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Adaptive Reuse of Abandoned Churches in the Walled City of Famagusta, North Cyprus

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ABSTRACT

There are so many abandoned heritage buildings worldwide and due to the lack of function and maintenance, they are ruined, deteriorate easily, and are forgotten. Similarly, abandoned valuable religious buildings faced vandalism deliberately because of the decreasing demand for use or lack of their communities. Some churches in Islamic countries are left useless and with no function, and North Cyprus is one of them. The Walled City of Famagusta has many historic religious buildings like cathedrals and churches. This research aims to develop proposals for the adaptive reuse of abandoned churches in the Walled City of Famagusta to overcome their current problems. The methodology of this historical research is qualitative and comparative. The data collection techniques are based on literature review and observation. This research will bring new perspectives on these churches' conservation for architects, historical researchers, and conservationists.

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1. Introduction

Famagusta, one of Cyprus's most important coastal cities in the medieval period, was once an international trade centre for the Levant and Western European merchants. Throughout history, many people with diverse cultures and different religious beliefs travelled and settled down in Famagusta and made their buildings with their architectural techniques and varying styles. Some roofed and restored churches survived the earthquakes and Ottoman bombard attacks and have been reused by changing their functions from churches to mosques. The most elegant one is St Nicholas Cathedral which was converted into Lala Mustafa Pasha Mosque by adding a minaret in 1571. Another example is SS Peter & Paul Church which was converted into a mosque and renamed Sinan Pasha Mosque or Buğday Mosque. St Anne Church, Nestorian Church, Armenian Church, Twin Churches, Jacobean Church, Mustafa Pasha Mosque, and Ayia Zoni Church are roofed churches that remained in the

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Walled City of Famagusta. Although few of the mentioned churches have a function, most of them are left abandoned like a store or even empty without any function. Unfortunately, The Cathedral of St George of the Greeks, St Symeon Church, The Church of St George of the Latins, The Church of the Franciscans, The Church of St Mary of Carmel (Carmelite Church), and Ay Nicolaos Church are abandoned ruins and these churches have no roofs nor any function for a very long time. Some unnamed and ruined churches and underground churches in Famagusta are unknown to the locals and even the experts in North Cyprus (Babazadeh-Asbagh, 2023b, pp. 1-2).

1.1. Problem Statement

Over the years, several natural disasters like severe earthquakes, wars such as the Ottoman Empire attack, and climate conditions affected the cultural heritage of Famagusta. Some of these churches luckily survived the earthquakes and bombs during the Ottoman siege, while some others were ruined. Subsequently, some of the churches have been conserved and restored, but unfortunately, most of them are still abandoned. Some abandoned churches are in good physical condition, but some are ruins without roofs. Lack of function and maintenance increase the speed of deterioration which causes them to be forgotten. Currently, there are roofed and ruined churches in the Walled City of Famagusta. Some of the roofed churches are in good structural condition and are in use, while others are abandoned. As they have not been used for a very long time, the maintenance problems, lack of security, lack of lighting, and vandalism together with weather problems cause the faster decay of these churches. The ruined churches have the same problems and face vandalism much more easily because of inadequate security. Furthermore, the absence of a roof on these buildings exposes them to adverse weather problems causing more decay to the interior wall paintings and decorations of these churches. The inadequate way-finding options for the ruined churches also accelerate their neglect (Babazadeh-Asbagh, 2023b, pp. 3-4).

1.2. Aim, Objectives, and Research Questions

This research attempts to answer these research questions: What are the current problems of the abandoned churches in the Walled City of Famagusta? Which functions are more suitable for each church for their adaptive reuse as a conservation method? This research aims to propose the best function for each abandoned church in the Walled City of Famagusta for their conservation and solving their current problems. To achieve this goal, the current problems of the aforementioned churches are analysed through a literature survey. As case studies, the abandoned churches in the Walled City of Famagusta, their material and structural decays, interventions, and current problems have been mapped and classified. This research aims to document and analyse the current problems of the churches in the Walled City of Famagusta to propose adaptive reuse for overcoming their problems (Babazadeh-Asbagh, 2023b, p. 5).

1.3. Methodology

This research has been based on a comprehensive literature survey on resources about adaptive reuse in general and examples of adaptive reuse in churches worldwide. Also, the history, conservation interventions, and current problems of the churches in the Walled City of Famagusta are discussed in detail. A field survey has followed the literature survey, which has led to the data collection of the case studies. Data collection on the physical conditions of the studied churches has been done through documentation of them. Photographs have been taken, measured plans, sections, and façades have been drawn and site maps have been prepared and digitalised. The data collected through literature survey and field survey have been utilised to develop an approach for adaptive reuse of the churches in the Walled City of Famagusta in particular and other similar cultural heritage sites with similar problems in general. This study adopts a comparative and qualitative survey through an in-depth evaluation of the aforementioned churches. Mapping, analysing, and classifying the architectural

characteristics and current problems of these churches were used to develop a proposal for the adaptive reuse of each case study. The data for this study were analysed based on the literature review about adaptive reuse in general and worldwide examples of adaptive reuse of churches, personal on-site observations, on-site analyses, photographs, precise measurements, mapping, and field surveys. It also presents a novel approach to analysing their architectural characteristics, and this engenders a better understanding of the values and importance of these churches in the Walled City of Famagusta (Babazadeh-Asbagh, 2023b, pp. 6-7).

1.4. Significance of the Study

The results of this research help to find proper functions for the abandoned churches in the Walled City of Famagusta, especially those remaining after the disappearance of their communities to be reused more sustainably. The adaptive reuse proposed in this study benefits the churches in the Walled City of Famagusta by being introduced to visitors more properly, and the access to the interior of these churches by giving them new functions saving them from the danger of being forgotten and neglected. It also increases the tourist value of the Walled City of Famagusta which will contribute to the improvement of the economy of the city and consequently the country. The proposals for the adaptive reuse of the churches in the Walled City of Famagusta can be used for other abandoned churches worldwide suffering similar problems to solve their problems as well (Babazadeh-Asbagh, 2023b, p. 5).

1.5. Scope and Limitations of the Study

This study investigates the current problems of the abandoned churches located inside the Walled City of Famagusta, including one underground church outside the Walled City. The research scope for these case studies is limited to architectural, structural, and material features, conservation and restoration interventions, and current problems. As some of these churches have not been documented properly, and have already been ruined, there is a limitation in accessing the original plans, sections, and façades of some of these case studies. Most of the underground churches were not documented, so there are only assumptions about their date of construction and who built them. The lack of documentation is the most serious limitation of this study for the author (Babazadeh-Asbagh, 2023b, pp. 5-6).

1.6. Data Sources

The data collection methods are based on the survey of published literature related to architectural features, and especially adaptive reuse of cultural heritage. There are some relevant references, including peer-reviewed articles and books. These resources include books borrowed from the Özay Oral Library of Eastern Mediterranean University (EMU), Ahmet Vural Behaeddin Library, The Library of the Architecture Department of EMU, online PDF books and articles downloaded from the Web of Science index. This research has been based on a comprehensive literature survey on resources about adaptive reuse in general and especially in the worldwide examples of churches and also about the history of the churches in the Walled City of Famagusta, like the first-hand resources, reliable documents, and original publications of Camille Enlart, George Jeffery, Edward I'Anson, Theophilus A. H. Mogabgab, Michael J. K. Walsh, and Peter Edbury (Babazadeh-Asbagh, 2023b, p. 7).

1.7. Data Analysis

A field survey has followed the literature survey, which has led to the data collection of the case studies. The plans, sections, and façades of the churches in Famagusta were measured and mapped by the author using manual measuring techniques with a laser meter and digitalised with the AutoCAD Software programme. Data collection on the physical conditions of the case studies has been done

through documentation. Photographs have been taken, measured drawings have been drawn and site maps have been prepared. The data collected through literature survey and field survey have been utilised to develop an approach for adaptive reuse of the churches in the Walled City of Famagusta in particular and other similar cultural heritage sites with similar interpretation problems in general (Babazadeh-Asbagh, 2023b, p. 8) (See Table 2).

1.8. Structure of the Research

The first part of this research is about defining the adaptive reuse of cultural heritage buildings in general and analysing some examples of adaptive reuse in churches worldwide. The second part of the study is about the architectural characteristics and current problems of the abandoned churches in the Walled City of Famagusta. After analysing each church in detail, the proposed functions are mentioned for their adaptive reuse. The images of the plans, sections, and façades, old and current pictures of the aforementioned churches and the tables of their current problems are supplementary data for proper proposals of the adaptive reuse of the churches in the Walled City of Famagusta. The last part of this study is the proposals for the adaptive reuse of each church according to its architectural characteristics and current situation. The conclusion discusses the recommended adaptive reuse functions for each church in the Walled City of Famagusta and this study's contributions to other similar cultural heritage, especially abandoned churches worldwide to solve their problems (See Table 1).

Table 1. Research Structure (Author's Compilation).

INTRODUCTION
⬇
Summary of the history of Cyprus, Famagusta, the Walled City of Famagusta, & the churches there.
Definition of the research problem & setting up the research questions.
Definition of aim & objectives, explaining the significance, scope & limitations of the study.
Definition of methodology consisting of data sources & data analysis (Table 2).
Summary of the structure of the research (Table 1).
THEORETICAL FRAMEWORK Theoretical Reviews on Adaptive Reuse of Cultural Heritage Buildings
⬇
Definition & objectives of adaptive reuse of cultural heritage buildings in general.
Summary of the adaptive reuse of the churches worldwide.
Mentioning the worldwide examples of the adaptive reuse of the churches.
ANALYSING THE CASE STUDIES Architectural, Structural, and Material Features of the Churches in the Walled City of Famagusta
⬇
Summarizing the history of medieval churches in the Walled City of Famagusta.
Analyzing the architectural, structural, material features, and problems of the Churches in the Walled City of Famagusta (Figure 1, Table 7).
Evaluation of the architectural characteristics of the churches located inside the Walled City of Famagusta & one underground church (out of the Walled City) in Famagusta: Evaluation of the plan of the churches in general and in Famagusta (Figure 1, Table 3), Evaluation of architectural characteristics of the churches in the Walled City of Famagusta (Table 4), Summarizing functions of the churches in the Walled City of Famagusta in different periods (Table 5).
Conservation of the Churches in the Walled City of Famagusta: Summarizing the conservation interventions of the churches in Famagusta (Table 6),

The Technical Committee on Cultural Heritage in Cyprus (TTCCH), The United Nations Development Programme – Partnership for the Future (UNDP-PFF), Summarizing the reports of UNDP in the Walled City of Famagusta in October 2012, January 2015, and October 2018.
Evaluation of the current problems of the churches in the Walled City of Famagusta: Summarizing the current problems of the churches in the Walled City of Famagusta (Table 7).

PROPOSALS
Adaptive Reuse of the Churches in the Walled City of Famagusta
Proposals for adaptive reuse of each church in the Walled City of Famagusta (Table 5).

⬇

Conclusions

Table 2. Data Analysis (Author's Compilation).

LITERATURE SURVEY

⬇

Reviewing the literature from: • Books, journal articles, theses & dissertations from libraries of EMU: Özay Oral Library & Ahmet Vural Behaeddin Library of the Architecture Department, • Online resources were downloaded from the Web of Science index. • Comparing the different examples of adaptive reuse of churches worldwide.

FIELD SURVEY

⬇

Personal observation of the author based on: • Site analysis of the churches in the Walled City of Famagusta: Using a laser meter to measure the sizes (length, width, height and area) of the churches for digitalizing the plans and sections via the AutoCAD Software and extracting the maps as PNG files to be used in the Microsoft Word Programme in tables and proposed posters and websites, • Analyzing the architectural characteristics of the churches in the Walled City of Famagusta: Using comparative tables in the Microsoft Word Programme for the plans (Figure 1, Table 3, Table 4) and functions (in different periods and suggested functions for the adaptive reuse of some) of the churches in the Walled City of Famagusta (Table 5), • Analyzing the current problems of the churches in the Walled City of Famagusta: Using comparative tables in the Microsoft Word Programme for the previous conservation interventions (Table 6) & current problems (Table 7) to suggest proposals for an interpretive plan of the churches in the Walled City of Famagusta.

Results

⬇

Proposals for the Adaptive Reuse of the Churches in the Walled City of Famagusta.

2. Adaptive Reuse of Cultural Heritage Buildings

2.1. Adaptive Reuse

Adaptive Reuse is defined by Merriam-Webster Dictionary as "the modification and reuse of an existing structure (such as a warehouse) for a new purpose". "The adaptation and reuse of vernacular architecture should be carried out in a way that respects the integrity of the structure, its character and form while being compatible with an acceptable standard of living" (Charter on the Built Vernacular Heritage, 1999, Article 5 of the Guidelines in Practice). Adaptive Reuse is the complete transformation of a building and is synonymous with remodelling, conversion, adaptation, reworking, rehabilitation or refurbishment. Adaptive reuse involves changes in functionality, which may be added or removed, and

circulation routes, directions, and relationships between spaces may or may not change (Plevoets & Van Cleempoel, 2011). Eugène-Emmanuel Viollet-le-Duc was the first to mention the theoretical approach to adaptive reuse as a way to preserve historic buildings, arguing that using buildings was the best way to preserve them in the 19th century. While architects were busy dealing with modern architecture, constructing new buildings and forgetting about historic buildings in the first half of the 20th century (Plevoets & Van Cleempoel, 2012), they considered reusing historic buildings as an amusing challenge in the second half of the 20th century. Therefore, since the 1970s, adaptive reuse has become a popular topic at conferences, publications, books, and symposiums in the field of conservation and architecture (Plevoets & Van Cleempoel, 2011; Babazadeh-Asbagh, 2018, pp. 203-204; Babazadeh-Asbagh, 2023e, August 5).

Adaptive reuse is the process of converting items that are no longer needed or useful into new items that can be used for a different purpose. Adaptive reuse of historic monuments is more than just preserving assets or restoring them for new or continued use. Adaptive reuse is the replacement of old buildings to adapt them to current needs and the environmentally friendly use of new users (Latham, 2016, pp. 56-57). The conditions that must be taken into account when considering the reuse of a church are the type of building and suitability for reuse, the original type and scale of the church, the external structure, internal spaces, rededication of sacred spaces, modernisation and postponement, maintenance requirements, and site considerations. Adaptive reuse of churches is difficult, but the potential for church reuse can also be determined by researching and documenting examples of previously successful reuse tactics (Kiley, 2004, p. 57). Since sustainability in the preservation of historic buildings is a social pillar, adaptive reuse has become an important issue in cultural heritage preservation. Adaptive reuse of historic buildings can support the conservation process by improving heritage maintenance and preservation (Babazadeh-Asbagh, 2023b, p. 78).

Cultural heritage can play a strategic role in achieving the Sustainable Development Goals, and this is widely recognised around the world by the United Nations (UN), United Nations Educational, Scientific and Cultural Organisation (UNESCO), International Council on Monuments and Sites (ICOMOS), and many regional and national institutions. To preserve historical assets and revitalise them from a circular economy perspective, the principles set out in international and national recommendations need to be translated into new approaches and tools (Cucco, Maselli, Nesticò, & Ribera, 2023, p. 202). Adaptive reuse is the process of renovating old buildings for new uses. In European cities, existing residential buildings are often renovated and converted into office buildings while preserving their historical value. The biggest challenge in adaptive reuse is balancing historic preservation with sustainable design. Different construction techniques and materials are used in historic buildings, depending on the period of construction and geographical zone (Rodrigues & Freire, 2017, p. 94). Adaptive reuse in heritage projects is the renovation, rehabilitation, redevelopment, and restoration of one or more buildings to meet the changing needs of a community. Cultural heritage projects include both legally protected (listed) and non-protected buildings. While the original purpose of the building no longer survives, the goal of the project is to preserve the unique historical and cultural features of the building (Binder, 2003). Adaptive reuse is a way to maximise the remaining utility of existing assets. Adaptive reuse allows components to be salvaged from ageing buildings through demolition programming (Sanchez, Rausch, & Haas, 2019, p. 1).

The reuse of historic buildings requires solving complex decision-making problems that affect the tangible and intangible assets of multiple stakeholders (Chen, Chiu, & Tsai, 2018, p. 12). In recent years, adaptive reuse of historic buildings has become widespread around the world. Due to the flexibility of the approach to reusing historic buildings, the selection of alternatives gradually became the focus of discussions with decision-makers. Properly preserving the value of historical buildings and maximising their usefulness is one of the most important challenges in cultural heritage preservation, taking into account various aspects such as culture, economy, and physical conditions. Historic buildings contain multiple target values (Teo & Huang, 1995; Tiesdell, 1995) including not only tangible values such as

physical structures and the natural environment but also intangible values such as social and cultural differences and priorities researching different stakeholders (Ferretti, Bottoro, Mondini, 2014; Kutut, Zavadskas, Lazauskas, 2014). Consequently, the factors influencing the selection of reuse alternatives are becoming increasingly complex. Considering only certain specific factors often creates conflicts between the selected alternatives and the preservation value of historic buildings being overlooked (Teo & Huang, 1995). Using an adaptive reusability model, Langston, Francis, Wong, Hui, and Shen (2008), Langston, Yung, and Chan (2013), and Yung, Langston, and Chan (2014) evaluated the functionality and reusability. They predict when ancient buildings will occur by analysing factors such as the life cycle of ancient buildings, actual age, service life, economy, society, physical environment, natural environment, function, technology, law, and time (Amit-Cohen, 2005; Tweed & Sutherland, 2007).

Although some studies highlight the effectiveness of the reuse of historic buildings as a sustainable mechanism to motivate investors to invest in upgrading underutilised historic buildings, adaptation reuse approaches are becoming more popular in building resilient urban areas (Aigwi, Egbelakin, & Ingham, 2018; Aigwi, Egbelakin, Ingham, Phipps, Rotimi, & Filippova, 2019; Ball, 2002; Bromley, Tallon, & Thomas, 2005; Pearce, DuBose, & Vanegas, 2004; Rohracher, 2001). Performance-based planning ideology can be applied to assess pre-determined priority aspects and criteria can be subjectively evaluated to establish quantitative boundaries for acceptable levels of adaptive reuse when considering the decision-making process regarding the classification of underutilised historic buildings for adaptive reuse interventions. Therefore, the two main components of performance-based planning in the context of prioritising historic buildings for adaptive reuse interventions should include: (i) reuse priority dimensions and criteria that provide a detailed description of desired adaptive reuse outcomes; (ii) a methodology for defining the impact of acceptable impact limit metrics on desired adaptive reuse outcomes (Aigwi, Egbelakin, Ingham, Phipps, Rotimi, & Filippova, 2019).

Nowadays, urban planners and city dwellers desire ecologically sustainable and vibrant communities. Imaginative and innovative approaches to the built environment in general and existing buildings in particular are key to achieving future sustainability. Urban heritage buildings are of particular interest as they may be underutilised or abandoned. Nonetheless, they are important to the heritage of local and, in some cases, international communities. The unique historical and cultural features of a building constitute its heritage. Heritage extends beyond the project itself to the surrounding area and is often a public or shared asset, recognised for its contribution to the economic and social development of the area (Guzmán et al., 2017; Hosagrahar et al., 2016; Rypkema & Cheong, 2011; Throsby, 2016; Vileniske, 2008; Zhang, 2012). Historic buildings include former places of religious worship, aristocratic/ royal residences, community meeting places, industrial production sites, early modern office buildings, and military installations. It is important to look for sustainable solutions in the urban development of these buildings (Foster, 2020, p. 1).

2.2. Adaptive Reuse of the Churches Worldwide

The church building is often the largest roofed space in a village or town, which has the potential to be reused for a variety of uses and activities when it is not in use as a religious building like a church anymore. Small churches in rural areas can host flexible arrangements and multi-uses for the local community, while large churches in urban texture can be reused providing layered arrangements in existing vacant spaces or newly added structures. Sharing concepts and adaptive reuse, if operated successfully, can have a positive effect of concentrating resources and generating additional income for the maintenance of the church buildings, while also returning churches to play a more central role in the community once again (Hobohm, 2008, pp. 2, 104). However, for abandoned churches without any government funding or donations, adaptive reuse can help to provide the funds for maintenance, repair works and conservation activities (Martineau, 2004; Hobohm, 2008, p. 36). Adaptive reuse is a process that changes a disused or ineffective item into a new item that can be used for a different

purpose. Adaptive reuse of historic monuments is more than just the conservation or rehabilitation of property for new or continued use. Adaptive reuse is the replacement of an old building to adapt to the current needs and environmentally friendly uses of new users (Latham, 2016, pp. 56-57).

The conditions that must be considered when contemplating the reuse of churches are building typology and reuse suitability, church archetypes and sizes, exterior structure, interior spaces, reconsecrating sacred space, modernisation and deferred maintenance requirements, and site considerations. Although adaptive reuse of churches is challenging, reuse potential for churches can also be declared by researching and documenting examples of previously successful reuse tactics (Kiley, 2004, p. 57). Many church buildings had been redundant even in times of prosperity they were underused due to few activities within the church (Douglas, 2006, p. 164). Three primary urban church property archetypes can be generalised for discussion: large churches completely built on their sites, medium-sized churches on large parcels including grounds and parking or other outbuildings, and large complexes consisting of a church, school, convent or other large ancillary uses, all together in a campus setting (Kiley, 2004, pp. 59, 60).

2.3. Examples of the Adaptive Reuse of the Churches Worldwide

Some churches are completely allocated for alternative uses, while others are used partly as a church and host different uses in other rooms or spaces. An example is Karmeliterkirche (Karmeliter Church) in Frankfurt, Germany, which was converted into a museum in 1984. St Stephen Church in London, England was reused as a personal residence in 1986. St Matthew Church in London, England was used as a nightclub in 1992. Mönchenkirche (Mönchen Church) in Jüterbog, Germany was converted into a library in 1992. Lutherkirche (Luther Church) in Berlin, Germany was subdivided into several flats in 1997. Eastback Chapel in Pembroke, Pembrokeshire, Wales, United Kingdom (UK) was reused as an antique centre in 2001 (Hobohm, 2008, pp. 37-39; Matzig, 1997, pp. 7, 17, 44, 59).

A church at Marrick Priory, a Benedictine nunnery in Richmondshire, North Yorkshire, England was converted into a refectory, with a meeting room, a kitchen, an office, and two dormitories with washrooms in the 1970s. The Church of St Peter in Wentworth, Cambridgeshire, England was subdivided into a worship space in the chancel and a multi-purpose community hall in the nave in 1993. It has two toilets, one for ambulant disabled use, a small kitchen, and a vestry area at the nave. St Paul's Church in Walsall, West Midlands County, England was re-ordered in 1994-1995 consisting of several retail outlets, community and conference facilities, a coffee shop, and a worship area. There was a mezzanine gallery for retail and catering purposes, meeting rooms, and a multipurpose conference hall on the top level with glass screens. The Church of St Paul's Road in Cambridge, England was reused in 1996 for non-worship activities, creating five meeting rooms on two levels of the nave including kitchens, a lift, a toilet, storage facilities, and a church office. All Saints Church in Hereford, Herefordshire, England was converted into a café in 1997. It consisted of a freestanding pod, the vestry, the café kitchen, servery, toilet facilities, and a gallery for seating on top. At St John's Church in Moggerhanger, Bedfordshire County, England a community shop was installed in the vestry in 2000. Similarly, some spaces of the church are used as meeting places with tea and coffee served.

The Church of St Michael in Cambridge, England was re-modelled in 2001 as a café, a community centre, and a church. A kitchen, toilet facilities, several rooms, and the church office occupied the nave and aisles. Kneesall Church in Nottinghamshire, England was reused as a village hall in 2004 with a glazed screen separating the chancel from the nave and a kitchen and storage space were added to the church. The Chancel of St Mary's Church in Burston, Norfolk, England was used as a church, and the nave was separated from the worship area being used as a hall by a neighbouring school. At Holy Trinity Much Wenlock Church in Shropshire County, England new disabled access, a kitchen, toilet facilities, and a new meeting room were being provided. The Church of St Paul's Old Ford in Bow, London, England was re-developed for a church-led shared use scheme in 2004. A new entrance to the church,

an escape door, and a new external fire escape staircase were added, and some alterations to the roof changed the external appearance of this church. A café, reception, lavatories, an art gallery, a gym including changing rooms, a sauna, an office, and reception in the attic, a lift for wheelchair access, and stairs were added inside the church. St Andrew's Church in Mickfield, Suffolk, England was restored in 2004 and converted into a private residence with a meeting place, a kitchen, and bathroom facilities serving as a multipurpose space for worship and community activities. The Church of St Mary and St Rhadegund in Whitwell, Isle of Wight, England opened a satellite post office for several mornings per week inside the bell tower in 2007.

At All Saints Church in Sheepy Magna, Leicestershire, England, a post office and community help desk, WC, and tea serving area were being installed. In St Bega Church in Eskdale, Cumbria, England, a satellite post office opened twice a week, and Discover Eskdale Centre informed visitors about the history of the Lake District, they also served tea and coffee. St Giles Church in Shipbourne, Kent County, England and Church of St Mary the Virgin in Rolvenden Kent County, England held markets for farmers in the nave. In St Andrew Church in Sutton-in-the-Isle, Cambridgeshire, England a tithe sale was organised every month. The Church of St Martin-in-the-Fields in Westminster, London, England was restored in 2008. All additions in alteration works were below the ground floor consisting of a café and a gallery in the crypt, a shop, a centre for homeless people, and rooms for the Chinese community in an adjacent courtyard. At Terrington St John Church in Norfolk, England and St Mary's Church in Chipping Norton, Oxfordshire, England there were rooms for priest residents. The first floor of the tower of All Saints Church in Snodland, Kent, England used to be a rectory. An extension to St Mary and All Saints Church in Willingham, Cambridgeshire, England was an anchorhold, a cell for a religious hermit. In St Lawrence Jewry Church and St Mary Le Bow Church in London, England, there were vicarages with roof gardens and car parking areas. Furthermore, the crypt of St Mary le Bow Church was reused as a café. The Church of St Margaret in Rishangles, Suffolk, England was converted into a private residence as a holiday home consisting of a living room, kitchen-dining area, four bedrooms, several bathrooms, and a sitting room (Hobohm, 2008, pp. 48-99; Williams, 2004).

According to the location of the churches, they are either urban or rural churches. The adaptive reuse functions are grouped into cultural, residential, institutional, office, commercial, and community functions. Cultural functions are like theatre, concert hall, museum, cultural centre, elderly day centre, city heritage centre, arts centre, historic foundation, and high school. Residential uses include the conversion of churches into single-family homes, multi-unit apartments or condominiums, inns, hostels or hotels, and special-needs developments for the elderly and disabled people. Former churches can be developed into office spaces, either as a multi-office complex for a single user or as suites with shared facilities for a group of users. Commercial uses span a wide variety of food, service, and merchandising activities and include retail stores, nightclubs, bars, and restaurants. Matching local community and non-profit institutional space needs with a vacant building may prove to be an effective means of preserving a church, as it can potentially tap into fundraising sources available for non-profit use. Churches have been converted into community centres, day-care facilities, heritage centres, elderly day centres, museums, schools, and libraries. Minimal alteration options include community centres, theatres, or clubs. Residential conversions tend to be the most significant in terms of physical alterations to the interior and exterior of a church. Although the best use of a church is the religious function of a house of worship, it can be reused with a different function if it has special or unique attributes. The site, structure, and size of the church are important factors for successful reuse (Kiley, 2004, pp. 71-82, 105-113).

3. Architectural, Structural, and Material Features of the Churches in the Walled City of Famagusta

At first, the plan of the churches had two general forms; centralised plan, and rectangular forms which were originally basilicas. Romanesque churches were built with the Latin cross or cruciform, symbolising the cross of Jesus Christ. He is the perfect man of God and the church is the house of God, therefore,

the plan of the church should have the divine proportion (Babazadeh-Asbagh, 2023a, p. 114). The Gothic period was an age of vision, and the Gothic cathedral was described as an illusionistic image of the Celestial City. The church is, "mystically and liturgically, an image of heaven", and it is the "house of God and the gate of Heaven" and the cathedral is the "symbol of the kingdom of God on earth gazed down upon the city" (Von Simson, 1988, pp. xviii, xix, xx, xxi, 8). "A cathedral was the bishop's church, hence the city's church; and what the art of cathedrals meant first of all, in Europe, was the rebirth of the cities". "The inside arrangement of the cathedral differed from that of the monastic basilica; the cathedral space acquired greater unity within" (Pfaff, 1983, pp. 93, 284).

Churches are classified by Mustafa Uysun into five groups: a) single-naved churches, b) double-naved (twin-naved) churches, c) three-aisled (basilica) churches, d) free-cross (cruciform) churches, d) cross-in-square churches. Single-naved churches consisted of a nave and a large apse where the main space was a simple rectangular chamber. This type was used particularly for churches and the simple rectangular plan was mainly used for chapels. Most of these churches have an East-West axis with an apse at the East end and the ceiling was generally in the form of barrel vaults along the main axis. Access to these types of churches is usually through a single door in the West wall, and most either have no separate narthex or only a small veranda with room for one or two people. The apse is generally higher than the nave and features a screen. Double-naved churches were used throughout the Byzantine Empire for centuries. The naves are separated from each other by one or more simple openings or by arcades of pillars and arches. Most have barrel vaults extending East to West end, and there are apses at the end of both naves. The cruciform plan churches were built on sacred sites or over the relics of martyrs and for martyrions in the capital and other parts of the Byzantine Empire. Cross-in-square churches were typical of medieval Byzantine architecture which gradually spread throughout the empire to become the standard church plan of the Middle Ages. Four columns support the dome over the central square area, and there are vaults on four sides of the dome that form the cross-plan roof. The areas between the arms of the cross are covered by a cross vault or small domes. The four columns define the central space that is dominated by the dome (Uysun, 2014, pp. 53-54; Uysun, 2017, pp. 18-19).

The plan of the churches in the Walled City of Famagusta has two general forms; cruciform shape and square plan. The churches with the basilica or axial form plan have a rectangular form of a cross and the circular, octagonal or central type has a square form plan. Most Gothic churches have a cruciform-shaped plan which is derived from the symbol of the Latin cross. The axis of these plans is East-West emphasising the West façade externally as the main entrance and the internal emphasis is on the Eastern apses. The East side is the direction of the rising sun which is believed to be the direction of the Holy Jesus Christ rising like the sun. Some other Gothic churches that were affected by Byzantine Architecture have the Greek cross plan. In these churches, the apse is usually on the East side and opposite to that there is the main entrance on the West front (Babazadeh-Asbagh & Uluca-Tümer, 2018, p. 419; Babazadeh-Asbagh, 2023a, pp. 123-124). The plan of the churches in the Walled City of Famagusta has two general forms; rectangular and square form. The rectangular-shaped plans have two categories; cruciform shaped with a nave and a transept, or East-West axial plan with a nave and two aisles. As the plan of cruciform-shaped churches looks like the cross, there is usually one entrance on the West façade, one on the North and one on the South elevation. The churches with square-shaped plans usually have three entrances, the main one on the West façade, one on the North and one on the South elevation (Babazadeh-Asbagh & Uluca-Tümer, 2018, pp. 438-439; Babazadeh-Asbagh, 2023a, p. 124).

All of the churches in the Walled City of Famagusta have the apse on the East side, so most of the case studies have their main entrance on the West façade. However, Ay Nicolaos Church and Ay Zoni Church have their main entrances on the South façade facing the main roads. Furthermore, SS Peter & Paul Church, St George of the Latins Church, and Templars' Church have their main entrances on the North façade facing the main roads. The North portal of SS Peter & Paul Church faces the royal palace,

the North elevation of St George of the Latins Church faces the main road, and the North portals of the Templars' Church were probably open to another adjacent building, as Camille Enlart believed, which is now ruined completely, and that open area is used as a car park currently. Thus, maybe the main road or adjacent important buildings facing these churches were the reason why the main portals of the mentioned churches were built on the South or the North façades instead of the West façade, which is more common in the Gothic churches. Almost all of these churches have entrances in three directions: West, North, and South, and only the Nestorian Church has been an exception which does not have any portal on the South side that is facing the current main road.

All of the churches have at least one entry on the West side, but Ayia Zoni Church and Ay Nicolaos Church are the exceptions, which do not have any entrances on the West façade. Some of the churches have three portals on the West façade, like St Nicholas Cathedral, SS Peter & Paul Church, Cathedral of St George of the Greeks, and Nestorian Church. Maybe because these were the biggest churches in size in the Walled City, they were built with three portals on the West façade, which were all opened in important ceremonies. Probably the form of the plan of these churches with one nave and two aisles was the reason for having three portals on the West façade and three apses in the East direction. None of these churches has the main entrance on the East side, but St Anne Church and Nestorian Church each have one small door on the northeast side, both of them were added later than the construction date. All of these churches have one entrance on the North side, but Templars' Church has three entrances on the North elevation, and Ayia Zoni Church and Ay Nicolaos Church do not have any entrances on the North elevation. All of the churches have one entrance on the South side, but the Nestorian Church does not have any entrances on the South side and Ay Nicolaos Church has two entrances on the South elevation (Babazadeh-Asbagh & Uluca-Tümer, 2018, pp. 438-440; Babazadeh-Asbagh, 2023b, pp. 54-55) (See Figure 1, Table 3, & Table 4).

The main façade of the three underground churches in Famagusta is not so inviting from the external view. When it is entered into the yard of Santa Maria de la Cava Church, the entrance of the church is in the opposite direction. All of the case studies have a single doorway after the external stairs which leads us to the underground level, but in St Mary of Bethlehem Church, the stairs are inside the church after the doorway, as its entrance is almost at the level of the adjacent road. Santa Maria de la Cava Church has 20 external stairs before the entrance and four internal stairs after the entrance, while St Mary of Bethlehem Church has eight interior stairs and no exterior stairs. The access to the St Dominic Crypt is after 13 exterior stairs and there is no access to the Unnamed Underground Church in the Walled City of Famagusta. The entrance of Santa Maria de la Cava Church has the shape of a rectangle, but the entrances of St Mary of Bethlehem Church and St Dominic Crypt each have an arc on the rectangular doorway.

St Mary of Bethlehem Church has a small square-shaped window or opening on the right side of the entrance on the main façade and a small circular window on the Eastern side of the church just below the ceiling. On the Eastern wall of St Dominic Crypt, there is a small rectangular-shaped window or opening. Only on the Eastern wall of Santa Maria de la Cava Church, there are pale remaining reddish wall paintings, but the other underground cave churches in this study do not have any interior wall paintings. There is a well in Santa Maria de la Cava Church, which might be used for religious ceremonies, but the other underground churches do not have any wells. Santa Maria de la Cava Church and St Dominic Crypt each have two roof lights that bring light to these dim underground churches. The windows of St Mary of Bethlehem Church and St Dominic Crypt on the Eastern part lighten these churches a little bit. There is a light explosion from the interior of all these churches towards the outside, as the small windows and ceiling lighting are just producing dimmed light into these dark churches (Babazadeh-Asbag, 2023b, pp. 55-56) (See Figure 1, Table 3, Table 4, & Table 5).

The eleven case studies of this research are the churches that are left abandoned without any function in Famagusta and have a proper upper structure. Eight of them are the churches located inside the

Walled City of Famagusta consisting of SS Peter & Paul Church, St Anne Church, Nestorian Church, Armenian Church, Templars' Church, Jacobean Church, Mustafa Pasha Mosque, and Ay Zoni Church. Three of the case studies are the underground churches; Santa Maria de la Cava Underground Church is located just outside the Walled City, St Mary of Bethlehem Underground Church and St Dominic Church/ Crypt are located inside the Walled City of Famagusta. St Dominic Church is ruined almost completely, and the underground part of the church does not have any apse, therefore the underground part of it is considered a crypt (See Figure 1).

The author has published several articles about the churches in the Walled City of Famagusta, North Cyprus which can be studied for more information, and the relevant videos on the YouTube channel of the author can be watched (Babazadeh-Asbagh & Uluca-Tümer, 2018, pp. 418-444; Babazadeh-Asbagh, 2023d, August 2; Babazadeh-Asbagh & Uluca-Tümer, 2019, June, pp. 466-485; Babazadeh-Asbagh, 2023b; Babazadeh-Asbagh & Uluca-Tümer, 2021; Babazadeh-Asbagh, 2023a; Babazadeh-Asbagh, 2023c, May 2; Babazadeh-Asbagh, 2024a; Babazadeh-Asbagh, 2024x, March 8; Babazadeh-Asbagh, 2021c, May 18; Babazadeh-Asbagh, 2024b, January 12; Babazadeh-Asbagh, 2024c, January 13; Babazadeh-Asbagh, 2024d, January 13; Babazadeh-Asbagh, 2024e, January 13; Babazadeh-Asbagh, 2024f, January 14; Babazadeh-Asbagh, 2024g, January 14; Babazadeh-Asbagh, 2024h, January 14; Babazadeh-Asbagh, 2024i, January 15; Babazadeh-Asbagh, 2024j, January 15; Babazadeh-Asbagh, 2024k, January 15; Babazadeh-Asbagh, 2024l, January 15; Babazadeh-Asbagh, 2024m, January 15; Babazadeh-Asbagh, 2024n, January 16; Babazadeh-Asbagh, 2024o, January 16; Babazadeh-Asbagh, 2024p, January 16; Babazadeh-Asbagh, 2024q, January 16; Babazadeh-Asbagh, 2024r, January 17; Babazadeh-Asbagh, 2024s, January 17; Babazadeh-Asbagh, 2024t, January 17; Babazadeh-Asbagh, 2024u, January 17; Babazadeh-Asbagh, 2024v, January 17; Babazadeh-Asbagh, 2024w, January 23).

3.1. Conservation of the Churches in the Walled City of Famagusta

The Walled City of Famagusta was nominated for and placed on the 2008 and 2010 World Monuments Watch. In 2008-2009, Supporting Activities that Value the Environment (SAVE) of the US Agency for International Development (USAID) assessed the conditions of SS Peter & Paul Church. SAVE was established in 2005 for the protection of the natural and cultural heritage of Cyprus. Water penetration, repair of cracks and loose stones, and protection against earthquakes were among the significant structural repairs done by SAVE. Europa Nostra Board visited the Walled City of Famagusta in 2012 and demanded the acceleration of the conservation process there (Mason et al., 2012, pp. 5, 6). The Technical Committee on Cultural Heritage (TTCCH) is playing the most important role in cultural heritage conservation in Famagusta. Since it was established in 2008, TTCCH has played a great role in the conservation of many cultural heritage sites in Famagusta and Cyprus. The agreement of 21 March 2008 reached between Greek and Turkish Cypriots under the auspices of the United Nations (UN), paved the way, to cause the establishment of TTCCH which is dedicated to the recognition, promotion, and protection of the rich and diverse cultural heritage of the island (UNDP, 2015, January, p. 3; UNDP, 2018, October, p. 8).

TTCCH is supported in its work by an advisory board composed of archaeologists, conservation architects, art historians, conservators, and town planners from both communities and all its programmatic decisions are taken in line with the agreed principles and the task attributed by the two leaders (UNDP, 2012, October, p. 1; UNDP, 2015, January, p. 3; UNDP, 2018, October, p. 8). In 2008, the European Parliament requested that the European Commission carry out a study on the condition and the estimated cost of restoring cultural heritage in Cyprus (UNDP, 2018, October, p. 12). In 2009, TTCCH agreed to compile a study of the immovable cultural heritage of Cyprus. This European Union-funded study was finalised in 2010 with the support of the United Nations Development Programme – Partnership for the Future (UNDP-PFF) (UNDP, 2012, October, p. 2; UNDP, 2015, January, p. 6; UNDP, 2018, October, p. 12). The Study conducted in 2010 resulted in the identification of a list of 10 cultural heritage sites

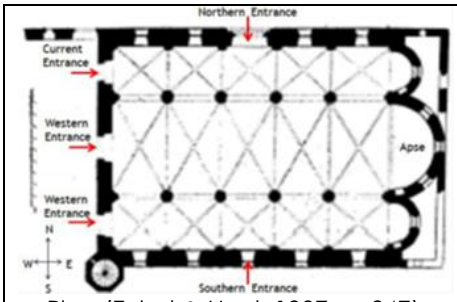
throughout the island in need of emergency measures. Mustafa Pasha Mosque in Famagusta was one of them (UNDP, 2012, October, pp. 2-3). In 2015, An initial list of 40 sites in need of emergency care and conservation was approved by the leaders (UNDP, 2015, January, p. 4).

Until 2015, 18 monuments have been structurally supported and physically protected or restored, Mustafa Pasha Mosque, St Anne Church, and St Mary of Armenian Church were among the completed projects in 2018 (UNDP, 2015, January, p. 7). Since 2010, the United Nations Development Programme (UNDP) has assisted TTCCH in preserving the cultural heritage of Cyprus (UNDP, 2018, October, p. 16). The capacity of TTCCH to define, agree upon, and formulate action priorities and a strategy for the future has been strongly supported by the European Commission since 2012. The strong bicommunal and multicultural ethos and demonstrated commitment of TTCCH to cooperation have led to the development of partnerships with various heritage-related institutions, most notably the Church of Cyprus and EVKAF (Kıbrıs Vakıflar İdaresi or The Islamic Trust of Cyprus), extending also to local and other competent authorities, expert groups, the UNDP and the Cyprus Settlement Support Unit of the European Commission in Nicosia (UNDP, 2018, October, p. 9). EVKAF Cyprus was founded in 1571 and its main office is currently located in Nicosia while there are two other branches, one in Kyrenia and another one in Famagusta. Although some churches in the Walled City of Famagusta have been conserved recently, the relevant information is not available on-site or even online for visitors and researchers to have access to the process of their conservation. See Table 6 for conservation interventions of the churches in the Walled City of Famagusta.

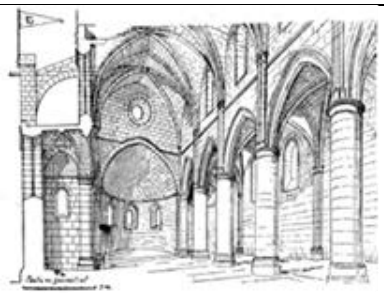
3.2. Current Problems of the Churches in the Walled City of Famagusta

Currently, some of the churches with the proper upper structure are in good structural condition and they have a function, but unfortunately, the others are abandoned. As they have not been used for a very long time, the maintenance problems, lack of security, lack of lighting, and vandalism altogether with natural and weather problems cause the decay of these churches faster and easier. The underground and ruined churches have the same problems and because of inadequate security, they face vandalism much more easily. Furthermore, the absence of a roof on the ruined churches exposes them to adverse weather problems causing more decay to the interior wall paintings and decorations of these churches. The inadequate way-finding to the underground and ruined churches led to their neglect. Lack of function and maintenance increase the speed of deterioration which causes them to be forgotten (Babazadeh-Asbagh, 2023b, pp. 56-57).

Even though some of the churches in Famagusta have been conserved and Theophilus Amin Halil Mogabgab has documented all the conservation works that he has done between the 1930s and 1950s, lack of documentation of the conservation process during different periods inside or beside the building is the common problems of almost all of the churches in the Walled City of Famagusta. Some of the churches that already have a function are closed almost all the time and open for a few events. Lack of documentation and conservation, being ruined and abandoned for a very long time, lighting problems at night, moisture, lack of access ramps for differently-abled, disabled, and elderly people, ageing, neglect and ignorance, natural and weather conditions like water erosion and wind erosion, lack of security, and unwanted plants growing inside, around, and on the walls are the main problems of the ruined churches in the Walled City of Famagusta. All of the underground churches in Famagusta have been left abandoned and vacant without any function for a very long time. Lack of documentation and conservation, lighting problems, moisture, lack of access ramps for differently-abled, disabled, and elderly people, ageing, neglect and ignorance, lack of security, and unwanted plants growing on the stairs and around these churches are the main problems of the underground churches in Famagusta (Babazadeh-Asbagh, 2023b, pp. 59-60). See Table 7 for the current problems of the churches in the Walled City of Famagusta.



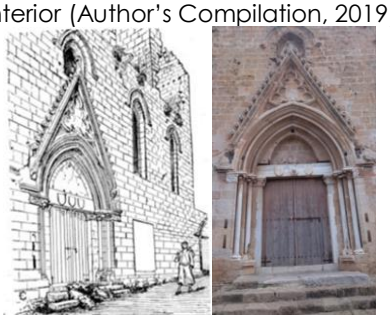
Plan (Enlart & Hunt, 1987, p. 247)


Section (Enlart & Hunt, 1987, p. 247)

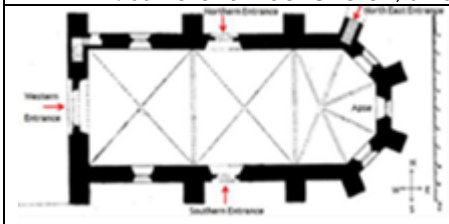

Interior (Author's Compilation, 2019)

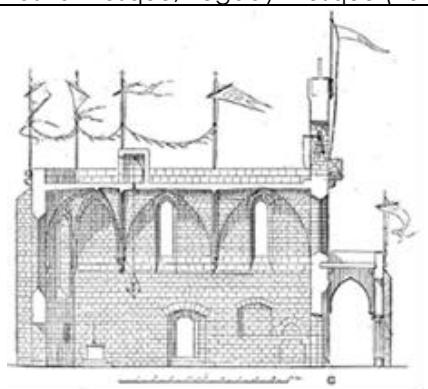

Interior (Author's Compilation, 2019)

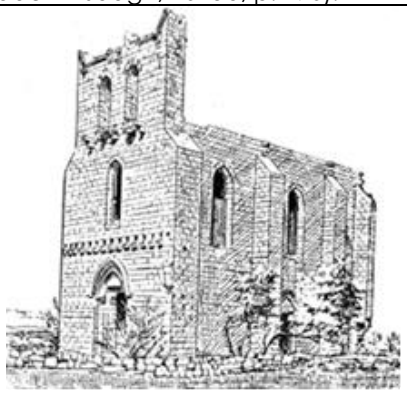

South-East View (Enlart & Hunt, 1987, pp. 578-579)


North Façade (Left: Enlart & Hunt, 1987, p. 250; Right: Author's Compilation, 2019)

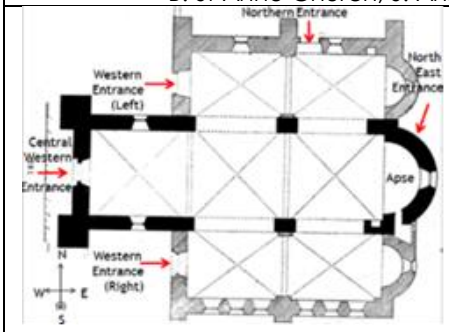
A. SS Peter & Paul Church, Sinan Pasha Mosque, Buğday Mosque (Babazadeh-Asbagh, 2023b, p. 170).


Plan (Enlart & Hunt, 1987, p. 278)


Section (Enlart & Hunt, 1987, p. 275)


South-West View (Enlart & Hunt, 1987, p. 277)

B. St Anne Church, S. Anna Church, Maronite Church (Babazadeh-Asbagh, 2023b, p. 194).

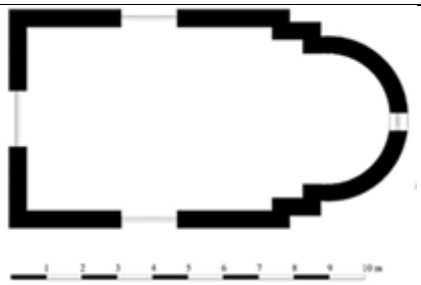


Plan (Enlart & Hunt, 1987, p. 281)


North Façade (Enlart & Hunt, 1987, p. 282)


North-East Façade (Author's Compilation, 2019)

C. The Nestorian Church, Ayios Yeorghios Xorinos Church, Church of Agios Georgios Exorinos, St George the Exiler Church (Babazadeh-Asbagh, 2023b, p. 198).

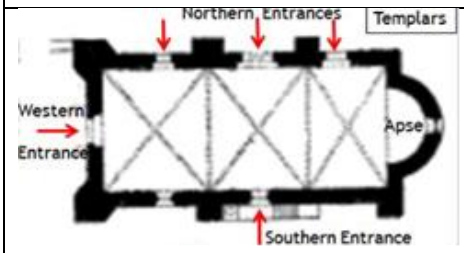


Plan (Author's Compilation, 2019)

South-West View (Enlart & Hunt, 1987, p. 286)

West Façade (Author's Compilation, 2019)

D. St Mary of Armenian Church, Saint Marie Church, St Mary's of the Armenians, Tabakhane (Tannery) (Babazadeh-Asbagh, 2023b, p. 202).

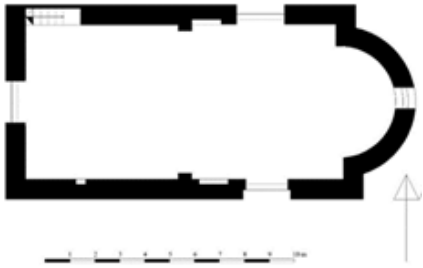


Plan (Enlart & Hunt, 1987, p. 291)

West Façade (Author's Compilation, 2019)

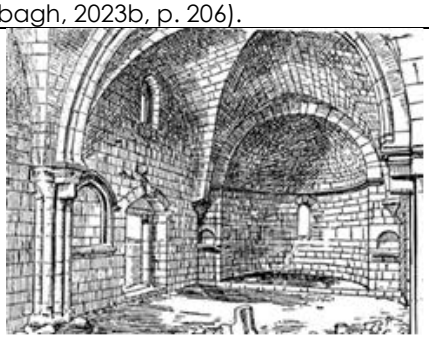
North Façade (Author's Compilation, 2019)

E. Templars' Church, one of the Twin Churches (Babazadeh-Asbagh, 2023b, p. 206).



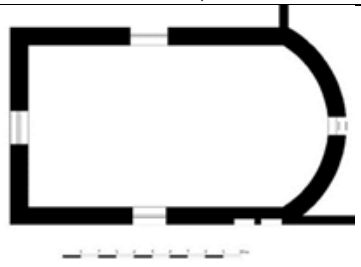
Plan (Author's Compilation, 2019)

South-West View (Enlart & Hunt, 1987, p. 299)



Interior (Enlart & Hunt, 1987, p. 301)

F. Jacobean Church, Tabakhane Mosque, Tanners' Mosque, Jacobite Church (Babazadeh-Asbagh, 2023b, p. 214).



Plan (Author's Compilation, 2019)

North-West View (Enlart & Hunt, 1987, p. 302)

North Façade (Author's Compilation, 2019)

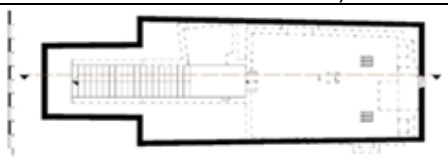
G. Mustafa Pasha Mosque, Stavros Church (Babazadeh-Asbagh, 2023b, p. 218).

West Façade (Author's Compilation, 2019)

East Façade (Author's Compilation, 2019)

North Façade (Author's Compilation, 2019)

H. Ay Zoni Church, Ayia Zone (Babazadeh-Asbagh, 2023b, p. 226).



Site Plan (Author's Compilation, 2019)

Plan (Author's Compilation, 2019)

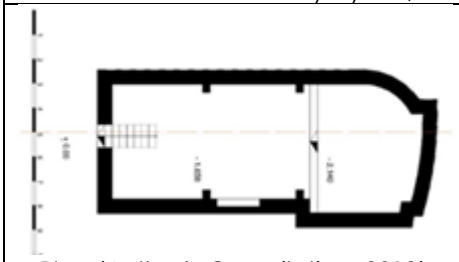
External View of the Main Façade (Author's Compilation, 2019)

(left:) External View of the Entrance, (right:) Internal View of the Entrance

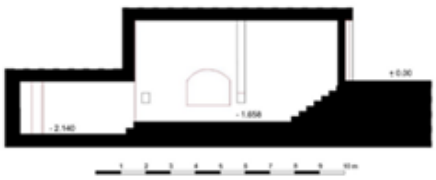
Interior View (Author's Compilation, 2019)

Wall Paintings (Author's Compilation, 2019)

I. Santa Maria de la Cava Church, St Cava Underground Church, Madonna Della Cava (Our Lady of the Cave), St Mary-Hydria, Cana, Cava, de Cena (Babazadeh-Asbagh, 2023b, p. 230).



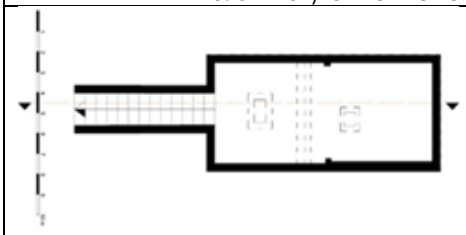
Plan (Author's Compilation, 2019)



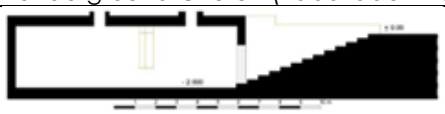
Section (Author's Compilation, 2019)

West Façade (Author's Compilation, 2019)

J. St Mary of Bethlehem Underground Church (Babazadeh-Asbagh, 2023b, p. 234).



Plan (Author's Compilation, 2019)



Section (Author's Compilation, 2019)

West Façade (Author's Compilation, 2019)

K. St Dominic Church/ Crypt, Ayia Photou, St Clare, Haia Fotou (Babazadeh-Asbagh, 2023b, p. 238).

Figure 1. Plans, Sections, Façades, and Pictures of the Churches in the Walled City of Famagusta.

Table 3. Evaluation of Plan of the Churches in Famagusta (Babazadeh-Asbagh, 2023b, pp. 139-141).

Name of Church	St Dominic Crypt	St Mary of Bethlehem underground	Santa Maria de la Cava	Ay Zoni Church	Mustafa Pasha Mosque	Jacobean Church	Templars' Church	Armenian Church	Nestorian Church	St Anne Church	SS Peter & Paul Church
Total Length (m)					19	16	20	11	27	18	29
Internal Length (m)	11	13	12		18	15	17	10	24	16	26
Total Width (m)					11	8	10	6	22	10	20
Internal Width (m)	5	5	7		10	6	7	5	18	6	17
Total Area (m^2)					209	129	196	70	431	190	590
Internal Area (m^2)	52	60	87		170	86	108	47	294	93	407
Nave/Aisle Number	1 Nave	1 Nave	1 Nave	1 Nave	1 Nave	1 Nave	1 Nave	1 Nave	1 Nave 2 Aisles	1 Nave	1 Nave 2 Aisles
Bay Number	2	3	1	1	2	2	3	1	3 (at nave) 2 (at aisles)	2	5
Apse Number		1	3	1	1	1	1	1	3	1	3
Entrance Number		1	1	1	3	3	5	3	4 (+1 door on East)	3 (+1 door on East)	5
Main Entrance	West Façade	West Façade	West Façade	South Façade	West Façade	West Façade	North Façade	West Façade	West Façade	West Façade	North Façade
Flying Buttress											√
Dome				√							
Plan Type	Single-naved	Single-naved	Single-naved	Single-naved	Single-naved	Single-naved	Single-naved	Single-naved	Single-naved (originally)	Single-naved	Three-aisled (Basilica form)
Building Material	Hewn Sandstone	Carved Stone	Carved Stone	Hewn Sandstone	Hewn Sandstone	Hewn Sandstone	Hewn Sandstone	Hewn Sandstone	Hewn Sandstone	Hewn Sandstone	Hewn Sandstone

Table 4. Evaluation of Architectural Characteristics of the Churches in Famagusta (Babazadeh-Asbagh, 2023b, pp. 142-144 drawn from Enlart & Hunt, 1987, pp. 213, 215, 246-253, 274-288, 290-294, 299-303, 578-579; Uluca-Tümer, 2017, pp. 208, 214-216, 218-219, 221, 223-224).

Names of Church	SS Peter & Paul Church, Sinan Pasha Mosque, Buğday Mosque	St Anne Church, S. Anna Church, Maronite Church	Nestorian Church, Ayios Yeorghios Xorinos Church, St George the Exiler Church, Agios Georgios Exorinos Church	St Mary of Armenian Church, Saint Marie Church, St Mary's of the Armenians, Tabakhane (Tannery)	Templars Church, one of the Twin Churches (The big one on the North side)	Jacobean Church, Tabakhane Mosque, Tanners' Mosque, Jacobite Church	Mustafa Pasha Mosque, Stavros Church	Ay Zoni Church, Ayia Zone	Santa Maria de la Cava Church, St Cava Church, Madonna Della Cava (Our Lady of the Cave), St Mary-Hydria, Cana, Cava, de Cena	St Mary of Bethlehem Under-ground Church	St Dominic Crypt (located under-ground of the ruined church)
Location in Famagusta	Sinan Pasha Street	Server Somuncuoğlu Street	Necip Tözün Street	Server Somuncuoğlu Street	Kishla Street	Server Somuncuoğlu Street	Lala Mustafa Pasha Street	Altın Tabya Street	Serbest Liman Yolu	Kishla Street	Server Somuncuoğlu Street
Built Date	Between 1300-1310	14th century	In 1360	After the middle of the 14th century	At the end of the 13th century	During the 15th century	During the 15th century	During the Latin period	1300	-	Latin Period
Architectural Style/ Church Type	Originally a Latin Church (especially Northern Entrance), Nestorian Church (later)	Latin Catholic Church	Syrian-Rite Church	Armenian Church	Templars Church	A mix of French, Aragonese Gothic & Byzantine architecture	Half-Gothic Church	Greek Orthodox Church	A Hellenistic tomb & burial space turned into a Christian cult place in the Lusignan period	Undergrou nd Church	It is a Crypt, not an Undergroun d Church as it does not have any apses.
Structural System	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
External/ Internal Structures	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Upper Structure	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Ornamental Elements	Good	Faded wall paintings	Good wall paintings	Faded wall paintings	Good	Good	Good	Good	Faded wall paintings	Poor	Poor

Table 5. Functions of the Churches in Famagusta in Different Periods (Babazadeh-Asbagh, 2023b, pp. 146-147 drawn from Enlart & Hunt, 1987, pp. 213, 215, 246-253, 274-288, 290-294, 299-303, 578-579; Uluca-Tümer, 2017, pp. 208, 214-216, 218-219, 221, 223-224).

Name of Church	Latin Period	Ottoman Period	English Period	After 1960	Current Function	Suggested Function
SS Peter & Paul Church	Church	Mosque, store	Granary, potato storage	Cultural centre, wedding ceremony hall, library, mosque, empty	Closed almost all the time, used for EMU events rarely	Interpretation Centre or Tourist Information Centre
St Anne Church	Church	Not known	Not known	Not known	No Function	Library & Bookstore
Nestorian Church	Church	Camel stable	Orthodox Church (at the beginning of the 20th century), vacant (after 1963)	Hospital (during the siege of the 1974s), cultural centre (since 1989)	No Function	Church
Armenian Church	Church	Tannery	Armenian church (1945)	No Function (after 1974)	No Function	Souvenir Shop
Templars' Church	Church	Mosque	Mosque, Masonic lodge	Refuge, library, association & community study hall	No Function	Exhibition Hall & Art Studio
Jacobean Church	Church	Mosque	No Function	No Function	No Function	Library & Reading Room
Mustafa Pasha Mosque	Church	Mosque	No Function	Mosque (since the middle of the 1990s)	Closed almost all the time	Mosque
Ay Zoni Church	Church	Not known	Not known	Not known	Store	Souvenir Shop
Santa Maria de la Cava Church	Church	Not known	Not known	Not known	No Function	Museum for Peace
St Mary of Bethlehem Church	Church	Not known	Not known	Not known	No Function	Architectural Office
St Dominic Crypt	Church	No Function	No Function	No Function	No Function	Souvenir Shop

Table 6. Conservation Interventions of the Churches in Famagusta (Babazadeh-Asbagh, 2023b; Mogabgab, 1941; Mogabgab, 1951; Piana, 2008, Uluca-Tümer, 2017; UNDP, 2012; UNDP, 2015; UNDP, 2018; Walsh, Edbury, & Coureas, 2016).

Name of Church	Conservation Interventions
SS Peter & Paul Church	Flying buttresses were added after the earthquakes of 1546 and 1568. Small repairs after the earthquake of 1735. Between 1937 and 1945, consolidation, finishing, cleaning, excavation, rehabilitation, strengthening, and renovation of structural elements was done by the Antiquities Department.
St Anne Church	The paintings on the walls were restored in 1937. In the report of UNDP (2018, October), it was listed among the completed projects.
Nestorian Church	At the beginning of the 1900s, the South façade was cleaned by the Greek Church Committee. Between 1937 and 1939, clearance, excavation, lowering of the path, and covering the road with asphalt were done. Some repairs were done for using the building until 1947.
Armenian Church	It underwent some repairs between 1937 and 1939. The south and north façades have improved with roof insulation, doors, and joinery installed. Some medieval foundations were found in the work on the frescoes in 1937. In the report of UNDP (2018, October), it was listed among the completed projects. A ceremony was held for the completion of the conservation works on 26 May 2018 funded by the European Union.
Templars' Church	During the restorations between 1938 and 1950, excavation, lowering of the ground and the road ahead, demolition of the adjoining residences on the East side, preparing against flooding, the building of the perimeter wall, and the structural and architectural elements were completed.
Jacobean Church	During the restoration works between 1937 and 1939, some of the ruined parts were built again. In the report of UNDP (2018, October), it was listed among the completed projects.
Mustafa Pasha Mosque	In 1990, during the restoration works, the concrete coating was poured over the vault. In the report of UNDP (2015, January), it was listed among the projects completed by UNDP-PFF.
Santa Maria de la Cava Church	After the excavations, the neighbouring land was expropriated and a boundary wall was built around it.
St Dominic Church/ Crypt	During the 1938-1939 excavation and repair works, different parts of the building were revealed, and then consolidation was done.

Table 7. Current Problems of the Churches in Famagusta (Babazadeh-Asbagh, 2023b, p. 150).

Name of the church	Lack of documentation near/inside the church	Lack of signs near/inside the church	Lack of access to the interior of the church	Lack of access ramps for disabled & elderly	Lighting problems	Neglect & Ignorance	Lack of maintenance	Moisture	Weather conditions: Water & wind erosion	Lack of security	Growing unwanted plants	Left abandoned	Vandalism	Ageing
SS Peter & Paul Church	√		√	√	√	√	√			√	√			√
St Anne Church	√	√	√	√	√	√				√		√	√	√
Nestorian Church	√		√	√	√	√	√			√	√	√	√	√
Armenian Church			√		√					√		√	√	√
Templars' Church	√		√	√	√	√	√	√	√	√	√	√	√	√
Jacobean Church	√	√	√	√	√	√		√	√	√		√	√	√
Mustafa Pasha Mosque	√		√	√	√	√				√	√	√	√	√
Ay Zoni Church	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Santa Maria de la Cava	√			√	√	√	√	√	√	√	√	√	√	√
St Mary of Bethlehem	√			√	√	√	√	√	√	√	√	√	√	√
St Dominic Church	√	√		√	√	√	√	√	√	√	√	√	√	√

4. Adaptive Reuse of the Churches in Famagusta

SS Peter & Paul Church has a good structural system, good external and internal structures, a good upper structure, and good ornamental elements (See Table 4) with an internal area of approximately 407 square metres (See Figure 1A & Table 3). It was a Latin church passed on to the Syrians in a later period. It was used as a granary, store, stable, and storage of potatoes sometimes. It was supposed to be converted into a museum. It was used as a cultural centre and wedding ceremony hall in the 1960s. It was used as a library in 1974. It was used as a mosque in the 1990s (See Table 5). Currently, it is closed almost all the time and open for a few events of EMU. It can be reused as an interpretation centre or tourist information centre opened every day for informing and guiding international tourists, students, and even the locals as it is needed in the Walled City of Famagusta (Babazadeh-Asbagh, 2023b, p. 83) (See Figure 1A).

St Anne Church has a good structural system, good external and internal structures, a good upper structure, and faded wall paintings (See Table 4) with an internal area of about 93 square metres (See Figure 1B & Table 3). It was used as a church during the Latin period. Its function during the Ottoman and English periods and after the 1960s is unknown. Currently, it is closed almost all the time (See Table 5). The proposed functions of this church based on the public opinions of tourists and locals are an art studio, dance studio, or library, while an exhibition hall, nursery, and residential functions are not considered appropriate (Peyravi, 2010, pp. 42, 66-72, 77, 95, 97). It can be reused as a library and bookstore as it has been already conserved and consolidated by the United Nations Development Programme (UNDP) in 2018 (See Table 6) and the interior spaces are appropriate for bookshelves. The location of the church is very quiet and suitable for a reading room or a library. To respect the authenticity of the interior wall paintings, transparent furniture and reversible interventions like movable bookshelves can be used for the proposed library function to reduce the interferences as minimal as possible (Babazadeh-Asbagh, 2011; Babazadeh-Asbagh, 2021a; Babazadeh-Asbagh, 2021b, May 14; Babazadeh-Asbagh, 2023b, p. 83-84) (See Figure 1B).

Nestorian Church has a good structural system, good external and internal structures, a good upper structure, and good wall paintings (See Table 4) with an internal area of around 294 square metres (See Figure 1C & Table 3). It was used as a church during the Latin period and as a camel stable in the Ottoman period. During the English period, at the beginning of the 20th century, it was an Orthodox Greek Church. It was left vacant after 1963. Between 1963 and 1964, it was used by refugees. During the siege in the 1974s, it was used as a hospital. Since 1989, it has been used as a cultural centre of EMU (See Table 5). Currently, it is closed but it can be reopened as a church because it still has the interior wall paintings and interior spaces similar to a church consisting of an altar and rows of benches for the pilgrims to sit and pray which can be reused for religious ceremonies of Christian students and tourists as most of the participants especially the international tourists are willing to attend religious ceremonies held inside these churches (Babazadeh-Asbagh, 2023b, p. 84) (See Figure 1C).

The Armenian Church has a good structural system, good external and internal structures, a good upper structure, and faded wall paintings (See Table 4) with an internal area of roughly 47 square metres (See Figure 1D & Table 3). It was used as a church during the Latin period and as a tannery in the Ottoman period. During the English period, it was an Armenian church (1945). It was left abandoned without any function after the 1960s (See Table 5). Currently, it is closed almost all the time. The proposed functions of this church based on the public opinions of tourists and locals are a tourist information centre, or library, while residential functions are not considered appropriate (Peyravi, 2010, pp. 42, 87-93, 95, 98). Due to its small size and location and also because of the lack of signs and wayfinding problems, it can not be reused as an information centre or library. As it has been already conserved and consolidated by UNDP in 2018 (See Table 6), it can be reused as a souvenir shop due to its limited interior space and transparent furniture can be used inside the church to respect the authenticity of the interior wall paintings (Babazadeh-Asbagh, 2011; Babazadeh-Asbagh, 2021a; Babazadeh-Asbagh, 2021b, May 14; Babazadeh-Asbagh, 2023b, p. 84-85) (See Figure 1D).

Templars' Church has a good structural system, good external and internal structures, a good upper structure, and good ornamental elements (See Table 4) with an internal area of almost 108 square metres (See Figure 1E & Table 3). It was used as a church during the Latin period and as a mosque in the Ottoman and English periods. It might have been used as a Masonic Lodge in the English period. After the 1960s, it was used as a refuge, a library, and an association and community study hall (See Table 5). Currently, it is closed almost all the time and just open for a few events. The proposed functions of this church based on the public opinions of tourists and locals are an exhibition hall, art studio, dance studio, or library, while a museum, nursery, tourist information centre, and residential functions are not considered appropriate (Peyravi, 2010, pp. 42, 58-65, 94, 95, 97). Due to its location and small size, it can be reused as an exhibition hall, and an art studio, as it was used before, opened every day for tourists and locals to visit the interior (Babazadeh-Asbagh, 2023b, p. 85) (See Figure 1E).

Jacobean Church has a good structural system, good external and internal structures, a good upper structure, and good ornamental elements (See Table 4) with an internal area of nearly 86 square metres (See Figure 1F & Table 3). It was used as a church during the Latin period and as a mosque during the Ottoman period. It was empty without any function during the English period and after the 1960s (See Table 5). Currently, it has no function. The proposed functions of this church based on the public opinions of tourists and locals are a café, souvenir shop, tourist information centre, or architectural office, while an exhibition hall, nursery, and residential functions are not considered appropriate for it (Peyravi, 2010, pp. 42, 73-79, 95, 97). As it has been already conserved and consolidated by UNDP in 2018 (See Table 6), it can be reused as a library and reading room due to its location and quite large interior space which is very suitable for a quiet reading room. Furthermore, reversible interventions like movable furniture can be used for the proposed library function to reduce the interferences as minimal as possible (Babazadeh-Asbagh, 2011; Babazadeh-Asbagh, 2021a; Babazadeh-Asbagh, 2021b, May 14; Babazadeh-Asbagh, 2023b, p. 85-86) (See Figure 1F).

Mustafa Pasha Mosque has a good structural system, good external and internal structures, a good upper structure, and good ornamental elements (See Table 4) with an internal area of approximately 170 square metres (See Figure 1G & Table 3). It was used as a church during the Latin period and as a mosque during the Ottoman period. It was empty without any function during the English period and after the 1960s. It was once used as a coffee-roasting establishment (See Table 5). It has been already conserved by UNDP-PFF in 2015 (See Table 6). It used to be open and a local Muslim Imam was teaching the Holy Quran to children, but currently, it is closed almost all the time and has no present function. The proposed functions of this church based on the public opinions of tourists and locals are a tourist information centre, souvenir shop, nursery, library, or dance studio, while residential functions are not considered appropriate for its reuse (Peyravi, 2010, pp. 42, 80-86, 95, 98). As it has been used as a mosque before, it can be reopened every day and reused as a mosque again for Muslims to say prayers (Babazadeh-Asbagh, 2023b, p. 86) (See Figure 1G).

Ay Zoni Church has a good structural system, good external and internal structures, a good upper structure, and good ornamental elements (See Table 4). It was used as a church during the Latin period. Its function during the Ottoman and English periods and after the 1960s is unknown (See Table 5). Currently, it is used as a store of unused commodities. Due to its small size and location near the gate, it can be reused as a souvenir shop (Babazadeh-Asbagh, 2023b, p. 86-87) (See Figure 1H).

Santa Maria de la Cava Underground Church has a good structural system, good external and internal structures, a good upper structure, and faded wall paintings (See Table 4) with an internal area of about 87 square metres located just outside the Walled City of Famagusta (See Figure 1I & Table 3). A Hellenistic tomb turned into a Christian cult place in the Lusignan period. It was an important burial space that appeared as early as 1300 under the name of Cava. It must have been used as a church during the Latin period, but its function is not known after that. It has been abandoned and left empty without any function for a very long time (See Table 5). It can be reused as a museum for peace in

North Cyprus after the renovation and restoration of the church (Babazadeh-Asbagh, 2023b, p. 87) (See Figure 1I).

St Mary of Bethlehem Underground Church has a good structural system, good external and internal structures, and a good upper structure (See Table 4) with an internal area of around 60 square metres (See Figure 1J & Table 3). Camille Enlart did not mention this underground church in his book (1987), nor did he indicate its location on his map. It must have been used as a church during the Latin period, but its function is not known after that. It has been abandoned and left empty without any function for a very long time (See Table 5). It can be reused as an architectural office after the renovation and restoration of the church (Babazadeh-Asbagh, 2023b, p. 87) (See Figure 1J).

St Dominic Crypt has a good structural system, good external and internal structures, and a good upper structure (See Table 4) with an internal area of roughly 52 square metres (See Figure 1K & Table 3). It was used as a church during the Latin period. Its function during the Ottoman and English periods and after the 1960s is unknown (See Table 5). Currently, it is empty, but it can be reused as a souvenir shop due to its small size and location near the North-East entrance gate to the Walled City of Famagusta (See Figure 1K) (Babazadeh-Asbagh, 2023b, p. 87).

5. Conclusion

When conflicts occur among different communities, religious buildings are the main target of ignorance, abandonment, or even conscious vandalism. As the historic buildings and sites belong to all human beings, no matter what their nationality or religion is, not even to the currently living people, not just for their builders in the past time, but also for future generations, everybody must do whatever they can for the protection and conservation of the valuable heritage worldwide. Interpretation and its different tools can be one of the methods for prolonging the life of historic buildings and especially abandoned cultural heritage like religious buildings. Adaptive reuse can be another solution for abandoned historic buildings when their original function is not the first choice for people with different religious beliefs in various communities.

In the case of the Walled City of Famagusta, St Nicholas Cathedral is the most famous historic building amongst the others, not just because of the elaborate west façade and is one of the Gothic masterpieces, but because it is the only church in Famagusta which has had a function since the establishment time. It suffered the bombardment and earthquakes just like the other churches, but as it was converted into a mosque and used continuously and experienced conservation, restoration, and constant maintenance, it became the icon of the Walled City of Famagusta. Similarly, if the abandoned historic buildings are given a function and are used with a proper management plan and being cared for with periodic repair and maintenance, this could prolong their life which is the ultimate goal of conservation. Adaptive reuse and changing the original function of abandoned religious buildings in different countries can benefit the historic buildings to live longer and even help with the financial issues for their maintenance and repair. Moreover, informing the people no matter if they are the locals who live in the same city and neighbourhood of the historic buildings, the tourists who might have seen them just once, or the international university students who have lived in that city or country for a short time of their life during their academic years or even the youngest students of the schools who are curious about the history of their city and country can help to raise the knowledge about the values of the cultural heritage as reducing the ignorance and vandalism (Babazadeh-Asbagh & Uluca-Tümer, 2021, pp. 96-97; Babazadeh-Asbagh, 2023b, pp. 110-111).

When the communities are changed during the time and their religious buildings are left abandoned and become vacant, due to the lack of function, poor maintenance policies, and lack of security, vandalism can be a serious problem for their cultural heritage buildings. Having a function can prevent vandalism due to the security and regular maintenance of cultural heritage buildings. Although the best function for a church is to be used as a worship centre, when the communities are not present

anymore, adaptive reuse can be suggested for a different function proposed for the abandoned church building. Adaptive reuse is one of the conservation methods that can have positive effects like financial benefits of the income for maintenance of the abandoned church buildings which is necessary for the sustainability of the cultural heritage buildings. Architectural characteristics, structural situation, size, and the location of the church buildings are important factors in choosing a new function for their adaptive reuse.

Adaptive reuse functions for a church building can be commercial like a café, bar, coffee shop, restaurant, or shopping centre, or community functions like a library, bookstore, or cultural heritage centre. Office functions like an architectural office or art studio, cultural functions like a theatre, museum, or concert hall, and residential functions like a house for a single-family residence, hostels, or even hotels, are the other reuse functions that can be used for the church buildings. Some of these functions are proposed for the adaptive reuse of the abandoned churches in the Walled City of Famagusta with proper upper structure and no function. The other churches which are ruined especially in their upper structure can be visited by tourists after the restoration and consolidation projects making sure that their physical structures are safe. There are some vacant places near some of these ruined churches in the Walled City of Famagusta which can be reused as a public park with sitting benches, public toilets, children's playgrounds, and sports facilities open to all visitors, tourists, students, and locals as there is a need for designing more green and public spaces (Babazadeh-Asbagh, 2023b, pp. 111-112).

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