Archaeological Museum Design in Re-Used Historical Buildings

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ABSTRACT

The historical buildings, over the generations, have been built in order to represent a culture, a belief or act as protection from attacking forces. However, with the changing needs, some functions become obsolete or some buildings fail to adapt to contemporary needs. Due to these reasons, when the 21st century arises, *Northern Cyprus* as an example, with its rich history and culture, is also left with many abandoned and unused historic buildings, which have passed through the years. The buildings being mentioned are looked at, as possibilities to re-liven the site by conservators. These kinds of sites and buildings are re-functioned as archaeological museums in various parts of the world. This research takes these into consideration and investigates the design approaches of archaeological museums, within adaptive re-use of historical buildings, with an effective focus on contemporary display and the approaches towards achieving this goal.

In the first chapter the problem definition, aim, methodology, and limitations of study are given in details. Chapter 2 gives general information about archaeological museums and their evolution. Later, the chapter goes into detail of archaeological museums in terms of space organisation, space character, display/exhibit design, and lighting, including successful examples from around the world. Chapter 3 is an investigation of contemporary approaches for adaptive re-use of historic buildings, focusing on the values, degrees of intervention and functions that can be given to re-used buildings. This chapter ends with successful worldly examples to support the research. Chapter 4 takes the Davidson Centre as an example to be learned from; through an in-depth research which is based on the theoretical knowledge in the

previous chapters, the analysis and classification is deeply made for this archaeological museum, formed by the adaptive re-use of a historic building within an archaeological site.

Keywords: Adaptive re-use, archaeological museums, architectural design, interior design, contemporary display of artefacts.

ÖZ

Tarihi eserler yıllardır bir kültürü, inancı veya işgalci kuvvetlere karşı bir koruma sağlamak için inşa edilmiştir. Fakat yıllardan beri değişen gereksinimlerle, bazı işlevler eskimekte; bazı binalar çağdaş gereksinimlere adapte olamamaktadır. Bahsettiğimiz nedenlerden dolayı 21. yüzyıla dayandığımız bu zamanda, zengin tarihi ve kültürüyle Kuzey Kıbrıs'ı örnek aldığımızda, uzun yıllar geçirdikten sonra terk edilmiş ve kullanılmayan tarihi binalarla baş başa bırakılmıştır. Sözü geçen bu tür binalar, farklı bir gözle bakıldığında, koruma uzmanları tarafından yeniden canlandırma olanağı olarak görülmektedir. Tarihi alanlar ve tarihi binalar, dünyanın birçok yerinde arkeolojik müze olarak Yeniden işlevlendirilmektedir. Bu araştırma, söz ettiğimiz konuları ele alıp, bu hedefe ulaşırken tarihi yapıların yeniden işlevlendirmesiyle elde edilen arkeolojik müzelerin tasarım yaklaşımlarını irdelemektedir.

İlk bölümde, problem tanımı, amaç, metodoloji ve limitasyonlar detaylı şekilde aktarılmaktadır. İkinci bölüm, arkeoloji müzeleri ve gelişimleri hakkında genel bilgi vermektedir. Daha sonra bu bölüm, arkeolojik müzeleri mekân tasarımı, mekân karakteri, sergi tasarımı ve aydınlatma konularına odaklanarak detaylı biçimde irdelemekte; dünya çapında başarılı örnekler içermektedir. Üçüncü bölüm tarihi binaların değerleri, müdahale dereceleri ve verilebilecek yeni işlevler üzerinde durularak, çağdaş yeniden işlevlendirme yaklaşımları incelenmektedir. Bu bölüm dünya genelinden başarılı örneklerle araştırmaya destek vermektedir. Dördüncü bölüm Davidson Center'i, önceki bölümlerdeki teorik bilgiler ışığında, derinlemesine araştırma yöntemi aracılığıyla, öğrenilebilecek bir örnek olarak ele almaktadır.

Arkeolojik bir alan içerisinde yer alan tarihi bir binanın yeniden işlevlendirilmesi ile elde edilen bu arkeolojik merkez için derinlemesine analiz ve sınıflandırma yapılmıştır.

Anahtar kelimeler: Yeniden işlevlendirme, arkeolojik müze, mimari tasarım, iç mekan tasarımı, eserler için çağdaş sergileme.

To my Family, my son and my close friends, thank you for your patience and support.

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TABLE OF CONTENTS

ABSTRACT iii

ÖZ v

DEDICATION vii

ACKNOWLEDGEMET viii

LIST OF TABLES xii

LIST OF FIGURES xiii

1 INTRODUCTION 1

1.1 Problem Definitions and Research Questions 1

1.2 Research Aim and Objectives 5

1.3 Research Significance 7

1.4 Methodology and Limitations 10

2 DESIGN ISSUES INARCHAEOLOGICAL MUSEUM SPACES 12

2.1 An Overview on Museums 12

2.1.1 Definitions and Evolution of Museums 12

2.1.2 Types of Museums 15

2.2 Archaeological Museums: An Overview 19

2.2.1 Evolution of Archaeological Museums 20

2.2.2 Classifications of Archaeological Museums 22

2.3 Key Issues in Archaeological Museum Design/Spaces 23

2.3.1 Space Organization 24

2.3.2 Space Character 26

2.3.3 Display/ Exhibit Design 28

2.3.4 Lighting 31

2.4 Successful Examples of Archaeological Museums 33
2.5 Chapter Conclusion 38
3 CONTEMPORARY RE-USE OF HISTORICAL BUILDINGS 39
3.1 Significance of Historic Buildings 41
3.2 Adaptive Re-use of Historic Buildings 44
3.2.1 Evolution of Adaptive Re-use 49
3.2.2 The Conservation Values for Adaptive Re-Use 50
3.2.3 The Decision to Adapt a Building 51
3.2.4 Degrees of Intervention 52
3.3 Changing Phenomena of Adaptive Re-Use 56
3.4 International Standards / Principles on Adaptive Re-Use 58
3.5 Successful Examples of Adaptive Reuse 61
3.6 Chapter Conclusion 65
4 INVESTIGATION OF DAVIDSON CENTER AS A RE-USED ARCHAEOLOGICAL MUSEUM 66
4.1 Architectural Space Organization 68
4.2 Space Character 71
4.3 Display/ Exhibit Design 72
4.4 Lighting 75
4.5 Significance / Value Analysis 77
4.6 Evaluation According To International Standards of Adaptive Re-Use 79
4.7 Design of Interventions 80
4.8 Chapter Conclusion 89
5 SUMMARY AND CONCLUSIONS 91
REFERENCES 95

APPENDICES 104

Appendix I: The Venice Charter 105

Appendix II: The Burra Charter 109

Appendix III: The Athens Charter 111

LIST OF TABLES

Table 1: Related international charters 61

Table 2: Evaluation of Davidson Center in the light of theoretical background (Source: Author) 90

LIST OF FIGURES

Figure 1: Process of designing "an archaeological museum" by the adaptive reuse of a historical building (Source: Author)……..3

Figure 2: Structure of the study (Source: Author)……..…6

Figure 3: proposed adapt STAR model (Conejos et al., 2011:10)……..…..10

Figure 4: The new acropolis museum exterior and interiors views (Source: Ambrose &Paine, 2006)…….15

Figure 5: The new acropolis museum exterior and interiors views (Source: Xiaolu Li., 2010)……..…….35

Figure 6: The Getty Villa project exterior and interiors views (Source: Xiaolu Li., 2010)……...36

Figure 7: The Zeugma Mosaic Museum exterior and interiors views (Source: Xiaolu Li., 2010)…….……..37

Figure 8: Typical combinations of changing a building's use (Douglas, 2006)…...…41

Figure 9: Degrees of intervention (Source: Douglas, 2006:3)……..…54

Figure 10: The Tate Modern Exterior and Interiors Views (Source: Macdonald, 2011)……...63

Figure 11: The Dominican Church Exterior and Interiors Views (Source: Plevoets & Van Cleempoel, 2009)..…….…..64

Figure 12: The Gasometer City Exterior and Interiors Views (Source: Wehdorn, 2008)……...65

Figure 13: Old City of Jerusalem (Source: Safdie, Barton & Shetrit, 1986)……..…..68

Figure 14: An overview of the Old City today (Source: Kimmel, 2011)…..……...….69

Figure 15: The underground planning of the museum, showing the different layers that have been built (Source: Kimmel, 2011)….....70

Figure 16: Visitors circulation patterns and lay out of compartments (Source: Xiaolu Li., 2010)……..…..71

Figure 17: Underground planning of the museum (Source: Kimmel, 2011)...……...72

Figure 18: The roof being built as low as possible to be parallel with the palace floors (Source: Xiaolu Li., 2010)……..73

Figure 19: Virtual displays and pictures in the museum (Source: Kimmel, 2011).....74

Figure 20: Light materials contrast with the original ones (Xiaolu Li., 2010)…….....75

Figure 21: the Oculus, and its drawings (Source: Kimmel, 2011)…….....…...……75

Figure 22: The Oculus provides Natural light in the day and artificial light at night (Source: Kimmel, 2011)……...……...76

Figure 23: Selected glass prevents ultra-violate light from entering and damaging the artifacts (Source: Xiaolu Li., 2010)…….……77

Figure 24: Artificial and natural lighting used to give depth to the structure (Source: Xiaolu Li., 2010)…….……..77

Figure 25: Examples of natural and artificial light (Source: Kimmel, 2011)…....…...78

Figure 26: Metal doorways hiding the plugs and sockets (Source: Kimmel, 2011)...78

Figure 27: The Davidson Museum is built over and integrated to the archaeological site (Source: Xiaolu Li., 2010)……80

Figure 28: An illustration of the architectural Oculus feature, carrying light to the deepest parts of the museum (Source: Xiaolu Li., 2010)……82

Figure 29: Light weight wooden and steel walls, combined with glass walls (Source: Kimmel, 2011)……...……...……..83

Figure 30: Detached elements on the interior of the design (Source: Kimmel, 2011)……...84

Figure 31: Detached material and the sketch of the plan (Source: Kimmel, 2011)....84

Figure 32: The building concentrates on using light-weight materials such as steel, wood and glass to reduce stress from the original building (Source: Xiaolu Li., 2010)……...85

Figure 33: The glass walls do not distract the viewers from the historical site (Source: Kimmel, 2011)……..……..……86

Figure 34: The area which the extension will be covering (Source: Kimmel, 2011)…….....……...……87

Figure 35: 3D images of the layers and the completed roof (Source: Kimmel, Etan. Davidson Center. 2015. PDF file).....…...87

Figure 36: 3D image of the finished inner design (Source: Kimmel, Etan. Davidson Center. 2015. PDF file)……..... 88

Figure 36: Plans for the levels and inner architecture (Source: Kimmel, Etan. Davidson Center. 2015. PDF file)…….….. 89

Chapter 1

INTRODUCTION

In this chapter, first the problems and the definition of adaptive reuse has been broadly introduced. The chapter familiarizes the aim of the research, giving an idea of the topic before going to depth. Keeping the aim of the study of make an overview on archaeological museum designs with re-used historical buildings, the significance of the research is also tackled which is bringing together the ‘underground heritage’ and ‘over-ground heritage’ in the study . Finally the chapter ends with the methodology used to conclude the work plus the limitations that have been used.

1.1 Problem Definitions and Research Questions

Generated from the Latin word *'aptare'*, the word adaptation means to change the capacity, function or purpose of a building by changing it to over or above maintenance. Over the years, the word has been narrowed down to suggest that a building has undergone some change of use over the years and by the people occupying the space. Another way that this term is looked is that it means to improve the place for future usage. We see this term nowadays quite commonly. The world that we live in is overcrowded by people and buildings hence natural resources are being wasted by new constructions. Due to this reason, the adaptation of buildings are becoming more and more desired by architects/ interior architects/ conservation architects and the land owners.

Over the centuries many examples of successful architecture can be observed. Many of them no longer having their old structure to stand on and some of their functions are now obsolete. For this reason many of the historical buildings have been abandoned by the community. Historical buildings with adaptation potential, to be reused for various appropriate functions can be adapted to be reused for various appropriate functions. Although giving a historical building a completely new function, is a challenging job; if one considers the "needed function" then it will be realized that converting it into a museum can be one of the appropriate approaches. On the other hand according to the potential of historical sites in close surroundings, "archaeological museum" is one of the best approaches for preserving the artifacts coming out from these areas, as well as preserving the "excavation sites". As Cyprus is rich in terms of historical background with many different historical layers and many archaeological artifacts are discovered and being excavated; there is an urgent necessity for suggesting a contemporary "archaeological museum" in North Cyprus.

The research is expected to cover the following issues which are important aspects of interior design and architecture:

1. Contemporary concepts in adaptive reuse of historical buildings.
2. Key design issues in archaeological museums within different categories of museums.

The scheme below breaks down the process of designing “an archaeological museum” into five easy steps;

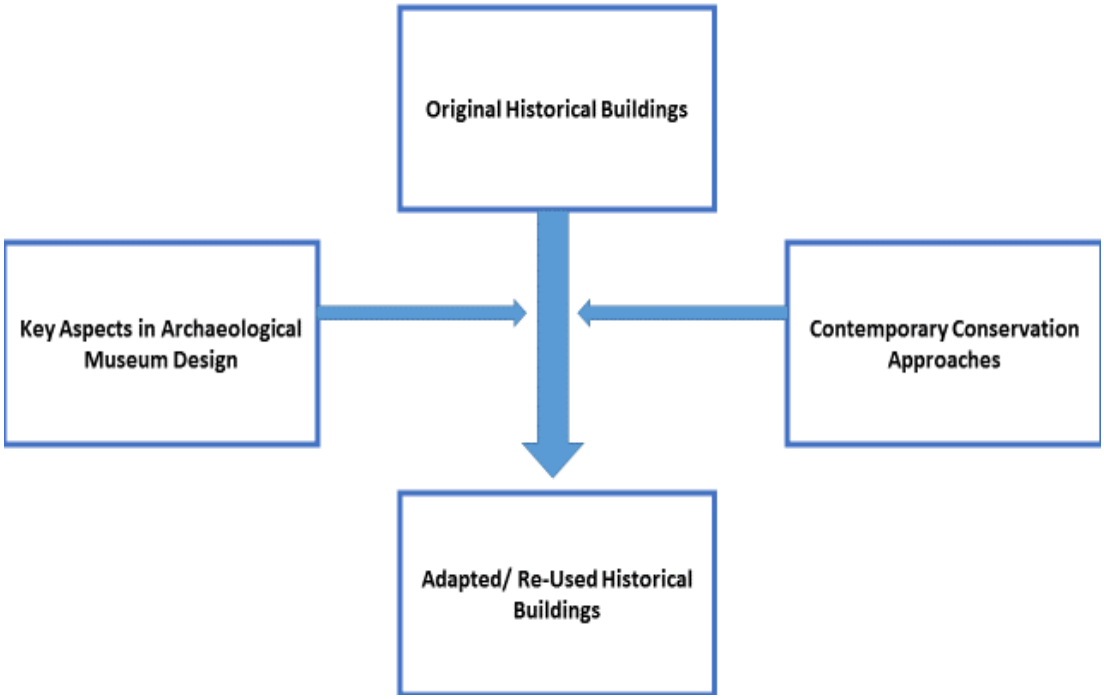


Figure 1: Process of designing “an archaeological museum” by the adaptive reuse of a historical building (Source: Author)

As said in the scheme above, designing an archaeological museum out of a historical building is a challenging job. What must be asked to first is, how would it be possible to reuse historic buildings within the contemporary conservation criteria and heritage values without destroying the historic significance of the building? The answer of this question can be answered very vaguely. When the old buildings are taken into consideration, altering and refurbishing them generally tends to be more or less the same price or more costly than it would, to plan, build and construct a building of the same functionality. When coming up with a set plan for the chosen site, the idea of what is intended to do with it, plays a key role for some structures. Considering the buildings state and condition, it would be more convenient to simply demolish the old building in order to build it up again to the required state to carry out the plan than

refurbishing it in the first place. However, if the building has heritage values and a decision is made for conservation, then re-functioning is an appropriate approach for conserving and sustaining these values to the future.

Taking to fact the risks that are taken by refurbishing a historical building, not all things are negative conservation. Architects/ Interior architects can rely on one term called restoration. In the simplest terms, it involves a process of bringing back what was broken or lost and putting it in the order or manner which it originally was. Restoration is an intensive process for heritage conservation. In this case, it could be viewed as a healing process aimed at rehabilitating a sick building. The rehabilitation or restoration process may simply be in terms of the physical conditions of the building, the psychological implications or even both. Restoring a building also revives the memories that abound in the building blocks of that structure. It begins with an understanding of the historical background of that building, choosing the appropriate survey tools for executing a restoration task (this includes materials and styles) and also a good understanding of legislative boundaries and policies (Feilden, 2005).

Throughout the years, even though technology and other fields have advanced, conserving a building isn't easy. It may seem like a simple touch that architects do, in order to fine out the decorative qualities of a place, but it can still be hard to find a solution to local and environmental problems. Also taking the decay of a building into consideration, there are major challenges that need to be overcome before attempting such project.

"How would it be possible to re-use historic buildings within contemporary conservation values and criteria?" without destroying the significance of historic buildings? Is a mainly asked question. As it has been stated, demolishing old buildings in order to build new ones, in the light of economical situations and to save time, is not valid for historic buildings that are valued by the public, either a historic or emotional bond to the place is important, or in such cases demolition wouldn't even be a considered option.

Conserving architecture and the fine decorative arts is not a simple deal and this is considered the main problem. Even though living in a time of space travel, developed technologies, and having atomic power, finding solutions to environmental problems such as the decaying of buildings is still a huge threat (Feilden, 2005).

Research Question: What are the Contemporary design approaches for archaeological museums within adaptive re-use of historical buildings with a special focus on a contemporary exhibit/ design?

1.2 Research Aim and Objectives

Within the architectural conservation field, preservation, restoration and conservation are words, which are being used interchangeably. In today's English, the word conservation has grown in popularity and has become a fashionable word in the architectural language. Despite not translating well into other languages, the work it covers is mostly for the care of museums and other objects of art that are a part of the buildings environment (Rodwell, 2008). When considering archaeological museums, the design of the artifacts and the way they are presented to the public must be thought

of. The design and the layout of the displays activate the visitor's imagination and this act encourages them to express

themselves. The historical artifact displayed cannot be classified as an inanimate object so easily. The object being displayed carry ideas and messages through the past. Therefore, as Dean& Edson mentioned (2013), the design of archaeological museums plays key roles in museums and its intended purpose.

The aim of the study is to make an overview on archaeological museum designs specially focusing on contemporary display of artefacts in re-used historical buildings. In the light of the research question and aim of the study, as the next step, the intersection of 'adaptive re-use' and archaeological museum design including 'contemporary display of artefacts' will be the focus of research (Figure 2).

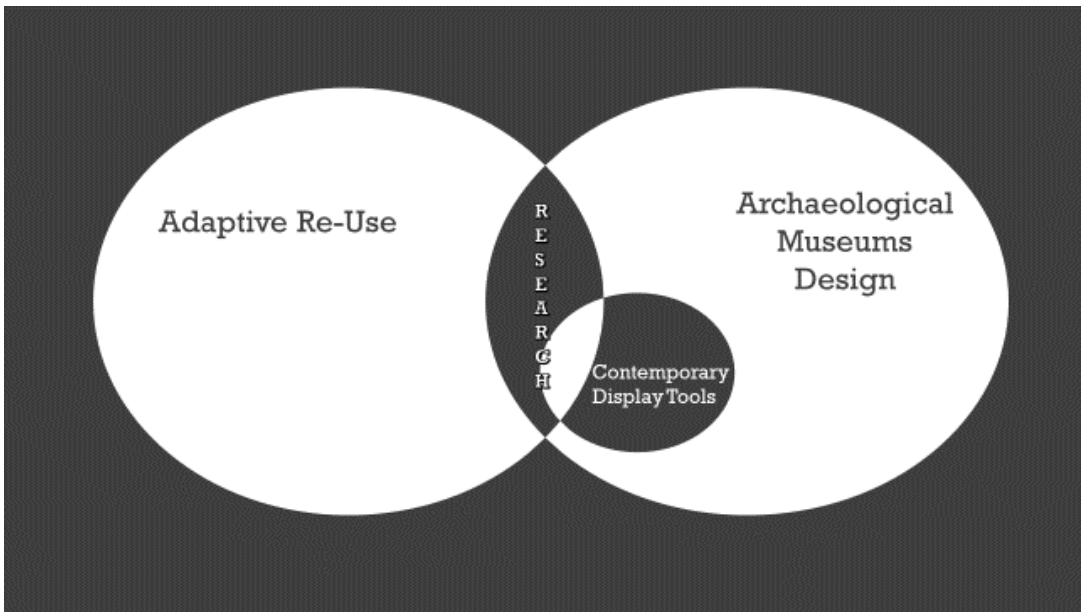


Figure 2: Structure of the study (Source: Author)

The aesthetics, historic, scientific and technical methods in the conservation of historic buildings are constituted of inter-professional discipline. Conservation is a

multidisciplinary activity, which is developing rapidly, within the framework of other experts, combining and contributing to one another's works in order to form an effective team (Feilden, 2005).

Due to the constant change of civilizations in Cyprus. There is a rich accumulation of historical heritage. Many historic buildings however, have lost the initial function and purpose for which they were built or they have failed to meet contemporary needs. This could be attributed to the change of belief systems, economic transformations and other external factors influencing the World on a broader scale. With a higher interest from entrepreneurs, these buildings can be brought back into the society and reused in the most appropriate and functional ways. How the buildings life span can be extended and further used will be discussed in this study.

It is believed that refurbishment is getting more popular in the recent years. Adaptation extends life through the process and through the ongoing technologic, economic and demographic change of city layout, such adaptations will be a better idea of the future of architecture. The objective of this research aims to determine an evaluation of re-functioning approaches for historic buildings, mainly focusing on contemporary design approaches and tools in archaeological museums.

1.3 Research Significance

To refine the meaning of a historic building, basically, a historic building is a place, which gives us a glimpse back into the culture, and the people that made such structures. A historic building has many values such as historic, architectural, aesthetic, archeologic, economic, social and in some cases spiritual and symbolic values. The main effect of these buildings generally come from an emotional value,

due to its symbolic importance of the cultural identity it once had. Building is such posture, after surviving give or take 100 years of hazards and its able to stand, such places gain the right to be called 'historic' (Feilden, 2005).

To prolong life of buildings, embracing all acts to preserve the natural heritage, the action taken to prevent decay is called conservation. Conservation is a broad term that runs across different fields and disciplines. However, when conservation in architecture is spoken about, the different processes involved in the preservation of history is simply referred to (Fielden, 2005). Also prolonging the artistic message, set by humans in such buildings, is kept for the objects to be presented. By establishing legislations through listing and scheduling buildings and ruins is the basis of historic conservation. Regular inspections and documentations are two key roles of conservative actions (Feilden, 2005).

Adaptive reuse refers to the process of reusing an old site or building for a purpose other than which it was built or designed for. It's important to be concerned about maximizing the potential of adaptive reuse of a building in its later life and to help to mitigate the effects it might undergo with the change of weather climate, in addition to the economic, social and environmental conditions when designing a new building. The full understanding of the context of a building should be understood by the designer and the design technologies should also be considered (Conejos et al., 2011).

The role of adaptive re-use in buildings has an important role in global climate protection and emissions reduction. Therefore, the design of future buildings which include the possibility of adaptive re-use is useful in terms of sustainability (Conejos et al., 2011). An alternative to demolition and construction is seen as adaptive re-use

in buildings, thus the buildings are automatically sustainable by generating less waste and using less energy. It can be said that it's a significant change in building functions at the time when the older functions become obsolete (Douglas, 2006).There are two main influences while deciding to re-use a building. One of them is timing (construction time) and the second one is available support (grants).

The graph below shows that there are different issues that should be dealt with, regarding to the design criteria for adaptive re-use of a building;

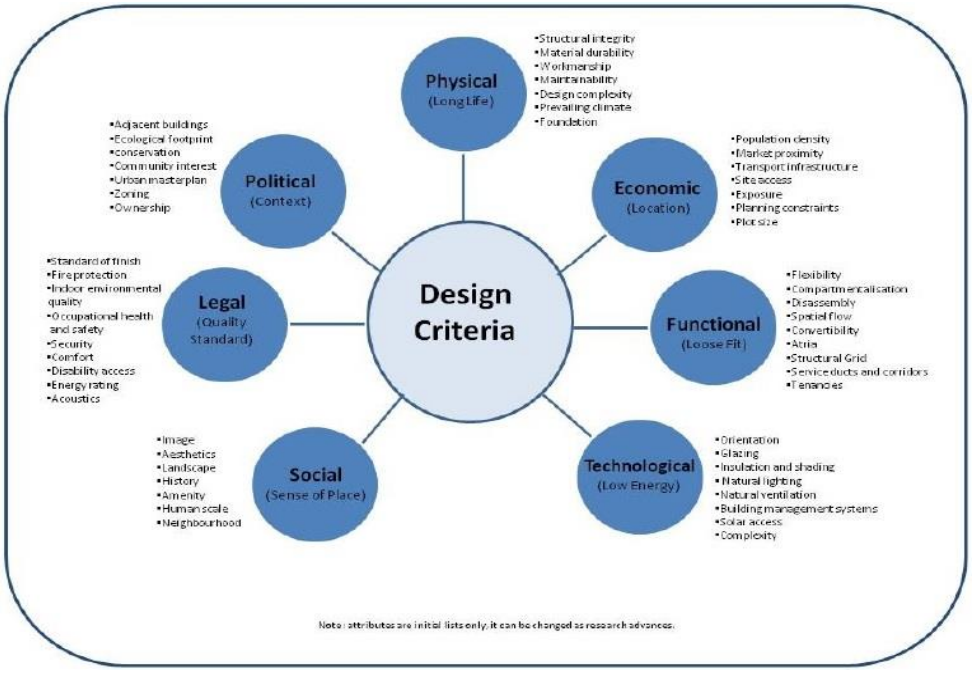


Figure 3: proposed adapt STAR model (Conejos et al., 2011:10)

The significance of the research is to blend the contemporary design of the archaeological museums, with special focus on the contemporary exhibit, by giving a historical building a new function under the framework of adaptive re-use. Preserving and displaying the artefacts and sustaining the historic importance of the site will also be taken into consideration. At this point the significance of this study can be

summarised as bringing together the underground archaeological heritage with the over-ground architectural heritage.

1.4 Methodology and Limitations

In successful studies, the main effects come from the way the research is held and its methodology. This research is based on mixed qualitative methods including personal observation, in-depth interviews and literature review for both theoretical and case study investigation. The in-depth interviews were held in two stages. The first interviews were conducted during the spring term of 2015, with *Assoc. Prof. Dr Luca Zavagno* and *Assist. Prof. Dr.Bülent Kızılduman* to take a professional view of ideas to help generate the research on archaeological museums. The second stage of in-depth interview was to gather information, throughout the summer of 2015. emails were sent to the Architect of the Davidson Centre, Mr. Etan Kimmel from Kimmel-Eshkolot Architects, followed with an in depth skype interview. Questions regarding the design, circulation, problem and difficulties, and plans regarding the future of the museum were asked. Another exchange of emails was carried out with Yuval Baruch, Jerusalem regional architect.

A successful example to learn from, is overviewed to visualise the theoretical backgrounds, in both keywords of “archaeological museums” and “adaptive re-use” which are taken to hand in the second and third chapter of this research. Additionally, one case, the Davidson Center, in Jerusalem, Israel, which handles both keywords, is successfully investigated further.

The reason of choosing the Davidson Museum is because it is an internationally known site with an accumulation of rich historical layers including an important archaeological site.

The limitations of research is that the study does not investigate new buildings which are built as archaeological museums. As it's mentioned before, the study conducts archaeological museums in re-used historical buildings, in that manner the focus is on historical buildings not new buildings. The study also gives an in-depth investigation of a single example that is an adaptive re-use project for an archaeological museum on an archaeological site, due to this reason, the collectable information which was provided has a limit.

Due to the lack of materials being provided for access is limited, finding information wasn't the easiest of tasks. Putting many hours into searching for suitable materials, through the EMU library to sources and Melbourne University library. However, not enough suitable information was on hand. After many days of searching the web, connections with the architect was made and the required information was provided. As the museum is considered a fairly new project, material that holds the information is hard to find, the help and support that the architect provides plays a key role in concluding the study.

Chapter 2

DESIGN ISSUES INARCHAEOLOGICAL MUSEUM SPACES

A museum administers to the gathering that have notable, logical or masterful esteem and set them up for opening through impermanent or lasting presentations. It could be said that, it additionally conveys the past to the present and make it cut yet again. It can be a well presentation of the history in different periods. This thought let the Historical centers and their structural planning, encountering another way. It was then comprehended that, a buildings have been utilized as a gallery can be used as a work of art itself (Desvalleés et al, 2010).

2.1 An Overview on Museums

The term "archaeological museum" is given to the place which houses ancient artifacts and represent the past, carrying it forward through illustrations, to be seen by the much newer generation (URL1). The section based chapter explores museums by points such as the types, definitions of museums in general and an in depth glance into archaeological museums.

2.1.1 Definitions and Evolution of Museums

Derived from a Latin word *'mouseion'*, the term museum, which is referred as the spot of dreams, new ideas, and instated as a foundation of examination. It was considered as a spot, where the rationalists and researchers, also known as the past day scientists, gathered to talk and discuss about their newly found ideas with one another. Even when it is looked back to the past centuries, the presence of museums are visible. To

understand museums, first of all, the Latin orientated word, which over the years, changed in meaning can be explored. The earliest translation for museums, dating back to the classical era, it meant “the temple of muses” who were nine young goddesses, who watched over the happiness of poetry, love, history, music and so on. As indicated by this understanding, the first historic center of the world is known to be the immense Alexandria Exhibition hall and Library, which was established in Third Century BC. It was a spot for new thinkers, researchers and rationalists and are considered as sites of education more than a position of saving materials. The time of utilization of the word “museum” is dated back to the 1700 A.D. to depict the accumulation of interests. At this point, the term ‘gallery’ is being utilized as a position of saving each kind of valuable accumulations (Lewis, 2013).

A non-profit establishment, which is known as museums, is appointed as a position of presentation and preservation of important articles and works of art. It gives a situation to mulling over and translating verifiable, experimental and aesthetic works (Dillenburg, 2011).

While making exhibited artifacts and objects a public viewing, gathered findings require a sheltered spot to be stored and since an incredible measure of cash has been spent to setup the world fairs, discarding the items in the wake of shutting the display was not practical or logical in an economic sense. Along these lines, galleries and museums have been developed, keeping in mind the end goal, to safeguard the show so they can live up to expectations (Panero, 2012).

In the USA, a project propelled by the government in the 1970s set out to give a progression of *'option spaces'* for workmanship, spaces closer in character to those in

which numerous masterpieces were made than to customary historical museum displays. Straight to the point Gehry's Brief Contemporary in Los Angeles drew on the experience of these venues so effectively that it turned into an unchangeable venue. Completely new museums keep on multiplying as a reaction to the proceeding with interest for metro landmarks. Yet the museums without bounds is prone to be less a *'hallowed'* space than an open and agreeable spot (Powell, 2005). In the event that historical museum buildings can overshadow the articles it is proposed to show old structures can get to be as displays in their own particular right. In the hands of a designer, existing structures of extraordinary characteristic have been changed practically as far as their symbolism – Stirling's Tate Display in Liverpool and Scarpa's Castelvecchio at Verona are examples which can be held prominent (Powell, 2005).

Museology, or in other words, the science of museum organization is the systematic study of management and function. Museology, which turned into an order toward the end of the earlier century, and which today benefits itself of examination and improvements in the fields of language, understandings and pictures, serves the purpose to other associations with the past. Contemporary interpretations is the main aim, it expects to re-design the past and its history. Every presentation array incorporates various topical sub-units, each of which is the most finished way for "intercession" or "correspondence" between the present and the material remainders of the past, while as yet giving the redisplay a human-centric core interest. Each topical sub-unit may be subordinated to more extensive topical, ordered or topographic gatherings of shows, in the structure of interim displays, open occasions or instructive projects (URL2).

2.1.2 Types of Museums

The types of museums vary in size, exhibited objects and/or purpose area, audience or the way they exhibit. The assortments of museums also have differences. The main character is, what classifies them. Ambrose &Paine (2006:7) classifies them as

Some types of museums:

Classification by collection:	
-General museum	-Military museum
-Geology museum	-Ethnography museum
-Archaeology museum	-Industrial museum
-Science museum	-Natural history museum
-Art museum	-etc., etc.
Classified by who runs them:	
-Government museums	-Independent or private museums
-Army museums	-University museums
-Municipality museums	-Commercial company museums
Classified by the area they serve:	
-National museums	-Regional museums
-Local museums	
Classified by the audience they serve:	
-Educational museums	-Specialist museums
-General public museums	
Classified by the way they exhibit their collections:	
-Traditional museums	-Open air museums
-Historic house museums	

Figure 4: The new acropolis museum exterior and interiors views (Source: Ambrose &Paine, 2006)

The list above is given in order to state the most common and the most integrated museums around the world. Further explanations are given below;

- A General Museum gathers and exhibits many disciplines under one roof. For example they can exhibit such things as art, history, science etc. (URL3).
- History Museums carry knowledge of history from the past to the future. There are mixtures of definitions accessible about historical museums. Historical museums are coeducational foundations and it is difficult to characterize them in a coordinated structure. Museums, fundamentally, is a spot to hold accumulations for study, examination and pleasure (Alexander, 1979). Some history museums cover specified aspects of history while other tend to be more general. History museums contain a wide range of objects and documents, art and artifacts, and archaeological objects. Another type of history museum is an archeological museum which specifies its exhibits on archaeological findings (URL4).
- Archaeological Museums, which are based on ancient findings, specialize in archaeological artifacts. These museums tend to be open aired and open planned. A good example for this would be the Agora Archaeological Museum of Athens and the Roman Forum in Rome. These places are adapted to the modern lifestyle and modernized museums to preserve the natural beauty and to preserve and display the artifacts gathered from such sites.

- Art Museums hold the display of local, national, or international artists. Whilst having these displays some artists also offer various disciplines of art. Just to be confusing, art galleries tend to display art in the museums alongside normal art. This confusion comes from art galleries usually referring to places that sell art and promote an artist (URL5).
- A Natural History Museum or a Museum of Natural History is a museum that exhibits such things as animals, plants, geology, ecosystem, climatology and paleontology. Art and science related to their part in history are also used in addition to the other exhibit halls. Natural history exhibits can generally be found included in nature centers (URL6).
- A Science Exhibition Hall is a gallery committed essentially to science. More established science historical centers had a tendency to focus on static presentations of items identified with characteristic history, fossil science, topography, industry and mechanical hardware, and so on. Cutting edge slants in museology have expanded the scope of topic and presented numerous intelligent shows. (URL7).
- Geological Museums and national museums can come together under the same roof. Geology museums exhibits life on Earth, ranging from volcanoes to minerals. Through the centuries, geological museums have collected and built their exhibitions on fossils, minerals, petrology and meteorites (URL8).
- Ethnology Museums focus on collecting, preserving, studying and displaying the artifacts that ethnology and anthropology are concerned with. In countries which have diverse ethnic groups or ethnic minorities usually possess such museums (URL9).

- Industrial products and manufactures are exhibited under the roof of Industrial Museums. In these museums, textile machinery, telecommunications, transport, engineering technology and mining can be found (URL10).
- Military Museums, as stated by its name, focuses and specializes in military histories. The museum often organizes the exhibit in a particular way, to show conflicts that have taken place around the world. Specifying on their weapons and other military equipment, the uniforms and wartime propaganda, these museums give the viewers a first-hand feeling of what it was like in those times (URL11).

As it has been stated above, museums are planned in many different ways, holding specific artifacts from different interests. No matter what the exhibition holds, the main idea of carrying information, culture and knowledge all stays as a general goal.

2.2 Archaeological Museums: An Overview

Archaeological museums give the public a chance to relive what once was standing, giving them an insight of the culture and lifestyle of the civilizations while sharing past knowledge (URL12).

The general function of the archaeological museum is to uncover archaeology of this overlooked world, connecting our legacy with the present, and giving a point of view toward the future: "Where past meets future" is along these lines the managing standard of all arranging and presentation. Archaeological museums offer the chance to restore the life and accomplishments of our predecessors in an individual and energizing path; reacting to the present developing open mindfulness and enthusiasm for this field (URL13).

The procedure of change is open-finished, constrained just by the continuance of the segments that make up a building. The utilization of a building may change commonly amid its lifetime, yet change does not so much suggest a change of utilization. The thought of an exhibition hall, a parliament house or even a railroad station is distinctive today from that which won even a couple of decades prior. Norman Foster's recreation of the English Historical Center gives an extended and enhanced space for training, addresses, drinking espresso, purchasing books and keepsakes and even only taking a seat and viewing different guests. All are a piece of the historical center "experience" of the late twentieth century. In other words, historical sites, such as the example given above, can be considered as open planned museums (Powell, 2005).

2.2.1 Evolution of Archaeological Museums

The principal museum of the world was established in Alexandria, Egypt, 3rd Century BC, which was an essential focus on the planet. It was a library, similar to an institute of taking in for researchers from everywhere throughout the world; the best library and museum of that time in the old world (Berti & Costa, 2009).

The early beginning of presentation has begun with exhibition halls. Late seventeenth century was the time for exhibition halls to open up to the world. Sometime recently, presentations were for noblesse (Madran, 2012).

Open art displays and show spaces are, compositionally talking, a moderately new marvel. The English landed upper class or the European gentry might, now and again, have assembled space to house and showcase centerpieces, for example, the model court at Petworth or the old corridors of the Louver, however reason - fabricated open structures for the visual expressions are a genuinely late idea (Turner, 1998).

Inside of this casing, the Greek historical centers expected their principal part as "trustees" and safes of the national ancient pieces (Archaeological Law of 1834). Later built up the thought of the exhibition hall, as a spot from which archeological information could be diffused, where people in general could create energy about the expressive arts. It is critical to note that all through the period under study historical centers were considered as spots available to all individuals from society: they were built up to people in general advantage. In addition, according to the Archeological Society, the showcase of artifacts was honest to goodness just in the event that they would be open to a wide open (Gazi, 1994).

"Yet it was just during the time which we have called the *Extension Period*. *Extension Period* (1900-1909) that gallery improvement appeared to be in view of a more intelligible project and that a stamped change in gallery practices was watched." This was expected not just to the inclusion of the almost exclusives of the Archaeological Society in museum matters, but also to the arrangement of lasting museum personnel (Gazi, 1993).

Since the 1970's more than 600 new Art Museums have been opened in the USA. Historical centers have turn into the images of national and metro pride and markers of social and financial, and in addition social, imperativeness all through the world. In the event that the historical center was once seen as an archive of history, it is currently seen as a pointer to what's to come. Initially considered as private spots for the excitement of a world class, galleries rose amid the enlightenment as habitats for instructing the masses – Paris' Louvre and London's British Museum (both the subject of gigantic late Twentieth Century remaking plans) were established in the spirit (Powell, 2005).

2.2.2 Classifications of Archaeological Museums

Basically, archaeological museum buildings can be divided into two main groups in an architectural point of view.

- Archaeological museum originally designed as a museum
- Archaeological museum adapted from a historical building

  Archaeological museum buildings can be divided into three according to their locations;

- The first one is archaeological museums on historical sites. These museums are built on the archeological site and serve as a museum at the mean time. Two examples would be the New Acropolis Museum (Athens Greece) and the Davidson Museum (Jerusalem, Israel)
- Secondly, the archaeological museums which are situated next to the archaeological sites. These museums are based near to the site, housing the museum separate. For example; The Getty Villa (California USA)
- Third, is the archaeological museums which are located away from the actual sites, and holds a distance from the museum and the archaeological site. In these museums the excavated artifacts need to be transported from the excavation site to the museum and be reassembled. For example; The Zeugma Mosaic Museum (Gaziantep turkey)

2.3 Key Issues in Archaeological Museum Design/Spaces

Archaeological museums, as we know are housing ancient artifacts and represent a part of history to the newer generation. These housings gives a glimpse into what once was, sharing knowledge and information of societies, cultures and lifestyles. To begin with the archaeological museums, their architecture and interior design including the display of the artifact, which are preserved on site, will be taken into acknowledgement (URL14).

Arranging museums is, in short, the demonstration of making a portrayal of new galleries and its points. In new museums, the goal is to make a clear, compact and brief outline arrangement and have efficient and sustainable utilization for a long term (Dean & Edson, 2013). The subtitles given below will go into depth of how the principles of both the interior and the architecture can to be what it is today.

Creating the description of new museums is the act of museum planning. One of its most important objectives is to provide a concise, clear and brief design for the museum and its exhibition halls, serving a long term purpose in efficiency related to the space design (Dean & Edson, 2013).

The exhibition is the main way through which a museum communicates with its public and for this reason it has to be meaningful. The exhibits, the surroundings, the colors, and the lighting should be coordinated in such a way that the visitors, irrespective of their educational background, can understand them (Singh, 1997).

As known by many, the oldest tool of presentation of history, considering they have a long development process, exhibitions designs are classified as context and function (Turner, 1998).

2.3.1 Space Organization

A historical center as a memory of the human society was started from exhibition spaces, and it is differentiated in the capacity and the part. An exhibition inside of a show space is a basic thing, however its actual worth is the data and its importance suggested in the matters. At the end of the day, the essentials of presence of an exhibition is a correspondence with show and an observer. Effective display space is a surrounding that gets an observer to start the multi-dimensional correspondence and the learning (Kim, 2005).

- **Space Planning**

Space planning includes the careful planning of efficiency and productivity to use the space accordingly. The term space planning, is often referred to large scale planning and planning according to specific tasks. Area requirements can be listed as;

1. Number of people served
2. Required furnishing and equipment
3. Nature of the activity

These requirements can be related to each other in a sense to the architectural context in a manner of aesthetics and functions (Ching & Binggeli, 2012).

The interior spaces can be adjusted in arrangement by the utilization of parcels, and by embedding false roofs to change the extents of display spaces to suit the work on

perspective. This adaptability is progressively valuable as the scope of work displayed develops and changes (Turner, 1998).

- **Spatial Outline**

Spatial outline has the essential piece of every museum. The principle impression is in view of the association of inside environment. Exhibition hall zones ought to be planned in a manner that leaves a decent discernment in clients' brain. Some contemplations help the design of the interior of the museum space productively. In a museum the accumulations are the primary questions. However, at the time being, objects and the areas are places which are making up the exhibition areas all together. To increase the effect of the collections, the objects being displayed can help the effectiveness of the environment, or on rare occasions, they can possess their own autonomy (Tzortzi, 2007).

Clearly, an architects motivation has a high impact in outline yet as it will be explained, there is additionally importance significance joined while taking all the possibilities into consideration, and through a regulated procedure, testing one thought against another. (Warren et al., 1998).

The greater part of the undertakings examined include historical buildings where the current fabric has been a noteworthy thought while planning the design of the structure. The motivation for our design bit by bit advances through a cautious process that includes considering the authentic foundation, looking at the points of interest of the current fabric and after that settling on choices about the layers of history. The greater part of this must be coordinated against the needs of the structures and its connection (Warren et al., 1998).

A store's configuration mirrors the visual thoughts of more than simply the draftsman and customer; it must be in a state of harmony with the imaginative vision of its architects, the desires of its clients, and the look of a brand (Barreneche, 2005).

Space is considered to be a quintessential component in the design of interior space in museums. With the volume of the space which has been dedicated to the task, its nor only used to move easier in, it's also used to see forms, hear noises. Space generates and enhances the elements filling the room.

- **Circulation**

An important part of experiencing a museum is the circulation and how the flow of the museum circulates the visitors. In museum design, there are some steps to be flowed. Once the visitors start arriving at the museum, they are expected to have made a decision on whether or not entering the museum, thinking if it's worth paying the fee to get in or not. Therefore the lobby plays an important role in attracting the visitors (Bitgood & Lankford, 1995).

Having payed importance to the lobby, that's not the only case in a successful museum circulation. Coming to the decision that the visitors chose to enter, they should feel the flow of the museum. Exhibits and artifacts should be planned in order to guide the visitors from the entrance to the exit, passing through a correct course, allowing them to experience the galleries and find their ways through.

2.3.2 Space Character

- **Space height**

In museum designs, regarding to the space and special design, the size or shape of the artifact that will be displayed could come in many shapes and sizes. Keeping this in mind, the height of the museum in an important factor that shouldn't be overlooked. By considering the factor of the object size in construction of the adaptation to the museums, exhibitions can easily be displayed. Height of the building might not be seen as a factor to be considered, or maybe is the last aspect that is thought of however, it's a fact that shouldn't be overseen.

- **Colour/Texture/Material**

When light is reflected onto an object, an absorption starts to happen and this occurrence brings out the color of an object. Some light sources such as florescent lamps, when reflecting off of a certain colored object, such as a wall, the light reflected may not be well balances in regards of contrast.

Color and its reflectance has three main dimensions:

1. Hue: Colors such as red or yellow
2. Value: Colors such as white and black
3. Saturation: The dullness or brilliance of a color, depending on the hue in a color (Ching & Binggeli, 2012).

In archaeological museums, the material used plays high importance. The material used keeps the viewers' attention based on the archaeological site. In such projects, materials containing natural colors is mainly chosen. When materials containing such colors is used, the attention is taken from the extensions and focused more on the actual artifact. A critical part of this is the way in which the extension and character of materiality has come to be caught on (Dudley, 2013).

The texture of the archaeological site usually consist and generates softness. The texture should not be hard on the viewer's eye and create a softer view, not having such distinguish form the historical site from the added extension. Soft and natural colors contemplate the texture and bind the two, original and the extensions together uniting them as a whole.

2.3.3 Display/ Exhibit Design

Distinctive arrangements, yet the same approach in all cases: the exhibition, designer works closely with the critical element from as ahead of schedule a stage as could be expected under the circumstances. It is vital to comprehend the general idea driving the presentation, and get an inclination for how coordinator and originator need to see the item, artifact, and work showed; whether it be in a casual, or a formal way. How is the work to advance through the distinctive show spaces, and what are the points of the display? This acquaintance procedure runs directly through every one of the phases of the employment, and regardless of the possibility that the impression is toward the begin to some degree dubious unformed, as yet getting this acknowledgement right is a decent method for verifying that the last, specialized arrangement which is tuned into the points of the display coordinator (Turner, 1998).

This examination drew impressively, if freely, on a changed adaptation of Susan Pearce's model for curio study (Pearce, 1986), which had officially demonstrated to function admirably in shows' investigation (Beraha, 1988). As indicated by this model every presentation may be seen as a bit of material culture, the complete comprehension of which requires the examination of its different properties, similar to history, provenance, material of development, place in the earth, social importance and understanding (Gazi, 1994).

As far as spatial format, early shows were sorted out as indicated by the accessibility and accommodation of space. Despite the fact that an unpleasant typological characterization was embraced subsequent to the earliest reference point, it appears that an inclination for sequential design of articles continuously assumed control (Gazi, 1994).

The gallery ought to take each chance to build up its part as an instructive asset utilized by all areas of the populace or specific gathering that the historical center is proposed to serve (ICOM, 2006).

- **Display Systems**

Bringing a museum together, for the display design, it's crucial that the experts and the specialists work together. The display system is divided into sections where they can be;

1. Self-standing designs,
2. Wall mounted designs,
3. Platforms and basses,
4. Interactive designs.

To accomplish these in the best way possible the experts of architecture have to co-exist with the specialists of design to reach perfect harmony with each (Madran, 2014).

- **Visual Communication Panels/ Technological systems: Interactive Displays**

In any learning process, the successful dissemination of knowledge is dependent on the educational quality according to a purpose of an exhibition. Therefore, successful

exhibition attained when the visitor is adequately stimulated and gains insight into a new discovery (Kim, 2005).

In museum exhibitions, nowadays, technological systems, in architectural building technologies, play key role in designs. When looked back to the past and how these were done, the concepts considered within this framework was astonishing. The museum technologies and exhibition differences, comparing to their time period, had a high effect of relation to the museums visitors. Depending on the museums type or the targeted audience, the design of the exhibition halls varied.

From a combination of technology and art, interactive displays are born. These interactive displays give the visitors a possibility of individual interaction with the museum. Museums give the people the chance to interact and not only with the history, but with an educational sense too. Exhibitions are the place where people get to meet the artifacts one on one. These types of exhibitions attract attention, hence the importance of the display design (Gazi, 1993).

- **Exhibition Conditions: Temperature and Moisture**

The collections in a museum can be affected directly by the temperature and the temperature variations. Some of these variations, for example is the increase of chemical reaction. When the temperature levels rise, there is an increase in deterioration of cellulous nitrate film. If the deterioration is not detected on time, it can lead to fire breakouts. Another important variation would have biological effects. These effects involve insects to eat and breed faster, and on some areas mold will grow faster. To add to this, in high temperatures, wax figures may deform and dust can accumulate and stick to surfaces easier (NPS, 1999).

Moisture changes with the increase and decrease of the temperatures inside the museum, for example turning the temperature down in the evenings when the doors are shut for the public is quite common. If the same action is repeated in storage rooms or exhibition halls then you can cause a daily amount of room humidity. This humidity turns to water and eventually builds up moisture. When the moisture levels are high in a room it can cause wooden surfaces to swell, fading of dyes or even corrosion. All the organic and inorganic materials will absorb the drop of temperature; accumulate moisture; and eventually causing self-damage. Monitoring and controlling these actions can be vital in the life span of the artifacts (NPS, 1999).

In exhibits, the comfort temperature for the people is also taken into consideration, so the recommended temperature is between 18 to 20 centigrade degrees. The level of heat should not rise any more than 24 degrees and should try to keep the cooling as level as possible (NPS, 1999).

2.3.4 Lighting

Light has a very high importance to the human nature, firstly, light is the main aspect, which helps us see and be seen. Without the help of light, everything would be dark and meaningless. Our vision on a space is directly associated with light. Light creates and sets boundaries in a place, making it look bigger or smaller, and in some cases, separates areas from one another.

Due to the light they generate, the sun, stars, bulbs and candles all give the possibility to make things visible. The reflection that bounces off the displayed objects and artifacts makes it possible to be seen. There are also some other factors which effect what is seen apart from the illumination and amount of light available. These are;

1. Brightness
2. Contrast

3. Glare
4. Diffusion
5. Color (Ching – Binggeli, 2005).

Exhibit designs get turned upside down when we realize that the only thing seen is what the light reveals. The most beautiful objects in the world can be in your possession but as long as the light isn't reflecting on it in the right way the beauty of that object can be seen. Light is experienced from the first step you take though the doors of a museum, this experience is the only link between the visitors and the objects, while being illuminated, if the colors aren't present, if the volume of light is too strong or if there isn't a balance, the link between will be broken or distorted. A low quality of light in a museum, in most likely occasions, creates a poor museum (Miller & MILLER, 2005).

To refer to the book, "Light is the Theme, 2011" by Louis Khan, the use of natural light is seen as an invention. We inherited artificial light, while the dependence of natural light is from the condition. What Khan is stating is the difference between natural and artificial light. The importance of each cannot be argued, however, we have control over one, and the others control depend on the conditions of nature. Understanding and using these lights in the correct way, in words, is up to the architect perception of the light. Natural lighting can produce a better visual perception on a site or excavated artifacts. However it's not always a case of benefit.

'Harshness and inconstancy' can be directed with the aid of the technology which we have. The undertaking for the lighting planner, in enlightening a historic interior or lighting a display of gems, is to utilize this innovation astutely: to add the

comprehension to the innovation. In an inside, one vital inquiry, once the protection issues have been taken to consideration, can't avoid being envision of what the first lighting levels of the inside were, and to have thought for these in any new plan, however not so much to mirror them unyieldingly. What's more, in a show, to take after the lead given by the custodian or coordinator in selecting fitting light levels in general, and for which protests or attempts to highlight (Turner, 1998).

In a museums gallery, the ambient of light should be as low as possible. To minimize the damage to the artifacts and the furnishing, a low ambient of light is recommended. The lighting should be concealed, using such things like drapes to cover the windows which lets the light in. However, the artifact should be lighten to conservation levels and the ambient of the light should be controlled frequently so it has a stable half-light level (Miller & MILLER, 2005).

Harmful ultraviolet rays may cause irreversible effects in exhibited artifacts. Due to the ultraviolet rays causing pictures to fade, become disfigured and discolored, direct sunlight should be blocked. Different alternatives for the sunlight to enter the sites should be found to reduce the harm that may occur. Some ways of doing this would be using sidelights and top lights, reflectors such as clerestories and even light shelves (Hancock et al., 2009).

2.4 Successful Examples of Archaeological Museums

Architecture and archaeology come together under the same roof when considering archaeological museums. The museums that are built to represent a site or exhibit its artifacts, generally tend to be unique. The museums, in some cases co-exist and sometimes function without being close to each other. Some of these examples are

archaeological museums onsite, some built next to the site and some of them are even built in a further destination from the archaeological site. The part below will illustrate some examples of these archaeological museums;

1. On archaeological site New Acropolis Museum (Athens Greece); the *New Acropolis Museum* tells a complete story of history. The comprehensiveness of picture and human presence is displayed successfully. The setting and lighting of the artifacts, also being built on a slope of the Acropolis itself gives the museum an advantage (Figure 5).

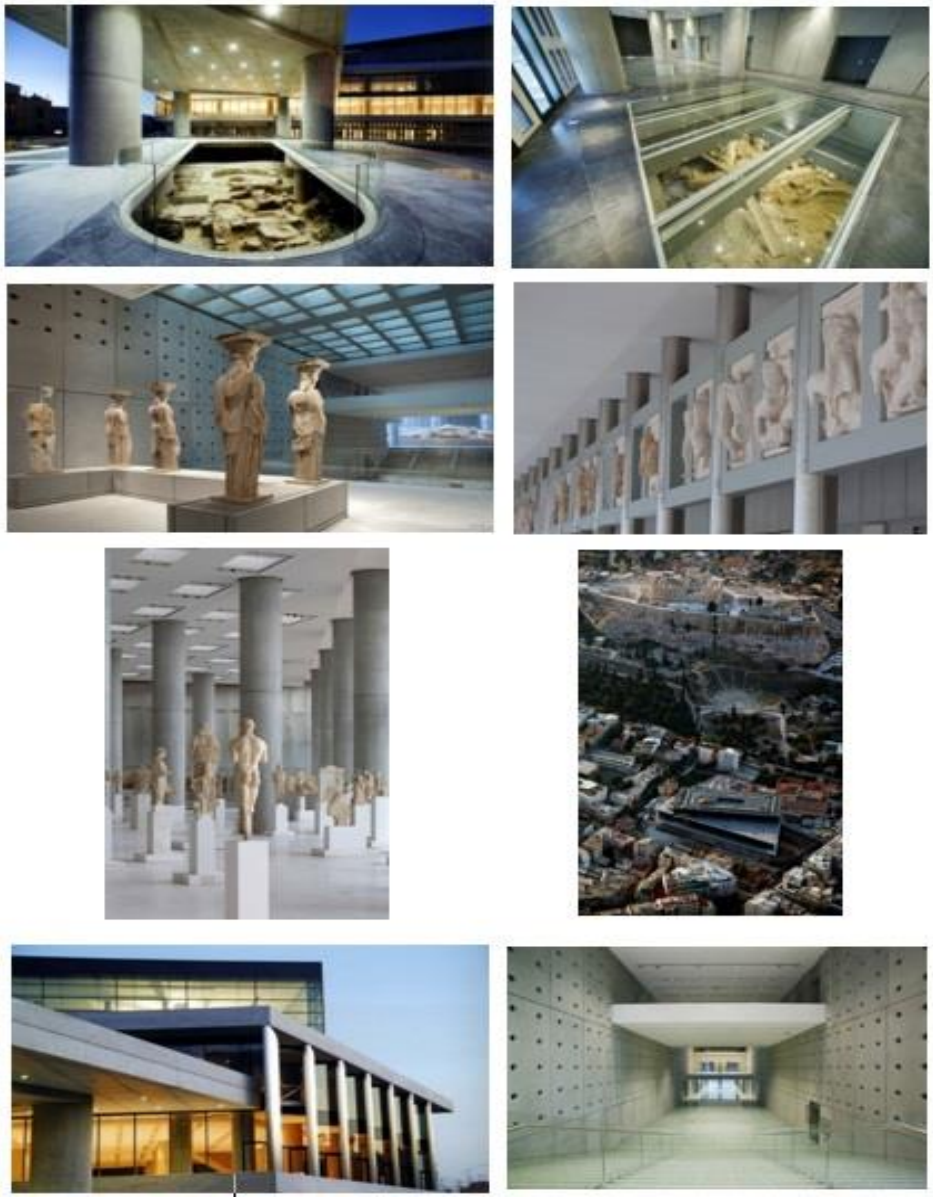


Figure 5: The new acropolis museum exterior and interiors views (Source: Xiaolu Li., 2010)

2. Next to archaeological site the Getty Villa (California USA); the *Getty Villa* project was set on practical goals. These goals include maximizing the natural light and helping the visitors to navigate in a logical sense around the place. The building is surrounded by public spaces while integrating the drama of an archaeological dig (Figure 6).

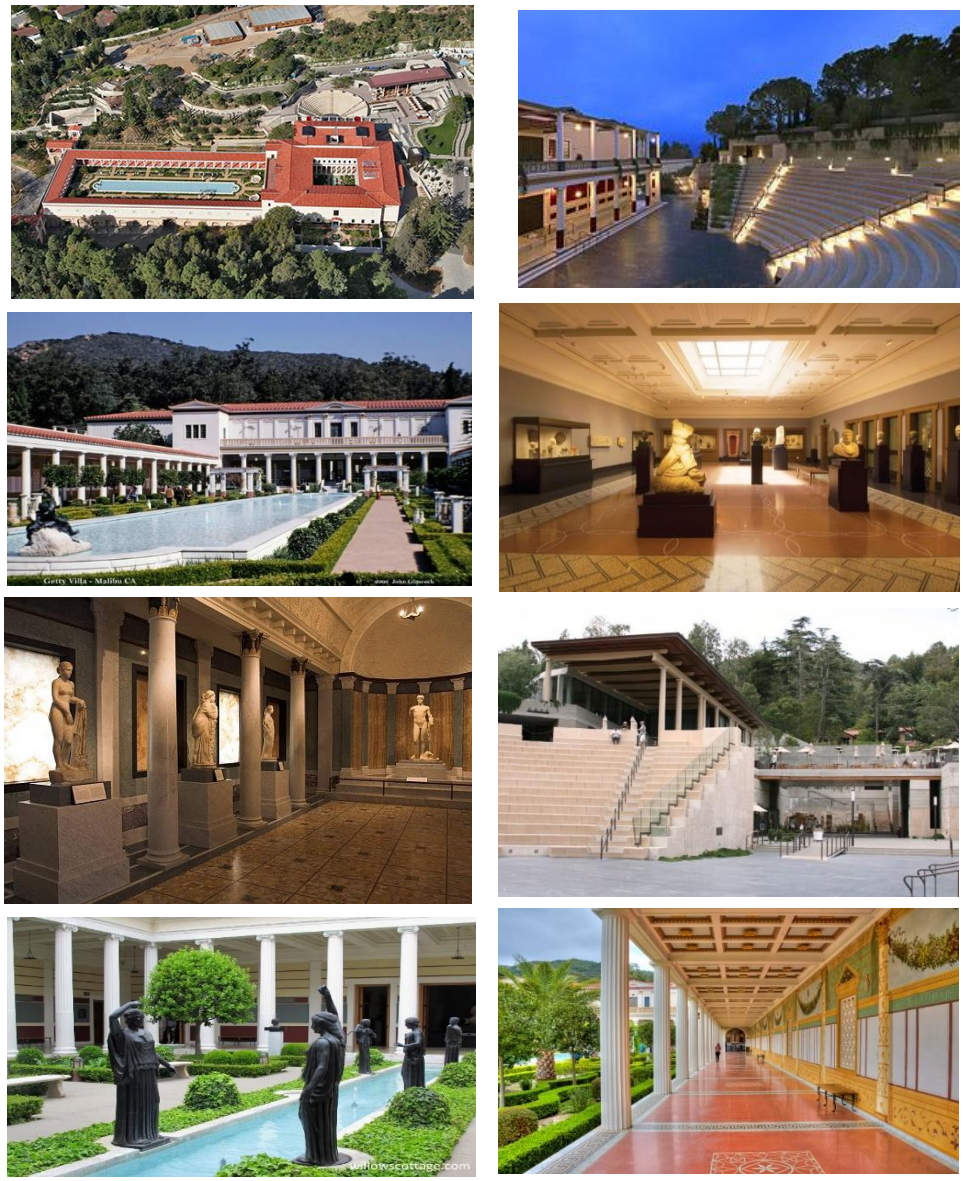


Figure 6: The Getty Villa project exterior and interiors views (Source: Xiaolu Li., 2010)

3. Away from archaeological site The Zeugma Mosaic Museum (Gaziantep Turkey); the Zeugma Mosaic Museum is the largest museum of its type in the world. It is located away from the ruins of the site and it preserves the ancient mosaics. The interactive displays, informative videos and its surrounding scenery gives the museum a whole new feel (Figure 7).

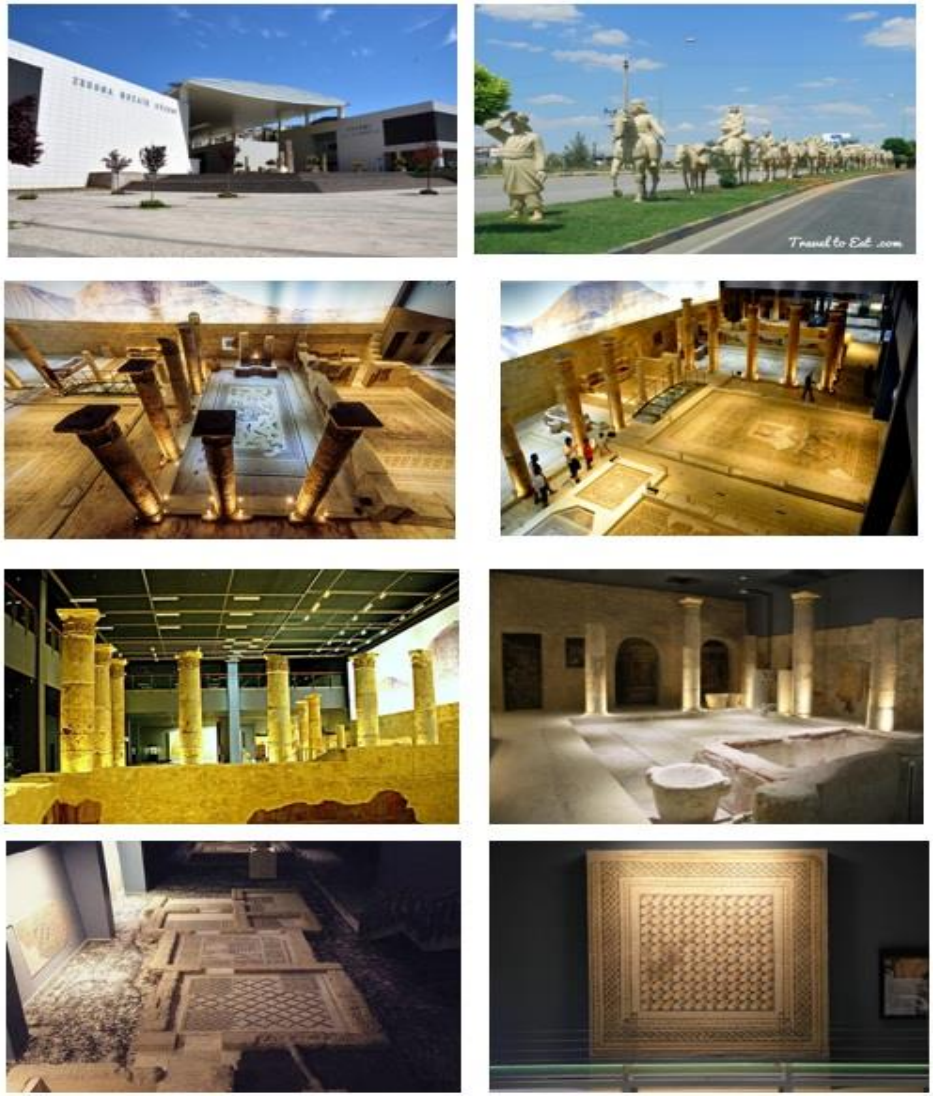


Figure 7: The Zeugma Mosaic Museum exterior and interiors views
(Source: Xiaolu Li., 2010)

2.5 Chapter Conclusion

In this chapter, first of all the concept of archaeological museum designs, and the types of museums that function around the world are explained broadly and then in depth. After these explanations, the focus is turned completely to one specific type of museum, which is archaeological museums. An overview, the evolution and the classifications are taken into hand and are dealt with in a deeper sense.

With enough said about the archaeological museums on the outer shell, a further look is taken to the inside. The principles of the design and interior design is widely explained and then the chapter comes to an end by showing some of the most successful examples of archaeological museums. The potential for joining old fabric and new thoughts to make an asset for what's to come is practically boundless (Powell, 2005).

Chapter 3

CONTEMPORARY RE-USE OF HISTORICAL BUILDINGS

The conversion of existing buildings into different functions are essential for several reasons. Conversion of old buildings can be a means of community regeneration, especially in areas where there is a decline in population; they are ways to recycle old structures and making them useful (O'kelly & Dean, 2007). A practical example of conversions into residential accommodations occurred in Southern California where wealthier residents converted historic railroad buildings into homes and moved in. This was motivated by their quest to experience a more artistic lifestyle.

Like in all buildings, including the historical ones, they all have a function according to its situated location. These functions can range from farm houses to castles, churches to courtyards. After the years have taken its toll on the building, and it is abandoned to neglect and deterioration, these buildings with significance go through the re-use process. The buildings are examined, brought back to life and as the name states, they are re-used. When a building is re-used, giving it the same function that it had in the past, isn't always the case. For example, buildings that once functioned as churches can be re-used as libraries, a factory can be transformed into accommodation houses or a restaurant and so on. Based on Douglas's classification (2006) some of these building types are:

- Farm buildings,
- Religious buildings,
- Industrial buildings,
- Public buildings,
- Military buildings,
- Residential buildings,
- Commercial buildings,
- Agricultural buildings,
- Mixed-functional buildings**.**

As stated by Latham, (2000b:2), "different building types present various opportunities and challenges, nevertheless, re-use is possible in most cases; signals that certain responses are appropriate for some types of building; and cautions about the sort of difficulties that may be encountered elsewhere". Based on Latham's classification (2000b) the variety of the buildings that can be used are;

- Country houses,
- Town houses,
- Farm buildings,
- Industrial buildings
- Offices
- Markets and retailing buildings,
- Civil buildings,
- Churches and Chapels,
- Schools
- Hospitals,

- Military establishments**.**

As James Douglas (2006:150) has mentioned, "there are a number of possible combinations for changing a building's use nowadays". Nonetheless, there are still some limits to the function a building can be given. For example, a large building with small offices above it, will not function well as one big living quarters**.** The table below will give further information on these limitations (Figure 8);

Existing use	*New use*		
	Residential	*Non-residential*	*Mixed*
Residential	Multiple flats in a tenement being formed into smaller size unit to increase rental or sale yield from properties.	Three-storey town houses in inner urban areas being converted offices.	High street tenement/town house buildings – ground floor converted to office or retail use and the upper floors as flats.
Non-residential	Redundant office block or mill converted into high-quality flats.	Disused educational building converted into workshop units for small businesses. Redundant telephone exchange or office block converted into a hotel.	Conversion of post-war clothing factory into sports facilities and workshop units for small businesses.
Mixed	Redundant workshop and office premises converted into flats.	A derelict row of retail units with flats above converted into offices.	Refurbishing a mixed-use development in the high street involving shops on the ground floor and offices on the upper floors.

Figure 8: Typical combinations of changing a building's use (Douglas, 2006)

3.1 Significance of Historic Buildings

As the years go by, new buildings are becoming more and more expensive, and not having any attractiveness to the eye. This is why many projects now reflect refurbishment of an old building instead of making a new one. Another reason for adaptation is that as the years go by, there is less and less room in urban parts for new construction. This reason is good for an architect, who wants to add something to the city. Rather than demolishing old buildings to make a new one, it's easier to adapt the

structure to modern day life and give it a new function. Refurbishment also generates less energy and waste than a new building. In other words sustainable energy helps us consume less and save more. It gives the new generation something from the old, reflecting history and keeping the culture of one place too. The buildings can give social function by keeping a familiar landmark of the city (Douglas, 2006).

Whilst taking adaptations into consideration, there are many influences that need to be considered apart from the legal and economic developments. Some of the main influences that are opposed to redevelopment while adapting a building are; grants, timing, deterioration, performance, change of use, legal restraints, conservation and sustainability. The first cade that is being taken into hand is the available grants that are provided for such work. In some cases, to help with the cost of adaptation or improvement work, grants are made available to help particularly with housing and or for historic buildings. Even though this is necessary, the funding is restricted. On the matter of adaptation, timing is also crucial. To adapt a building to a new state saves valuable time. Rather than planning and constructing a building from scratch, to build a structure of the same size, using conventional techniques become rational (Douglas, 2006).

The change in the use of buildings, in other words, if a building is left empty for a long time, the building can be beneficial to people with adaptation in mind. Due to the lack of importance it may hold, or it may not serve the purpose that was demanded, these buildings prove to be useful. However, keeping such buildings in a state to hold the qualities is difficult. But after undergoing such adaptations, the buildings will gain value. The deterioration of a building can be recovered and taken care of after going through the process. While shifting the buildings life span, adapted buildings are worth

more because it increases its service in life. A well thought adaptation plan extends the economic life of a building. After covering the deterioration, the buildings performance also needs to be taken into hand. First of all adapted buildings should undergo enhancements of their acoustic, durability or structural performance. This is considered to be one of the main reasons why a building is chosen to be re-used. Another reason it can be chosen is if the buildings energy consumption is at an excessive rate. If a building is using up too much energy, maybe upgrading the thermal efficiency of the fabric in the layers, upgrading the heating system or even renewing it can be included (Douglas, 2006).

Apart from all the benefits about how and why buildings should be adapted, or all the steps that are taken in favor of such actions, there are also some legal restraints which must not be pushed to one side. When thinking of a building, which hasn't been used for years, due to the planning constraints of the building, it cannot be demolished by the owner. The building must be left to its self to self-destruct rather than knocking it down. Such restraints push the owner to highly consider the fact of changing the use of the building and adapting it to become something more than it already is. Such reasons are very influential in one's decision (Douglas, 2006).

After all this being said, what can be seen is that the people all over the world share the same idea of wanting to preserve the past. They want to keep the historical artifacts as proof of their time. They believe that the architecture of the past is a light shining towards the present, representing and carrying that culture with it (UNDP, 1999).

In the conservation of architectural heritage, the major goal is to introduce strategies that will combine harmonically with each other in reconciling the past with the present.

The cultural and technical reasons are frequently influencing an owner of such historical places to decide on adapting such places rather than demolishing and the building. The historic importance of such places also are sufficient to the idea of being saved. The idea of reusing or upgrading a building is environmentally friendly. The process can be referred to as sustainability. This modification can be applied to buildings which want to be refurbished or to new buildings which have been demolished, giving them a lower emission on energy and waste (Douglas, 2006).

As stated before, a building cannot be completely demolished because of some legal restraints, and the building must be left to self-destruct or it is refurbished to make use of it in other ways. Many historical buildings have gone through such restraints, but being allowed to be partially demolished, a building can be re-introduced with a new function. We often see such work in abandoned warehouses, factory floors or the halls of the Jeu de Puame. Insertions are the most commonly used to adapt a building to its new function. Nowadays most of the libraries, churches and ballrooms are formed out of Jeu de Paume courts. Its most famous example of these courts is the museum in Paris (Uffelen, 2011).

According to Greffe (2004) and Harun (2011) two main concerns on the topic of reuse of buildings is the creation of job opportunities and maintaining ingenuity without destroying the significance of the historical background of the structure.

3.2 Adaptive Re-use of Historic Buildings

It is generally known that, most historic environments are often faced with some sort of transformation challenges that tend to occur either as scientific, aesthetic or architectural displacement of values. According to Clifford (1988), traditions and

culture have been lost over time; there has also been an invention of new traditions as well as a revival of ancient ones (Pearson & Sullivan, 1999).

It is quintessential that the architect or planner in charge of the renovation project are very sensitive. This is because he or she is faced with the task of meeting the client brief as well as ascertaining the structural integrity of the building; and the work plan he or she develops and the finance at his or her disposal will determine the final outcome of the project (Bonet, 2007).

Some of the key ingredients that influence the traditions and cultural evolution of a people are religion, beliefs, economical and sociological stratification, and it does influence it both in a macro and micro scale level. In an adaptive reuse project what is often seen as the major challenge is deciding the function the building will eventually be used for. It should be put into consideration that local architecture represents the external reflection behavioral patterns of a people through the physical furnishing used in projecting the building.

This physical representation includes the nature of the organization of the spaces, the covering materials finishing applied to the building. Lim (2007) clearly reveals that generally traditional architecture should clearly attend to the needs of the community.

Erecting a fresh building is sometimes easier than renovating an existing one, several factors are responsible for this. Firstly, the fact that care has to be taken to make sure that historic aspects of the building and the structural integrity of the building is intact. At this point seem to be uncertain (Bonet, 2007).

Besides, the process of renovating existing building possess a severe challenge to architects as it implies designing adaptive strategies that are quite different compare to the ones that would be used for a fresh building (Bonet, 2007).

Embarking on renovation of building rather than erecting new ones have are often done for certain reasons, most often it is either because new construction would cost more or because there are strict rules prohibiting the demolition of the existing buildings (Bonet, 2007). What is more, conserving a heritage building, contributes to sustainability and enhances the ecological realm of the environment (Pearson &Sullivan, 1999).

Not with standing, which ever reason it is that influences the decision, the historic building must be contextually correct, as it must respect the height of the surrounding or adjoining buildings as well as meeting the present and future needs of the users of the building as well as fitting into their way of life (Bonet, 2007).

Dating back to the World War II, the EU nations have placed a strong affinity and attachment to historic buildings and this has brought about a new stylistic mannerism, and several construction works have occurred in the bid to achieve building restoration and has resulted in a situation where the facades are the only parts that are preserved while in the reality fresh structure are actually been erected (Bonet, 2007).

On the other hand, a more elite approach has appeared on the scene that presents renovation works as though they were imbibing an old factory to today's requirements, treating the relationship with the past as a second concern. Regardless of how aggressive this approach seem to be, an intense use of contemporary construction

materials is seen to be quite modest, compared to approaches that tend to directly imitate methods and forms that are out of use in the bid to be contextual and modest with respect to the surrounding pre-existing buildings (Bonet, 2007).

There were many debates about the true meaning of sustainability, to quote from Mr. Chatzimikes; “eat but do not eat the very corn seed that you need to sow next year’s crop”. To define what was said, achieving sustainability in any given renovation project is never with 100% certainty and it can never last forever (UNDP, 1999).

Interacting always occurs in the clash of interest in portraying conformity with the requirements of historical listing, and aggressive new representation, and conscious addition of historic relevance and the economical use of existing architecture as raw material (Uffelen, 2011).

There are not set of rules to what is correct or incorrect when it comes to renovation. Every project embarked upon, presents its own peculiar sets of challenges, weaknesses and its strong sides as well, that might not have been faced before (Krauel & Ockrassa, 2006).

In renovating a historic building, how much of the old should be preserved? To what extent should the new work copy or improve of the existing building? What new methods and material will best fit into the old building? These are some key questions that are often considered when embarking on a renovation work: besides, even the smartest conservator experts admit that solutions used in one project, can hardly be applied to another. Each new project comes with its own peculiar challenges and must

be innovatively tackled (Krauel & Ockrassa, 2006). What's more, the historic values and characteristics makes this process more complicated.

After all, the technicalities involved in a project are just as need as artistic vision in any project. From the beginning of a project to its completion, the information on the materials, which have been used, and construction stages has been included (Krauel & Ockrassa, 2006).

According to Douglas (2006:104) there are four stages involved in a conversion project:

- Stage 1: Incubation stage
- Stage 2: Negotiations stage
- Stage 3: Construction stage
- Stage 4: Management stage

These key stages play high importance in renovation of historic buildings, for designers and the owner.

- **Level of building change**

The level of amendment, degree of maintenance adaptability of occupants to a building is hinged on certain factors:

- Functional requirements of the structure,
- The structural quality of building,
- The level of deterioration of the building,
- Statutory requirements, especially those relating to health and safety,
- The requirements of the building owner (Douglas, 2006:11-12).

In all the architectural conversions, the building doesn't only change in material used but also the content does too.

3.2.1 Evolution of Adaptive Re-use

The historical backdrop of current structural protection has been followed to the juncture of Christianity and Humanism at the season of the Italian renaissance, and to the acknowledgment of traditional vestige both as a vital age of the past and a springboard for social coherence and innovativeness.

The initiation of the first major projects of urban conservation in Europe, the enchantment of the Loi Malraux in 1962, is credited to France. With the establishment of this project, the legal and financial terms were also set on a basis for *sectuers sauvengardes* (project areas) (Rodwell, 2008).

The start of Sentimentalism corresponded with the 1830s, a time of common turmoil, and it was checked by a developing enthusiasm for the historical backdrop of the nation. In 1844, reclamation exercises began towards the end of the decade. There was intrigue especially in the medieval church buildings and Islamic landmarks (Jokilehto, 2007).

Major periods developed the periods of restoration; the 'romantic' (1835-1864), 'stylistic' (1865-1936). In these two periods, in the romantics time, the inventories and historiography was marked whilst in the stylistic period, influenced by the Italians and the English, used original materials in their projects to emphasize the character (Jokilehto, 2007). The aim of the repair process, at the beginning was to build up a historical building by using parts that have deteriorated and demolished. Historical restoration was first introduced and emerged between the years of 1880 and 1890. The

base of the historical restorations were suggested to be based on the original patterns as shown in books, paintings, stamps and investigations. This was done because the accuracy of the building in the documents were adequate.

After many discussions and meetings organized by ICOMOS mainly, today's cotemporary conservation which is based on Venice Charter, is bulleted under 5 points;

- Negative experience and real problems enlightened the process;
- The latest regulation on conservation is based on the Venice Charter; (further explored in 3.4)
- Conservation is concerned with archeological sites, historical environments, and buildings forming the fabric around the monumental buildings apart from restoration of isolated buildings.
- Historical evidence or the witness of an important improvement defines historical monuments' concepts to contain urban and rural settlements.
- Simple work that have cultural meaning through time, is also included to important architectural work or pieces of art.
- The monuments are recommended to be preserved in their original environments. (1st Article of Venice Charter)

3.2.2 The Conservation Values for Adaptive Re-Use

If it's possible to do, enhancing the message and values of cultural property must be preserved in conservation. As well as establishing the extent and nature of the individual treatment, the systematic values set overall priorities in deciding proposed interventions.

Three major heading are put under the ‘values’ assigned to cultural property, these are;

1) Emotional values: (a) wonder; (b) identity; (c) continuity; (d) spiritual and (e) symbolic.

2) Cultural values: (a) documentary; (b) historic; (c) archaeological, age and rarity; (d) aesthetic and symbolic; (e) architectural; (f) contextual; (g) educational; (h) political and ethnic symbolic.

3) Use values: (a) potential; (b) economic; (c) social.

3.2.3 The Decision to Adapt a Building

Professionals in the building sector such as interior architects, architects, urban planners, quantity, and land surveyors stand a better chance of making decisions that could be of great significance in the process of adapting buildings. It is quintessential, that they are not ignorant of the client’s needs. For most building occupiers and owners, there are Five basic requirements that are very crucial when it comes to achieving sustainability, according to (Douglas, 2006:39) “the building should be long lasting - *durable*; loose fit - *adaptable*; consume minimal energy- *thermally efficient*; sufficiently prevent water and air penetration- *weatherproof*; afford a safe and healthy indoor atmosphere- *comfortable*”. Another point is that the developing number of lodging augmentations are that people and their living standards are evolving.

The environmental enhancements illustrates the benefits an adaptation can do. With the help of new and improved services, provides comfort in a places environment and saves on the energy consumption. With the reduction made to the energy consumption the place becomes more sustainable in terms of contribution. The indoor climate will be given a performance enhancement on a much higher scale. Not only benefitting the internal comfort, the exterior is also expected to be considered.

The adaptation project's design brief comprises the first part of the feasibility study. It should contain statements addressing each of the following matters:

- "The purpose of the project, its scope and content, and necessary background information
- A social brief indicating how and by whom the adapted building is to be used
- The desired activities and functions, and relationship between them
- The constraints operating over the project
- Special requirements, such as sustainability measures, higher or other dimensional constraints
- Accommodation schedule, room data schedule and of all surface finishes
- Any other information relating to requirements for the adapted building" (Douglas, 2006:42).

3.2.4 Degrees of Intervention

Adaptation can be achieved through some or a combination of the following objectives of spatial modifications:

- "Adjusting the size of units
- Vertical or horizontal division of large building into smaller units
- Making units self-contained
- Combining spaces
- Providing additional space
- Expanding existing space
- Providing common areas and circulation
- Increasing accommodation
- Improving accommodation
- Providing space for special or new activities

- Alternations for elderly and disabled
- Reconfiguration of internal planning for convenience
- Changing the function of spaces" (Douglas, 2006:8)

No matter which type of conservation project, the whole, takes simultaneously in several various parts. The seven degrees are: (Figure 9)

(1) Prevention of deterioration;

(2) Preservation of the existing state;

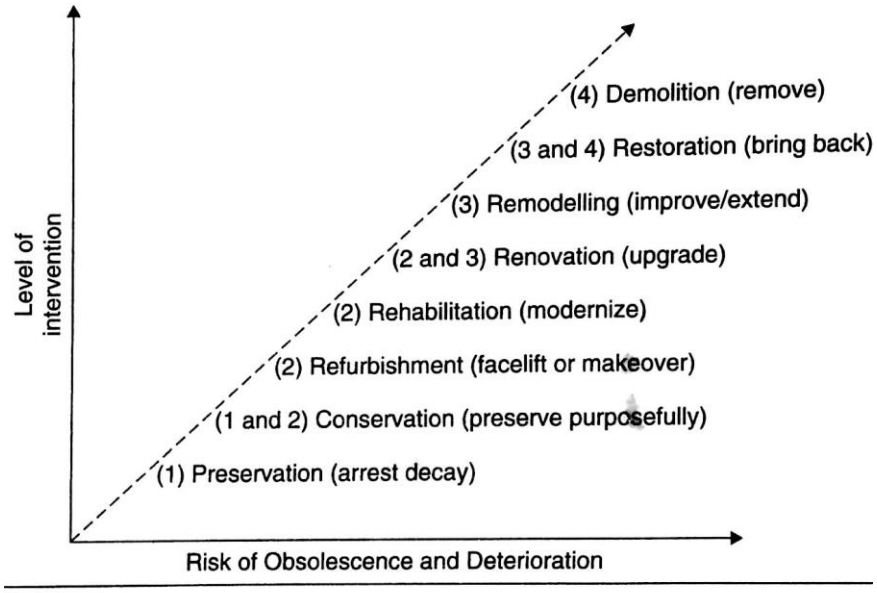
(3) Consolidation of the fabric;

(4) Restoration;

(5) Rehabilitation;

(6) Reproduction;

(7) Reconstruction. (Douglas, 2006)



Notes

1. *Maintenance*: Basic adaptation works including fabric repairs (see Chapter 2).
2. *Stabilization*: Strengthening and major improvement works to the structure including inserting epoxy resin stitches in wall junctions (see Chapter 7).
3. *Consolidation*: Medium adaptation and maintenance works including damp proofing measures and timber treatment (see Chapter 8).
4. *Reconstruction*: Substantial rebuilding of part or parts of the building (see Chapters 7 and 11).

Figure 9: Degrees of intervention (Source: Douglas, 2006:3)

In the figure above, the adaptation is mainly dependent on the purpose and the extent of the change that is wanted for the building. As it shows, the risk of deterioration and harm of the building increases in stages as the limit of the intervention heightens (Douglas, 2006).

These degrees of intervention are dealt with below;

- **Prevention of deterioration**: Protecting cultural property by controlling its environment. Prevent the decay and damage getting out of hand.
- **Preservation**: Preservation deals directly with cultural property. Listing and cleaning.
- **Consolidation**: Ensuring its continued durability and structural integrity.
- **Restoration:** Reviving the original concept of legibility of the building.

- **Rehabilitation:** While protecting heritage value, processes and encompass actions historic buildings to make it possible to adapt compatible, contemporary use (URL15).
- **Reproduction:** Reproduction entails copying an extant building to maintain its aesthetic harmony.
- **Reconstruction:** Reconstruction has to be based on accurate evidence and documentation (Feilden, 2005).

This is another critical viewpoint to be considered for the reuse of a legacy structure or building. Remaking could essentially be translated as a procedure of revamping. Remaking can be fractional or entire regarding the size of frequency. In the thought of reproduction and the endeavors to restore or reuse a building for any given reasons, it is imperative to recollect that when the needs of the proposed clients are dismissed, the undertaking may in the end up being a fizzled venture. So as to stay away from disappointment with respect to the clients furthermore to make an inviting environment, Barakath (2003) and Barakath et al. (2004) hassles the requirement for clients' thought in recreation ventures.

On a general note, in arranging the new utilization of an old building, the study must consider a more extensive size of nature. This thought incorporates the prompt environment, the neighboring structures and their capacities and the general perspectives of individuals about the planned utilization. Security and openness of the space to all classifications of planned clients is likewise an imperative thought that ought not to be dismissed.

3.3 Changing Phenomena of Adaptive Re-Use

In spite of the several mechanisms for control, that has been put in place, when embarking on revitalization, preservation, or to protecting buildings, initial speculative procedure is mostly to strengthen, that it sometimes destroys the pre-conceived idea (UNDP, 1999).

This sort of practice has been resolved by the emerging enlightenment approach that works by refurbishing old buildings to a newer building type requirements and places little emphasis on a relation with the past (Schleifer, 2006).

The decision to invest in the constructions of shelters has never been a trivial one at any point in time. A building not only provide shelter to its owner; but also does offer emotional security and provides a succor to relation beyond one's nucleus family. There was an emerging trend of increase in the cost of real estate that started in the early 1990s; this trend was more obvious within the urban core (Mornement, 2007).

Another major issue that cannot be side lined is the fact that in the midst of the growing number of house extensions, there is also a change in lifestyle observed. It is more obvious in the world place as well. There is a growing number of people that work from their homes, this further increases pressure on the house creates severe space constrain (Mornement, 2007).

Creating new extensions can even be more difficult than designing a new structure. Apart from the restrictions coursed by the design there also arise certain challenges which are planning, legal and structurally related that has to be considered

(Mornement, 2007). However due to the environmental sensitivity is a rising concept on small residential projects.

In the United Kingdom, as proposed by the Manhattan Loft Corporation (MLC), formed by Harry Handelsman in 1992, and Tom Bloxham who is a Manchester-based Urban Splash, founded by entrepreneur in 1993, both spearheaded a new path to development. They claim that elaborate living gives rise to free expression to create pace for personal identity. This goes beyond just creating personal spaces to creating spaces for leisure activities (O'kelly & Dean, 2007). This movement called the loft movement was basically a 1990s concept, though it still fascinates some contemporary designers. The 1990s loft was an industrial warehouse space with wide openings that allows for a good external view. Though today, the term has been misunderstood to mean sins. It's a smaller flat with double heighted ceiling above the living room, a chic redevelopment or a new-build in the form of a loft (O'kelly & Dean, 2007).

The German are at the forefront leading in the conversion of office spaces into residential buildings. According to Martin Ostermann of Magma Architecture, *"Offices take up too much space in the city center, and they have the potential to make ideal housing because they have great views and people love open spaces.*" (O'kelly & Dean, 2007).

In the united kingdom, Bloxhams: in most large British cities now, the Victorian building stock has been recycled, yet, we still have a lot of office spaces from the 1960s that could be converted into residential building (O'kelly & Dean, 2007). The plans of many structure that were designed in the first half of the 20th century are not suitable for contemporary housing. The floors of kitchens and conveniences were often too

small compare to the space required for modern ones. Besides, they seem so to place appropriately as it is no longer allowed to have a toilet positioned next to a kitchen. The material like asbestos used could pose some difficulties in the conversion process.

In designing for modern use the avenues to make available worktops and wash basins for bathroom are taken. Doors could easily be replaced. Overhead closers should be fitted on kitchen doors to help reduce the risk of condensation in dwelling (Douglas, 2006).

Historical buildings are not just empty buildings for adaptation but it is regarded as a heritage with any values, so, due to its emotional values, the adaptation decisions has to be given accordingly and sensitively. They carry out a more spiritual value. This is a drive force for conservation and adaptive reuse.

3.4 International Standards / Principles on Adaptive Re-Use

Impacts in different nations brought about the foundation of lawful and authoritative systems for the insurance of social legacy, and the effect can be measured by the way that, by the 1990s, most conditions of the world had confirmed the UNESCO World Legacy Tradition (Rodwell, 2008). A need has seemed to characterize some normal parameters; these are communicated in worldwide sanctions, proposals and rules, and additionally in the advancement of experimental procedures for the examination and consideration of legacy (Rodwell, 2008).

1972 was the year that denoted the start of facilitated universal activities in the fields of both supportability and protection. Since the appropriation of preservation in 1972, the worldwide group has grasped the idea of maintainable improvement. The insurance and protection of the normal and social legacy are a noteworthy commitment to

supportable improvement. The world legacy tradition concerning the security of the World Social and Characteristic Legacy – to give its full title – addresses various parallel targets (Rodwell, 2008).

To begin with, by its extreme tittle and its 'one world' symbol, the tradition symbolizes the autonomy of social and regular legacy and the commonality of their insurance. The Tradition was the first key worldwide archive to make the association in the middle of society and nature, and stays one of only a handful few that do. Second, the Tradition presented the idea of world legacy of 'exceptional all-inclusive quality;' and of the obligation of the universal group to participate to guarantee its assurance and transmission to future eras for the advantage of mankind overall. Third, Article 5 of the Tradition confers state gatherings to setting up successful and dynamic measures for the insurance, protection and presentation of the 'entire of universal legacy, regardless of whether is perceived as World Legacy' (Rodwell, 2008).

Identified with genuineness is a second key idea against which World Legacy Locales are evaluated, in particular uprightness. Uprightness is characterized the UNESCO Operational Rules as 'a measure of wholeness and soundness', and in connection to noteworthy urban areas there is a reckoning that the 'connections and element works that are vital to their particular character ought to be kept (Rodwell, 2008).

Adaptability comes with a criteria when a building needs to be adapted. The building must be suitable to absorb minor and major changes to its capacity before undergoing such adaptations (Mornement, 2007). Mainly these points can be covered with the following; *convertibility*, allowing the use of the building to be changed economically, legally and technically. *Dismantlability*, meaning that the structure can undergo

demolition safely efficiently and quickly. *Disaggregatability*, after the stage of demolishing a building, the dismantled materials and components are advised to either be reused or reprocessed as much as possible to save on cost of new materials. *Expandability*, making it available for the increase of volume capacity. And finally *Flexibility*, to make the building more space efficient by shifting, space planning and reconfiguring the layout of a building (Douglas, 2006).

Conservation processes are also compartmentalized into stages and requirements. These are listed as follows. Three essential requirement as indicated by URBED (1987) there are three key necessities and four phases of any effective transformation plan: fitting improvement methodology, main thrust and suitable building.

Appropriate development approach: Traditional methodology: This includes either an ordinary/institutional or entrepreneurial style. The principal style as of now has a particular new use for the building. Entrepreneurial methodology: Nonetheless, is more theoretical. For this situation level of interest for the changed over property is less settled, in light of the fact that the client may not be known. Deriving force: The main impetus could be the customer's or specialist's illustrative. A qualified development proficient with involvement in adjustment work, for example, contracted surveyor, enlisted engineer, sanctioned developer or specialist would be a suitable individual for this part. Suitable building: In a perfect world, the building ought to be suitable for the proposed change of utilization in locational, physical, spatial and legitimate terms. In any given restoration process, manageable vitality assumes a key part (Douglas, 2006). Making feasible vitality, diminishes the typical cost for basic items for elderly individuals who ordinarily live in historic cities. In modernization, maintainable vitality is one of the key variables of business structures (Douglas, 2006).

The Charters are used to set standards and provide advice to owners, custodians, managers and conservation architects / interior architects, who would like to undertake tasks on places with cultural significance. Places including natural indigenous and historic places with cultural values can apply according to the Charters. The table below illustrates a brief definition of the aim for these Charters (Burra Charter).

Table 1: Related international charters

CHARTER	YEAR	AIM	APPENDIX
Venice Charter	1965	*The Venice Charter for the Conservation and Restoration of Monuments and Sites* is a code of professional standards that gives an international framework for the conservation and restoration of ancient buildings. The committee aimed to provide principles to guide the preservation of the historic buildings.	I
Burra Charter	1979	The *Burra Charter* defines the basic principles and procedures to be followed in the conservation of Australian heritage places.	II
Athens Charter	1993	The *Athens Charter* for the Restoration of Historic Monuments is a seven-point manifesto adopted at the First International Congress of Architects and Technicians of Historic Monuments in Athens in 1931.	III

3.5 Successful Examples of Adaptive Reuse

The term of adaptive re-use, the process isn't only about remaking the old building, even if it has got special architectural or historic interest. It is about generating the importance of the place in a newer function, giving a whole new life and purpose to the building. Some of these examples are industrial sights adapted to exhibition halls, some from church yards to libraries. In some cases even from factories to cafes. The part below will illustrate some examples of these adaptive re-used buildings;

1. Tate Modern (London England); the *Tate Modern* is a former power station located in Southwark, London. The new function of the Tate modern is to function as a museum holding the national collection of British art. The building still carries most of its original character, for example the turbine hall still stands in its original form (Figure 10).

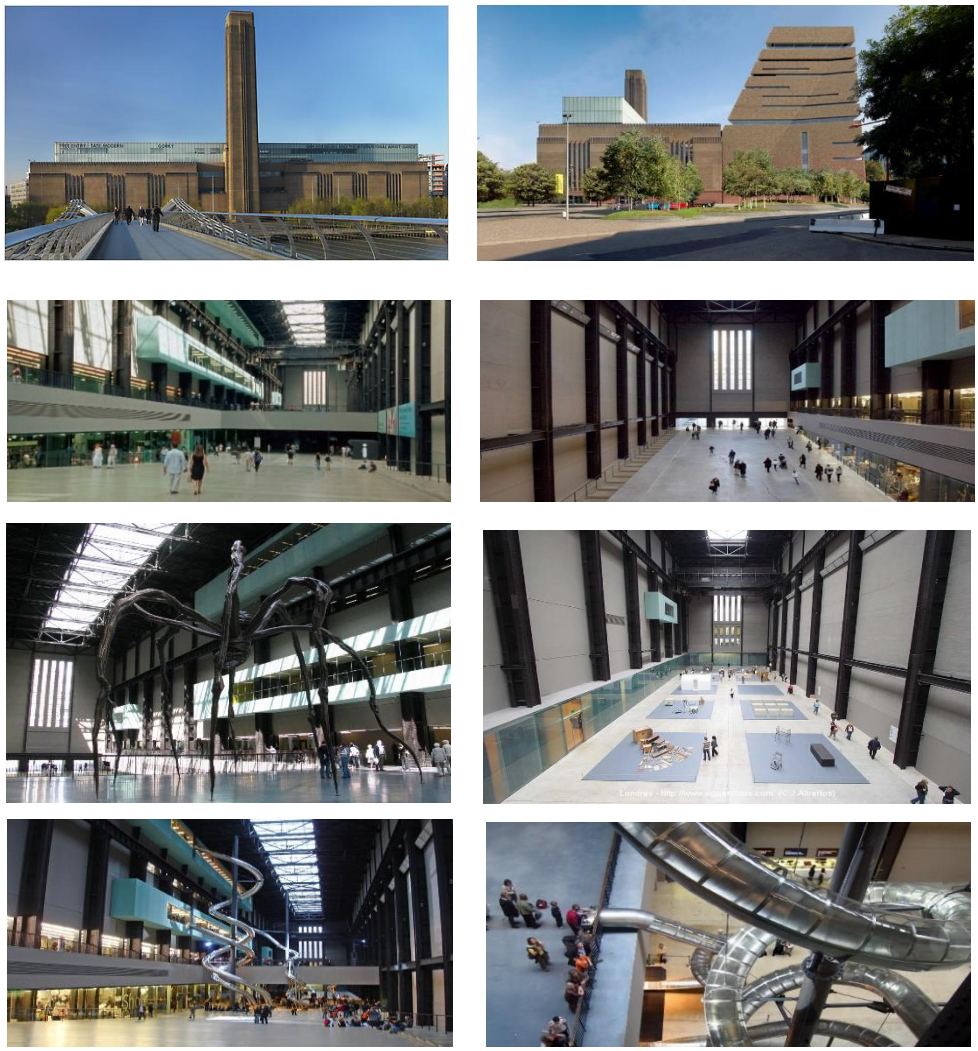


Figure 10: The Tate Modern Exterior and Interiors Views (Source: Macdonald, 2011)

2. Dominican Church (Maastricht Netherlands); the *Dominican Church* didn't become a ruin over the years. The church has been adapted with modern day black steel shelving and fashionable furniture. The lighting in the church has been strategically placed to give the room a candle lit feel while functioning as a bookshop (Figure 11).

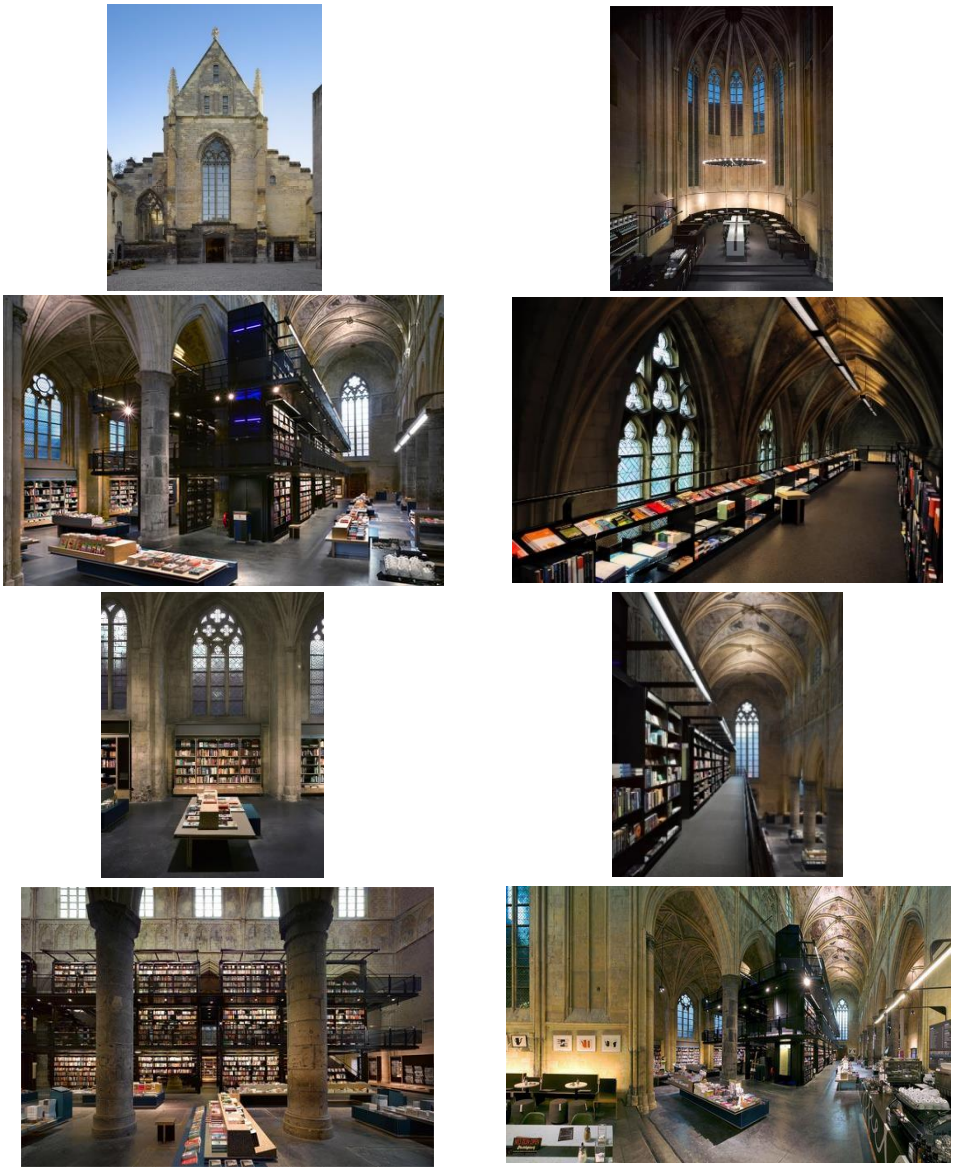


Figure 11: The Dominican Church Exterior and Interiors Views (Source: Plevoets & Van Cleempoel, 2009)

3. Gasometer City (Vienna Austria); the *Gasometer City* is a successful example of living quarters. Once functioning as gasometers, being shut down was what made the building a target for adaptive re-use. The site now holds function as entertainment, working and living areas. These once famous gasometer storages have now become infamous worldwide for its new adaptive function (Figure 12).

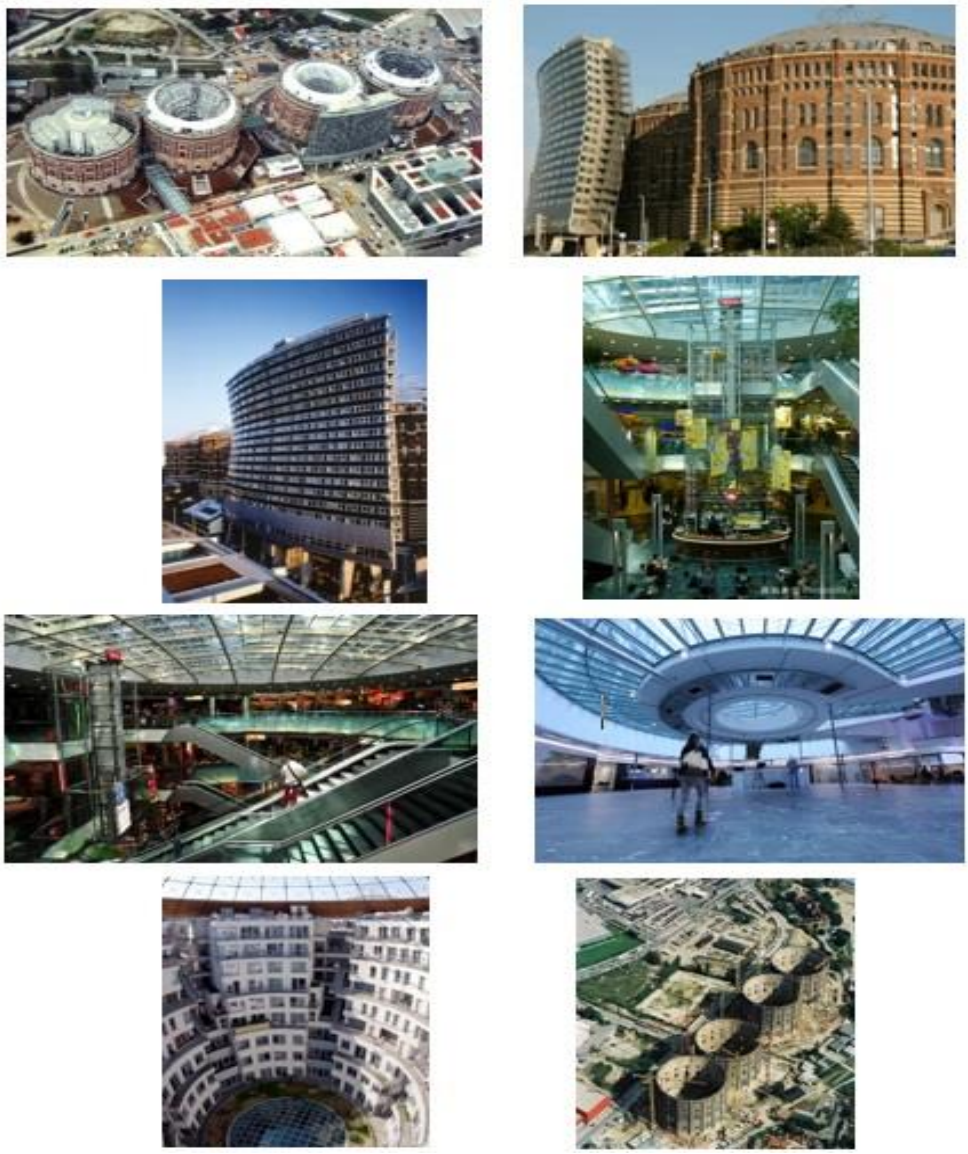


Figure 12: The Gasometer City Exterior and Interiors Views (Source: Wehdorn, 2008)

3.6 Chapter Conclusion

The chapter brings light to contemporary re-use of historical buildings. An in depth analysis of adaptive re-use of historical buildings are made and presented throughout this chapter. The chapter can be summarized under four main topics. The first of them being the significance of historic building. This title gives an insight of the importance a building has among the culture and its importance in history. The second title focuses on adaptive re-use and its principles in a much deeper manner. Starting from the evolution, which concentrates on the methods used over the years, passing on to the values of conservation.

Adapting a building needs a lot of thought put into it before it can be done. The decisions and the requirements are listed in this section for a further understanding along with the degrees of intervention and the different functions in adaptive reused are considered. In the final part of the chapter to conclude, successful examples of adaptive re-use have been added.

Chapter 4

INVESTIGATION OF DAVIDSON CENTER AS A RE-USED ARCHAEOLOGICAL MUSEUM

The museum taken into consideration to conduct this research is the Davidson Museum. The Davidson Museum is located in the historical city of Jerusalem, Israel, woven into the archaeological excavation site of an Umayyad palace at the southwestern corner of Temple Mount. The museum is named after its benefactor, William Davidson, a Michigan industrialist, who was one of the largest manufacturers of float glass in the world. Mr. Davidson is the main source regarding financial investments to the project. The site that the center was added on originally was an excavated palace belonging to the Umayyad period, which belonged to the Muslims of the 7th Century The designer of this glass and steel center built over the ruins of a palace is *Ethen Kimmel and Michal Eshkolot Architects*, who gracefully tells us the story of this architectural place. The task of turning this site into the Davidson Center, which covers a 1000 square meter area, started the project in 2001 and came to an end in the year 2007, making it the archaeological museum it is today. Archaeological museums, in this case the Davidson Museum, as we know house ancient artifacts and represents parts of history to the newer generations. These artifacts being displayed give a glimpse into what the place once was, sharing knowledge and information of societies, cultures and lifestyles (URL16). Kimmel,E. (2015).

To explore and study some of the most important archaeological sites in Jerusalem, the Davidson Center offers an opportunity to do so. The exhibitions hold illustrations, showcasing and describing some of the main historic events in the ancient city. This center highlights the main features of the past through the extensions of the archaeological park. Throughout the history, it is able to see four main periods of the archaeological park. These were the *Second Temple, the Roman, the Byzantine and the Islamic periods*. In each of these periods, the site was built over in ways to appeal to the needs of each period. As *Assoc. Prof. Dr Luca Zavagno (2015)* states, The Davidson Center stands as a witness to all the destruction the archaeological site has gone through over the years by displaying artifacts from each layer of time and period (Figure 13,14).

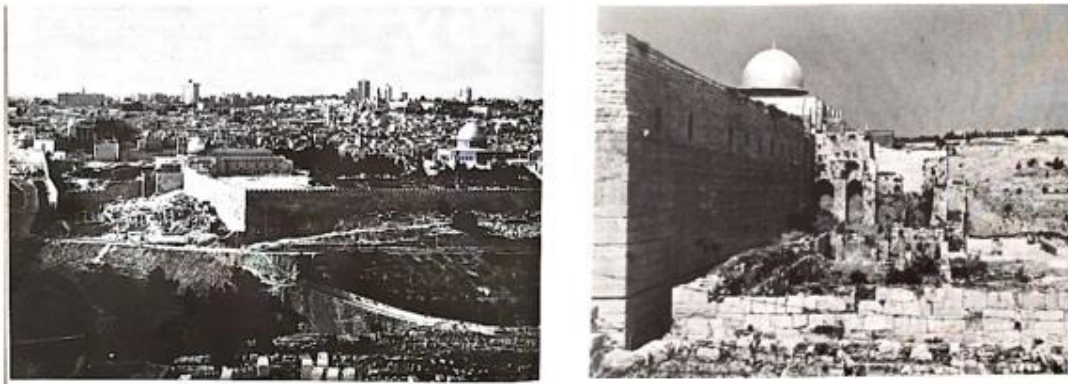


Figure 13: Old City of Jerusalem (Source: Safdie, Barton & Shetrit, 1986)

Figure 14: An overview of the Old City today (Source: Kimmel, 2011)

4.1 Architectural Space Organization

The function of the Davidson Center is to act as a museum while preserving the cultural heritage. The archaeological museum and its design came from a competition which was won as young architects. Its significance arises when it showcases many layers of culture, carrying the past to the present. The center does this with both excavated artifacts and virtual displays. The museum is placed underground for one main reason, and that is so no harm or damage is made to the historical site.

The success of the Davidson Center can be seen throughout the museum. Starting from the lobby, the circulation pattern the visitors will follow is neat and organized. After entering the museum, the visitors will need to follow a pattern to make their way around the museum. The exhibitions and their artifacts are planned to guide the visitors from the entrance to the exit in a spiral layout, passing through the museum and experiencing the showcased artifacts (Figure 15, 16).

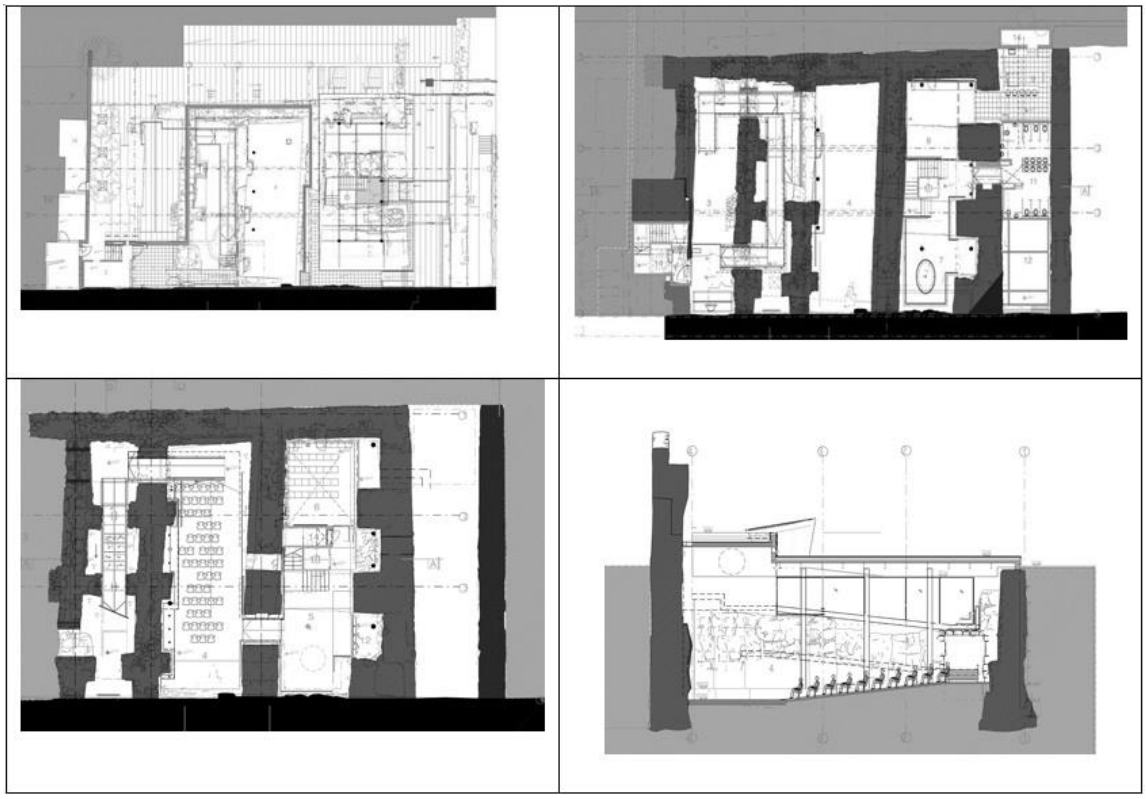


Figure 15: The underground planning of the museum, showing the different layers that have been built (Source: Kimmel, 2011)

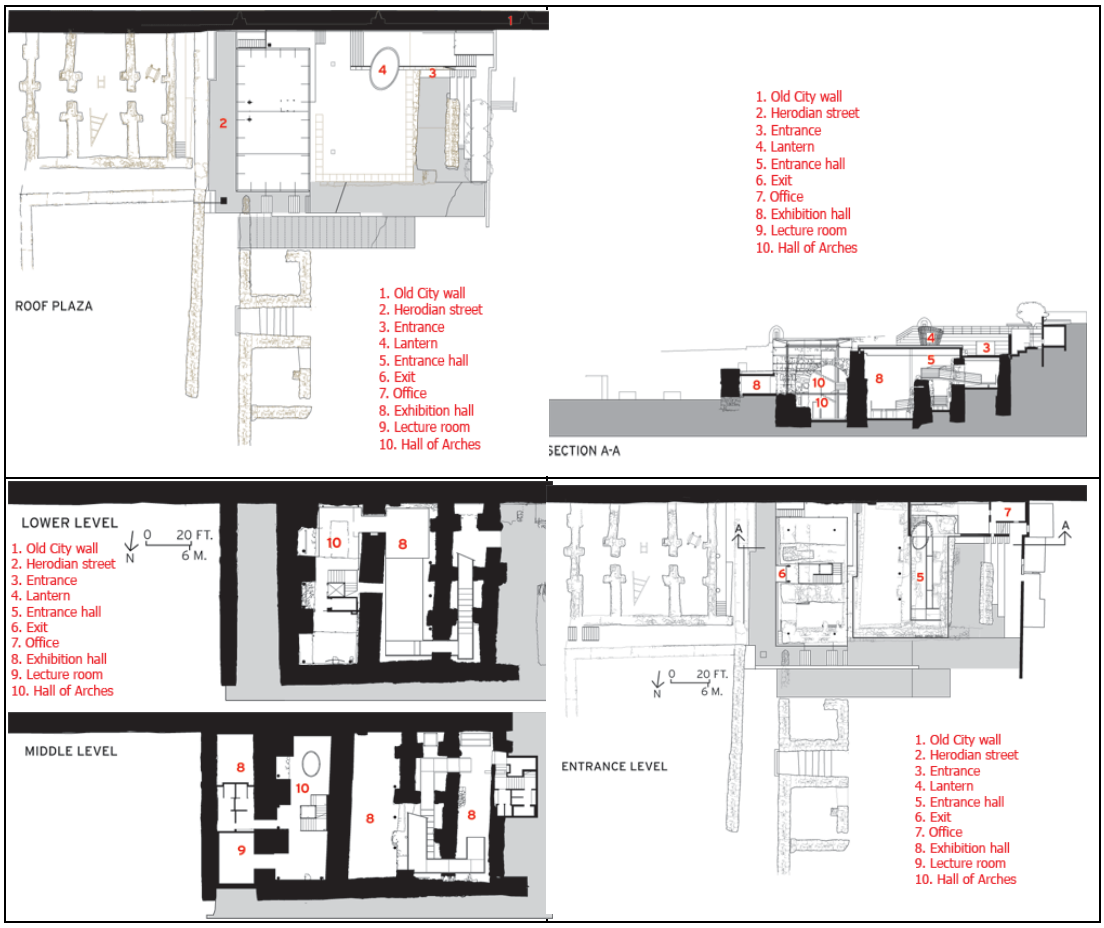


Figure 16: Visitors circulation patterns and lay out of compartments
(Source: Xiaolu Li., 2010)

The expected feeling that is received is a feeling of motion. The well-orchestrated experience takes the visitor through the stages of time while illustrating its importance. The entrance of the museum covers an importance not only for the museum but for the visitors as well. The architectural spiral, that has been built inside and directs the visitor underground, gives a last look outside before going deeper in layers. Following the underground spiral like layers, the paths lead the way back to the main entrance, allowing the people to have a new look on the outside world. The museum being underground is not to be hidden but to preserve the level of the ground floor of the historic palace. To not completely disappear, the architects design the oculus as a beacon, pointing out the location of the museum (Figure 17) (URL17).

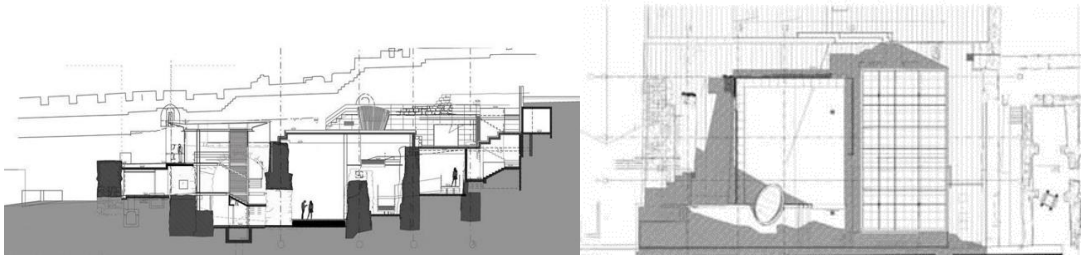


Figure 17: Underground planning of the museum (Source: Kimmel, 2011)

The excavation took place from the palace's top all the way down to the original floor level, where they found five storerooms. Out of these five rooms four of them were selected and used for the Davidson Center. Another part of this concept, used for the Davidson Center, was to preserve and enhance the remains of this historic structure so that it would act as a divider between ancient and modern. (URL18).

4.2 Space Character

While building up the structure of extension part, innovative technology was looked to. This technology allowed the structure to be built with light materials such as wood, glass and steel (URL18). One of the reasons of using these lightweight materials were thought of in order to reduce the stress form the historic site and its structure, the old and fragile building in many cases can't handle the pressure of inappropriate materials. The inner ramps, hanging from the ceiling helps reduce stress to the building. While making the Davidson a strategy, which was followed by *Kimmel- Eshkolot,* was to make the building as transparent and the height of the building as low as possible. As mentioned in 4.2 the reason for this was to keep the archaeological park from interfering with the architecture of the Old City walls. The other parts of the building are mostly underground. The levels of the roof are built parallel to the palace floors, integrating the walkways and landscaping. Design character will be explained further in 4.7 which explains the design of interventions (Figure 18) (URL19).

Figure 18: The roof being built as low as possible to be parallel with the palace floors (Source: Xiaolu Li., 2010)

4.3 Display/ Exhibit Design

In the Davidson Center, apart from the adapted historical building, the exhibitions or the artifacts that are being displayed play a key role in making the museum a success. The site, first of all, as a whole, is a display itself. The museum is built on site for the reason of keeping the original site a part of its permanent exhibition. Displaying its target and most important artifact is enhanced by the materials used in the construction of the adapted building. Glass panels help the ancient walls to be more noticeable without the distraction to the newer up to date materials. Kimmel,E. (2015). The other exhibitions consist of the ever evolving, new interactive model of the Umayyad Palace and the Sasany and Fatimy treasures. Glass boxes containing coins from around the world, all carrying an original story from around the world is presented in the museum. The endless tries casting of bringing the new and the old together, in the sense of meeting the old artifacts with the new materials. Working on an archaeological site comes with its difficulties. The walls and floor levels all being un-even, constant measurements and planning was required to make the adapted structure as straight as possible (Figure 19).

Figure 19: Virtual displays and pictures in the museum (Source: Kimmel, 2011)

According to the architect, Mr. Kimmel, "visiting archaeological sites is less appealing due to their nature of generally being exposed pieces of history without context. What we try to do here is to make the experience as interesting as possible by presenting the artifacts in context with supplementary audios, visuals and descriptive information. History comes to life with the museum when aspects such as lighting, circulation, color, texture, and material are used effectively.

Another challenge in order to have these exhibitions was the decision to build down, deeper submerging the structure and marking new traces of the palace. The success of the exhibitions all comes together with the accomplishment of the different cultures which existed over different time periods, all come together and co-exist in the same time and in the same place (Figure 20,21,22) (Xiaolu Li., 2010).

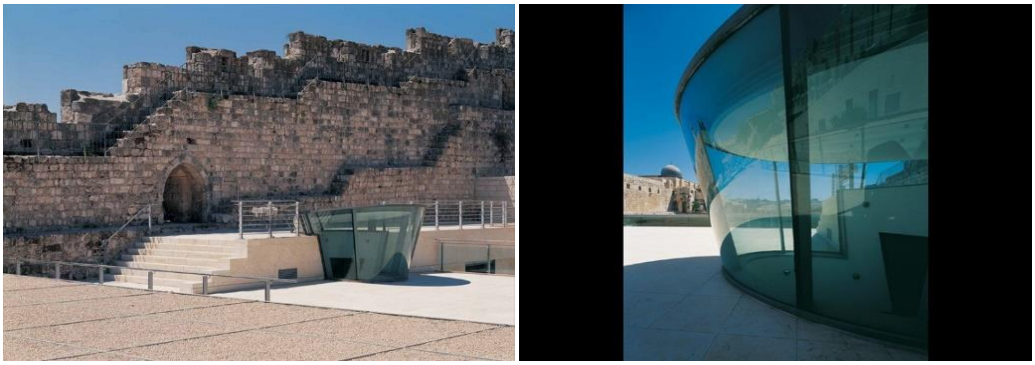


Figure 20: Light materials contrast with the original ones (Xiaolu Li., 2010)

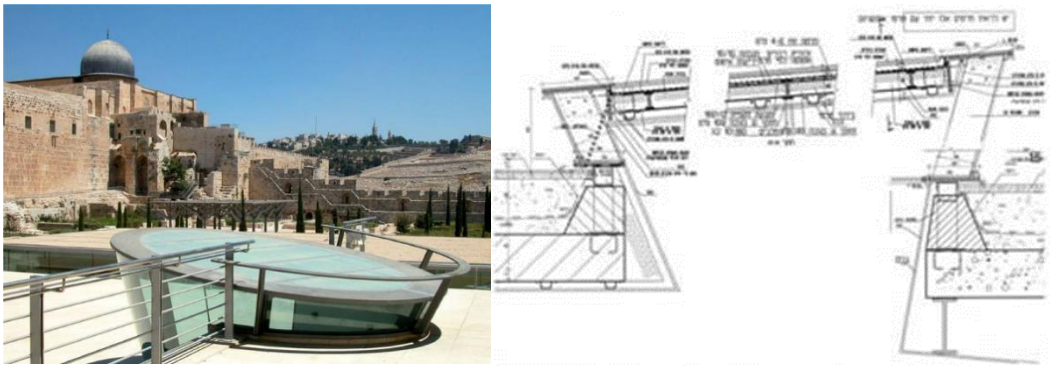


Figure 21: the Oculus, and its drawings (Source: Kimmel, 2011)

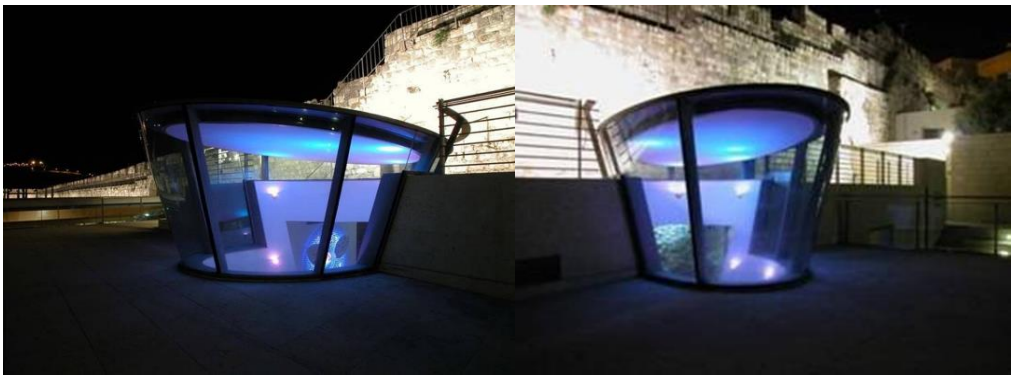


Figure 22: The Oculus provides Natural light in the day and artificial light at night (Source: Kimmel, 2011)

As mentioned in Chapter 2, a historical center as a memory of the human society was started from exhibition spaces, and it is differentiated in the capacity and the part. An exhibition inside of a show space is a basic thing, however its actual worth is the data and its importance suggested in the matters. At the end of the day, the essentials of presence of an exhibition are a correspondence with show and an observer. Effective display space is a surrounding that gets an observer to start the multi-dimensional correspondence and the learning encounters (Kim, 2005).

The way that an exhibition is perceived by the visitors is curtail in museum movement and the relations to the special relations in the respect to affect to the public experience. The co-awareness and the visual physical compresences of shaping the space of the museum are perceived as a movement in museums and shows.

4.4 Lighting

One of the other important aspects would be the factor of light. As known, light provides us visibility in the day with natural light, and at night with artificial light. In museums and their displays, there is no ‘safe’ light level that won’t cause damage to the display. In display design, the problem caused from light still hasn’t come to an end but it has been reduced over the years. Due to the Davidson center being built

mainly of glass, the displays need to be protected from harmful light. Some of these precautions can be taken by firstly reducing the illuminance, or in other words, reducing the amount of light that an object will receive; and secondly, by reducing the exposure time. If the time the object is exposed to light is reduced, then preserving it will be easier. The final way to protect the artifacts would be to cancel the unnecessary radiation which is invisible to the eye. Ultraviolet ray is a good example for such situations (Figure 23, 24, 25) (URL20).

Figure 23: Selected glass prevents ultra-violate light from entering and damaging the artifacts (Source: Xiaolu Li., 2010)

Figure 24: Artificial and natural lighting used to give depth to the structure (Source: Xiaolu Li., 2010)

Figure 25: Examples of natural and artificial light (Source: Kimmel, 2011)

Lighting holds a highly important place for the Davidson Center. Light is the main tool, which helps us see and experience the depths of the Center. In the Davidson, the natural lighting is supplied through the ceiling, down to the lowest levels of the museum. The cleverly organized lighting helps the center to appear larger, wider and lest cramped (Davidson, 1997). With the need for artificial light comes the need for the plugs, wires and sockets which are all cleverly disguised under the ramps and behind the metal doorways (Figure 26).

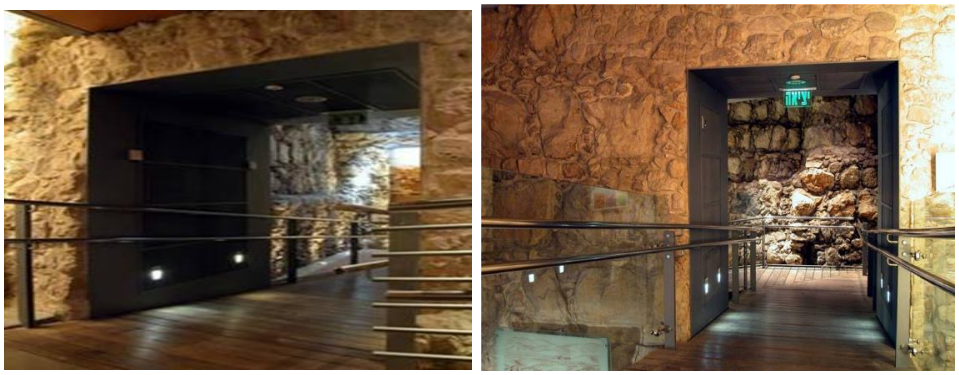


Figure 26: Metal doorways hiding the plugs and sockets (Source: Kimmel, 2011)

4.5 Significance / Value Analysis

The site holds cultural value for the people of Jerusalem. The site holds so much historical, political and cultural significance that when undergone, it had many

difficulties to stay loyal to the task and preserve this importance. The site that has been worked on, apart from all of the other significances, it is considered one of the holiest places in the world today. With religious background, the importance of the site grows even more important. The usage and function of the ancient building has developed and changed over many years as the ruler of the ground changed. Starting from the Second Temple Era, which is estimated to be around the year 516 B.C to the year 70 A.D, the ancient city functioned as a lively social center with the orders of King Herod. Not too long after, form the years 330 to 638 A.D., the Byzantines used the grounds with a Christian based character. Furthermore, the Umayyad rule which followed the Byzantine rule from 638 to 750. And last but not least, the Arabic Caliphate took the grounds, constructed a monumental government center, and transformed it into a mosque (URL21).

The Davidson Museum is a successful example of a certain type of museum. The building is built over the archaeological site without disturbing it and functions as a museum at the same time as *Assist. Prof. Dr.Bülent Kızılduman* (2015) mentioned. The benefits of having such buildings are to protect the ancient site, give the place a new function and bring it back to life. Having the museum on site means that the excavated items do not need to be taken from their original place and transferred miles away (Figure 27).

Figure 27: The Davidson Museum is built over and integrated to the archaeological site (Source: Xiaolu Li., 2010)

4.6 Evaluation According To International Standards of Adaptive Re-Use

Evaluation of the Davidson Center according to Venice Charter is summarized below:

- Article 2: The conservation and restoration of monuments must have recourse to all the sciences and techniques which can contribute to the study and safeguarding of the architectural heritage.
- Article 4: It is essential to the conservation of monuments that they be maintained on a permanent basis.
- Article 7: A monument is inseparable from the history to which it bears witness and from the setting in which it occurs. The moving of all or part of a monument cannot be allowed except where the safeguarding of that monument demands it or where it is justified by national or international interest of paramount importance.
- Article 10: Where traditional techniques prove inadequate, the consolidation of a monument can be achieved by the use of any modern technique for conservation and construction, the efficacy of which has been shown by scientific data and proved by experience.

- Article 12: Replacements of missing parts must integrate harmoniously with the whole, but at the same time must be distinguishable from the original so that restoration does not falsify the artistic or historic evidence.
- Article 13: Additions cannot be allowed except in so far as they do not detract from the interesting parts of the building, its traditional setting, the balance of its composition and its relation with its surroundings.
- Article 15: Excavations should be carried out in accordance with scientific standards and the recommendation defining international principles to be applied in the case of archaeological excavation adopted by UNESCO in 1956. Ruins must be maintained and measures necessary for the permanent conservation and protection of architectural features and of objects discovered must be taken. Furthermore, every means must be taken to facilitate the understanding of the monument and to reveal it without ever distorting its meaning. All reconstruction work should however be ruled out "a priori". Only anastylosis, that is to say, the reassembling of existing but dismembered parts can be permitted. The material used for integration should always be recognizable and its use should be the least that will ensure the conservation of a monument and the reinstatement of its form.

4.7 Design of Interventions

The architecture of the Davidson Center is unique. When looked at as a whole, we can see that the old and the new merge together forming something spectacular. As mentioned before, the architectural layout of the adapted building is combined to the ancient city. The visible parts of the structure are the transparent glass and steel structure, not to compete with the values of the original building and to reveal the new interventions by providing contrast. Another unique feature is the Oculus, an architectural element which is a reference to the existence of the 21st Century

underground. In the sense of adaptive re-use, the elements chosen by the conservator experts faced them with the challenge of converting the ancient buildings elongated, roofless, rectangular spaces into functional buildings. The measurements of these spaces were each approximately five meters wide, twenty meters long and seven meters deep. This task provided easy and comfortable access to the public while preserving ancient elements (Figure 28) (URL22).

Figure 28: An illustration of the architectural Oculus feature, carrying light to the deepest parts of the museum (Source: Xiaolu Li., 2010)

Looking at the site, the only visible additions made to the site is the steel, wood and glass geometrical structure. The structure's layout provides easy access to the visitor and also preserves the site. The outer and inner walls use glass panels as much as possible. One reason for this was to let in as much light as possible, avoiding the use of artificial light as much as possible and to give the structure a contemporary feeling.

When a closer look is taken to the interior structure and its design, we see that it's built of ultra-light materials which are completely detached from the original stone walls. This strategy was followed to highlight the original walls and combine the new with the old that shows contrast between original materials and new materials in additions/ extensions. The ceiling holds a multifunction and an extremely important part in the museum. Not only acting as a roof, it is also used as a ground of the historic site. Everything attached and hanging from the ceiling helps store pipelines and wires, preventing an unfriendly view (Figure 29, 30, 31).

Figure 29: Light weight wooden and steel walls, combined with glass walls (Source: Kimmel, 2011)

Figure 30: Detached elements on the interior of the design (Source: Kimmel, 2011)

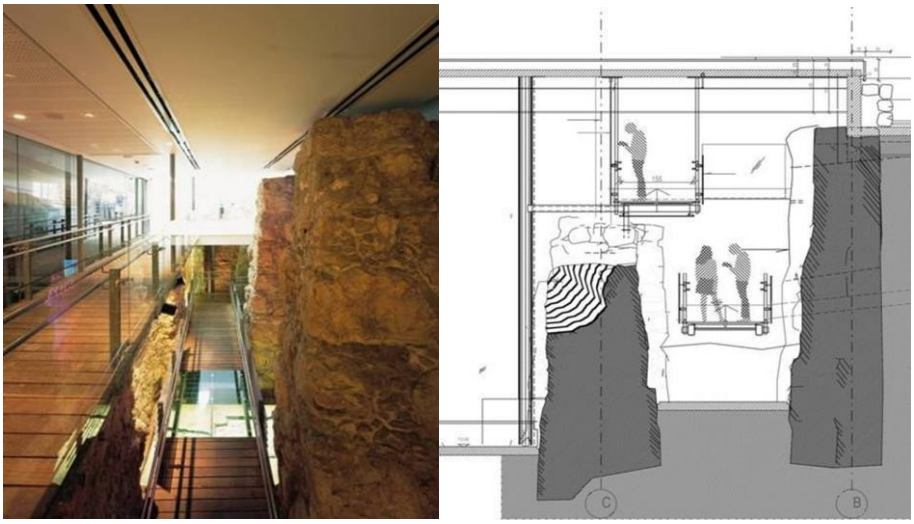


Figure 31: Detached material and the sketch of the plan (Source: Kimmel, 2011)

To refer to contemporary adaptive re-use, the materials that are used in a project, such as the Davidson Center, are carefully selected. An important reason for this is no other than being easy to change.

In adaptive re-use projects, the function of the building being adaptively re-used, can often be changed or altered in order to address the well-being of the site. Using lightweight materials provide the architects the possibility to change and alter the additions made with ease. When talking about the benefits to the architect, also considering architectural firms which take on such projects, the type of material used reduces cost.

The recycled light-weight materials are more cost efficient. Using recyclable materials such as wood, steel and glass, the designer can complete a project with reasonable cost. To compare the cost of the materials used and the cost of materials that are not preferred in adaptive re-use projects, there is a noticeable difference (Figure 32).

Figure 32: The building concentrates on using light-weight materials such as steel, wood and glass to reduce stress from the original building (Source: Xiaolu Li., 2010)

All this in mind, the architect wants the historical site to be more in the viewers' eyes than the new adaptations they have made. In order to succeed in such tasks, the selected materials help the designer out in reaching that goal. The added materials are expected to be neutral and neither compete with original materials of historical buildings not the displayed objects. Let's say, for instance, if the walls of extensions of the adapted building were made of shiny aluminum, strengthened with carbon fiber pillars, the viewers would spend most of their time analyzing the material which has been used, distracting them from looking at the actual exhibited ancient stone walls. In short, when the walls of the extension parts are made with glass, the people don't get distracted and focus all of their attention on the heritage site. As a whole, an archaeological museum can seem a bit boring for the visitors. Knowing that there aren't any real artifact apart from the building and the walls itself to display. The architects and designers integrated the feeling of motion and the cleverly selected material to enhance this experience for them (Figure 33).

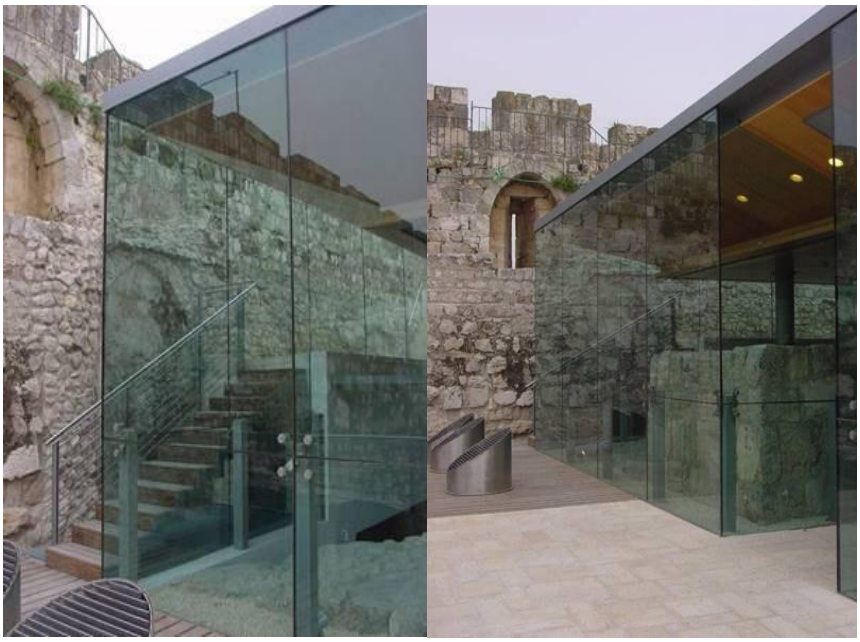


Figure 33: The glass walls do not distract the viewers from the historical site (Source: Kimmel, 2011)

In further information, after speaking with the architect himself, it has also been said that Mr. Davidson had provided them with an extra amount of money to extend the museum further. The design plan has already been drawn and planned out.

The extension will also be built underground as the previous part of the museum is. Pictures of the new project can be found below (Figure 34, 35, 36, 37);

Figure 34: The area which the extension will be covering (Source: Kimmel, 2011)

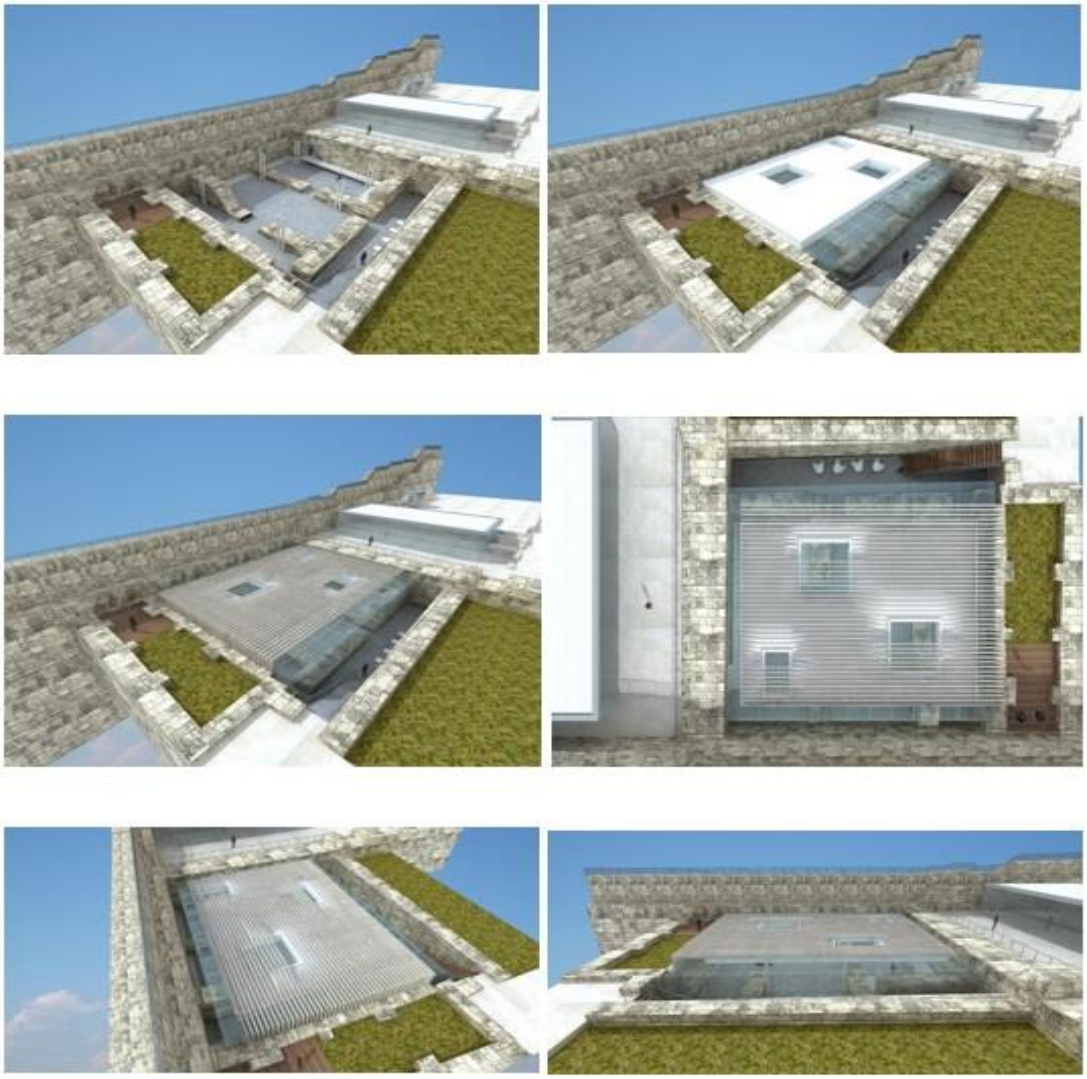


Figure 35: 3D images of the layers and the completed roof (Source: Kimmel, Etan. Davidson Center. 2015. PDF file)

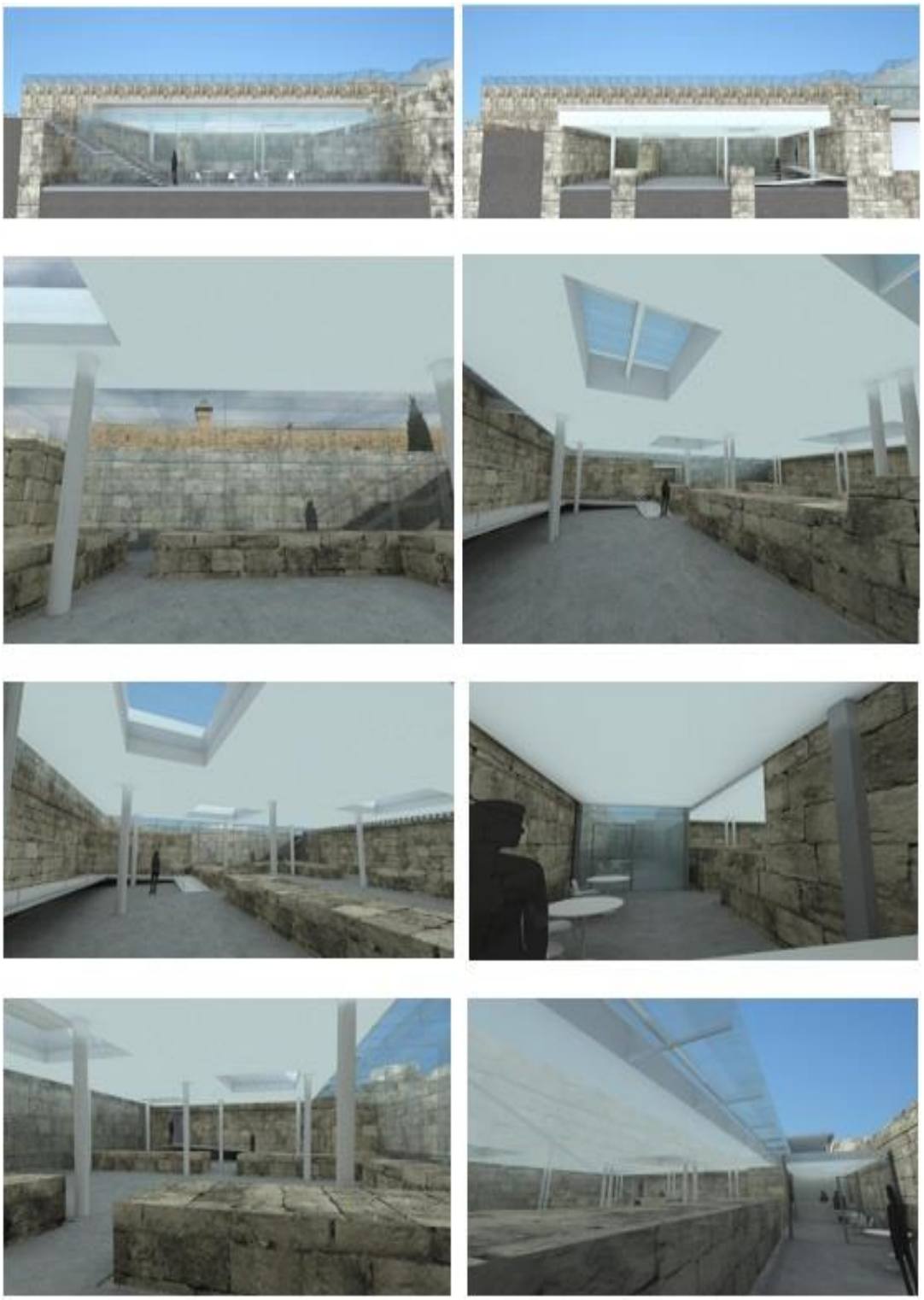


Figure 36: 3D image of the finished inner design (Source: Kimmel, Etan. Davidson Center. 2015. PDF file)

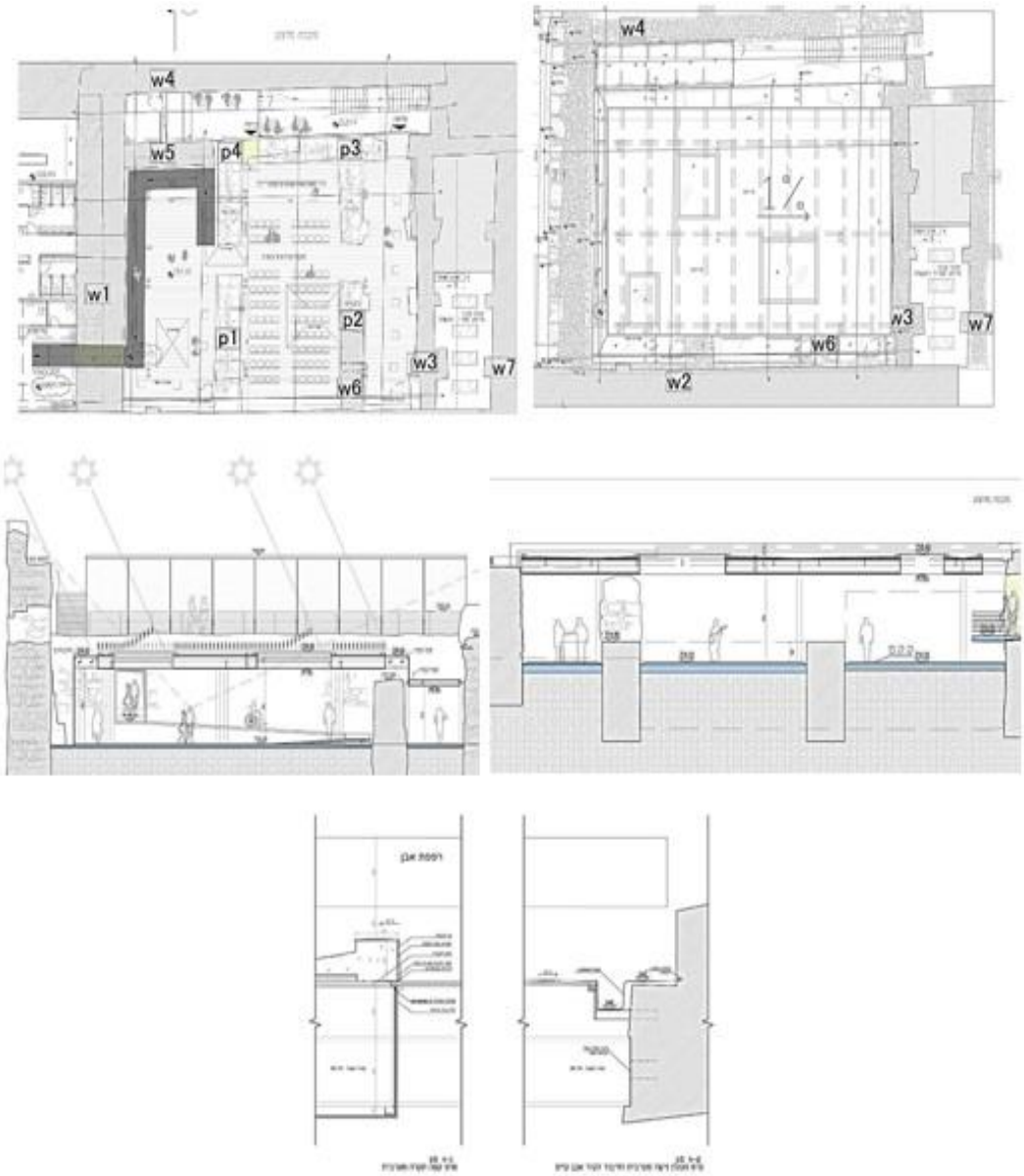


Figure 37: Plans for the levels and inner architecture (Source: Kimmel, Etan. Davidson Center. 2015. PDF file)

4.8 Chapter Conclusion

To conclude the chapter, taken into consideration is the Davidson Center. With paying high significance to the archaeological museums, the study concludes with a depth research study. Starting from the museum's overall background, later a deeper analysis of the center's space organization, space character, display/ exhibit design, lighting are explained in the light of contemporary museum design. Additionally, the significance and value analysis; evaluation according to international standards and design of interventions are provided in this chapter in the light of contemporary concepts of adaptive re-use. The principles that have been followed in this archaeological building enlightens the values of the site and gives an insight of the degrees of intervention in adaptive re-use. The Davidson Center can be learned from and observed in the sense of approaches in both archaeological museum design and contemporary adaptive re-use. Hence the fact that the Davidson Center is a successful example. Continuously, according to the information given in this research, the result of this research is explained in the next chapter under the title of conclusion chapter.

Table 2: Evaluation of Davidson Center in the light of theoretical background (Source: Author)

Chapter 5

SUMMARY AND CONCLUSIONS

The research conducted, holds the purpose of enlightening the public about the importance of the historical buildings and sites that are generally forgotten, walked passed and are left unnoticed. Bringing light to these sites and buildings, the public, is hoped to take these buildings into importance and not let them deteriorate.

Talking about functions that can be given to these buildings, giving them a new purpose in life, can affect the visualization of the outer world's perspective on an urban context and their values of the past. To be able to reach the goal that has been aimed at, the research has been conducted and divided into four sections.

In the Introduction Chapter, what is being tackled firstly is the problem, the problem definition, and adaptive reuse being broadly explained, Using visuals such as graphs and figures, this study shows the flowchart of inserting an archeological museum in a historic building and presented with a closer look. The chapter acts as a familiarization to the aim of the research, giving an idea of the topic before going to deeper analysis. Keeping the aim of the study in mind making an overview on key issues in archaeological museum design in re-used historical buildings the significance of the research is also tackled and achieved.

To pay a higher importance and to have security, in the sense of not making any drastic mistakes on the work that will be faced, the concept of archaeological museum design, and the types of museums that function around the world are explained broadly and then in depth in the following chapter. Here based on the detailed explanations, one specific type of museum, which is archaeological museums is focused on in detail, covering all aspects. After an overview of the topic is passed, the evolution and the classifications are analyzed and are dealt with in a deeper sense. After providing relevant information, that will later on help with the analysis of a selected case, a further look is taken to the space organization, space character, display/ exhibit design, and lighting are widely discussed and various references are used to support the task, then by showing some of the successful examples of archaeological museums the chapter of archaeological museums come to an end.

Speaking of which, the historical buildings and archaeological sites all possess high importance in people's lives. The next chapter brings contemporary re-use of historical buildings to light. Focusing on adaptability and the re-use ability of historic buildings, an in depth analysis of adaptive re-use, in the sense of conserving and giving new functions to historical buildings are made and presented. In the research that's been conducted, the main topics to give depth can be summarized under four main topics. The first of them being the significance of historic building. Giving insight of the importance a building has, among the culture and its importance in history is answered. Clear reasons show just how important it can be, to adapt a building that has been left abandoned. And a significant reason is that it keeps a city familiar to the eye of the public. A supporting title, after the significance of historic buildings, focuses on adaptive re-use and its principles in a much deeper manner. After losing so much culture and traditions over the years, applying an adaptive re-use to a building only

seems fair. The process of adaptive re-use has been followed for many years and through many periods of time. Dating back from the juncture of Christianity to the Italian renaissance, this development can be seen. An important point to comprehend in adaptive re-use, would be the understanding of simple work on something that has a cultural meaning through time, and its importance to architectural work. Starting from the evolution, which concentrates on the methods used over the years, the study then follows on to the values of conservation.

Adapting a building needs a lot of thought put into it before it can be realized. Interior architects, urban planners, land surveyors and professionals such as these all make up for the decision to be made. These topics are needed and play importance because they are basic things that are required from the evolution of cultures. For a further understanding along with the degrees of intervention and the different functions in adaptive reuse are considered.

In the case study chapter, the main focus of the research is conducted around the Davidson Center, Jerusalem / Israel. Representing many years of historical significance to various ages and cultures, the Davidson Center is the center of attention undergone. Having many historical periods pass through, it had many difficulties staying loyal to the task and preserve this importance among all of the cultures. With paying high significance to the archaeological museum, that is built over the historic remains of the ancient site in Jerusalem. Starting from the museums overall background, digging deep into the functions and periods, the study went through, later a wider analysis of the center's exterior and interior design, including the materials used and the purpose of them. A main and important reasons of using lightweight materials such as glass wood and steel, were chosen in order to reduce weight that

would have been put on the site from other used materials. The historic site and its structure is an old and fragile building. Due to this, in many cases the structure cannot handle the pressure of other unsuitable materials. The principles that have been followed in this archaeological building enlighten the values of the site and give an insight of the degrees of adaptive re-use, and an important reason for this is no other than being easily reversible. The Davidson Center is a successful example to be learned from and observe the approaches explained about contemporary conservation concepts as well as contemporary archaeological museum design.

To state how and who this research will benefit, first of all academicians and researchers, architects, interior architects, conservations experts and practitioners, also governmental and non-governmental bodies related to historical architectural heritage can make use of the information gathered in this study. The next step to furthering the research is that, the study can be used as a path to further studies which can propose specific design guidelines for archaeological museum design in adaptive re-use in historical buildings.

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APPENDICES

Appendix I: The Venice Charter

CONSEIL INTERNATIONAL DES MONUMENTS ET DES SITES — ICOMOS — INTERNATIONAL COUNCIL ON MONUMENTS AND SITES

INTERNATIONAL CHARTER FOR THE CONSERVATION AND RESTORATION OF MONUMENTS AND SITES (THE VENICE CHARTER 1964)

IInd International Congress of Architects and Technicians of Historic Monuments, Venice, 1964.

Adopted by ICOMOS in 1965.

Imbued with a message from the past, the historic monuments of generations of people remain to the present day as living witnesses of their age-old traditions. People are becoming more and more conscious of the unity of human values and regard ancient monuments as a common heritage. The common responsibility to safeguard them for future generations is recognized. It is our duty to hand them on in the full richness of their authenticity.

It is essential that the principles guiding the preservation and restoration of ancient buildings should be agreed and be laid down on an international basis, with each country being responsible for applying the plan within the framework of its own culture and traditions.

By defining these basic principles for the first time, the Athens Charter of 1931 contributed towards the development of an extensive international movement which has assumed concrete form in national documents, in the work of ICOM and UNESCO and in the establishment by the latter of the International Centre for the Study of the Preservation and the Restoration of Cultural Property. Increasing awareness and critical study have been brought to bear on problems which have continually become more complex and varied; now the time has come to examine the Charter afresh in order to make a thorough study of the principles involved and to enlarge its scope in a new document.

Accordingly, the IInd International Congress of Architects and Technicians of Historic

Monuments, which met in Venice from May 25th to 31st 1964, approved the following

text:

DEFINITIONS

Article 1.

The concept of a historic monument embraces not only the single architectural work but also the urban or rural setting in which is found the evidence of a particular civilization, a significant development or a historic event. This applies not only to great works of art but also to more modest works of the past which have acquired cultural significance with the passing of time.

Article 2.

The conservation and restoration of monuments must have recourse to all the sciences and techniques which can contribute to the study and safeguarding of the architectural heritage.

Article 3.

The intention in conserving and restoring monuments is to safeguard them no less as works of art than as historical evidence.

CONSERVATION

Article 4.

It is essential to the conservation of monuments that they be maintained on a permanent basis.

Article 5.

The conservation of monuments is always facilitated by making use of them for some socially useful purpose. Such use is therefore desirable but it must not change the lay-out or decoration of the building. It is within these limits only that modifications demanded by a change of function should be envisaged and may be permitted.

Article 6.

The conservation of a monument implies preserving a setting which is not out of scale. Wherever the traditional setting exists, it must be kept. No new construction, demolition or modification which would alter the relations of mass and colour must be allowed.

Article 7.

A monument is inseparable from the history to which it bears witness and from the setting in which it occurs. The moving of all or part of a monument cannot be allowed except where the safeguarding of that monument demands it or where it is justified by national or international interest of paramount importance.

Article 8.

Items of sculpture, painting or decoration which form an integral part of a monument may only be removed from it if this is the sole means of ensuring their preservation.

RESTORATION

Article 9.

The process of restoration is a highly specialized operation. Its aim is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents. It must stop at the point where conjecture begins, and in this case moreover any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp. The restoration in any case must be preceded and followed by an archaeological and historical study of the monument.

Article 10.

Where traditional techniques prove inadequate, the consolidation of a monument can be achieved by the use of any modern technique for conservation and construction, the efficacy of which has been shown by scientific data and proved by experience.

Article 11.

The valid contributions of all periods to the building of a monument must be respected, since unity of style is not the aim of a restoration. When a building includes the superimposed work of different periods, the revealing of the underlying state can only be justified in exceptional circumstances and when what is removed is of little interest and the material which is brought to light is of great historical, archaeological or aesthetic value, and its state of preservation good enough to justify the action. Evaluation of the importance of the elements involved and the decision as to what may be destroyed cannot rest solely on the individual in charge of the work.

Article 12.

Replacements of missing parts must integrate harmoniously with the whole, but at the same time must be distinguishable from the original so that restoration does not falsify the artistic or historic evidence.

Article 13.

Additions cannot be allowed except in so far as they do not detract from the interesting parts of the building, its traditional setting, the balance of its composition and its relation with its surroundings.

HISTORIC SITES

Article 14.

The sites of monuments must be the object of special care in order to safeguard their integrity and ensure that they are cleared and presented in a seemly manner. The work of conservation and restoration carried out in such places should be inspired by the principles set forth in the foregoing articles.

EXCAVATIONS

Article 15.

Excavations should be carried out in accordance with scientific standards and the recommendation defining international principles to be applied in the case of archaeological excavation adopted by UNESCO in 1956.

Ruins must be maintained and measures necessary for the permanent conservation and protection of architectural features and of objects discovered must be taken. Furthermore, every means must be taken to facilitate the understanding of the monument and to reveal it without ever distorting its meaning.

All reconstruction work should however be ruled out "*a priori*". Only anastylosis, that is to say, the reassembling of existing but dismembered parts can be permitted. The material used for integration should always be recognizable and its use should be the least that will ensure the conservation of a monument and the reinstatement of its form.

PUBLICATION

Article 16.

In all works of preservation, restoration or excavation, there should always be precise documentation in the form of analytical and critical reports, illustrated with drawings and photographs. Every stage of the work of clearing, consolidation, rearrangement and integration, as well as technical and formal features identified during the course of the work, should be included. This record should be placed in the archives of a public institution and made available to research workers. It is recommended that the report should be published.

Appendix II: The Burra Charter

The Bu r r a Charter

The Australia ICOMOS Charter for Places of Cultural Significance 1999 with associated Guidelines and Code on the of Co-existence

Australia ICOMOS Inc

International Council of Monuments and Sites

Preamble

Considering the International Charter for the Conservation and Restoration of Monuments and Sites
(Venice 1964), and the Resolutions of the 5th General Assembly of the International Council on Monuments and Sites (ICOMOS) (Moscow 1978), the Burra Charter was adopted by Australia ICOMOS (the Australian National Committee of ICOMOS) on 19 August 1979 at
Burra, South Australia. Revisions were adopted on 23 February 1981, 23 April 1988 and 26 November 1999.

The Burra Charter provides guidance for the conservation and management of places of cultural significance (cultural heritage places), and is based on the knowledge and experience of Australia ICOMOS members.

Conservation is an integral part of the management of places of cultural significance and is an ongoing responsibility.

Who is the Charter for?

The Charter sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians.

Using the Charter

The Charter should be read as a whole. Many articles are interdependent. Articles in the Conservation Principles section are often further developed in the Conservation Processes and Conservation Practice sections. Headings have been included for ease of reading but do not form part of the Charter.

The Charter is self-contained, but aspects of its use and application are further explained in the following Australia
ICOMOS documents:

- Guidelines to the Burra Charter: Cultural Significance;
- Guidelines to the Burra Charter: Conservation Policy;
- Guidelines to the Burra Charter: Procedures for Undertaking Studies and Reports;
- Code on the Ethics of Coexistence in Conserving Significant Places.

What places does the Charter apply to?

The Charter can be applied to all types of places of cultural significance including natural, indigenous and historic places with cultural values.

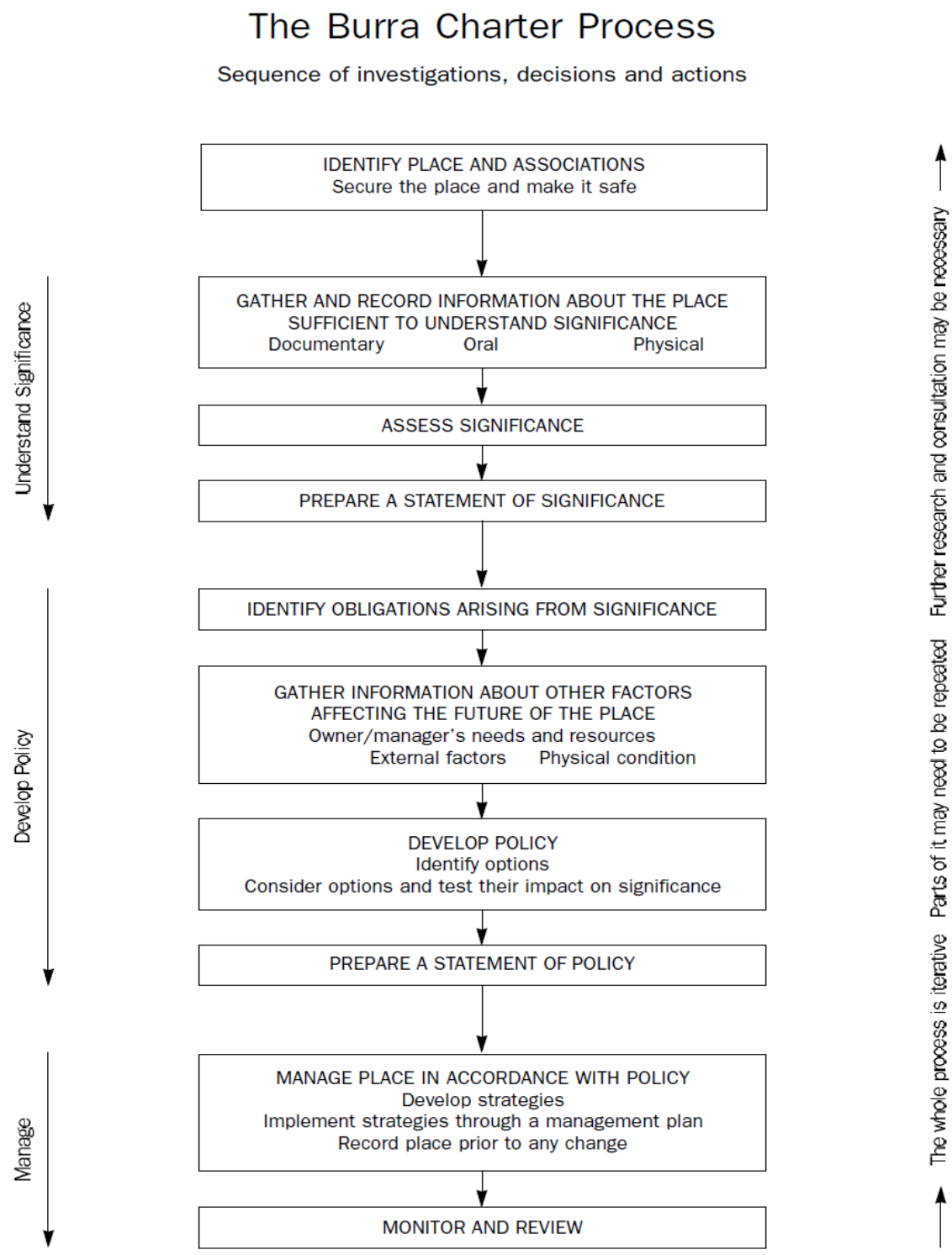
The standards of other organisations may also be relevant. These include the Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places.

Why conserve?

Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences. They are historical records, that are important as tangible expressions of Australian identity and experience. Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the Australian landscape. They are irreplaceable and precious.

These places of cultural significance must be conserved for present and future generations.

The Burra Charter advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.



Appendix III: The Athens Charter

Fonte: ICOMOS

The Athens Charter

for the Restoration of Historic Monuments

Adopted at the First International Congress of Architects and Technicians of Historic Monuments, Athens 1931

At the Congress in Athens the following seven main resolutions were made and called "Carta del Restauro":

1. International organizations for Restoration on operational and advisory levels are to be established.
2. Proposed Restoration projects are to be subjected to knowledgeable criticism to prevent mistakes which will cause loss of character and historical values to the structures.
3. Problems of preservation of historic sites are to be solved by legislation at national level for all countries.
4. Excavated sites which are not subject to immediate restoration should be reburied for protection.
5. Modern techniques and materials may be used in restoration work.
6. Historical sites are to be given strict custodial protection.
7. Attention should be given to the protection of areas surrounding historic sites.

General Conclusions of the Athens Conference

I. -- DOCTRINES. GENERAL PRINCIPLES.

The Conference heard the statement of the general principles and doctrines relating to the protection of monuments.

Whatever may be the variety of concrete cases, each of which are open to a different solution, the Conference noted that there predominates in the different countries represented a general tendency to abandon restorations *in toto* and to avoid the attendant dangers by initiating a system of regular and permanent maintenance calculated to ensure the preservation of the buildings.

When, as the result of decay or destruction, restoration appears to be indispensable, it recommends that the historic and artistic work of the past should be respected, without excluding the style of any given period.

The Conference recommends that the occupation of buildings, which ensures the continuity of their life, should be maintained but that they should be used for a purpose which respects their historic or artistic character.

II. -- ADMINISTRATIVE AND LEGISLATIVE MEASURES REGARDING HISTORICAL MONUMENTS

The Conference heard the statement of legislative measures devised to protect monuments of artistic, historic or scientific interest and belonging to the different countries.

It unanimously approved the general tendency which, in this connection, recognises a certain right of the community in regard to private ownership.

It noted that the differences existing between these legislative measures were due to the difficulty of reconciling public law with the rights of individuals.

Consequently, while approving the general tendency of these measures, the Conference is of opinion that they should be in keeping with local circumstances and with the trend of public opinion, so that the least possible opposition may be encountered, due allowance being made for the sacrifices which the owners of property may be called upon to make in the general interest.

It recommends that the public authorities in each country be empowered to take conservatory measures in cases of emergency.

It earnestly hopes that the International Museums Office will publish a repertory and a comparative table of the legislative measures in force in the different countries and that this information will be kept up to date.

III. -- AESTHETIC ENHANCEMENT OF ANCIENT MONUMENTS.

The Conference recommends that, in the construction of buildings, the character and external aspect of the cities in which they are to be erected should be respected, especially in the neighbourhood of ancient monuments, where the surroundings should be given special consideration. Even certain groupings and certain particularly picturesque perspective treatment should be preserved.

A study should also be made of the ornamental vegetation most suited to certain monuments or groups of monuments from the point of view of preserving their ancient character. It specially recommends the suppression of all forms of publicity, of the erection of unsightly telegraph poles and the exclusion of all noisy factories and even of tall shafts in the neighbourhood of artistic and historic monuments.

IV. -- RESTORATION OF MONUMENTS.

The experts heard various communications concerning the use of modern materials for the consolidation of ancient monuments. They approved the judicious use of all the resources at the disposal of modern technique and more especially of reinforced concrete.

They specified that this work of consolidation should whenever possible be concealed in order that the aspect and character of the restored monument may be preserved.

They recommended their adoption more particularly in cases where their use makes it possible to avoid the dangers of dismantling and reinstating the portions to be preserved.

V. -- THE DETERIORATION OF ANCIENT MONUMENTS.

The Conference noted that, in the conditions of present day life, monuments throughout the world were being threatened to an ever-increasing degree by atmospheric agents.

Apart from the customary precautions and the methods successfully applied in the preservation of monumental statuary in current practice, it was impossible, in view of the complexity of cases and with the knowledge at present available, to formulate any general rules.

The Conference recommends:

1. That, in each country, the architects and curators of monuments should collaborate with specialists in the physical, chemical, and natural sciences with a view to determining the methods to be adopted in specific cases;
2. That the International Museums Office should keep itself informed of the work being done in each country in this field and that mention should be made thereof in the publications of the Office.

With regard to the preservation of monumental sculpture, the Conference is of opinion that the removal of works of art from the surroundings for which they were designed is, *in principle*, to be discouraged. It recommends, by way of precaution, the preservation of original models whenever these still exist or if this proves impossible, the taking of casts.

VI. -- THE TECHNIQUE of CONSERVATION.

The Conference is gratified to note that the principles and technical considerations set forth in the different detailed communications are inspired by the same idea, namely:

In the case of ruins, scrupulous conservation is necessary, and steps should be taken to reinstate any original fragments that may be recovered (anastylosis), whenever this is possible; the new materials used for this purpose should in all cases be recognisable. When the preservation of ruins brought to light in the course of excavations is found to be impossible, the Conference recommends that they be buried, accurate records being of course taken before filling-in operations are undertaken.

It should be unnecessary to mention that the technical work undertaken in connection with the excavation and preservation of ancient monuments calls for close collaboration between the archaeologist and the architect.

With regard to other monuments, the experts unanimously agreed that, before any consolidation or partial restoration is undertaken, a thorough analysis should be made of the defects and the nature of the decay of these monuments. They recognised that each case needed to be treated individually.

VII. -- THE CONSERVATION OF MONUMENTS AND INTERNATIONAL COLLABORATION.

a) Technical and moral co-operation.

The Conference, convinced that the question of the conservation of the artistic and archaeological property of mankind is one that interests the community of the States, which are wardens of civilisation,

Hopes that the States, acting in the spirit of the Covenant of the League of Nations, will collaborate with each other on an ever-increasing scale and in a more concrete manner with a view to furthering the preservation of artistic and historic monuments;

Considers it highly desirable that qualified institutions and associations should, without in any manner whatsoever prejudicing international public law, be given an opportunity of manifesting their interest in the protection of works of art in which civilisation has been expressed to the highest degree and which would seem to be threatened with destruction;

Expresses the wish that requests to attain this end, submitted to the Intellectual Cooperation Organisation of the League of Nations, be recommended to the earnest attention of the States.

It will be for the International Committee on Intellectual Co-operation, after an enquiry conducted by the International Museums Office and after having collected all relevant information, more particularly from the National Committee on Intellectual Cooperation concerned, to express an opinion on the expediency of the steps to be taken and on the procedure to be followed in each individual case.

The members of the Conference, after having visited in the course of their deliberations and during the study cruise which they were able to make on this occasion, a number of excavation sites and ancient Greek monuments, unanimously paid a tribute to the Greek Government, which, for many years past, has been itself responsible for extensive works and, at the same time, has accepted the collaboration of archaeologists and experts from every country.

The members of the Conference there saw an example of activity which can but contribute to the realisation of the aims of intellectual co-operation, the need for which manifested itself during their work.

b) The role of education in the respect of monuments.

The Conference, firmly convinced that the best guarantee in the matter of the preservation of monuments and works of art derives from the respect and attachment of the peoples themselves;

Considering that these feelings can very largely be promoted by appropriate action on the part of public authorities;

Recommends that educators should urge children and young people to abstain from disfiguring monuments of every description and that they should teach them to take a greater and more general interest in the protection of these concrete testimonies of all ages of civilisation.

c) Value of international documentation.

The Conference expresses the wish that:

1. Each country, or the institutions created or recognised competent for this purpose, publish an inventory of ancient monuments, with photographs and explanatory notes;
2. Each country constitute official records which shall contain all documents relating to its historic monuments;
3. Each country deposit copies of its publications on artistic and historic monuments with the International Museums Office;
4. The Office devote a portion of its publications to articles on the general processes and methods employed in the preservation of historic monuments;
5. The Office study the best means of utilising the information so centralised.

Return to **ICOMOS**

HTML: 2 August 1994; modified 12 January 1996