey focuses on the official residence of the Viceroys of India in Goa, featuring elevations and floor plans of the ground and noble floors. The building stands out as an imposing three-story structure.

In the caption accompanying the main floor, the drawing includes a small elevation of the renowned Arch of the Viceroys. This arch, designed by Júlio Simão and commissioned by the Count of Vidigueira D. Francisco da Gama, who was the grandson of Vasco da Gama, was constructed for the celebrations of the first centenary of Vasco da Gama's arrival in India (Carita, 1996).

Today only part of the Palace is the archway which still stands. Recently, an illegal construction[15] appeared on the site, which used to be densely covered in a coconut grove.

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[15]
https://timesofindia.indiatimes.com/city/goa/hc-stays-asi-order-to-demolish-controversial-old-goa-bungalow/articleshow/95153193.cms

Palácio da Inquisição

Figure 35: Location of *Palácio da Inquisição*. (Superimposition of Project for the City of Goa by José de Morais Antas Machado - Lisbon : GEAEM, 1775 onto Google Satellite Image, 2023)

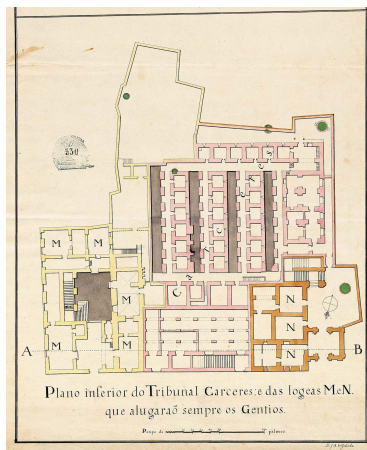**Figure 36: (Google Earth Satellite Imagery, 2023)**

Figure 37: Survey Drawings of the Palace of Inquisition. João Baptista Vieira Godinho (assin.) Goa, c.1779. *Desenho a pena aguarelado com* 1950x376 mm Lisboa, GEAEM-1222/2ª-24 A-111

Figure 38: 'Image of Present Situation' (Google Street View Imagery, 2022)

This structure opened up into the Cathedral soiree but its side lines the western portion of Rua Direita. The survey comprises a section and three floor plans, allowing for the assessment of the Adil-Shah Palace's grandeur and its interior program complexity spread across three floors. Originally serving as the Adil-Shah Palace, it became the residence of the Portuguese Viceroy until 1554 when Viceroy Pedro de Mascarenhas relocated to the Fortress Palace. Subsequently, the building was occupied by the Inquisition (Carita, 1996).

The first floor included entrance areas and services, along with shops rented to merchants. The noble floor, used by the court, contained the renowned "great hall" of judgement, documented by travellers like Jean Baptist Tavernier and Charles Dellon (Dellon, 1866) (Tavernier, 1676). Two noble rooms housed the 1st and 2nd Inquisitors. The accused individuals were detained in cells distributed over two floors within the palace's old inner courtyard.

This survey was conducted in connection with the abolition of the Inquisition starting in 1774 and the building's potential rehabilitation for the Court of Appeal. The choice of Panjim as the new capital led to the idea being abandoned and demolished in 1820, along with the Palácio da Fortaleza dos Vice Reis. (Carita, 1996).

Residences Along the East of Rua Direita

Figure 39: 'Location of residences along the east of Roa Direita'. (Superimposition of Project for the City of Goa by José de Morais Antas Machado - Lisbon : GEAEM, 1775 onto Google Satellite Image, 2023)

Figure 40: (Google Earth Satellite Imagery, 2023)

Figure 41: 'Detail from Illustration' *Rua Direita na Cidade de Goa. Século XVI, Descrição da viagem do navegante Jan Huygen van Linschoten às Índias Orientais Portuguesas, 1579 - 1592. (Amsterdam, 1596)*

Figure 42: 'Image of Present Situation' (Google Street View Imagery, 2022)

Opportunity

According to Rossa (2015), cultural heritage is assumed as an active past, an inheritance that requires permanent management and can be considered one of the assets of the contemporary city. As an underlying concept for reading the relations of built cultural assets in the contemporary city, we adopt the urbanistic heritage, as defined by Rossa (2015), as the "stable formal relations system on which the city is created and re-created."

The example of 'Rua Direita,' once a principal road in the capital of 'Estado da Índia,' illustrates how only a handful of structures have endured the test of time and history. The evolution of road networks, residences, and socio-cultural dynamics has given rise to a new layer in what is now a lost city.

Key Questions:

Is Old Goa still regarded as an urbanised area?

Can it be classified as a lost city?

How can an urban revitalization plan be devised for an almost lost city?

These questions, along with related inquiries, warrant in-depth exploration. Endangered sites within the city should be identified and safeguarded. The implementation of a rigorous heritage protection plan is imperative, coupled with the adaptation of new functions on an urban scale. The revitalization of the city offers an opportunity for heritage development and tourism in a thoughtful manner. This gives the potential for a much larger study, proposal and project. For this thesis, only a brief proposal will be given on the Rua Direita.

Proposal idea

An annual event, the Feast of St. Francis Xavier, stands as the largest Christian festival in Goa. Celebrated annually on December 3rd at the Basilica of Bom Jesus in Old Goa, this festival is preceded by nine days of novenas, drawing pilgrims from across the globe. During this time, a grand fair takes place, lining the streets with stalls selling sweetmeats, toys, and clothing as seen in Fig. 43. The saint's body rests in a silver casket within the Basilica of Bom Jesus and is taken down for veneration as seen in Fig. 42.

Figure 42 : Procession for the Veneration of St. Francis Xavier's relics. (Goa : O herald, 2014)

To efficiently manage the influx of pilgrims, tourists, visitors, and locals, an urban-level plan is proposed. The area between the Basilica and the Cathedral can be cordoned off for religious activities during the festival. *Rua Direita*, historically a commercial road, could be transformed into the festival's commercial zone. A well-structured layout for food and beverage stalls, entertainment merchandise, and seating arrangements could be devised. Additionally, an enactment of *Rua Direita*, featuring a backdrop illustrating the 'lost monuments' along the road, could create a new skyline for *Rua Direita*.

Figure 44 : Images of the commercial part of the feast of St. Francis Xavier. (Goa : O Herald, 2014)

The management of this intervention would fall under the jurisdiction of the tourism department, contributing to the funds allocated for Old Goa's maintenance. Given that December witnesses numerous year-end events in Panjim, this initiative could also help disperse crowds and facilitate traffic management.
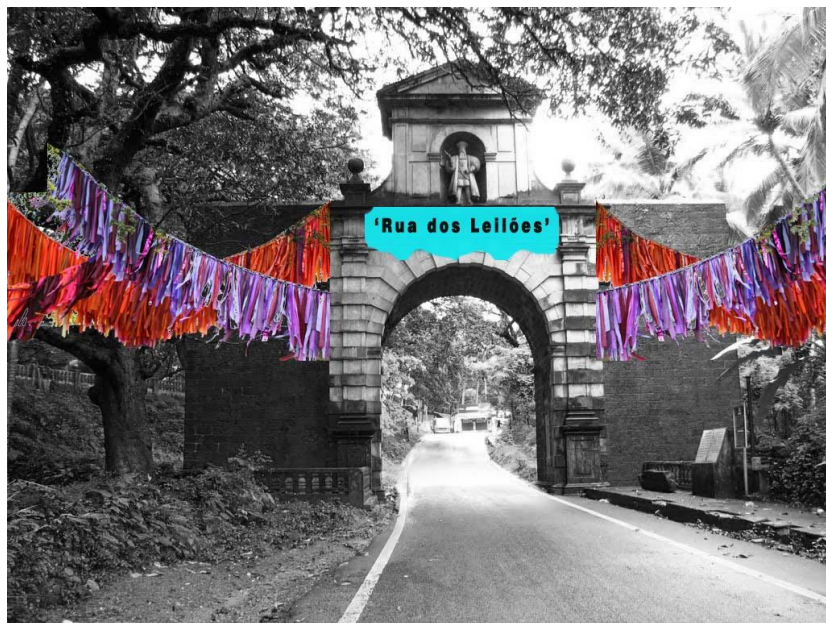

Figure 45: Proposal mockup of the entrance to Rua Direita for the "Rua dos Leilões" proposed festival through the remains of the Viceroy's Arch, Old Goa

[4] Cases of ruin

After an exploration of the region's history, encompassing its natural and cultural landscapes, a comprehensive understanding of the historical development and timeline of the town has been attained through the urbanistic and street level study. This enlightens us about the profound importance and significance of the systematic loss incurred through the deconstruction of the Old City of Goa. And it is important to remember that the deconstruction of the Old City of Goa was inevitable (Gomes, 2011). Subsequently, a spatial picture has emerged, illustrating the composition and overall morphology of the city's built environment, encompassing residential areas, public spaces, boundaries, linkages, and main streets. The previous chapter related to lost structures, this chapter dwells on structures currently in ruin.

Going through the layers of the past with present situation, it can be predicted that there could be two paths for the fate of these sites - complete disappearance of the monuments by the various threats it has endured through its timeline or the revaluation and revival of these sites based on its potential to be adapted for the future.

Moving forward, an evaluation will be conducted at the edifice level, focusing on specific sites within the region. This evaluation follows identification, diagnosis and treatment.
The comprehensive understanding of heritage structures, with their intricate histories, calls for a systematic approach with a similar process to that used in medicine. This entails distinct steps encompassing diagnosis by acquiring relevant data and information, therapy by identifying the causes of damage and decay, and controls by selecting appropriate remedial measures and monitoring the effectiveness of interventions. This undertaking will be reinforced by learning and observations from the Master's in Building Rehabilitation. The sites in focus, while not completely disappeared, are in a state of ruin, facing the perilous fate shared by other significant monuments lost in the Old City of Goa. This investigation entails a study of their historical significance, particularly their contributions to the realm of "Goan Architecture." Furthermore, a diagnostic assessment is undertaken to identify the factors that have led to their current state of ruin. Finally, proposals are presented to revive, restore, and rehabilitate these

sites, breathing new life into them and preserving their cultural values for future generations.

The site-specific procedure entails the implementation of various materials studied through the Master's program from identification of pathologies, diagnosis and further intervention of spaces within the historic sites.

A thorough examination to identify and address various issues. Fractures and cracks, including fissures and linear cracks, are scrutinised as they create discontinuities in the coating, facilitating moisture penetration. Biological contamination, characterised by vegetation growth and black crusts, hinders drainage and promotes moisture retention. Rising humidity resulting from moisture migration from the ground is carefully assessed. Drainage issues caused by surface runoff leading to saturation in specific areas are also taken into account. Dissonant mortars, differing in composition from adjacent surfaces, may introduce various pathologies. Absence of protective mortar leaves the substrate vulnerable to external agents. Cantaries exhibit multiple pathologies such as fissures, crevices, detachments, chromatic variations, deposits, biological colonisation, and lack of joint filling. Windows and doors are examined for issues such as rotting, lack of connections, reduced section, drying cracks, ageing, peeling paint, oxidised hardware, glass absence or breakage, which can result in insufficient tightness and excessive permeability. Cement-based renders, when incompatible with existing foundations and elements like counters and stone masonry walls, can cause blistering, degradation, and tearing. Generalised dirt and stains are addressed, along with the presence of spurious elements like infrastructure that may weaken outer walls in some cases.

The identification of said pathologies, constitutes the 'State of Conservation' of the ruin and site will be defined. Subsequently, a 'Critical Analysis' will be derived with the diagnosis of pathologies and finally a 'General Intervention' will be laid out marking zones to be conserved, restored, revitalised or if needed even demolished.

Heritage encompasses acts of remembering, including not only the narration of oral histories but also the embodiment of that recollection. It signifies an experiential aspect,

implying that heritage is not rigid or static, as often urged by conservation principles. Instead, it's a dynamic process that, while transmitting established values and meanings, also generates new ones (Smith, 2006). And so, finally various proposals will be made for these sites that hold history and for them new stories within their walls

4.1 Igreja e Convento de Nossa Senhora do Carmo, Chimbel

Presentation of the Site

Figure 46 : Map showing the location of the village of Chimbel in the Map of Goa and its magnified location with references of the Old City of Goa that lies on the east of Chimbel and the new capital of Goa, Panjim that lies on its west.

The Church and Convent of Our Lady of Mount Carmo is situated in the village of Chimbel. With reference to Fig. 46 at two scales above, the village of Chimbel is a settlement situated five kilometres from Panjim, and nine kilometres from the Old City of Goa. It is a sparsely populated village that lies in the valley south of the Kadamba Plateau. Marked in yellow, the newly constructed National Highway 746 (Panjim-Belgaum) (NH746) through the Kadamba Plateau is a faster route to Chimbel and further to Old Goa from Panjim. After following NH746 from Panjim, taking a sharp turn off the highway, one enters the Village of Chimbel.

The original settlement of the village pre-dates Portuguese occupation in Goa and it experienced an influx of settlers during the 18th century when the Portuguese capital shifted from Old Goa to Panjim. During this shift in the capital the inhabitants that moved out of the Old City, settled in villages as they moved westward, towards Panjim. The site in focus is tucked in this village and as one drives down the quaint road of the village it is

almost easy to miss, as it sits in the middle of a vegetation filled plot as seen in Figure 29. It is so intensely covered with vegetative growth that through a satellite image, one cannot locate it either. So, why should this lost and abandoned site be an important site to focus on and revitalise?

Figure 47 : Google map of the village of Chimbel with the site of the church and convent of Our Lady of Mount Carmel marked and shows the dense vegetation that surrounds the ruin. Also seen in the map is the newly constructed NH746 Panjim-Belgum highway.

SITE ANALYSIS

It is crucial to acknowledge that a site is never static but rather a dynamic entity consisting of interconnected networks. Edward T. White (1982) emphasises the active nature of these networks, despite the focused structure being in a ruined state. Within the framework of the consequence triangle, three key actors are involved: the building, the users, and the context. By considering this triangle, the analysis of the site reveals its role as an active network encompassing various contextual elements that shape and define the site. Following 'Site Analysis' by Edward T. White, a systematic site analysis is carried out.

NEIGHBOURHOOD CONTEXT: With reference to Fig. 47, following NH746 from Panjim, taking a sharp turn off the highway, one enters the Village of Chimbel. The approach to the site is by a secondary road on its southern periphery. The site is owned by the Provedoria[16], a government institution now known as the Institute of Public Assistance[17]. To the west is the adjacent plot of the Provedoria, which holds an old age home from where the residents have been shifted to another building in Panjim. On the immediate east of the site lies sparsely scattered residential structures and buildings of mixed use and further the density of the village of Chimbel increases as can be seen in Fig. 47. To the south of the site, the contours of the valley descend to the marshes and a tributary of the river Mandovi which can also be noted in Fig. 47. The north of the site slopes upward and finally meets the new Panjim-Ponda highway.

CIRCULATION: The road on the south is a secondary road that leads further into the village; it is not highly frequented by vehicles. Pedestrian circulation on the site is close to none as the site is privately owned and currently closed.

LEGALITIES: The property is privately owned by the Tertiary Carmelites property was seized from the Tertiary Carmelites and transferred to the Santa Casa da Misericórdia, the precursor to the present-day Provedoria, which is a semi-governmental institution for public assistance. More about the history of legalities will be covered below.

NATURAL PHYSICAL FEATURES: Following the contours marked in Fig. 48 below, the site slopes upwards to the north, but slopes downwards to the south, the site does collect drainage water from the slope to the north, it comes to a stop at the ruin, but then passes further south.

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[16] The Public Assistance Department commonly known as "Provedoria" was set up by the Erstwhile Portuguese Government in 1947 by an Enactment No. 1200 dated 7.8.1947. By Legislature Enactment No. 1984 dated 14.4.1960, the Department became an autonomous body. The major policy decisions are directed by the Government of Goa.

[17] Website: https://ipagoa.org.in/

Figure 48 : Contour map of the village of Chimbel with the site of the church and convent of Our Lady of Mount Carmel marked. Also seen in the map is the newly constructed NH746 Panjim-Belgum highway. (Generated from Open street map, 2023)

History & Ruination

HISTORY

The abolition of religious orders by the liberal regime in 1834 led to the closure of religious institutions throughout the Empire, which, in practice, in Goa, caused the closure of the city itself, since little else had remained there since the flight of urban inhabitants and services to Ribandar and, after the construction of the Linhares Causeway in 1633, to Panjim. The shift in capital took 70 years, and along the landscape sprouted different settlements. The village of Chimbel was one of these villages. The construction of Church and Convent of Our Lady of Mount Carmel in the early 18th century attests to the development of Chimbel and other rural areas surrounding Old Goa, in correspondence with Old Goa's depopulation process, which began early in the 17th century.[18] This structure stands as an invaluable exemplification of late modern Goa church architecture. (Mendiratta & Velho, 2004) Its heritage significance is of utmost importance, serving as a testament to the region's cultural and historical legacy. While

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[18] "The undoing of Old Goa coincides with the development of Goan churches and houses throughout the hinterlands of Ilhas, Salcete and Bardez, during the late 17th, 18th and 19th centuries. Naturally, this is not a coincidence." - Paulo Varela Gomes, "As Igrejas dos Católicos de Goa," Ler História 50 (2010):

conclusive data is presently lacking, it is estimated that the construction of this church took place between 1755 and 1785. (Mendiratta & Velho, 2021)

EGREJA E RECOLHIMENTOS DE N. SRA. DA SERRA E SANTA MARIA MAGDALENA
(Antigo convento dos Carmelitas)

A procissão da quinta feira de endoenças sahindo da egreja.
O escrivão conduzindo a antiga e celebre cruz de marfim, precedido da irmandade da Misericordia e seguido da meza
A esquerda está o recolhimento de N. Sr.ª da Serra, e, á direita, o de Santa Maria Magdalena,
que tem capella privativa.

Figure 49 : Church of Nossa Senhora do Carmo, Chimbel during a Holy Week procession. (Goa: História da Misericórdia de Goa III, 1900)

The site in question was occupied by the Tertiary Carmelites, until 1835 when the religious orders were expelled from Goa. Subsequently, the property was seized from the Tertiary Carmelites and transferred to the Santa Casa da Misericórdia, the precursor to the present-day Provedoria, which is a semi-governmental institution for public assistance. The convent underwent a repurposing process and was transformed into a residence for destitute women and girls. In the 1930s, the site also became home to Goa's first mental health hospital. In the 1960s and 1970s, minimal changes occurred in Chimbel. It gradually became known as an Old Age Home, which remained in operation until its closure in 2018. (Mendiratta & Velho, 2021)

However, the conditions at the government-run Old Age Home, managed by the Institute of Public Assistance, were far from comfortable. In 1979, construction commenced for a new and modern Old Age Home nearby, inaugurated in 1982 to provide support for destitute individuals.

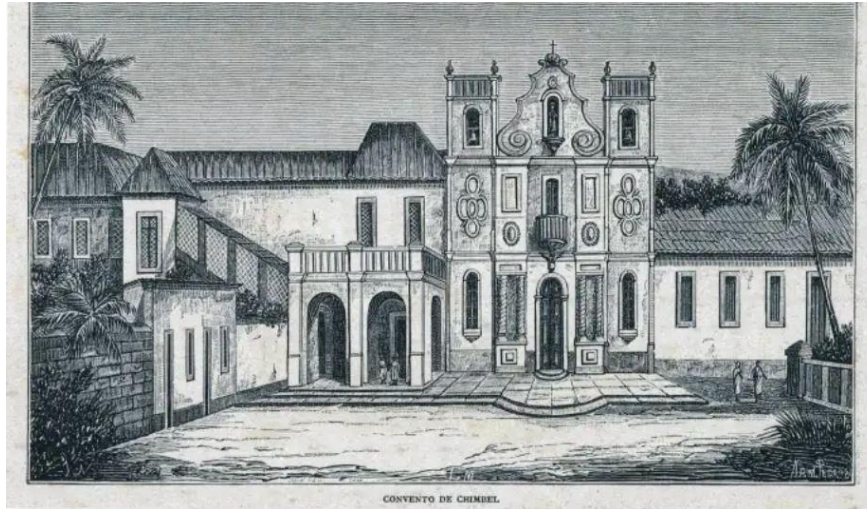VOLUMETRIC DESCRIPTION OF BUILDING BEFORE RUIN

Figure 50 : Illustration of the Church and Convent of Our lady of Mount Carmel by António Lopes Mendes in the book, A India Portugueza (Lisboa : Fundação Oriente, 1992)

From the reconstruction drawings[19] proposed by Sidh Mendiratta and Fernando Velho in 2004 and their further studies up to the year 2021 we understand that before its ruin, the conventual building in Chimbel, starting from its original hospice and subsequent church, underwent expansion over time. The available 1835 inventory suggests the presence of a single cloister in Chimbel at that time. (Mediratta, Velho, 2019) Therefore, they propose that the novitiate, built between 1770 and 1800, comprised a rectangular volume adjoining the church near the chancel. At the opposite end of this structure, the novitiate's chapel, also mentioned in the 1835 inventory, was likely situated. The convent encompassed several other chapels, along with a sacristy. The sacristy was probably located behind the chancel, accessible through a small corridor connecting the hospice area to the novitiate. A chapel near the entrance of the hospice, known as the "capela da Portaria," and another chapel dedicated to São Luís Gonzaga were present, although the exact locations are unknown. In addition to the chapels, the main rooms within the Chimbel complex included a refectory, a kitchen, an infirmary, and a library. However, the precise positioning of these rooms remains undisclosed.

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[19] Sidh Losa Mendiratta and Fernando Dias Velho, "The church and convent of the Tertiary Carmelites in Chimbel, Goa: field, survey and historical notes," Revista Oriente 26 (2018)

RUINATION

From the early 1980s, the old conventional structures of Chimbel were abandoned and began to deteriorate. In the 1990s, the Institute of Public Assistance systematically demolished these structures, except for the church, employing specialised labour for the task. Despite the Institute of Public Assistance attempts to repair the church in 1993, concerns were raised by citizens regarding the demolition works. Accusations of gross negligence were made, as the prescribed 3-metre buffer zone between the church's walls and the demolition area was not respected. These actions not only resulted in structural weakening of the church but also caused damage to altars and religious artefacts. Additional grievances included allegations of desecration of graves, failure to protect religious statues from theft, and deliberate neglect of cultural artefacts, all directed towards Provedoria. Between 1995 and 2010, the old Church of Nossa Senhora do Carmo faced significant damage due to monsoon seasons. The Provedoria and the Archdiocese of Goa and Daman engaged in correspondence regarding the costs and responsibilities of preserving the sacred building. Despite protests from concerned citizens, both institutions were unable to prevent the gradual collapse of the church, which ultimately occurred after 2010. (Mendiratta, Velho, 2021)
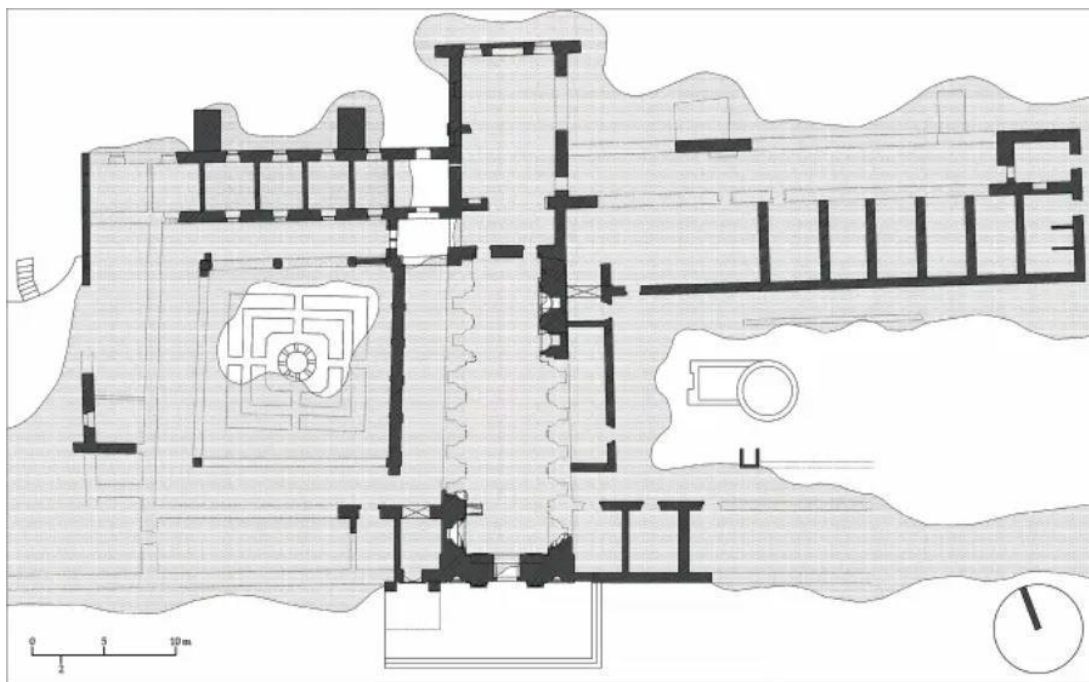

Figure 51: Plan of the Church and Convent of Our Lady of Mount Carmo. (survey coordinated by F. D. Velho & S. L. Mendiratta, 2017/ technical help by Siddesh Naik & Paresh Vengurlekar. Mendiratta,Velho 2004)

Layers of ruin and rehabilitation: The cases of Chimbel and Graça (Goa, India)

CURRENT STATE OF RUIN

During a site visit in 2019, the ruins of the old convent were already covered in debris and overgrown vegetation. The collapsed roof rafters were entangled in the debris, indicating their relatively good condition. The walls of the church have collapsed and crumbled onto the floor of the church and is covered with debris. There are remnants of the eastern cloister. The walls of the sacristy still stand, although not in their original height as they have undergone degradation and weathering. Although most of the church had crumbled, its main façade remained standing, showcasing an impressive presence above the surrounding palm trees. Despite its state of ruin, the site continues to serve as a venue for occasional religious and social functions. 'Mount Carmel Conservation Association' of Chimbel was formed and has objected to the plans of the Provedoria to begin construction of a new block over the state protected ruins of the Church and Convent of Mount Carmel. The association hosts meetings on site occasionally and more recently mass has also been hosted in the ruins by the catholic residents of Chimbel.

During his presentation at the Charles Correa Foundation in July 2019, Ar. Fernando Velho revealed the developmental pressures on Chimbel. He emphasised the village's need for inclusive public space, where residents, irrespective of their origin, can gather. This equitable space would encourage interaction and play among children from various backgrounds, aligning with Jane Jacobs' notion that the acceptance and utilisation of public spaces determine their true functionality.

State of Conservation, Critical Analysis & General Intervention

This section will tackle the identification of various pathologies of the structure. Spot images[20] are shown from sections of the ruins and diagnosis is done and is conveyed by marking various pathologies[21] identified and marked on the images. Following this, a critical analysis report is given to convey the state of conservation of the site.
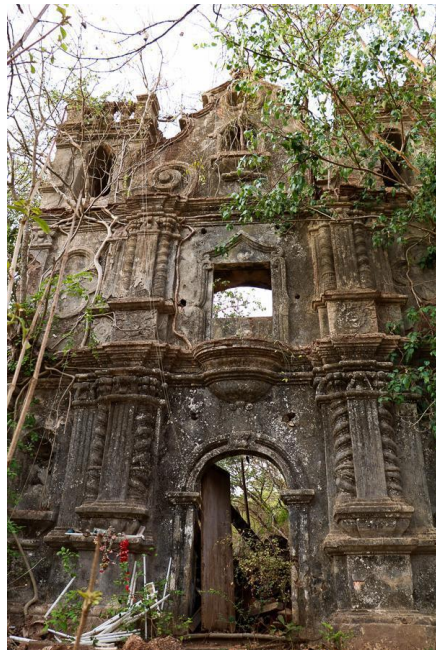

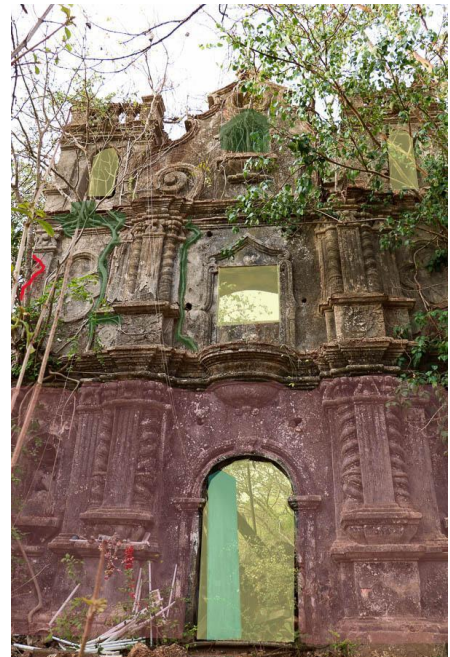**Figure 52: Façade of the Chapel. (Goa: Lester Silvera, 2019)**

Figure 53: Diagnosis of Façade of the Chapel on Fig. 52

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[20] Images are sourced from the blog 'The Balcão' by Ar. Lester Silveira.
 https://thebalcao.com/the-architectural-splendour-of-the-chimbel-monastery/
[21] Pathologies are marked based on the authors learnings from the Master's in Rehabilitation of Edifices, University of Coimbra, Portugal.
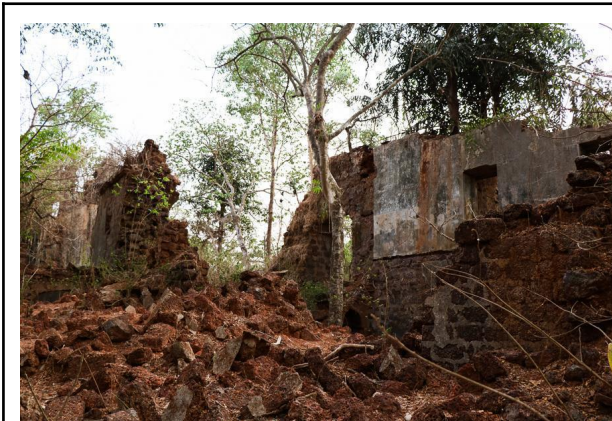
Figure 54: Rubble from collapsed walls of the ruin. (Goa: Lester Silvera, 2019)

Figure 55: Diagnosis of walls that still stand based on Fig.54

Figure 56 : Ruins of the Sacristy. (Goa: Lester Silvera, 2019)

Figure 57: Diagnosis on the ruins of the Sacristy on Fig. 566

Figure 58: Descriptive basalt stone above the secondary doorway to the Chapel. (Goa: Lester Silvera, 2019)

Figure 59: Diagnosis of basalt stone above the secondary doorway to the Chapel on Base Fig. 58

Figure 60 : Stucco patterns on what remains of the arch over the narthex. (Goa: Lester Silvera, 2019)

Figure 61 : Diagnosis on what remains of the arch over the narthex on Base Fig. 60

Figure 62: Ruins of an inverted shell niche that survives in the Chapel interior. (Goa: Lester Silvera, 2019)

Figure 63: Diagnosis of ruins of an inverted shell niche that survives in the Chapel interior on Fig. 62

The images above are marked after observing and diagnosing existing pathologies on the ruin. The 'key' to the pathologies identified along with a brief description is given below.

KEY:

FRACTURES AND CRACKS ......

Fissures and linear cracks that promote discontinuities in the coating, enhancing the entry of moisture into the building.

BIOLOGICAL CONTAMINATION......

Development of curled vegetation and black crusts, blocking the path or drainage of water and encouraging the permanence of moisture in the substrate.

RISING HUMIDITY ......

Migration of moisture from the ground

DRAINAGE ISSUES......

Surface runoff saturating certain areas.

DISSONANT MORTARS ......

Dissonant mortars of composition different from those existing in the same place and on contiguous surfaces, which may cause different pathologies

ABSENCE OF MORTAR ......

Leaving the substrate unprotected and subject to the action of external agents

WINDOWS / DOORS / STONEWORK ......

Present several pathologies, such as: rotting of some parts, lack of connections. Present several pathologies, such as: fissures, crevices, fractures, detachments, chromatic citations, deposits, biological colonisation, lack of joint filling, cracking and volumetric fillings with dissonant mortars

CEMENT BASED RENDERS ......

Plasters of a cementitious nature which, being able to be incompatible and dissonant with the existing foundation and other elements, such as counters and stone masonry walls. may cause the appearance of blistering, degradation of construction elements, tearing,

SPURIOUS ELEMENTS ......

Infrastructure or members that, in some cases, weaken the outer walls.

Upon identifying various pathologies, it becomes evident that the ruin is in dire need of conservation and treatment due to its abandonment, leaving it exposed to natural elements. The presence of fissures and linear cracks allows moisture to infiltrate the building, leading to coating discontinuities. Biological contamination, manifested through curled vegetation and black crusts, further exacerbates moisture retention in the substrate. While migration of ground moisture is not currently observed, this may be due to the absence of post-monsoon period images. Dissonant mortars, differing from those found on adjacent surfaces, are evident and may contribute to distinct pathologies, indicating previous restoration efforts.

The absence of proper protection exposes the substrate to external agents, posing a significant threat, especially during the Goan monsoon season. Various stonework exhibits multiple pathologies, including fissures, crevices, fractures, detachments, chromatic citations, deposits, biological contamination, lack of joint filling, cracking, and volumetric fillings with dissonant mortars. Moreover, the presence of cementitious plasters may cause incompatibility issues with the existing foundation and other elements such as counters and stone masonry walls, leading to blistering, degradation, and tearing.

The site also suffers from general dirt and stains. Additionally, certain infrastructure or members, displaced due to roof or wall collapses, impose unaccounted loads on stones or walls, weakening the outer structures. In conclusion, immediate and comprehensive conservation measures are necessary to preserve this historically significant site.

ANALYSIS

A strategic planning and strategic management technique is used to identify Strengths, Weaknesses, Opportunities, and Threats related to the site. This situational assessment plays a part in analysing various physical and abstract factors that may be acting on the site in focus. It will later help frame the general intervention strategy and proposal to be adopted to revive the site.

STRENGTH: Having recently received recognition as a protected heritage site[22] by the state government, this location holds significant historical value and serves as an exemplary specimen of Goan church architecture. Recent research has proven that this site is a special case of goan architecture and has important historical relevance which is important to conserve.

WEAKNESS: This site has been left abandoned, enduring neglect and bearing the brunt of the challenging conditions imposed by the Goan monsoon. The diagnosis of pathologies of the structure have shown that the state of the ruin is at a critical level.

Figure 64: Holy mass held in december 2020 (Goa : MCCA, 2020)

OPPORTUNITY: This presents a unique opportunity as the villagers are resolute in their efforts to preserve the site. Despite its current state, the site continues to serve as a venue for religious functions as seen in Fig. 64. Furthermore, it has attained recognition at the state level, affirming the importance of the site. The village and public heritage committees have been created for its protection such as The Mount Carmel Conservation of Chimbel (MCCA Chimbel). They should persevere in their endeavours and diligently pursue a comprehensive rehabilitation plan.

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[22] https://www.thegoan.net/goa-news/in-ruins-chimbel-church-notified-as-a-heritage-site/62970.html

THREATS: The owners of the site have issued plans that threaten[23] to demolish the existing structures and replace them with modern buildings. Furthermore, with the NH746 highway surrounding plateau and the evolving real estate and public infrastructure developments in the surrounding areas have the potential to alter drainage patterns, posing a risk to the site as it is situated in a low-lying area that may experience water accumulation.
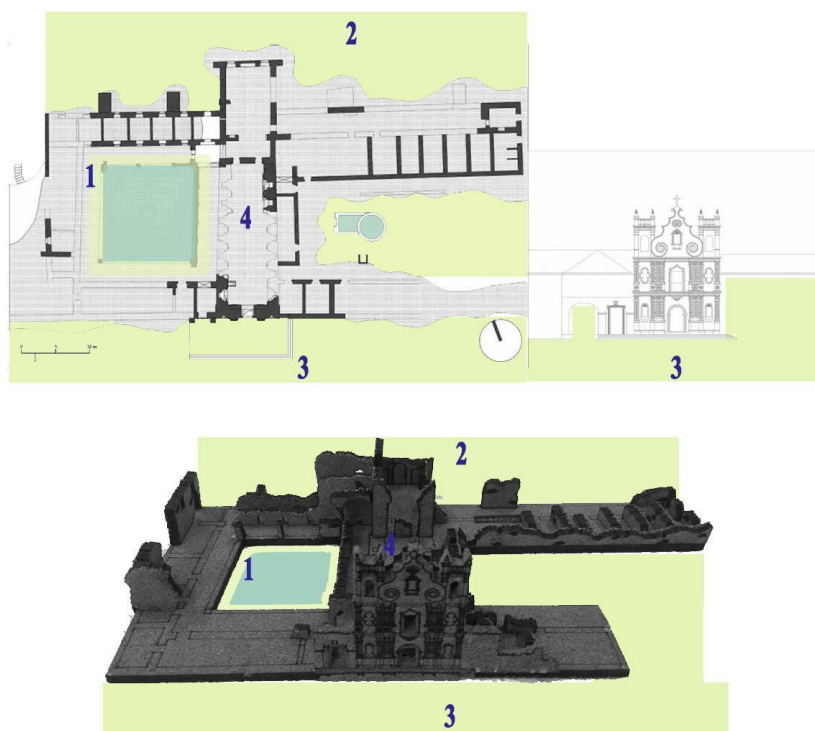
GENERAL STRATEGY

Figure 65 : Graphics showing zones of conservations and restoration and zones for revitalisation.

CONSERVATION/RESTORATION ……..
REVITALISE   ………

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[23] Local newspaper article :
https://www.heraldgoa.in/Goa/Citizens-fear-ruins-of-Mt-Carmel-Church-at-Chimbel-will-be-destroyed/171141

Despite its critical conservation status following a thorough diagnosis, the structure holds significant potential. The combined analysis of pathologies and a SWOT analysis has led to the formulation of a comprehensive intervention strategy, outlined in Fig. 65. This strategy focuses on the above-ground portion of the structure. It requires extensive archaeological excavation and documentation, followed by sensitive conservation efforts led by professional conservators, addressing each pathology individually.

In the same Figure, the zone marked out in green is marked out to be revitalised. The foreground of the church, the courtyards including a well which is currently dysfunctional can be excavated, revived and readapted for new purposes.

Proposal

Following the pathology diagnosis, there is an immediate need for excavation and systematic conservation of the site, particularly given its recent designation as a protected heritage site. This must be prioritised as the next crucial step in its rejuvenation process, aligning with the previously outlined general strategy. Specific proposals corresponding to the numbered points in the general strategy can now be introduced. (Figure 65)

Figure 66: [1] A public park through the ruins with interventions to make zones throughout the site accessible to various user groups.

After clearing, stabilising, and preserving the site, provisions can be made within the revitalization scheme to accommodate religious events, particularly the Catholic feast of Our Lady of Mount Carmel, which is currently celebrated at this location.

Layers of ruin and rehabilitation: The cases of Chimbel and Graça (Goa, India)

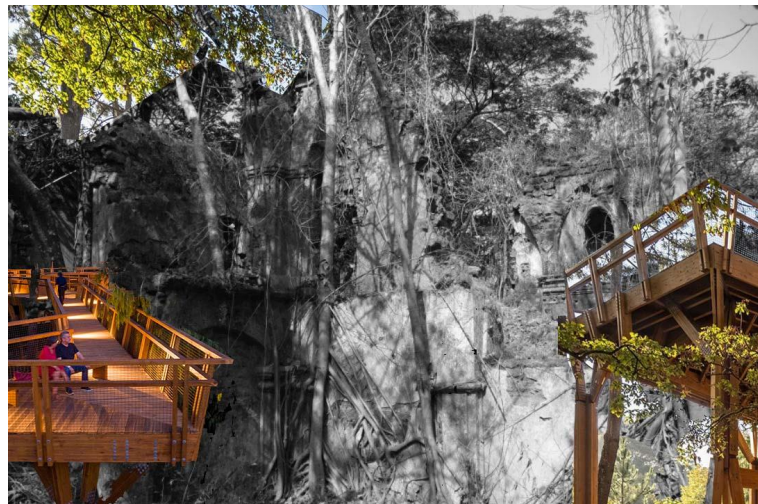**Figure 67 : Treetop walk Serralves Porto, Portugal**

Figure 68 : Treetop walk Serralves Porto superimposed within the ruins.

As mentioned before the Chimbel village necessitates the establishment of an inclusive public space, wherein children from both Indiranagar and the old village can freely engage in play and interaction. A public space for the well-being and development of the locals, ensuring equal opportunities and fostering a sense of unity within the community seen in Fig. 66. Throughout history, the site has consistently served as a haven for diverse social groups, encompassing roles such as an asylum, convent, church, orphanage, or residence for destitute women. Given this rich historical context, it is prudent to consider revitalising the site's original purpose and rehabilitating it to accommodate a new community. A proposal for a public park that integrates religious and cultural activities,

along with a garden area traversing the ruins as seen in Fig. 68, would provide the villagers with a daily recreational space to enjoy.

Figure 69 : [2] Proposal view showing a mockup of adaptive reuse interventions on the site with an aim to facilitate access to specific viewpoints, enabling visitors to appreciate the visual elements of the site while also creating a possibility of exploration through the ruins.

To facilitate a new function, basic infrastructure needs to be introduced on site such as, security, for vigilance of the ruin- in order that no further destruction of property is seen, as well as for the safety of the users. Enhancing usability and safety for users across different age groups necessitates prioritising accessibility to the site and its revitalised areas. Various measures can adaptively reuse the site as seen in Fig. 69, such as constructing ramps, installing railings, and ensuring well-maintained stairs. In the case of a public park, the introduction of walkways with seating areas in open spaces can be considered. These interventions aim to facilitate access to specific viewpoints, enabling visitors to appreciate the visual elements of the site. Such initiatives will foster an engaging "exploration" concept throughout the ruins. Additionally, providing public bathrooms is also imperative for user convenience.
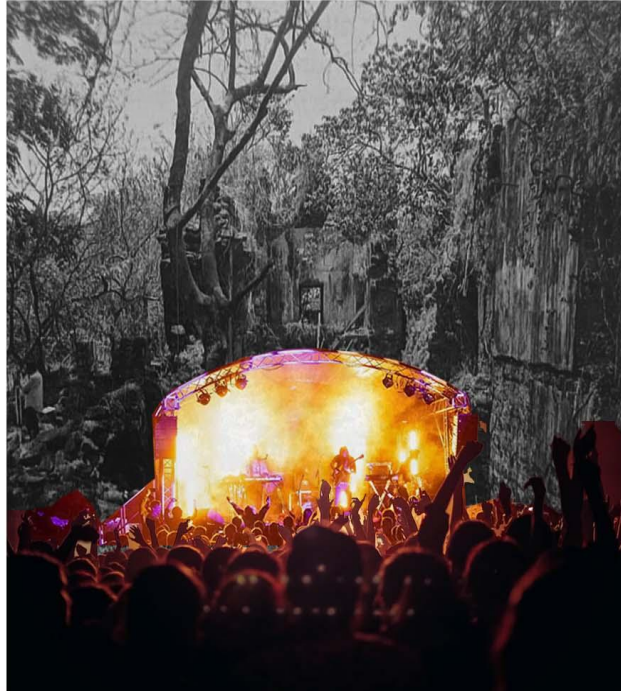
Figure 70 : Proposal mockup showing superimposition of performances and events within the ruins.

To enable effective interpretation of the site's historical significance, a curated gallery display can be utilised, presenting contextual information, old photographs, and emphasising the site's historical and architectural significance. This could be done in the courtyard of the ruins and could be rehabilitated as a heritage interpretation area.

Figure 71 : [3] This proposal view shows the large foreground of the church, with its intact dramatic façade, which would serve as an interesting area and backdrop for cultural events.

To facilitate cultural events, it is recommended to designate marked areas for temporary stages, offering opportunities for performances and gatherings. As shown in Fig. 71 , the proposal view shows the large foreground of the church, with its intact dramatic facade, which would serve as a prominent vantage point and backdrop for cultural events. Additionally, the area is shaded by tall trees, providing relief during daytime events. (Fig. 73)

Figure 72 : Fall 2018 collection from Chanel Paris—Grand Palais, 2019.

Figure 73 : Superimposition of Fall 2018 collection from Chanel Paris with the ruins as a backdrop based on Fig. 72.

Layers of ruin and rehabilitation: The cases of Chimbel and Graça (Goa, India)

Another option is to utilise the courtyard within the ruins, as shown in Fig. 74. Once revitalised, as a smaller cultural space with an accompanying rehabilitated cloister. Careful consideration should be given to sound precautions to minimise noise disturbance, especially as neighbouring areas are residential. Thoughtful seating arrangements should also be provided to ensure visitor comfort.

Figure 74 : [4] Proposal mockup showing the utilisation courtyards of the ruins once revitalised.

Considerations should be given to organising multi-religious festivals that foster inclusivity and respect for different faiths. Understanding how the structure functions for users of diverse religious backgrounds is essential for promoting local cultural harmony and inclusiveness. It is important to organise multi-religious festivals that respect and embrace different faiths. Understanding the role of the structure in accommodating users from diverse religious backgrounds is crucial for fostering local cultural inclusiveness.

4.2 Igreja da Graça, Convento de Santo Agostinho, Old Goa

Presentation of the site

Figure 75 : Map showing the location of Old Goa in the Map of Goa and its magnified location with references of the village of Chimbel to its west and the new capital, Panjim that is further westward.

The Church of Our Lady of Grace and its adjoining Convent of St. Augustine is situated in the Old City of Goa. With reference to Fig. 75 of maps at two scales, Old City of Goa is situated thirteen kilometres from Panjim, the current capital of Goa. Until recently, the access to Old Goa from Panjim was along the ponte de linhares which was constructed in the 1600s as settlers were moving away from the Old Goa to Panjim. Marked in yellow, is the newly constructed National Highway 746 (Panjim-Belgaum) (NH746).

With the Old City, the ruins of the Convent and church of the Augustinian order in Old Goa comprise a large archaeological group of major historical value and were classified as part of the World Heritage[24] in 1986. The vestiges of the architectural structures situated on the vanished city's Monte Santo. As seen in Fig. 76, this hill, located west of

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[24] These monuments, 'Churches and Convents of Goa' were inscribed and classified as UNESCO World Heritage as - The churches and convents of Goa, the former capital of the Portuguese Indies – particularly the Church of Bom Jesus, which contains the tomb of St Francis-Xavier – illustrate the evangelization of Asia. These monuments were influential in spreading forms of Manueline, Mannerist and Baroque art in all the countries of Asia where missions were established. (https://whc.unesco.org/en/list/234/)

the city centre, hosted the sites of church of Priorado do Rosário, the Jesuit college of São Paulo-o-Novo, or São Roque, the Augustinian college of Nossa Senhora do Pópulo and the Chapel of Santo António and the Convent of Santa Monica, this hill also had a large yard inclined to the north-east, which has since disappeared through overgrown vegetation, a car park and a very busy paved road that cuts across it diagonally. Regrettably, the current landscape condition severely hampers any interpretation of the original urban context of this Sacred Hill in the former city of Goa. The site is also under the national protection of the ASI, the Archaeological survey of India.

So, if this is already a protected and conserved site, why is it an important site to focus on and revitalise?
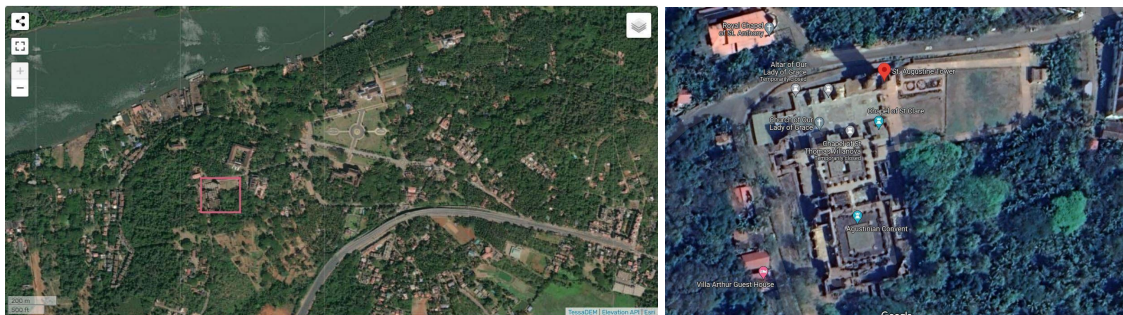

Figure 76 : Location of The Church and Convent of the Augustinian order on Monte Santo, lying west to the city centre of what was the Old City of Goa. At a magnified scale the image shows the archaeological ruins and the vegetation that surrounds it. (Google Earth Satellite Imagery, 2022)

SITE ANALYSIS

Edward T. White's site analysis approach once again, it is crucial to recognize that even though this site is abandoned it is not a site that is static but a dynamic entity comprising interconnected networks. Within the consequence triangle framework, the building, users, and context emerge as key actors. By revisiting this triangle, the site analysis exposes its active network nature, incorporating contextual elements that contribute to its shaping and defining.

NEIGHBOURHOOD CONTEXT: The site is situated on the 'Holy Hill' of Old Goa, adjacent to notable landmarks. To the north, the Chapel of St. Anthony and the 'Convent of Santa Monica' can be found, presently housing the 'Museum of Christian Art'. Further

northwest stands the 'Church of Our Lady of the Rosary', also located on the 'Holy Hill'. Descending beyond this point, one encounters the 'Dempo shipbuilding yard' and the former 'Portuguese Arsenal of the Old City of Goa', now a coconut tree-dotted plot used as parking space during the annual December feast of St. Francis Xavier at the 'Basilica of Bom Jesus'. Beyond this lies the River Mandovi. Acting as a perimeter between these neighbouring areas and the site boundary of the 'Church and Convent of St. Augustine', a secondary road is present. On the eastern side of the site, another road delineates its boundary, followed by the 'Church and Convent of St. John of John'. To the south and east of the site, there is an un-excavated area comprising the Church and college of Our Lady of Populo, covered in vegetation.

CIRCULATION : Vehicular circulation occurs along two roads that border the site's northern and eastern peripheries. During the tourist season, particularly from April to May and November to December's end, there is an increased presence of vehicles, including tourist buses and tuk-tuks. Notably, the construction of the Panjim-Ponda highway has impacted vehicular circulation on a larger scale. Although the highway passes south of the site, a section lies within the 500-metre setback boundary. This busy highway has not only introduced higher vehicular flow to Old Goa but has also attracted real estate developers to the area. Pedestrian movement within the site is restricted to the excavated areas, marked by barricades.

LEGALITIES : The site is government owned. The protection and regulation of the serial property in Goa are governed by the Planning and Development Authority (Development Plan) Regulations (1989, 2000), which clearly mark out conservation and preservation zones, including Old Goa. The Conservation Committee oversees and approves applications for infrastructural interventions under the Town and Country Act. All centrally protected monuments in India are also subject to the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act (1958), Rules (1959), and amendments (1992) and (2010). While there are no specific provisions for World Heritage properties, the Archaeological Survey of India manages the property through its Management System/Module.

NATURAL PHYSICAL FEATURES : Due to its location on a hillock and its contour lines can be noted in Fig. 77, it is seen that the hill slopes facing east and southeast, the drainage patterns at the site move away from the ruin, which is advantageous considering Goa's climatic conditions. The soil type on the site is laterite, a coarse and acidic soil that has limited moisture retention capacity. The open space in front of the main façade of the church, which is maintained by the ASI, lacks wild vegetation. Vegetation, mainly consisting of coconut trees, covers the area to the west and southwest of the site. Given Goa's strong southwest monsoon winds and rains, these trees now serve as a buffer. Although they do not completely shield the ruins, they mitigate the impact of monsoon rains on a portion of the site.

MAN-MADE FEATURES : Modifications have been made by the ASI to enhance tourist accessibility at the site. A new compound wall, constructed with laterite stone, has been installed on the northern side of the site, adjacent to the secondary road. Additionally, a laterite security cabin has been erected at the entrance, situated in the northeast corner of the site. Temporary roofing has been implemented on specific sections of the ruins. Further on the south compound wall, images and information has been put up, in an attempt to give tourists an idea of the history of the site.
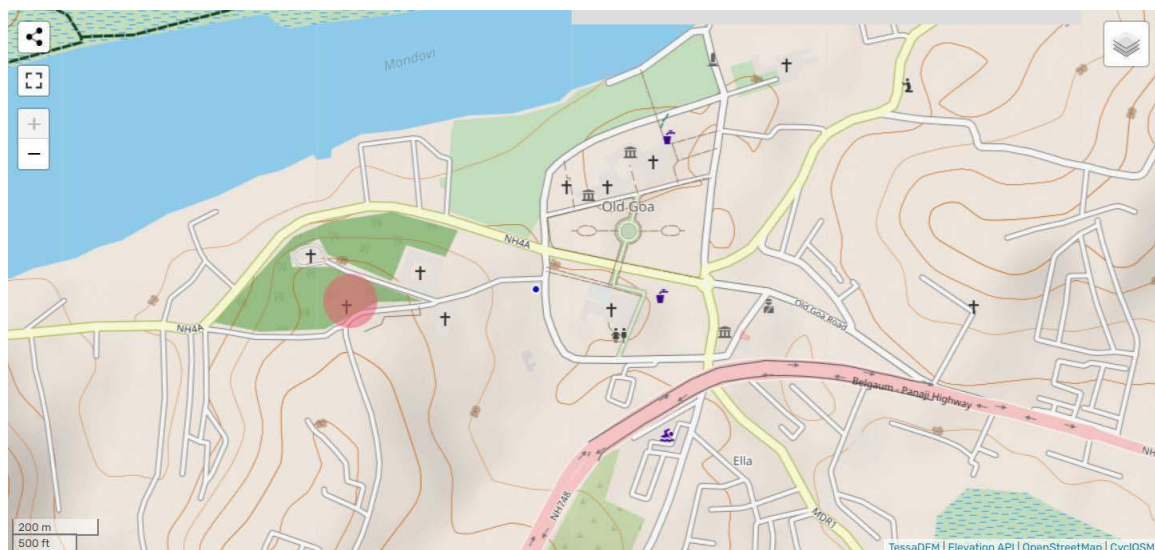

Figure 77 : Contour map of Monte Santo with the site of the church and convent of Our Lady of Grace marked. Also seen in the map is the newly constructed NH746 Panjim-Belgum highway.

History and Ruination

HISTORY

The Convent of Nossa Senhora da Graça, built by the Augustine missionaries in Goa, was a significant building in terms of its architectural design and historical context. Its construction was initiated in 1597 and lasted for about two decades. The convent was the primary residence of the Augustinian order in the East and had the College of Nossa Senhora do Pópulo attached to it.

Figure 78 : Photograph of the ruins of Church and Convent of St Augustine (Goa : Souza & Paul, 1880)

VOLUMETRIC DESCRIPTION OF BUILDING BEFORE RUIN

The Church of Nossa Senhora da Graça in Goa, India is a remarkable example of the architecture that emerged as a result of Portuguese influence on Christian religious architecture during the 16th and 17th centuries. The church was richly decorated with altarpieces, sculptures, paintings, and tiles, typical of many religious buildings in Goa. The main chapel was particularly impressive, with its great altarpiece containing eight sculptures surrounding the opening of the chamber where the sacred host was kept.

The Augustinian convent, located to the south of the church, was also an impressive structure, with two cloisters, a small courtyard, and various support and access areas. The convent contained four chapels, cells for novices and friars, a library, two refectories, a kitchen, an infirmary, an apothecary, the chapter hall, the provincial chapter hall, and the

church sacristy, among other areas. The Augustinian convent was located south of the church building and arranged around two cloisters separated by the chapter room and also a small patio. The cloister closest to the church, called the superior, is slightly smaller than the inferior or novitiate cloister. The convent's rooms were distributed on three floors. There were four chapels, cells for novices and friars, a library, two refectories, a kitchen, infirmary, pharmacy, parlour, chapter room, provincial chapter room and the church's sacristy, among other support spaces and access areas. Located just to the building's west were the laterite quarries, lime kilns and other convent support infrastructures. A service patio was likewise located at the south end of the complex, with various annexes used for the purpose of maintaining and supplying the convent. This was where the aforementioned elevated passageway led to the College of Our Lady of Popolo. The convent's enclosure began on the north side of the convent, with orchards and wells in this area. Besides the architecture, this sumptuous monastery also contained a notable collection inventoried when it closed in 1835. (Pereira, Mendiratta, HPPIP) A photograph of the ruins seen in Fig. 78 taken by Souza&Paul in 1880 is an important record of the church façade before it collapsed.

DESCRIPTION OF RUIN

Archaeological excavations overseen by the Archaeological Survey of India at the site since 1990 have revealed ruins of the convent, which continue to undergo extensive archaeological work. A topographical survey proposal for the ruins of the church and upper cloister of the convent of N. Sra. da Graça from Old Goa was presented, leading to the recommencement of rubble removal in three strategic locations. The first excavation area focused on the space behind the chancel, the second intervention targeted a compartment in the west wing of the upper cloister, and the third intervention between the upper cloister and the novitiate cloister resulted in the "discovery" of the chapter chapel.

Today, the ground floor of the convent remains in ruins, along with some fragments of the upper floor, drawings can be seen in Fig. 80 that shows the floor plan and Fig. 81 that shows the front elevation of the Church and Convent of St. Augustine. Efforts are underway to make new areas of the complex accessible through a circulation path.

Scientific debris clearance is ongoing near the second cloister, and consolidation work is planned to strengthen weakened portions before public access. Additionally, construction of new facilities, including toilets, waiting rooms, and caretakers' rooms, is already in progress at the front entrance gate.

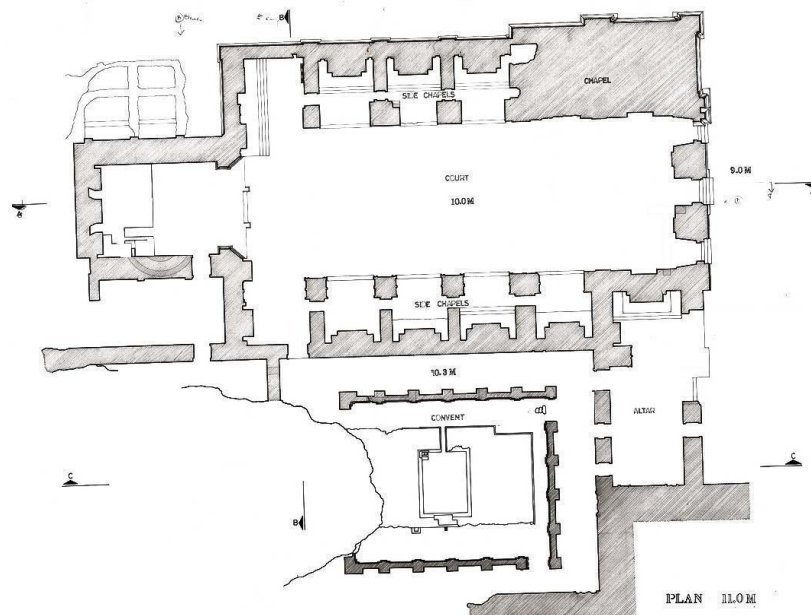**Figure 79 : Remains of the complex of the Convent of St Augustine. (Goa, 2019)**

Figure 80 : Plan of the Church of Our Lady of Grace adjoining the Convent of the Augustinan order, Goa.
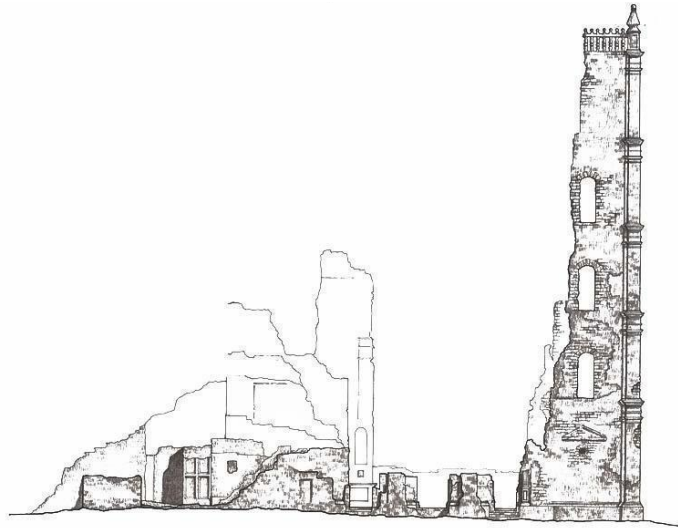**(Ahmedabad : CEPT University Archives, 1933)**

Figure 81 : Front elevation of the Church of Our Lady of Grace, adjoining the Convent of the Augustinan order, Goa. (Ahmedabad : CEPT University Archives, 1933)

The site's rich historical significance has garnered global recognition, earning it a coveted spot on the UNESCO World Heritage list. Despite its age and significance, the site continues to serve as a vibrant hub for cultural exchange and community engagement, drawing visitors from all over the world. It has even played host to the Ketevan Sacred Music festival[25] as seen in Fig. 82. However, the potential for a sensitive and nuanced rehabilitation proposal remains under-explored, leaving room for innovative and thoughtful approaches to preserving this precious piece of heritage. Issues faced by the site due to weathering and insensitive rehabilitation practices that have been carried out in the name of preservation.

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[25] https://serenademagazine.com/youngest-festival-goa-ketevan-world-sacred-music-festival/

Figure 82 : Ketevan Sacred Music Festival, within the ruins of the Church of Our Lady of Grace. (Serenade Magazine, 2016)
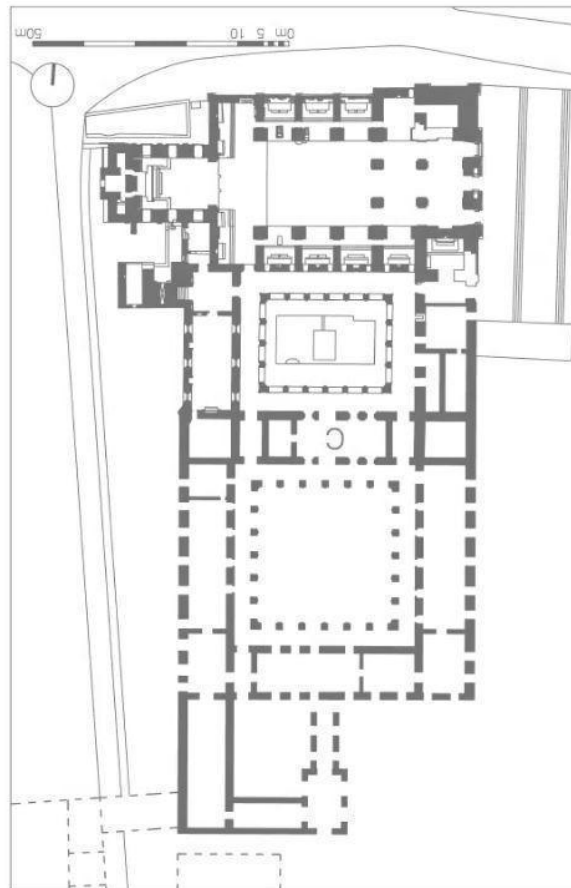

Figure 83 : Plan of the church of Our lady of Grace adjoining the Augustinian Convent, Old Goa (Mendiratta, 2004)

Layers of ruin and rehabilitation: The cases of Chimbel and Graça (Goa, India)

State of Conservation, Critical Analysis & General Intervention

This section focuses on identifying structural pathologies through spot images taken from different parts of the ruins. The diagnosis involves marking and identifying various pathologies in these images. Subsequently, a critical analysis report is provided to communicate the site's conservation status.

Figure 84: Façade of the Church. (Google Street View Imagery, 2022)

Figure 85 : Diagnosis on façade of the Church on Base Fig. 84

Figure 86: View of the remains of the bell tower and one of the aisle chapels from the Nave of the Church. (Google Street View Imagery, 2022)

Figure 87: Diagnosis on the remains of the bell tower and one of the aisle chapels on Base Fig. 86

Figure 89: Diagnosis on the remains on the left of the transept of the Church on Base Fig.88.

Figure 88: View of the remains on the left of the transept of the Church. (Google Street View Imagery, 2022)	

Figure 90: View of the remains of the first cloister of the Convent. (Google Street View Imagery, 2022)

Figure 91: Diagnosis on the remains of the first cloister of the Convent on Base Fig. 90

Figure 92: View of the remains of the second cloister of the Convent. (Google Street View Imagery, 2022)

Figure 93: Diagnosis on the remains of the second cloister of the Convent on Base Fig. 92

The images above are marked after observing and diagnosing existing pathologies on the ruin. The 'key' to the pathologies identified along with a brief description is given below.

KEY:

FRACTURES AND CRACKS

Fissures and linear cracks that promote discontinuities in the coating, enhancing the entry of moisture into the building.

BIOLOGICAL CONTAMINATION

Development of curled vegetation and black crusts, blocking the path or drainage of water and encouraging the permanence of moisture in the substrate.

RISING HUMIDITY

Migration of moisture from the ground

DRAINAGE ISSUES......

Surface runoff saturating certain areas.

DISSONANT MORTARS ......

Dissonant mortars of composition different from those existing in the same place and on contiguous surfaces, which may cause different pathologies

ABSENCE OF MORTAR ......

Leaving the substrate unprotected and subject to the action of external agents

WINDOWS / DOORS / STONEWORK ......

Present several pathologies, such as: rotting of some parts, lack of connections. Present several pathologies, such as: fissures, crevices, fractures, detachments, chromatic citations, deposits, biological colonisation, lack of joint filling, cracking and volumetric fillings with dissonant mortars

CEMENT BASED RENDERS ......

Plasters of a cementitious nature which, being able to be incompatible and dissonant with the existing foundation and other elements, such as counters and stone masonry walls. may cause the appearance of blistering, degradation of construction elements, tearing,

SPURIOUS ELEMENTS ......

Infrastructure or members that, in some cases, weaken the outer walls.

Upon careful analysis of the various pathologies, it becomes evident that despite being protected by UNESCO and the ASI with regular maintenance and conservation efforts, the ruin requires more frequent and delicate treatment. Fissures and linear cracks permit moisture infiltration, weakening the remaining walls. Biological contamination from vegetation and fungi worsens moisture retention in the substrate. Since the site is situated on a hill, there is no ground moisture migration. The presence of dissonant mortars, used in previous restoration attempts, indicates a lack of site-specific sensitivity in these efforts.

The absence of adequate protection exposes the substrate to external elements, particularly during the Goan monsoon season, posing significant risks. Various stonework displays numerous pathologies, including fissures, crevices, fractures, detachments, chromatic changes, deposits, biological contamination, joint filling issues, cracking, and volumetric fillings with dissonant mortars. Additionally, the presence of cementitious plasters may lead to incompatibility problems with the existing foundation and other elements, resulting in blistering, degradation, and tearing.

Being a public tourist site, the walls once adorned with decorative ceramic tiles have gone missing, and the frequent contact of tourists posing for pictures has contributed to long-term degradation of the stones. In conclusion, preserving this historically significant site requires a comprehensive heritage management plan and sensitive conservation measures.

Figure 94: Drone image of the ruins of the church of Our lady of Grace adjoining the Augustinian Convent that sits atop Monte Santo in Old Goa. The remains of the 46 metre high four storied bell tower that was once a part of the façade of the church is still standing. The view shows the scale of the ruins in comparison to the neighbouring structures seen To its north, the Chapel of St. Anthony and the 'Convent of Santa Monica' can be found, presently housing the 'Museum of Christian Art'. Further northwest stands the 'Church of Our Lady of the Rosary', also located on the 'Holy Hill'.On the eastern side of the site, another road delineates its boundary, followed by the 'Church and Convent of St. John of John'. It is notable that the volume of the sumptuous monastery has left a volumetric void on the hill.

SWOT ANALYSIS

A strategic planning and management technique is employed to assess the Strengths, Weaknesses, Opportunities, and Threats (SWOT) associated with the site. This assessment considers both tangible and intangible factors influencing the site. It serves as a foundational step in shaping the overall intervention strategy and proposals aimed at the site's revitalization.

STRENGTH: The historical significance of the site has been duly acknowledged, resulting in its prestigious designation as a UNESCO World Heritage site. Notably, the site remains an active hub for tourists and visitors, serving as a venue for diverse cultural events. This presents a unique occasion to propose a meticulous rehabilitation plan that adheres to principles of sensitivity. Careful consideration must be given to the impact on the surrounding landscape, ensuring that any interventions uphold the site's integrity.

Moreover, the site holds profound meaning as a symbolic representation of Old Goa and its broader significance as an embodiment of Goa's identity.

WEAKNESS: The site remains vulnerable to weathering, particularly exacerbated by the degrading effects of the Goan monsoon on the laterite stone. Regrettably, there have been instances of insensitive rehabilitation under the guise of site preservation. Additionally, challenges arise regarding traffic management in close proximity to the site, as well as concerns regarding compliance with the century-old monument and the potential consequences associated with its modification.

OPPORTUNITY: There is an opportunity to revive the site. Add a proper exploration network for the user to really get a feeling of the scale of the monument. Funds can be generated by equipping the ruins with the right methods to host cultural activities like concerts and art shows, which the site has already hosted in the recent past.

THREATS

The site faces a multitude of threats, including structural deterioration resulting from inadequate conservation efforts, thereby exacerbating its decay. Compliance with legal standards presents an ongoing challenge, as does meeting the expectations of those who reside within or have a significant connection to the site. It is crucial to consider the perspectives and expectations of the site's inhabitants. The sensitivity of any proposed interventions must be carefully assessed to ensure harmonious integration with the site's historical significance. Moreover, the incorporation of modern systems into historically significant monuments poses a complex task. The site is also susceptible to theft and property damage associated with tourism, while traffic congestion exacerbates the challenges faced.

GENERAL STRATEGY

Figure 95 : Graphics showing zones of conservations and restoration and zones for revitalisation.

CONSERVATION/RESTORATION ……...
REVITALISE ………

Even though the monument is classified as a UNESCO protected site and is frequented by tourists a large part of it remains underused and has great potential to be adapted and revived. The combined analysis of pathologies and a SWOT analysis has led to the formulation of a comprehensive intervention strategy, outlined in Figure 95. This strategy focuses on the above-ground portion of the structure. It requires extensive archaeological excavation and documentation, followed by sensitive conservation efforts led by professional conservators, addressing each pathology individually.

In the same Image, the zone marked out in green is marked out to be revitalised. The foreground of the church, the remains of the church and the adjoining convent that has zones are currently dysfunctional and require to be excavated, these areas have immense potential to be revived and readapted for new purposes.

Proposal

Following the pathology diagnosis, it is noticed that even though conservation activities have been carried out on site, perhaps a more frequent work requires to be seen. There is a need for excavation and systematic conservation in various zones of the site. Specific proposals corresponding to the numbered points in the general strategy can now be introduced. (Figure 15)
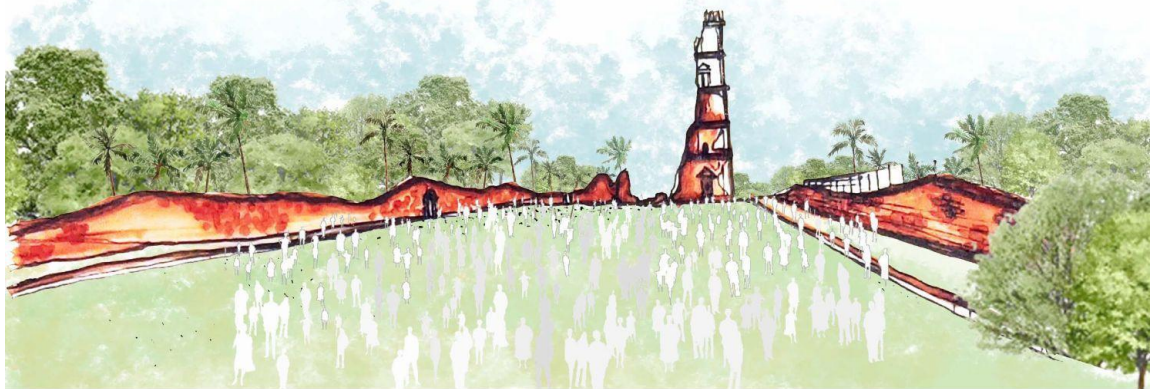
Figure 96 : [1] Proposal mockup showing the utilisation and reactivation of the grand foreground of the ruins once revitalised.

The foreground necessitates intervention to enhance and emphasise the significance of public space as seen in the mock proposal of Fig. 96. One approach could involve utilising the ruins as a backdrop for 3D projections, creating a captivating night spectacle that showcases the site's historical and cultural heritage seen in Fig. 98.

Figure 97 : Fendi Fashion Show, Haute Couture Tribute to Karl Lagerfeld Rome, Italy, 2019

Figure 98 : Superimposition of Fendi Fashion Show, Haute Couture Tribute to Karl Lagerfeld Rome, Italy, 2019 with the ruins as a backdrop based on Fig. 97.

To enhance usability and safety, various measures can be implemented, including the installation of ramps, railings, and well-maintained stairs. Additionally, interventions should be undertaken to facilitate access to specific viewpoints, allowing visitors to appreciate the site's visual aspects. In order to facilitate tourist access while preserving

Layers of ruin and rehabilitation: The cases of Chimbel and Graça (Goa, India)

the ruins, the introduction of a series of steel bridges and platforms can be considered. These structures would allow visitors to navigate through the site, providing an immersive experience and a tangible sense of the monument's scale.
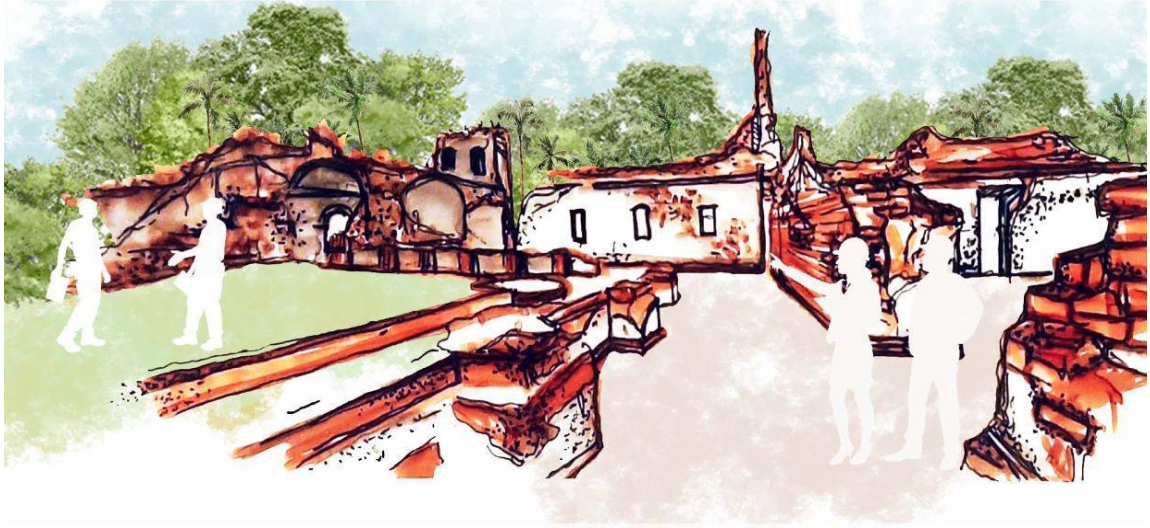

Figure 99 : [2] A proposal mockup of a zone in the convent of St Augustine to host excavation activities for educational purposes. It also shows that areas are still waiting to be excavated and documented.

For effective interpretation of the site's historical significance, a gallery display can be curated, showcasing contextual information, old photographs, and highlighting the site's historical and architectural importance. Another proposition is to have a cordoned off area to host excavation activities for educational purposes. To have a simulated archeological dig that will teach the basics of archaeology, the logic of excavation, and the importance of heritage and keeping records and preserving the context.

Figure 100 : Edoardo Tresoldi architectural installation rebuilds archeological remains, using wire mesh (Siponto-Puglia, Italy, 2016)

Figure 101 : Zones marked out within the Convent of St. Augustine to recreate the lost volumes and allowing vegetation to grow over the installation as a volumetric guide.
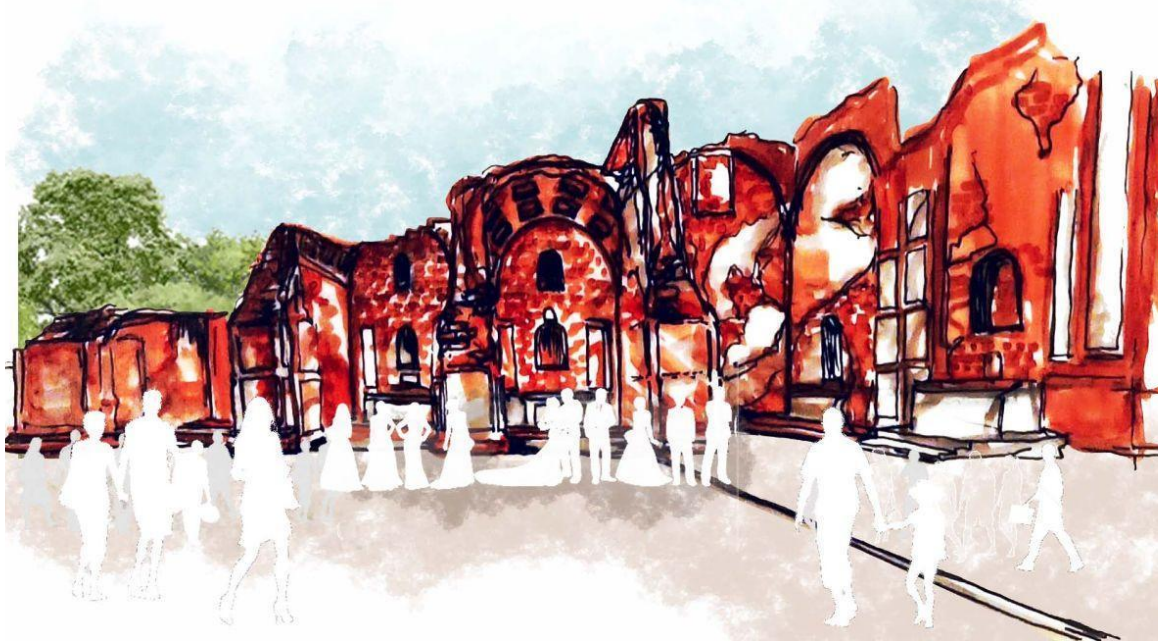
Figure 102 : [3] An example of a religious event held in one of the chapels of the Church of Our Lady of Grace within the ruins.

To cater to cultural events, it is advisable to designate marked areas for temporary stages, providing options for performances and gatherings. Adequate sound precautions should be taken to minimise noise disturbance, and thoughtful temporary seating arrangements should be made available to ensure visitor comfort. Accommodation solutions should be approached with sensitivity, ensuring that they harmoniously blend with the surroundings. Additionally, considerations should be given to organising multi-religious functions that foster inclusivity and respect for different faiths. Understanding how the structure functions for users of diverse religious backgrounds is essential for promoting cultural harmony and inclusiveness. An example of a catholic wedding is seen in Fig. 102.

Since the floor of the ruins is the largest seamless surface available, a light projection spectacle can be casted onto the floor of the ruins. A proposal mockup of light show spectacles are seen in Fig. 103 and Fig. 104. These shows will do no harm to the existing ruins, as they do not involve mounting or erection of structures within the site. It could also introduce night visits to the site, which could broaden the schedule of events and hence the remuneration generated.

Layers of ruin and rehabilitation: The cases of Chimbel and Graça (Goa, India)

Figure 103 : Proposal mockup featuring the superimposition of a light projection show onto the floor of the ruins.

Figure 104 : Proposal mockup featuring the superimposition of a light projection show onto the walls of the ruins.

Lastly, it is crucial to assess the impact of the volume and value of interventions on the site. Careful planning and implementation should be undertaken to strike a balance between enhancing the site's appeal while preserving its historical authenticity and integrity. What one could hope from the project is a proposal aimed at raising awareness among the people about the heritage of Goa holds great importance. By fostering a sense

of appreciation and understanding, the local community can actively participate in the preservation and promotion of Goa's cultural legacy.

Conclusion

The contemporary urban landscape of Old Goa, just like any other settlement fabric reflects the enduring impacts of successive generations of settlers, manifesting in physical structures as well as socio-political, economic, and religious institutions. Throughout its history, the city has undergone transformations, reshaping the significance and meaning of its spaces. This ongoing evolution involves adapting or even de-transforming spaces to align with evolving necessities. Notably, the phase of decline can lead to spaces losing importance, yet adaptive reuse might rejuvenate their relevance.

Divided into distinct levels of analysis, the study encompassed a comprehension of the Old City of Goa at three levels. At the macro or urbanistic level, the exploration of the region's history, natural and cultural landscapes was conducted. With this, the understanding of the historical development and timeline of the Old City of Goa until its current state of the city was done. From this urbanistic level insights were gained into the underlying factors that have shaped its evolution through the years. We conclude that the decline of the city was inevitable (Gomes, 2011) and that the deconstruction of the city meant the loss of the volumes of the urban fabric. The historic monuments that still stand within Old Goa possess untapped potential for comprehensive revitalization and restoration through the establishment of a city-level organisation dedicated to this purpose.

The intermediate or street level selected, *Rua Direita* to conduct a sketch and illustrative analysis. It contrasted the present-day situation with its former peak using present day illustrations and old illustrative references. This part of the study reinforces that the loss of the volumes on this street, that was once a busy street, in a city thriving with commerce and trade and lined with grand monuments plays a dimensional difference in its usage today. It is concluded from this street level example that the loss of monuments and historic sites that once held religious practices, cultural gatherings, social events,

commerce, and even a simple human to builtform spatial relationship creates a multidimensional void in the activities and life in the area.

These chapters led to the strengthening the opportunity and potential of revitalization of Old Goa and the need to regulate or guard the further loss of heritage sites. Following this, a comprehensible study is undertaken at the micro or edifice level. It approached two sites in a state of decay and steady decline to meet the same fate as other monuments in their locale. Two specific sites within the region's ruins namely, The Church and Convent of 'Our Lady of Mount Carmel', Chimbel and the 'Church of Graça and Convent of St Augustine', Old Goa were selected for investigation.

It advances to study the history and contextualization of the sites and shows their historic significance. Then processed to describe the current state of ruin. The sites were then approached as endangered locales, and were analysed for their potential and diagnosed various factors that currently pose threats to its preservation and integrity. It also offered an evaluation of the site's challenges, presenting a multi-dimensional perspective that informs its potential for preservation and holistic development.

A comprehensive diagnostic assessment was conducted to reveal the conservation status of the sites and identify factors contributing to their deterioration. The site-specific procedure involved a meticulous examination to address various concerns. Fissures and cracks, including linear ones, were analysed due to their impact on the coating's integrity and potential moisture ingress. Biological contamination, evident through vegetation growth and black crusts, hindered drainage and encouraged moisture retention. Rising humidity from ground moisture migration was evaluated, along with drainage problems arising from surface runoff causing saturation in specific areas. Dissonant mortars, differing from adjacent surfaces, introduced diverse pathologies. The absence of protective mortar exposed substrates to external agents. Cantaries exhibited multiple issues like fissures, crevices, detachments, chromatic variations, deposits, biological colonisation, and absent joint filling. Examination of windows and doors encompassed concerns like rot, poor connections, reduced sections, drying cracks, ageing, and paint deterioration. Cement-based renders, when incompatible with existing foundations and

elements like counters and stone masonry walls, led to blistering, degradation, and tearing. Addressing general dirt, stains, and spurious elements, like infrastructure weakening outer walls in certain cases, completed the assessment.

After this a critical analysis was carried out on both sites that led to the basis for a general strategy to preserve and revitalise the sites. Further proposals were put forth to support the adaptive reuse of these two sites.

Every place has its own heritage, but to identify its character, qualities and potential and carry them through modern sensitive solutions requires professional skills. This thesis argues that efficient implementation of existing cultural heritage legislation can enhance heritage management.

As the Chimbel village necessitates the establishment of an inclusive public space, wherein children from both Indiranagar and the old village can freely engage in play and interaction. A public space for the well-being and development of the locals, ensuring equal opportunities and fostering a sense of unity within the community is proposed the case of the Church of Our Lady of Mount Carmel, Chimbel. A public park through the ruins with interventions to make zones throughout the site accessible to various user groups. And since the site has been taken over by vegetation, a Treetop walk was superimposed within the ruins. A Proposal view showed a mockup of adaptive reuse interventions on the site with an aim to facilitate access to specific viewpoints, enabling visitors to appreciate the visual elements of the site while also creating a possibility of exploration through the ruins. Proposal mockup showing superimposition of performances and events within the ruins and showed the utilisation of courtyards of the ruins once revitalised.

In the case of the 'Church of Graça and Convent of St Augustine', Old Goa, emphasis of comprehensive archaeological excavations were made where needed, and the establishment of Archaeological Parks is proposed as an urgent measure, promoting cultural and natural heritage for local communities. This can also sprout career paths in the youth of Goa, who will ultimately carry the importance of these heritage sites into the

future. Proposal mockups showing the utilisation and reactivation of the grand foreground of the ruins once revitalised gives a visual of the underutilised foreground and how it should be used. Approach utilising the ruins as a backdrop for 3D projections, creating a captivating night spectacle that showcases the site's historical and cultural heritage were explored. Mock up of superimposition of international fashion shows were made to imagine this site to be used on an international level. Proposal mockups featuring the superimposition of a light projection show onto the floor of the ruins was also created. These opportunities and proposals will broaden the schedule of events and hence the remuneration generated by the site. These finances would in turn help in the conservation and the upkeep of the historic site.

It is suggested that both sites become archaeological parks, potentially combined to showcase historical linkages. Cultural heritage tourism's potential and risks are discussed, highlighting the need for community collaboration.

Goa's rich tangible and intangible heritage remains underutilised, but this thesis holds optimism for improved sensitive management of historically significant sites through future endeavours. Preserving monumental heritage involves an interdisciplinary approach, encompassing architecture, engineering, history, archaeology, conservation, and restoration. The lack of an efficient heritage management system is a substantial impediment to effective conservation efforts in Goa's heritage zones. Preserving heritage necessitates high-quality solutions aligned with its intrinsic cultural value. Therefore, decision-making requires meticulous assessments of the existing heritage, involving comprehensive discussions within the design team. This thesis functions as a record, documenting heritage features and enriching architectural and construction history.

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