2002

Evaluation of Conservation Plans of City Walls for the Potential Development of Conservation Guidelines for the City Wall of Cairo Through Comparative Studies

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EVALUATION OF CONSERVATION PLANS OF CITY WALLS FOR THE

POTENTIAL DEVELOPMENT OF CONSERVATION GUIDELINES

FOR THE CITY WALL OF CAIRO THROUGH COMPARATIVE STUDIES

Pushkar Sohoni

A THESIS

in

Historic Preservation
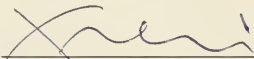
Presented to the Faculties of the University of Pennsylvania in
Partial Fulfillment of the Requirements for the Degree of

MASTER OF SCIENCE

[2002]

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FINE ARTS/NA/Co/2002/S082

PRESERVING CAIRO'S CITY WALLS:
A COMPARATIVE STUDY OF CONSERVATION PROGRAMS
FOR CITY WALLS

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The objective of the thesis is to develop a preservation plan and guidelines for the walls of the old city of Cairo. A broader understanding of urban enceintes or city walls and the problems associated with their preservation is also sought in the course of this particular focus.

The walls around old Cairo have been the defining factors for many aspects of the city including its physical limits, defenses, and social and economic stratification over a period of more than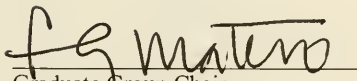 one thousand years. The walls are part of a living and ever-evolving tradition and are a significant dimension of the definition of the old and new city.

Cairo's existing wall is made up of discrete sections that reference a single identity. The fragmentation of its sections has not in any way undermined the relevance of the walls in imparting a sense of identity to the old city. This is not a single monument to be conserved in the conventional sense, but instead depends on a reestablishment of the fortification system through its surviving fragments and accretions. Local customs and traditions that define this social and physical relationship should be studied and modified without causing any material or spiritual damage to any of the factors involved.

The re-use, neglect, repairs and now current restoration efforts of these walls, of which only segments survive today, are part of a long tradition of urban change. Although the function of these walls has changed over time, the sense of identity that they impart to the old city is significant and means different things to different people.

A case study approach has been developed in which several historic walled cities with existing conservation plans have been evaluated. The criteria for selection of case studies are based on several factors: social, economical, historical, material, political, geographical, and so on. This provides the basis for comparison; for the development of an approach. Conservation approaches and implementation have been evaluated against contemporary conservation theory and practice.

The relevant portions of preservation schemes from other sites have been modified as necessary to draft the general guidelines for the city walls of Cairo. However, it must be

appreciated at every stage that the preservation of these walls is a unique proposition, and no case study adequately addresses the definite problems and situations that these particular walls present. Case studies for the preservation of city walls can never correspond to the specifics of this situation but certainly philosophies, approaches and methodologies can be understood and used to identify and potentially resolve the inherent problems here.

> *Man's desire and need for protection are as old as his aggressive impulses, and few of his occupations have absorbed as much of his attention, time, effort, and capital as the design and construction of defenses against the transgressions of his human enemies. Since neolithic times he has endeavoured to render his settlements safe from aggression by surrounding them with massive defensive structures that have become enduring records of his material progress on the one hand, and impressive monuments to his bellicose inclinations on the other. And if the combination of the explosive shell and the rifled gun-barrel in the nineteenth century finally rendered fixed circumvallations obsolete, the persistence of earmarking large percentages of national budgets for defense suggests that man's age-old fears have remained the same and that his technological progress has not been matched in the field of human relations.*[1]

-Horst de la Croix

The earliest settlements that archaeological research commonly recognizes as cities are also the earliest cities known to have been walled. At Jericho, Catal Hüyük in Anatolia, Uruk in Sumer, and at Harrappa in the Indus Valley, city walls of many different materials, dimensions and character were discovered. In some civilizations, the terms 'wall' and 'city' were synonymous with each other; classical Chinese uses the character 'Cheng' [城] for city and wall. As the town secretary of Eisenach put it in 1399, "What has a wall around it, that we call a city."[2] The earliest town walls that have left an archaeological trace were fitted out with special features that would be copied or reinvented again and again in later civilizations.[3] According to Daniel Smail, "In the Middle Ages, it was the wall that made the city."[4] Urban walls had a symbolic significance as emblems of urban identity as well as a pragmatic defensive purpose. The walled space imposed constraints upon the urban population to which they reacted with ingenuity, exploiting the fortifications for their own economic needs. Urban authorities,

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[1] Horst de la Croix, *Military Considerations in City Planning.* (George Braziller, New York 1972), p.8.
[2] James D. Tracy (ed), *City Walls: The Urban Enceinte in Global Perspective* (Cambridge University Press, 2000), pp.1-2
[3] Ibid., p.3
[4] Daniel Lord Smail, "Mapping Networks and Knowledge in Medieval Marseille, 1337-1362: Variations on a Theme of Mobility" (Ph.D. dissertation, University of Michigan, 1994), p.4.

for their part, had to balance the need to administer the walls for the purpose of revenue with the maintenance of the defensive capabilities of the town.[5]

The city wall has always been a system. Systems are only as effective as their weakest point and multiple systems can only be as effective as the lowest functioning module. When the system grows obsolete for its primary function, which is defense in this case, the secondary functions of the systems are the motivation for retaining the system. However, these secondary functions can, at times, thrive on the fragments of the system. The discontinuity of the system directly affects only the primary function.

The primary role of the enceintes was to protect the cities they enclosed, to function as a defensive system. But they functioned as multiple systems, some positive to urban life and others not. Some of these functions were unintended but unavoidable as a result of the physical reality of the enclosure. When the primary function was lost as a result of improvements in artillery and changed political forms of governance, secondary functions of city walls continued. These secondary functions did not rely on the continuity of the wall as a pre-requisite.

As in all systems, the physical form of the system was dictated by a multitude of factors that relate to its functions. Construction techniques, military technology, social structures and hierarchies, political systems, all contributed to the formal and morphological development of the city wall.

The choice of the site for a city was the one factor which influenced the functioning of all the constituent systems of city walls.

Military and defense system

The earliest known human settlement that can be called urban, Jericho was inhabited since the ninth millennium B.C. Originally the town was not fortified but by 7500 B.C. the town had peripheral ditches and a massive stone wall enclosing it. The massive scale and construction suggest that it was probably not the first one of its kind.[6] Almost every

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[5] Kathryn Reyerson, "Medieval Walled Space: Urban Development vs. Defense" in *City Walls: The Urban Enceinte in Global Perspective* (Cambridge University Press, 2000), Ch.4, p.88.
[6] Horst de la Croix, *Military Considerations in City Planning.* (George Braziller, New York 1972), p.13.

urban settlement since till the nineteenth century has been enclosed by some form of a defense system. A city wall was the commonest system in use for defense. The Greeks designed the towns of Prienne and Miletus with grid-iron planning but the city walls were irregular to conform to the topography and to include the highest altitude in the adjacent area. The inner planning of the city was dictated by various considerations, but the city walls were always a response to the defense needs of the city.

Urban development system

One of the functions of a city wall was to contain the city. Definite limits were established for civic organization. Very few services or protection were available outside the wall. If the city did grow and spill over outside, these ex-urbs were clustered around the city gates outside the city walls. At times, the city walls would be reconstructed or modified to include and enclose these pockets of growth, as happened in Cairo. Walls defined and framed the urban fabric of the city; whatever was outside the frame may be proto-urban but it was not the city. The city wall also gave the city its identity and very few walled cities might have looked alike. Any city could be identified from the outside. The cities without walls were, by contrast, featureless urban settlements.

Fortifications were commonly added at different stages of the city's growth. Sometimes, the fortifications were constructed initially and the city was built inside later. But the existence of an enceinte was crucial to the growth of the city. The enclosure could not be too small because that would stunt and limit the growth of the city. If the enclosure was too large for future growth, the defense systems became compromised and expensive to operate. The area that the city wall enclosed had to be a delicate balance between the interests of city growth and city defense. The viable solution was to expand the city wall and incorporate the growth of the city within as the city kept growing.

Symbolic system

Leon Battista Alberti his Ten Books on Architecture wrote that any city without walls was 'naked'.[7] Walls were architectural emblems of municipal value and a symbol of its citizenry. However, the concept of circumscribing the city with an architectural enclosure was sublimated by the Spanish in the new world when the first Viceroy of New Spain, Antonio de Mendonza (1535-50), defied a royal edict that required him to build fortifications in Mexico City and other towns. He justified himself by stating the concept of religion and piety being the city's strongest defense.[8] However, the central theme of an enclosure for an urban area, protective and symbolic, was still very much part of his ideology, perhaps by the use of intangible means.

The wall was symbolic of sovereignty and the status of the city. Some of these military embellishments also acquired a symbolic value that could be translated to certain function. In sixteenth century Europe, crenellations could be stripped form a city's wall as a way of proclaiming that it had forfeited its right of fortification.[9]

In many subtle ways, the city enclosed within the walls was a microcosm of the empire. The walls were not only the physical barrier against the invaders, but also the representation of the boundaries of the realm.

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[7] Leon Battista Alberti, *Ten Books on Architecture*, ed. Joseph Rykwert (London, 1995) bk. IV, Ch.iii, p.72.
[8] Richard L.Kagan, "A World without Walls: City and Town in Colonial Spanish America" in *City Walls: The Urban Enceinte in Global Perspective* (Cambridge University Press, 2000), Ch.5, p.129.
[9] Marino Sanuto, *I Diarii*, eds. N.Barozzi, G.Berchet, R.Fulin. F. Stefani, 58 vols. (Venice, 1879-1903), 9 : Ch.72

The military function of city walls were undermined with the changing political realities and military technology in the nineteenth century. The formation of nation-states rendered city walls and urban fortifications redundant; the frontlines and boundaries where wars were fought in trenches and ditches were the ephemeral fortifications that regional powers were using as defense systems. The famous French Maginot line was not unlike the great wall of China, a defense system for a nation-state. Urban enceintes were a product of political realities that grew from the principles of city-states. By the nineteenth century, only cities and settlements near these boundaries were in need of their own defense system, but that too was pushed to obsolescence by improvements in artillery technology. Regions and continents where nation-states were not the political institutions might have retained the defense systems of city walls, but military systems with improved artillery overtook the slower transmission of political systems.

The development of the airplane as a fighting machine in the World War I and the V-2 rocket in World War II confirmed the demise of city walls as defensive systems. If a city wall is no longer defensive, the cost associated with the construction or maintenance can never be justified; some of the roles of the city wall can be taken over by other means, but in the social and intangible roles that a city wall played, a void is left behind. The survival of the wall depends upon other uses, surviving or continuing.

Most city walls around the world exist in a fragmented state in response to social changes and changing technologies, and are being defined as systems that they never were. They are becoming tourist attractions, a mechanism to manipulate tourist flow in many subtle and not so subtle ways. It is this reality that the world has to realize, but this realization shall also respect the other operating mechanisms that city enclosures have intrinsic within their physical reality. The city wall in a contemporary sense can be seen as a recreation system, a means of instituting a civic identity, and a physical facility to be converted for newer urban uses.

The decision to allow newer uses not originally intended for the wall and yet retain the integrity of the wall is a paradoxical dilemma faced by policy makers. The intended function of a system or a building comprises a part of its integrity and the decision to change the function is not preservation. But the only way to justify the existence of the wall systems is to assign them newer functions. This is in effect using the same physical fabric to replace one system by another. The physical fragments of the system are preserved but the system, in terms of its function, is completely replaced. Unless the function of the system is only didactic and interpretive in its nature, any new use could be regarded as the imposition of a new system over the existing fabric. It is not unlike using the same tool for a completely different purpose.

The relation between architectural fragments and the original system they comprised is best expressed by Aldo Rossi,

> "The question of fragment in architecture is very important since it may be that only ruins express a fact completely. This ability to use pieces of mechanisms whose overall sense is partly lost...I am thinking of a unity, or a system, made solely of reassembled fragments."[10]

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[10] Aldo Rossi, *A Scientific Autobiography*, (The MIT Press, 1981) p.8.

Model plan by theorist Adam Fritach (*L'Architecture Militaire*...1635) to illustrate the integration of a citadel with the town. Although the urban plan of the citadel is radio-centric, that of the town is more similar to a checkerboard.

ELEMENTS OF FORTIFICATION

A Bastion
B Gorge
C Right face
D Curtain wall
E Left flank
F Front of fortification
G Exterior side
H Perpendicular
I Line of defence
J Exterior side
K Angle of the polygon
L Flanked angle or capital
M Angle of the flank
N Angle of the shoulder
O Bisector of the flanked angle
P Magistral line

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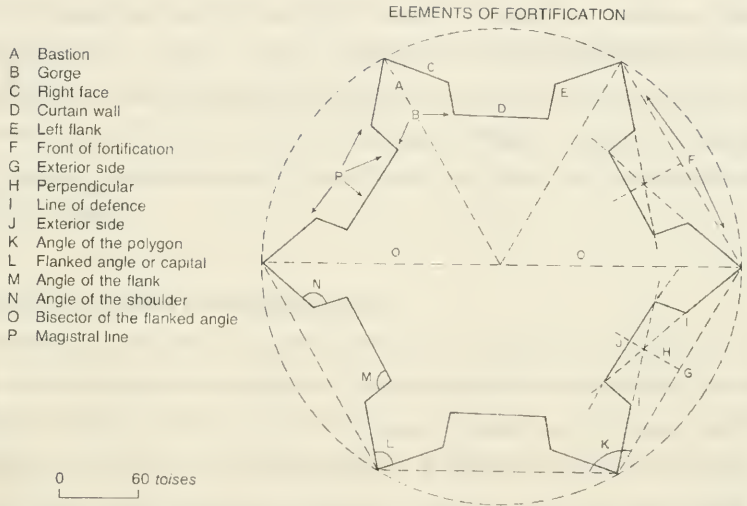
(source:. *Quebec, The Fortified City: From the 17ᵗʰ to the 19ᵗʰ century.* (Parks Canada, Ottawa) Andre Charbonneau and Yvon Desloges and Marc Lafrance 1982. p.97.)

Elements of Fortification

Selection of Case Studies

A case study approach was developed in which historic walled cities with conservation plans were evaluated. The selection of case studies was based on social, economical, historical, material, political, and geographical criteria. Walled cities from around the world such as Lahore in Pakistan, Jerusalem in Israel, Carcassonne in France, Quebec in Canada, San Juan in Puerto Rico, Chester in England and Istanbul in Turkey were inducted into a matrix. Various parameters in the implementation of their conservation plans were compared and evaluated. Based on this table, case studies for comparative study were selected. The most important attributes of a case study were that it should have a conservation plan in action for the city walls, the documentation for which was available.

Analysis of Implemented Conservation Plans

Conservation approaches and implementation were compared and understood on the basis of an evaluation against contemporary conservation theory and practice. Each case studied had a brief description written for the general national policy that governed the conservation plan as also case specific legislation or guidelines that may be effected. A tabulated format for the comparative evaluation of national policy was based along the lines of the Convention for the Protection of the Architectural Heritage of Europe drafted in 1985. The definition of the architectural or cultural heritage, the identification of properties to be protected, the statutes and laws for heritage protection and the general preservation philosophy pursued were studied for each national policy framework. The actual case specific study entailed an understanding of the political mechanism, the ownership, maintainence and management, the governing ideology and the impact that the implementation of a conservation plan has had on the city walls and their immediate environs. Observations and conclusions were made for every case study and these were

utilized for a better understanding of the commonalities of city walls, the plans to conserve them and the effectiveness of such implemented plans.

Drafting of Conservation Guidelines

The relevant portions of preservation schemes from other sites were modified as necessary to draft general guidelines for the city walls of Cairo. However, it must be appreciated at every stage that the preservation of these or any walls is a unique proposition, and no case study shall adequately address the definite problems and situations that these particular walls present.

Local tradition, history and skills are not to be ignored and consideration of social customs and their association with the city walls is important. Using the conservation plans from case studies as models may not be entirely suitable but they help frame a structure upon which guidelines could be worked out. These guidelines endeavor to apply international standards within the context of cultural, social and economic realities.

The selection of case studies was based upon many criteria. The most fundamental was that the city walls chosen should have an implemented conservation plan, in order to allow comparative analysis of the success enjoyed by the same. City walls are a global phenomenon found in almost all urban civilization unto the late eighteenth century, when the changing social and military environments rendered them functionally obsolete. The matrix devised for the prima facie evaluation of the walled cities, as contenders for the case studies, was based on geographical, technological, socio-economic, cultural, political and historical factors. But the existence of a conservation plan that had been implemented, as also the availability and accessibility of relevant documents pertaining to the same, were the critical factors that outweighed all other considerations.

Istanbul (Turkey), Carcassonne (France), Chester (England), and Quebec (Canada) were the cities selected. Istanbul, in view of its strong cultural and geographic affinities was a natural choice. Carcassonne has almost all the tricks of defense and city fortification known in medieval Europe, in the construction of its city walls; it provides a good example for comparison with medieval examples from the Islamic world. Carcassonne's outer town walls were built approximately 65 years after Cairo's Ayubbid walls. The conservation of Carcassonne's walls was carried out in the nineteenth century by a famous restoration architect, Viollet-le-Duc. His restoration is a typical example of nineteenth century conservation philosophy (unity of style, extensive reconstructions, etc) and can therefore be compared with other, more recent conservation practices. Quebec is unusual in the sense that it was designed to withstand the impact of firearms. It is the only surviving example of a walled city in North America. Chester had a strong rehabilitation and conservation plan for the walled precinct, which was implemented successfully.

Chester, Istanbul and Quebec are located in a live urban context even today; though the problems of Cairo, as any other city, can never be replicated in these cities, the commonality of a living urban context may be a starting point to understand the relationship between the city residents and the city walls.

Continent / Region			Implemented Plans							
			America		Middle East		Europe		Asia	AFRICA
Classification of Factors for Study	Factors for Comparison	City	Quebec, Canada	San Juan, Puerto Rico	Istanbul, Turkey	Jerusalem, Israel	Carcassonne, France	Chester, England	Lahore, Pakistan	CAIRO
Geographical	Climate									
	Geographic Region									
Vectoral	Period of Construction									
	Scale									
Scientific	Construction Technology									
	Materials									
Social and Historical	Socio-economic Structure									
	Culture and Religion									
	Government and Policies									
	Historic Significance									
Conservation	Plan									
	Documentation									
	Implementation									

Selection of Case Studies

Starting with the birth of Islam in 622, the Arabs learned a new way of looking at history. This was developed particularly under the rubric of the Hadith that formed a record of the deeds and words of the Prophet. From the Hadith, a record of the Quranic time, there was a gradual transition to the history of the ordinary community, starting with the work of Tabari (839-923 A.D.), who wrote an immense history of the world.[11]

Mehdi Hodjat has written about the general approach of the Quran to the past and the heritage:

> The Quran recalls the remains of the ancients as signs, intimating that if enough attention is paid to them, they will become the means for the guidance of mankind. …From the Quran's point of view, the past, indeed, is not dead. It is a living factor that plays a significant role in the well-being of the individual and the betterment of social relations for any society helping to form their future.[12]

Art and Architecture

The walls around medieval Islamic cities, like most other buildings and objects in the Islamic land, are richly decorated, often with inscriptions. These long bands, carved or inlaid with precious stone, are found on mosques, gates, towers and on city walls. The inscriptions are a reflection of many matters of that era, from spiritual to the material. Although these inscriptions are not a complete reflection, they definitely reveal aspects of religious, urban, political, social and economic history. The gates of the walls in Cairo are magnificent, and their inscriptions skillfully carved. The art of writing in Islam has always been a matter of pride and prestige. It has always been considered the noblest form of art because of its association with the Quran. This preoccupation with beautiful writing extends to all arts including secular manuscripts, inscriptions applied to metalwork, pottery, stone, glass, wood, and textiles and architecture.

The texts carved on the walls of Cairo are near the Bab-al-Nasr, Bab-al-Fatah, Bab-Zuwayla. The entire text, which must have been drawn up in the Fatimid era, was

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[11] Jukka Jokilehto, *A History of Architectural Conservation* (Butterworth-Heinemann 1999), p.11.

carefully composed, learned and witty. The Cairene inscriptions also allude to contemporary events. They are composed carefully and laid out meticulously, with a few words added or omitted so that the text fits the exact space available. In the words of Sheila Blair, "Tutush's inscription on the northern curtain wall of Diyarbekir is a pale imitation of the erudite and expensive text repeated on all the sides of Fatimid Cairo."[13]

Architecturally, the walls of Cairo are significant because they are representative of the various regimes and dynasties that ruled Cairo and the architectural styles associated with them. Knowledge of construction technology and materials through many centuries can be observed through them. Since architecture itself is reflective of social, political and other cultural contexts, it can be deemed amongst the more truthful of material manifestations of civilization, accurately recording society and culture. Architecture is valuable when it is a representative of an era, a culture. It helps to form a sensibility for the ethos of a given time and region. It is around these tangible expressions that the more imperceptible aspects of a culture are conjectured.

Stylistically, the city walls of Cairo show Fatimid, Ayyubid, and a host of other influences considering all the modifications and accretions to the original to be considered valid as an architectural record. Even the parts rebuilt by the French represent a specific response by an outside agent to the existing works.

The architectural style of the wall is not purely Islamic throughout. There are non-Islamic conformations as well, but their origin is debatable. A statement from the Armenian, Charnical Abu Salah, indicates that a Copt participated in the design at the behest of Badr-al-Gamali. Maqrizi suggests that Badr employed three Armenian brothers who came from Syria.[14]

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[12] Mehdi Hodjat, *Cultural Heritage in Iran: policies for an Islamic country*, D.Phil. diss., University of New York, published by the Municipality of Tehran.
[13] Sheila S. Blair, "Decoration of City Walls in the Medieval Islamic World: The Epigraphic Message" in *City Walls: The Urban Enceinte in Global Perspective* (Cambridge University Press, 2000), Ch.16, p.509.
[14] Ahmed Monir Abd-al Qader, *Al-Kahera al-Fatimia*, (The Catholic University of America Press, Washington D.C., 1965), p.58.

A Historical Record of Islamic Settlements

In the Islamic (Arabic) cities, there was a clear hierarchy of settlement pattern,[15] Muqaddasi, a tenth century scholar mentioned the hierarchy as:

1. Amsar (sing-Misr) -metropolis.
2. Qasabat (Qasabah) -fortified provincial capital.
3. Mudun (madinah) -main town, district town, market town.

The name used by most native Egyptians for Cairo and Egypt is Misr. The synonymity of the city with the state is an indication of the centrality of Islamic Cairo in Egyptian society. The city walls were an integral part in the planning and identity of the city. The distinctive arrangement of the two palaces facing each other across the city's main north-south street can be dated to the Fatimid reign. The positioning of the city gates was one of the determinants for the street pattern. The city plan and the city wall were designed together, one of the reasons that the shape, size and extent of the walls changed with the expanding city.

The Qasabah is essentially a citadel that is attached to the wall surrounding town; however it remains independent to continue the resistance even after the fall of the city, or to serve as refuge for the governor. Its position is determined by military and strategic planning. The Qasabah 'usually had one gate with a single door which opened onto the town that it defended or held itself aloof from. In addition, it had an emergency escape postern called the Gate of Treason (Bab-al-Ghadr). The Ayyubid walls of Cairo reflect this aspect of planning and the relationship between the city and the citadel.

Virtually all the cities in Africa had been walled by the tenth century and the Fatimid foundations were built very much on a local idiom. The first Fatimid capital of Mahdia was a Mediterranean fort built against Byzantine naval threats. The second, Mansuriya, however, was built in the style of Baghdad, as a royal and administrative complex on the

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[15] Prof. Santosh K.Ghosh, in 'Redesigning the Islamic City',
Preservation of Islamic Architectural Heritage-proceedings of the conference on the preservation of architectural heritage of Islamic cities,

outskirts of an economic center. Cairo was begun as a temporary walled garrison for the Fatimid troops on the outskirts of Fustat. Changed political circumstances meant that the original structure was to be the residence of the commander-in-chief and the spiritual leader of the Fatimids. The history of Cairo itself presents different concepts of walling, as the function of the wall changed along with the nature of what it enclosed.[16]

"Islam has always been an urban faith; its civilization has always flourished most successfully in the labyrinths of the ancient bazaar towns. Certainly there can be no doubt that Islam looks its most impressive in a great urban cathedral mosque."[17]

Cairo is a refined example of an Islamic metropolis through its various stages of evolution. It is a living record of this identity and the city walls reference the kernel of this great city.

The Suqs (covered/semi-covered public spaces), the Babs (gates), the Surs (fortifications and ramparts), the Palaces, the Khandaqs (moats and ditches), the Burj (strategically located fortified towers) and other elements of the old city of Cairo, that survive as monuments and vestiges of history, are all woven into the fabric of Islamic Cairo; the common thread being the city walls. Even the cemeteries justify their location once the limits and extent of the city walls is clarified.

Military History and Technology

"These fortifications, moreover, are of supreme importance as one of the few examples of military architecture of Islam prior to the wars of the Crusades."[18]The city walls of Cairo, with their gates, their fortified towers and the overall layout, combined with the construction techniques employed are a lesson in military history and

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(Arab Urban Development Institute, King Saud University Press, 1988), p.21.
[16] Jonathan M. Bloom, "Walled Cities in Islamic North Africa and Egypt with particular reference to the Fatimids" in *City Walls: The Urban Enceinte in Global Perspective* (Cambridge University Press, 2000), Ch.4, p.88.
[17] William Dalrymple, *City of Djinns: A Year in Delhi*, (Harper-Collins, London 1993) p.251.
[18] K.A.C. Creswell, *The Muslim Architecture of Egypt*, (Clarendon Press, Oxford 1952-59) v.1 p.165.

fortification techniques. The three Fatimid gates of Cairo are considered to be the finest gateways of the eleventh century.[19]

Irreplacability

Not all artifacts are so easy to replace or exchange; the cause of survival of an artifact is rooted in one or more of the three domains: inability, validity, emotion. When an artifact possesses economic, structural, or functional validity, it survives. In such cases, all that the artifact would need is maintenance and repair, having no other serious matter for discussion or decision among academicians for its survival. Agglomerations, which do not possess any particular validity, but do possess significant cultural value, would need serious intervention for their existence.[20]

After a long course of gradual transformation, the Muslim world, and particularly the Arab world, is once again undergoing a drastic change; physically as well as socially.[21]

Designers of the built environment cannot escape the social forces governing, and cannot overrun the social constraints of their communities. Consequently, "'a city, its institutions, its structure and its architecture are impressively honest in laying bare the value structure of its builders and its inhabitants."[22]

The Wall as a Living Artifact

The city walls are part of the living city of Cairo and this characteristic extends the domain of this study to economic and social concerns. The wall is a part of peoples' everyday lives and any attempt to isolate them through conversion to monuments shall deny this social connecion. Picturesque restoration is not be the goal, but certain aspects

[19] Besim Selim Hakim, *Arabic Islamic Cities: Building and Planning Principles*, (Sydney and Henley, London and New York) p.60.

[20] M.Numan Cebeci, in 'The Built Muslim Environment: Its Evolution, Change and Adaptation', in *Preservation of Islamic Architectural Heritage-proceedings of the conference on the preservation of architectural heritage of Islamic cities,* (Arab Urban Development Institute, King Saud University Press, 1988), pp.93-94.

[21] M.Numan Cebeci, in 'The Built Muslim Environment: Its Evolution, Change and Adaptation', *Ibid.*p.91

[22] S.Gulzar Haider in 'Habitat and Values', *The Touch of Midas*, ed. Z.Sardar, (University of Manchester Press 1984)

of the city walls shall be protected against inappropriate change, which jeopardizes their continuity and validity.

> "An overly deliberate restoration, creating a sort of museum, fosters the tendency to view the past as a plaything...In this age of mass tourism, the living museum approach, however well-intended, is probably best avoided. A genuine economic integration into the living city provides a better opportunity to preserve the historic legacy, but such efforts require a bit of intuitive brilliance and luck."[23]
>
> "Majority of the recent architecture of the Muslim world may be summed up as an instant Islamic that promises a storybook cultural identity through an eclectic pastiche of historic motifs. Only a self deceptive social reality will develop among make-believe stage settings."[24]

Going away from the dream of restoring our environments with their past identity and character is required in a world of highly effective communication and transport, where media culture is unified and universalized.

Social Research Potential

The city wall is an intrinsic part of Cairo and definitive of the city in many ways. The physical division of the city as within and outside is just one manifestation of the wall acting as an entity. But it may well be indicative of a social, economic, cultural or ritual stratification of the people living in the city. Apart from the physical lines and boundaries that it demarcates, many other divisions of the city and the people therein could potentially be understood through a study. This tremendous research potential that the city wall indirectly supports is by itself a good reason towards preserving the wall in tangible as well as social terms.

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[23] Carl L. Brown (ed.), Foreword to: *From Madina to Metropolis* (Darwin Press, Princeton NJ 1973) p.30 (footnote)
[24] S.Gulzar Haider. *Op. cit.*

Historic Value and Fabric

The vestigial city fortifications have seen the evolution of Cairo since before it was founded. The sense of continuity of habitation in the city of Cairo is made possible with the presence of built structures that have witnessed the long history of the city. The overlays of each era are reflected in the erstwhile fortifications of the city.

The outstanding features of Badr-al-Gamali's fortifications are the quality of the stone treatment, unparalleled in Cairo, and the variety of vaults used in the walls and gates: shallow domes, barrel vaults, cross vaults, and also a spiral vault in a staircase at Bab al-Nasr.[25] Only round arches are used in the architecture of the whole wall complex built in the Fatimid period. The fabric of the city walls contains materials used throughout the long history. It is not only a wealth of historical material, but a record of subsequent additions, repairs and expansions to the earlier city wall. The changing functions and character of the city wall, which are continuous in their change to this day, are accurately recorded and preserved in the vestiges of the city wall. The historical record of the city and of the wall around it, are contained within the material fabric of the wall.

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[25] Doris Behrens-Abouseif, *Islamic Architectere in Cairo: An Introduction*. (The American University in Cairo Press, Cairo 1989)

Founding the City of Cairo

Throughout their conquests, Arabs established new capitals and cities in the conquered lands. Cairo was the fourth city to be established at the head of the Nile Delta, and the first amongst them to be walled, and its city walls and gates remain one of its most distinct architectural features. Several sections of these walls and gates, dating to the reconstruction of the city's defenses in the second half of the eleventh century, are deemed masterpieces of Islamic military architecture.

The land of Cairo is the site of a long-gone town called On (the biblical version of a name ancient Egyptians pronounced 'Yunu'). The remnants of a 4000-yr old obelisk are all that remain. A rival city whose ruins lie across the Nile was Memphis, twenty miles of modern Cairo.[26] Memphis was founded by Menes, the legendary founder king of the First Dynasty. Rather than picking on On, he chose a site twenty miles southwest on the left bank, so that it was not vulnerable to attack from the east. Six dynasties after Menes, the ancient Egyptian capital acquired its name Men-nefer (which means lasting and beautiful) that the Greeks later corrupted to Memphis.[27]

As Memphis declined, another city grew, first as a Roman and then as a Byzantine garrison town. When Muslim warriors surged out of Arabia in A.D.640, it was the fall of this fortress that clinched their victory of Egypt after a seven-month siege. The Caliph's Governors made this place, which they called Misr-e-Fustat, the seat of their rule.[28]

The history of Cairo can be studied only after the history of the three Islamic capitals that preceded the establishment of Cairo. It is necessary, not only chronologically and historically, but also because the topography of the new city contained these three capitals.

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[26] Max Rodenbeck, *Cairo: The City Victorious* (Alfred A Knopf, New York 1999), p. 5.
[27] Ibid., p. 10.
[28] Ibid., p.13.

After the Arab conquest of Egypt, a new capital was built by Amr Ibn el-As in the year 21 A.H. (641 A.D.) north of the Babylon fortress. Amr called this city al-Fustat.[29] The site of al-Fustat was well chosen, geographically and militarily. It was located at the head of the Nile delta, where it was protected from enemy attacks. To the east was the Muqattam plateau, which was also a shield against enemies. Its proximity to Arab lands ensured supplies of foods and essentials.

When the Abbasids took over the caliphate, they established a new capital in Egypt. The new city was established in the northeast of al-Fustat in a region called Al-Hamra al-Kuswa; extending upto the Yashkur Hills. Ali-ibn-Salih then established the governor's headquarters (dar-al-Emarah) and soldier's barracks. Al-Fadl ibn-Salih then built the mosque of al-Alkar in the center of the town. Eventually, al-Askar and al-Fustat became linked to form one large city. Princes of Egypt continued to live in dar-al-Emarah till the establishment of Fatimid Cairo (al-Qahira). [30]

When al-Fustat became overpopulated, Ahmad ibn Tulun founded the new town of al-Qatai, which was the first royal city founded in the Nile valley during the Islamic era. It was the center of an independent ruler whose connection with the Abbasid caliph in Baghdad was purely religious. The inspiration for al-Qatai was Samarra in Iraq, where ibn Tulun had lived before coming to Egypt.[31]

In A.D 969, the Fatimids swept in from Tunisia and wrested Egypt from Abbasid control. In contrast to the caliphs of Baghdad, Sunni Muslims whose legitimacy sprang from their descent from the Prophet's uncle Abbas, the upstart dynasty claimed to be descendents of the Prophet's daughter Fatima. The Fatimids founded a royal precinct a few miles north of the existing settlement of Misr-al-Fustat.[32]

The second ruler of the Fatimid dynasty was Abu'l-Qasim. He died on 18th May 946 and was succeeded by his son Ismael-al-Mansur, who in 945 founded Sabra, later called

[29] Dr.Soad Maher in 'Islamic Cairo', *Cairo*, ed. Gregory Vitiello, (Louisiana State University Press, Baton Rouge, 1988), p.58.
[30] Dr.Soad Maher in 'Islamic Cairo', *Cairo*, ed. Gregory Vitiello, (Louisiana State University Press, Baton Rouge, 1988), p.62.
[31] Ibid, p.62.
[32] Max Rodenbeck, *Cairo: The City Victorious* (Alfred A Knopf, New York 1999), p. 53.

Mansuriya.[33] This was the fourth Royal suburb in Qairawan. It had five gates: the Bab-al-Qibli, the Bab-al-Ketama, the Bab-ash-Sharqi, Bab-Zuwayla and Bab-al-Fatah. The last two names were also adopted for the gates in Cairo later on.

The city was first named al-Mansuriya, after the palace city Mansuriya outside Qairawan, which was founded by al-Mansur billah, father of al-Muizz. Al-Muizz changed the name of the settlement to al-Qahira upon his arrival there four years later on the 11th of June, 973 (7 Ramadan, 362 A.H.).[34] However, some details in this version of events about the naming of Cairo are doubted by scholars.[35]

The Fatimids, with the founding of Cairo had established three successive capitals within a brief half century: Mahdia, Mansuriya and al-Qahira.

Brief History of Cairo and Egypt

Cairo has been the pivotal center of Egypt in almost every sense for more than the past one thousand years. It is not surprising that the word *Misr*, used in Arabic to denote a metropolis, is a word that native Egyptians use as a name for Cairo as also for Egypt. Given this inherent association and identification of the city of Cairo with the nation of Egypt, a brief history of the various regimes and dynasties in Egypt during and after the founding of the city of Cairo should be read as an integral part of the history of the city itself.

The Early Islamic Period (640-969)

Under the first Khalif of Islam Abu Bakr As-Siddiq, the Prophet Muhammad's closest companion, the Muslim armies vanquished the Byzantines in AD636. They advanced toward Egypt under the command of Amr Ibn Al-As, one of the companions of the Prophet.

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[33] Ibn Hammal p.23, trans.pp.40-41; K.A.C. Creswell, *The Muslim Architecture of Egypt*, (Clarendon Press, Oxford 1952-59) v.1 p.19.

[34] Taqi-al-Din al-Maqrizi, *Al-Mawa'iz wa'l-I'tibar bi-dhikr al-khitat wa'l athar*, 2 vols (Cairo, 1853) quoted by K.A.C. Creswell, *The Muslim Architecture of Egypt*, (Clarendon Press, Oxford, 1952-59) v.1 p.22.

[35] Ibid., p.23.

The Muslims laid siege to Babylon-in-Egypt, which surrendered. They then took Heliopolis and in A.D.642 the Byzantine imperial capital of Alexandria. Amr Ibn Al-As established Fustat north of Babylon-in-Egypt as his military headquarters and seat of government and the Egyptians swiftly embraced the new religion of Islam.

Egypt became part of an expanding empire that was soon to stretch from Spain to Central Asia. The Umayyad Dynasty ruled Egypt from Damascus until the Abbasids took control of the Khalifate and shifted the political capital of Islam to Baghdad.

Ahmad Ibn Tulun who had been sent by the Abbasid Khalif Al-Mu'taz to govern Egypt in AD868, declared Egypt an independent state and successfully defended his new domain against the Abbasid armies sent to unseat him. His dynasty ruled Egypt for 37 years. Ibn Tulun built Al-Qatai, a new capital centred around a vast central mosque, the courtyard of which could accommodate his entire army and their horses. But Tulunid rule was quickly ended by the Abbasids, who retained direct control over Egypt. The Ikhshidid Dynasty ruled from AD935-969 when Egypt was invaded by Shi'a Fatimid armies from Tunisia.

The Fatimid Period (969-1171)

The Fatimid Dynasty traced their lineage from the Prophet's daughter Fatima Zahra and her husband Ali Ibn Abu Talib. The Fatimids established their imperial capital within the walls of a newly built imperial city called Al-Qahira, meaning "The Triumphant". Within the walls of the city were lavish palaces and the Mosque of Al Azhar and its University, which is now the world's oldest existing institution of learning.

Egypt flourished under the Fatimids who ruled behind the walls of their imperial city, maintaining the mystery of distance from their subjects. It was not until the reign of Khalif Al-Hakim that the Fatimid decline began. His reign ended mysteriously when Al-Hakim rode his favourite mule up into the Muqattam hills at night. The mule was found but Al-Hakim had apparently vanished.

Fatimid rule continued over Egypt for another 150 years and the country continued to prosper. However their empire gradually declined due to famine, internal troubles and

external pressure from the Seljuk sultans who captured Syria from the Fatimids, and the Christian crusading armies which conquered Fatimid Palestine and the Lebanon. To protect the remainder of their diminishing empire, the Fatimids collaborated with the Franks, an act which outraged the Seljuk Sultan Nurad'din who sent an expedition to overthrow the Fatimids.

The Sultan deputized his general Shirkoh to repel the Fatimid and Frank armies and conquered Upper Egypt, sending his nephew Salah-ad-Din Al-Ayyubi to capture Alexandria, thus opening the way for the Ayyubid Dynasty.

Ayyubid Rule (1171-1250)

Salah al-Din Al-Ayyubi ("Saladin") assumed control of Egypt upon the death of the last Fatimid Khalif in 1171. When the Crusaders attacked Egypt, burning part of Cairo, Salah al-Din fortified the city and built the Citadel. His reign was a golden age for Egypt and Salah al-Din is revered as one of the greatest heroes of Islam, for his humility, personal courage, brilliant military and administrative mind and for defeating the Christian armies and treating the vanquished with dignity. Salah al-Din also introduced Mamlukes (an Arabic word meaning "owned"), Turkic slaves from the Black Sea region who had been raised as mercenary soldiers.

Upon the death of Salah al-Din in 1193, he was succeeded by his brother, al-Adil, following a protracted succession dispute. Al-Adil died in Syria, upon hearing the news of the crusaders' seizure of the chain bridge (*burj al-silsila*) at Damietta in 1218. He was succeeded by his son and Salah al-Din's nephew, al-Kamil, who drove back the Fifth Crusade. His successor, Sultan Ayyub, increased the size of his Mamluke army and married a slave girl called Shagarat Ad-Durr (Tree of Pearls).

When Ayyub died, his wife became the first woman to rule Egypt since Cleopatra. She was the last ruler of the Ayyubids. Prophetic injunctions against women rulers placed Shagarat Ad-Durr in an untenable position and the Abbasids forced her to take a husband. When her new husband, Aybak, planned to take a second wife, Shagarat Ad-Durr had

him murdered. She was assassinated shortly after this and the Mamluke military commander Baybars assumed control, ushering in the Mamluke period.

The Mamluke Period (1250-1517)

Baybars, one of the great Ayyubid commanders, seized power in the aftermath of Shagarat Ad-Durr's murder but his heirs were murdered by Qalawun, another Mamluke who established the Bahri Mamluke dynasty, named after the Mamluke garrison along the Nile River (Bahr Al-Nil).

The Mamluke armies of Sultan Mohammed An-Nasir shocked the seemingly unstoppable Mongol armies by defeating them on the Syrian battlefield. The descendants of Mohammed An-Nasir were weak and the Turkish Bahri Mamluke dynasty gradually lost control of the sultanate which was seized by the Circassian Mamluke Barquq who established the Burgi Mamluke dynasty, named after the Mamluke garrison set beneath the Citadel in Cairo. Although Sultan Mohammed An-Nasir had made a treaty with the Mongols, they remained on the borders of Syria and Sultan Barquq campaigned against the Mongols to drive them out of the Near East altogether.

Heavy taxation was levied to pay for these campaigns, debilitating the economy of Egypt. Conditions were exacerbated by a plague that swept through the country during the reign of Barquq's son Farag. It was not until the reign of Sultan Barsbey that Egypt regained its power. The 46th Mamluki sultan was Qansuh Al Ghuri who continued the Mamluki architectural tradition but saw his economy crash after European traders began using the Cape of Good Hope for their spice trade rather than trading through Cairo. The following year Tuman was executed by the Ottomans, signaling the end of the Mamluke Empire and the beginning of Ottoman rule, but the Mamlukes remained a powerful force within Egypt throughout the Ottoman period and beyond.

Ottoman Rule (1517-1798)

Although the Ottoman Turks were brilliant military strategists and developed a rich Islamic civilization, they were poor colonial administrators. They ruled Egypt from

Istanbul through Pashawat who were trained in Istanbul. Their direct involvement in government rarely extended to more than enforcing tax collection. Otherwise the Ottomans exercised minimal control over their new province and relied on the Mamluke army whose ranks continued to expand with mercenary slaves brought in from the Caucasus. This lack of concern manifested in neglect and deterioration which opened the way for the French invasion of Egypt in 1798.

European conquest (1798-1802)

The armies of Napoleon crushed the Mamlukes at Imbaba and occupied Cairo. Napoleon's aim was to block British trade routes to India and to establish a Francophonic society in Egypt. He imposed a French administrative system and implemented public works projects to clean up and renovate the long-neglected country, clearing blocked canals, cleaning the streets and building bridges. For all his attempts at "civilizing" the country, Napoleon failed to win the respect or allegiance of his subjects. His quixotic mission was doomed from the outset. Within a month of entering Egypt the British, under Admiral Nelson, attacked and destroyed the French fleet moored at Abu Qir Bay in Alexandria and the Ottoman sultan threatened war against the French.

Napoleon returned to France, leaving his armies behind. But his commander, General Kléber, was assassinated, leaving the army to General Menou, who claimed to have converted to Islam and declared Egypt a French protectorate. At this, the British occupied Alexandria and with the Ottomans captured Damietta and Cairo, forcing the French to surrender.

The Dynasty of Mohammed Ali Pasha (1802-1892)

The French occupation destabilized Egypt and their defeat and withdrawal left the country vulnerable to an internal political struggle which was won by Mohammed Ali, an Albanian lieutenant in the Ottoman army who, with Mamluke help, drove the British (temporarily) out of Egypt. The Ottomans elevated him to khedive or viceroy of Egypt.

Mohammed Ali was also an ambitious expansionist whose armies extended his power over Syria, Sudan, Greece and the Arabian Peninsula until by 1839 he controlled a large portion of the Ottoman Empire. When it became clear that his power was exceeding acceptable limits, the British intervened, forcing him to relinquish some control to the Ottoman sultan. Mohammed Ali died in 1848 leaving his grandson Abbas to succeed him.

Abbas opened Egypt to free trade, closing schools and factories and effectively halting the moves towards industrial development and economic self-sufficiency Mohammed Ali had set in motion.

Said Pasha, the son and successor of Abbas, reversed his father's policies and actively set about developing the country's infrastructure and initiated the building of the Suez Canal which was completed in 1869 by his successor the Khedive Ismail. Under his rule, industrial and civil infrastructure was further developed. More factories were built. A telegraph and postal system was established. Canals and bridges were constructed and the cotton industry which had been introduced during the reign of Mohammed Ali, began to flourish as a result of the American Civil war which prevented southern cotton production for the duration of the war.

However, all this expansion had a price. Ismail's modernization put Egypt heavily into debt and the end of the Civil War and resumption of American cotton production caused a major recession in Egypt's cotton industry. As a result of this economic crisis, Khedive Ismail was forced to abdicate in 1879 and the British began to assume greater control over the country.

British Occupation (1882-1952)

Ismail's son Tewfiq Pasha reformed the Egyptian economy and relinquished financial control to the British who began to run the government of the country. Egyptian nationalists, horrified at Tewfiq's submission to the British, forced him to appoint their leader Ahmed Orabi as Minister of War, but the European reaction was swift and violent. Alexandria was shelled and Ismailiyya occupied. Orabi's army was defeated at Tel El

Kabir and the British reinstalled Tewfiq as a puppet. Orabi was driven into exile and Mustafa Kamil became the leader of the nationalist movement.

British influence over Egypt continued to increase. The country became an economic colony, totally dependent upon the import of British manufactured goods and the export of its raw cotton.

Sa'ad Zaghloul was the leader of the nationalist movement during and after the war and in 1918 he formally presented the British High Commissioner with a demand for complete autonomy which was rejected out of hand. Zaghloul's eventual arrest and deportation to Malta resulted in wide-spread anti-British riots, forcing the British to back down. In 1922 the British ended the protectorate and recognized Egypt's independence, while maintaining control over the essential government institutions and the Suez Canal. Fouad was proclaimed King of Egypt in March of the same year. The years that followed were characterized by a triangular power struggle between the British, the King and the nationalist Wafd party which had the support of the population.

Farouk, the son of King Fouad, ascended the Egyptian throne in 1935. Within a year he had signed the Anglo-Egyptian Treaty which gave British forces the right to remain in the Suez Canal Zone while ostensibly ending the British occupation. Egypt became a major strategic asset and base of operations during World War II. Cairo and Alexandria were filled with soldiers, spies, political exiles and government leaders. The decisive battle in the North African campaign was the Battle of El-Alamein in the desert outside Alexandria. General Montgomery's Eighth Army drove back Rommel's Afrika Korps and the allies swept across North Africa to victory.

When parliamentary elections were held in 1952 the Wafd Party won the majority of seats and Nahas Pasha as prime minister repealed the 1936 treaty which gave Britain the right to control the Suez Canal. King Farouk dismissed the prime minister, igniting anti-British riots which were put down by the army. This event compelled a secret group of army officers, which became known as the Free Officers, to stage a coup d'etat and seize control of the government. King Farouk was forced to abdicate and General Naguib -- as

the most senior officer, the nominal leader of the group -- became prime minister and commander of the armed forces.

In reality a nine-man Revolutionary Command Council (RCC) led by Colonel Gamal Abd Al-Nasser ruled Egypt decisively. The monarchy was abolished, all political parties (including the Wafd) were banned and the Constitution was nullified.

In 1953 the Egyptian Arab Republic was declared. Abd Al-Nasser became acting head of state and in 1956 officially assumed the presidency of the republic.[36]

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[36]Most of the history presented here has been taken from the website Arabnet.
http://www.arab.net/egypt_history.html

(source: Petra Fine Art Catalogue v.6 ill.215.)

Bab-al-Zuwayla

First Wall (Fatimid)

In A.D 969, the Fatimids swept in from Tunisia and wrested Egypt from Abbasid control. The Fatimids founded a royal precinct a few miles north of the existing settlement of Misr-al-Fustat. The walled, one-and-a-half-mile-square city was to be an exclusive zone of palaces and parade grounds and private gardens. Heeding the advice of astrologers, they called the place Al-Qahira, after the planet Mars the triumphant.[37]

Gawhar, the commander-in-chief and the Prime Minister of the Fatimids, was a Byzantine Greek. He made an enclosure of about 1200sq m using sun-dried brick (labin)[38]; these fortifications existed about 50 cubits behind the existing wall and were destroyed in A.D.1400 (803 A.H.) between the Darb Batut and the Bab-al-Barqiya.[39]

Gawhar wasted no time in planning out an appropriate governmental community on the scene to please his caliph. It would be a fortified enclosure containing a palace, various administrative and military offices, and quarters for the regiments. He chose the high ground immediately east of Kalig canal, about one mile removed from the Nile, as the exact site. The plan of the city was drawn up in Islamic tradition; the main avenue called Kasabet-al-Qahira (bisector of the city), ran north-south between the two chief entry points, the gates of Al-Fatah and Al-Zuwayla. The mosque, a great structure called Al-Azhar, was one of the first buildings erected. Ali Mubarak Pasha states that "the first city walls enclosed an area of 350 acres." He goes on to say that the division of the city into quarters was based on the intended inhabitants of that area.[40]

The south wall faced Fustat, the east Muqattam, the north open country and the west, a canal which existed at a short distance until 1900 A.D. This canal later came to be

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[37]Max Rodenbeck, *Cairo: The City Victorious* (Alfred A Knopf, New York 1999), p. 53.

[38] Ibn Iyas, *Tarikh-Misr*, I, p.45; K.A.C. Creswell, *The Muslim Architecture of Egypt*, (Clarendon Press, Oxford 1952-59) v.1 p.21..

[39] Maqrizi quoted by Creswell, ibid., v.1 p.22.

[40] Ali Mubarak Pasha, *Al-Khetat al-Taufiqiah al-Gadida*.

known as Shari-al-Khalig-al-Masri. The city walls had eight gates: on the south was the double arched Bab-Zuwayla, on the west was the Bab-al Farg (which was later proved to be on the south) the Bab-al-Sa'ada, the Bab-al-Qantara. The north had Bab-al-Fatah, and the Bab-al-Nasr, while the east had Bab-al-Barqiya, the Bab-al-Qarratim (later called the Bab-al-Mahruq) and the Bab-al-Khoka.[41]

The information we have about this first enclosure is almost entirely topographical, and the only architectural information we have is that the wall was made of mud brick and was wide enough for two horsemen to ride abreast. The construction of mud brick probably explains why the wall was ready to be replaced just seven or eight decades after its construction. Nothing of this wall remains today. The outline of this wall, despite its removal, was skillfully traced by Casanova.[42] He located its boundaries and seven main gates.[43] While its exact height is unknown, it has been estimated at about approximately 25 to 30 feet based on similar walls in other cities of that period.

Second Wall (Fatimid)

In 468 A.H. (1076 A.D.) Damascus fell into the hands of the Sejluk Turks and in the following year, Atsiz appeared before Cairo. He was repulsed but he renewed his attempts in the years A.H. 471, 478 and 482. This, along with the fact that the town had outgrown its original enclosure built by Gawhar, were the reasons that prompted Emir-al-Guyush Badr-al-Gamali to construct new fortifications. The north and south alignments were advanced. His walls followed in general the east and west outlines of its predecessor. The northern wall was moved in order to accommodate the mosque of al-Hakim within the community. This modification required the rebuilding of the gates of Bab-al-Nasr and Bab-al-Fatah on their present sites. Al-Gamali increased Cairo by the area that separates the two Zuwayla gates from the Bab-al-Fatah, which was near the Hara of Baha'-ad-din, from the present Bab-al-Fatah. He reconstructed the walls of burnt

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[41] Maqrizi quoted by K.A.C. Creswell, *The Muslim Architecture of Egypt*, (Clarendon Press, Oxford 1952-59) v.1 p.23.
[42] Ibid.
[43] Ahmed Monir Abd-al Qader, *Al-Kahera al-Fatimia*, (The Catholic University of America Press, Washington D.C., 1965), p.57

brick and built the gates of stone.[44]   Only eighty years after its erection, the second wall was already in poor condition at many points and much of it was intentionally demolished. Of these fortifications, there still exist the three splendid gates, the Bab-al-Nasr, Bab-al-Fatah and the Bab-al-Zuwayla, together with 400 m of the north wall with five towers and 70m of the south wall.[45]

"These fortifications, moreover, are of supreme importance as one of the few examples of military architecture of Islam prior to the wars of the Crusades."[46]

Third Wall (Ayyubid)

Salah-ad-din, as a result of a complicated series of events, became the Wazir of the last Fatimid Khalif in 1169, and then became the Sultan of Egypt upon the latter's death. He built a large part of the existing walls of Cairo. Salah-ad-din opened the gates and allowed the population to build inside and around the royal city. After two hundred years, al-Qahira was no longer a royal enclosure. This was the beginning of a city called Cairo, which was Salah-ad-din's city. He had a completely different concept of a city than the Fatimids did. He wanted a city that was protected by strong walls and defenses, but was a thriving, unified city that had cultural and commercial freedom. Salah-ad-din laid out plans to build a fortress, the Citadel, in 1176 - 1177 on Cairo's most easily defended hill and began expansion of the Fatimid walls to enclose the city. He used stone throughout, even from the small pyramids of Giza. The wall of Fustat that runs from the Citadel to the Nile, the part of the wall known as the Burg-al-Zafar that runs from the Darb-al-Mahruq to the Bab-al-Nasr and the section from the Darb-al-Mahruq to the Bab-al-Wazir are all important surviving sections of the wall that he built.

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[44] Maqrizi quoted by K.A.C. Creswell, *The Muslim Architecture of Egypt*, (Clarendon Press, Oxford 1952-59) v.1 p.161.

[45] K.A.C. Creswell, *Fortification in Islam before A.D. 1250*, (Geoffrey Cumberlege, London 1952), p.113. Series: Annual Lecture on the Aspects of Art, Henriette Hertz Trust of the British Academy.

[46] K.A.C. Creswell, *The Muslim Architecture of Egypt*, (Clarendon Press, Oxford 1952-59) v.1 p.165.

(source: Slide no. 150 C136 1 WANA 1B Cairo from the Slide Collection of the Fisher Fine Arts Library, University of Pennsylvania)

North Wall Angle view from second tower to Bab-al-Fatah

Surviving Sections of the Wall and their Description

Gates

Bab-al-Nasr

This gateway is placed at the north-east corner of the Fatimid Cairo as enlarged slightly by Badr-al-Gamali and consists of two square towers, solid for two-thirds of their height, flanking a very fine arched gateway set back from their front face(4.54m). At the back of the latter is a great square bay(10.77 x 8.17), covered by an intersecting vault and forming a covered roadway between the towers.

Bab-al-Fatah

This gate, like the Bab-al-Nasr, consists of two towers flanking a great archway. The passageway behind this arch instead of being roofed by an intersecting vault is spanned by a great voussieured dome on spherical triangle pendentives.

Bab-al-Zuwayla

Like the Bab-al-Fatah, to which it is closely related consists of a great arched gateway.   (4.84m wide) . Defended by two oblong solid-fronted towers behind the archway is a passageway covered by a sallow dome on spherical triangle pendentives supporting the great platform, which extends right across behind the rear upper face of both the towers. Minarets were later placed on top of towers.

Walls

Having decided which part of the wall are Fatimid, it shall be convenient to divide them into sections:

Surviving Remains of the North Wall: [47]

1. Length running south from Bab-al-Nasr. length 30.60 m

2. curtain wall from Bab-al-Nasr to first tower. 28.91+8.06

3. curtain wall from first to second tower. 49.06+5.00

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[47] K.A.C. Creswell, *The Muslim Architecture of Egypt*, (Clarendon Press, Oxford 1952-59) v.1 p.183.

4. curtain wall from second tower to great salient. 49.13+24.80

5. curtain wall from great salient to the Bab-al-Fatah. 24.95+22.85

6. curtain wall from the Bab-al-Fatah to the staircase tower. 24.73+26.35

7. curtain wall from the staircase tower to the round fronted tower. 52.44+11.63

8 Wall beyond. 89.04 m

Surviving portion of the South Wall:[48]

One more length of Fatimid wall remains to be considered and that is the fragment concealed behind the houses of Darb-al-Ahmar. It is not marked on the 1912 map of Cairo of 1:5,000. It is not marked on the map of Napoleon, where the north wall is shown more complete than it is today.

The following parts of the wall must be the work of Salah-al-din: [49]

1. The east wall from the Bab-al-Wazir to the Bab-al-Mahruq.

2. The continuation of the same wall from the Darb-al-Mahruq running north to a great tower called the Burg-as-Zafar(part of this is buried under debris) after which it turns west and runs to a point about 60m. south of the Bab-al-Nasr.

3. The second half of this wall which runs west from the round fronted tower 103m. west of the Bab-al-Fatah. This wall ends in a pentagonal tower and then turns away southwest. it then ran west again nearly as far as the Shari'-al-Khalig al-Masri until it was cut through by the Shari'al Farug thirty years ago. On the other side of the Khalig, it can be traced running between the Sikket-al-Faggala and the Shari-at-Tabla and the base of one half round tower remains.

4. The west wall destroyed in the making of the road mentioned above.

5. The wall of Fustat.

[48] K.A.C. Creswell, *The Muslim Architecture of Egypt*, (Clarendon Press, Oxford 1952-59) v.1 p.205.
[49] *Ibid*, v.2 p.41.
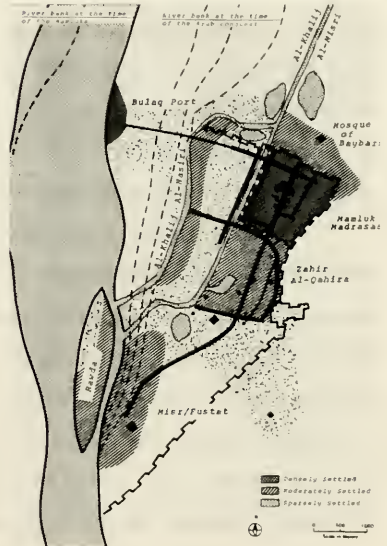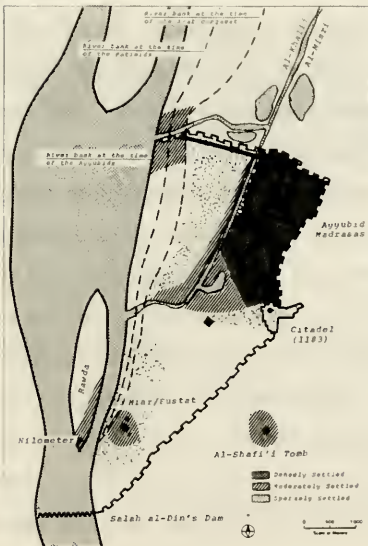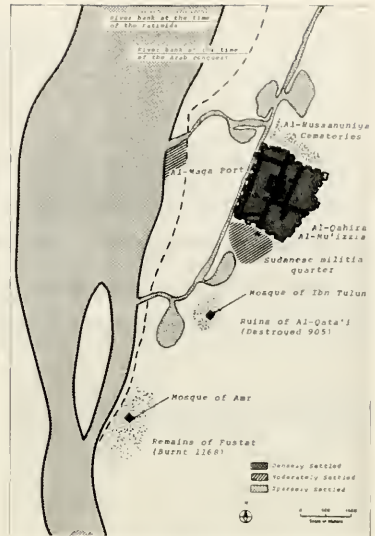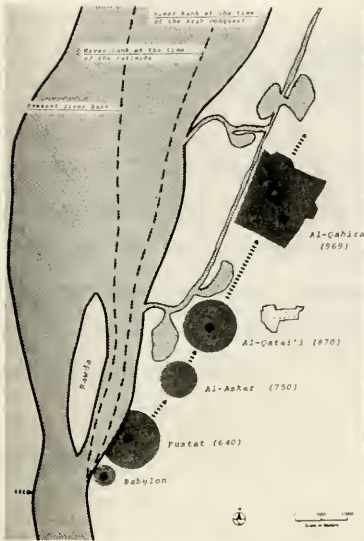
Phases in the evolution of the walled city of Cairo
Establishment of Cairo (AD 969); Fatimid Rule (AD 969-1169);
Ayyubid Rule (AD 1169-1250); Bahiri Mamelukes

"Since the pre-Roman period a fortified settlement has existed on the hill where Carcassonne now stands. In its present form it is an outstanding example of a medieval fortified town, with massive defences encircling the castle, its associated houses, streets and the fine Gothic cathedral. Carcassonne is also of exceptional importance because of the long campaign of restoration carried out by Viollet-le-Duc, one of the founders of the modern science of conservation."

[WHS Status 1997] C (ii) (iv)

Introduction

History

The City of Carcassonne is primarily known as a fortified medieval city, but the settlement had been inhabited for much longer. The Gauls created a town in the sixth century B.C. which in Roman times became an active urban centre. At the end of the second century B.C. the Romans founded the colony of Narbonne extending as far as Toulouse, thus incorporating Carcassonne. This became an independent colony a century later and was called *Julia Carcaso*. Pliny the Elder refers to it a *latina oppida*. [50]

In the fourth century A.D.[51], ramparts were built, remnants of which are still visible along two-thirds of the inner wall. In the fifth century, the occupation alternated between the Roman and Visigoth forces that arrived from Hispania. From 585 to 725 A.D. the Francs had possession of the stronghold, when the Arabs, under Ambasa ibn Suhaym al Kalbi, Wali of Andalusia, took the fortress. In 759 A.D. the Arabs were pushed across the Pyrénées by Pippin the Short. During this course of history, the fortifications were partially destroyed and rebuilt. In the ninth century, Charlemagne appointed himself the

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[50] Pliny the Elder, *Historia Naturalis*, III, 5.
[51] The first reference to a masonry construction is dated to 333 A.D. when the 'hyerosolimitan itinerary' (a description of a pilgrimage from Bordeaux to Jerusalem) mentions the *castellum* of Carcassonne. These are today acknowledged to make up most of the foundations of the walls as also the body of a few towers.

first Count of Carcassonne. It was on the west side of the primitive fortifications that a château was built in the twelfth century by the family of Vicomte Trencavel, before it was enlarged and surrounded by a wall a century later. In the meantime, Carcassonne had been captured by Simon de Montfort during the Crusade against the Cathars and had become part of the royal domain. Works continued throughout the thirteenth century. Recent studies have provided a precise chronology of the medieval fortress, distinguishing between three building campaigns.[52] The fortress lost all strategic importance, however, after the signature of the Treaty of the Pyrénées in 1659, and became successively an arsenal, an arms depot and a warehouse for foodstuffs under the *Ancien Regime* and the French Revolution. After having been used as a stone quarry in the nineteenth century, its was saved from demolition by the protests of concerned Carcassonne intellectuals and by the efforts of Prosper Mérimée.[53]

The French State then commissioned Eugène Viollet-le-Duc to restore the site. 52 towers and 3 km of ramparts of this exceptional architectural monument, which is now on UNESCO's list of World Heritage Sites, were preserved. As the property of the French Ministry of Culture and Communication, the château and the ramparts have been opened for tourists by the Caisse Nationale des Monuments Historiques et des Sites.

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[52]Joseph Poux, *La Citè de Carcassonne á la fin du XVIe siécle, etude archèologique d'aprés des comptes royaux inèdits.* (Morin, Paris 1907).
[53] Inspecteur Général des Monuments Historiques (1834); later became the Minister of Commerce and Public Works.

Aerial Views of Carcassonne

Definition of the heritage

The immovable, man-made heritage in France today is protected by law and this extends to archaeological remains; individual monuments, and groups of buildings; developed sites, built upon or otherwise, as parks and gardens; and entire areas of towns and cities. The law provides for the protection and conservation of buildings and parts thereof. Initially, protection was offered to properties which was in the public interest to conserve for historic or artistic reasons. Then it was gradually extended to objects of technical, scientific or ethnological interest.

There are two levels of protection: classified monuments and the inclusion in the supplementary inventory.

- classified monuments

The selection criteria today may include aesthetic quality, rarity, representative samples of a given style or era. The property's state of repair and physical state are also recognised. No restrictions are placed by law on the type of buildings or the period of construction.

This extends protection measures to the surroundings of monuments listed (within a 500 m radius) or included items in the supplementary list.

The decision to classify the building is taken by a national board, chaired by the Minister of Culture. The measure is ordered by the Minister where the owner consents and by the *Conseil d'Etat* where it is opposed by the owner.

- supplementary inventory of historic monuments

Decisions to include buildings in the supplementary inventory of historic monuments are taken by a regional board chaired by the Prefect; the Prefect consults the owner, though that is not a legal requirement.

- conservation areas

The establishment of *secteurs sauvegardes* (conservation areas) in the 1960s was a reaction to the sweeping renovation projects of the time when historic centers in old towns were 'cleaned up' and older buildings razed to make way for everything modern. The Act of 8 January 1983, of *zones de protection du patrimoine architectural, urbain et paysager* (ZPPAUPs) was to enable the protection and the management of the urban and rural heritage, of built areas and landscapes, on a contractual basis, allocating the responsibilities between central and local authorities. This procedure mainly concerns towns and cities with historic centers.

Identification of the heritage

There are systematic inventories applying research principles different from studies relating to protection and restoration. Inventory compilation is open-ended and not finite. However, this inventory helps in the decision making for new protection decisions.

- documentation

The *Inventaire general des monuments et des richesses artistiques de la France* (General Inventory of the Monuments and Art Treasures of France) is a specialist department of the Ministry of Culture, which conducts a survey of the heritage based on a strict methodology. This work is separate from protection measures.

The information from the General Inventory is entered into two databases: the Mérimée database for architecture and the Pallisy database for movable objects. Another inventory is the *carte archeologique de la France* (archaeological map of France).

- conservation

Prior to the restoration of historic monuments, a study is commissioned to gather historical, technical and scientific information intended to be used for the decision making during the restoration process. These studies are led by the chief architect for the historic monuments.

Studies are also conducted for more technical knowledge of buildings by the *Center de recherché sur les monuments historiques* (Historic Monuments Research Centre) and the *Laboratoire de recherché sur les monuments historiques* (Historic Monuments Research Laboratory). These agencies report to the Central Historic Monuments Department.

**Protection in Heritage Conservation**

- preservation and protection of the heritage

Under the Act of 1913, all the work on protected buildings is subject to approval by the relevant departments of the Ministry of Culture, on the basis of a preliminary report. Most of the applications are reviewed by administratively decentralized agencies at a regional level (Regional Cultural Affairs Directorates) under the scientific supervision of the General Directorate for Historic Monuments.

Complicated or controversial issues are referred to the National Historic Monuments Commission. The public bodies mentioned in the conservation studies and documentation in the earlier paragraph are often consulted in the course of conservation. Work on the classified buildings also involves consideration of public safety, apart from the actual conservation. The creation of new floor areas as also a change in the use of the premises necessitates a building permit, in addition to the required authorization for historic monuments. The buildings listed in the supplementary inventory need ordinary building permits to undergo any conservation or restoration work. Archaeological excavations in protected sites require permission, which may be granted on the basis of the merits of the proposal, including the applicant's competence. All projects in the vicinity of the protected monument (within a radius of 500 m), or in heritage protection zones or conservation areas require the approval of the official architect (*architecte de batiments de France*) who is assigned to the government agency with jurisdiction for the area concerned. This agency is usually the Local Architecture and Heritage Department (*service departemental de l'architecture et du patrimoine*). These authorities issuing permits must comply with the official architect's views and recommendations.
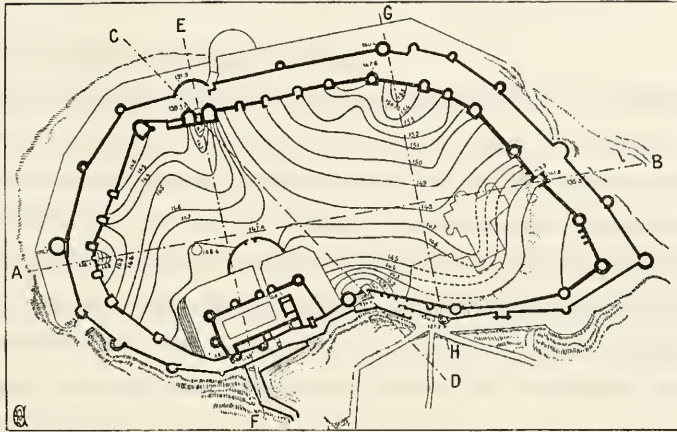
DEVELOPMENT OF THE INNER ENCEINTE AND THE DIFFERENT BUILDING CAMPAIGNS
(Surveys made by Mr. Pierre EMBRY).

Coupe AB

Coupe CD

Coupe EF

Coupe GH
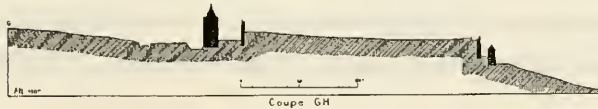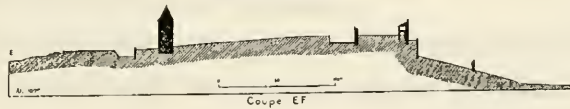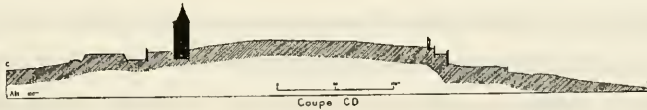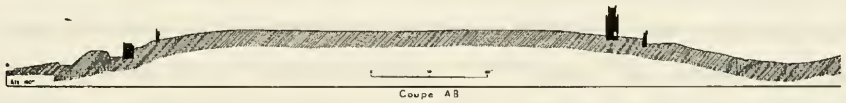
(source: **Pierre Morel.** *The Sights of Carcassonne* (Arthaud, Paris 1973)

46

Conservation Philosophy

- restoration/ reconstruction/ integration

The heritage restoration policy has long borne the weight of the philosophy of the architects and historians who worked in the field of heritage conservation in its early years in the nineteenth century. Eugene Viollet-le-Duc with his restoration at the Cite de Carcassonne had his theory that is considered a historical stratum in conservation.

In the first part of the twentieth century, the approach to restoration was influenced by the two major campaigns undertaken immediately after the World Wars as part of wider efforts to rebuild the country. This context favoured a practice geared towards restoring deteriorated monuments identically to their original state, sometimes using modern materials and methods.

In the 60s and the 70s, the whole conservation and restoration effort came under the framework of the ICOMOS Venice Charter.

The increasing awareness of the monument to its context is now driving many of the conservation plans and actions now, and the creation of ZPPAUPs and conservation areas is a part of this trend. The decree of March 6, 1979 states "The local services of the architect are to promote architecture and qualitative town planning becoming integrated harmoniously into the surrounding environment. For that purpose, they are charged:

- to take part in the definition of orientations and in the elaboration of the documents of town planning and to take care of the insertion of prescriptions relative to the quality of constructions and to the protection of landscapes;

- to participate with respect to legislation concerning sites, ancient memorials and conservation areas, to suggest any protective measures in conformance with these legislations;

- to contribute to the instruction of the projects of organization or works which interest the neighborhoods of presented within the framework of capacities concerning these spaces."[54]

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[54] Council of Europe: European National Heritage Policies http://www.european-heritage.net/en/index.html

Laws/ Legislations/ Acts/ Agreements/ Motions/ Conventions/ Treaties

1. Historic Monuments Act 1913 [*loi du 31 decembre 1913 sur les monuments historiques*]

2. Decentralisation Act of January 7 1983.

3. The Act of 8 January 1983 [*zones de protection du patrimoine architectural, urbain et Paysager*]. (ZPPAUPs).

4. Venice Charter International Charter for the Conservation and the Restoration of Monuments and Sites (1964).

5. Act of 4 August 1962, [*secteurs sauvegardes*].

6. Act of 27 September 1941, for permission to excavate.

7. Act of March 6, 1979

Political

Ownership

The site is the property of the Government of France through its agency, the Ministry of Culture and Communication.

Management/ Planning

The site is managed and maintained by the French Ministry of Culture and Communication, which is responsible for the patronage for architecture and cultural heritage as a part of its mission. All state-owned historic monuments., coming under the aegis of the Ministry, are managed by a public body, the *Caisse nationale des monuments historiques et des sites* (NFHMS) (National Fund for Historic Monuments and Sites). This institution is responsible for the day-to-day management; it opens the site to the public, provides information and promotes the cultural enhancement.

Maintainence

All work on protected buildings has to be approved by the relevant department of the Ministry of Culture on the basis of a preliminary report. Advisory bodies are consulted in accordance with the nature of the works.

Some of the advisory authorities at the national level:

1. Committee of Architectural Research
2. Scientific Cultural Commission on Architectural Education
3. Higher Commission Historic Buildings
4. Council of the Ethnological Inheritance
5. National Council of Archaeological Research

Laws etc. in effect

1. Historic Monuments Act 1913 [*loi du 31 decembre 1913 sur les monuments historiques*]

2. Act of 27 September 1941, for permission for excavation.

3. Act of 4 August 1962, of *secteurs sauvegardes.*

4. Decentralisation Act of January 7 1983.

5. The Act of 8 January 1983, of *zones de protection du patrimoine architectural, urbain et paysager.* (ZPPAUPs).

Conservation Philosophy

Viollet-le-Duc

Restoration/ Interpretation

Towards the middle of the nineteenth century, the ruinous remains of the fortress received attention from archaeologists. Carcassonne was never understood as the physical document of a city of the past, but rather as a monument; an example of military architecture to be preserved according to the growing science of medieval scholarship. Summarising the arguments of Viollet-le-Duc for the restoration of the Cité:

1. The value of the fortress is that of a monument, of a didactic object that may let us understand the art of fortification through the Middle Ages. By extension, it permits us to understand how a certain *gènie national* was shaped in this time, the fortress and its history thus becoming a metaphorical representation of the history of the French nation.

2. The restoration is made possible by the historic discourse that allows the architect to understand the fortress in a state of war or attack, when each element worked or functioned within a precise machine operated by the warriors.

3. Analogous constructions and remains in situ provide the marks that within an organic understanding of architecture will be used towards a comprehension of the whole.

4. The somewhat marginal operation of clearing the walls of poor habitations is in itself an act of urban renewal and sanitation.
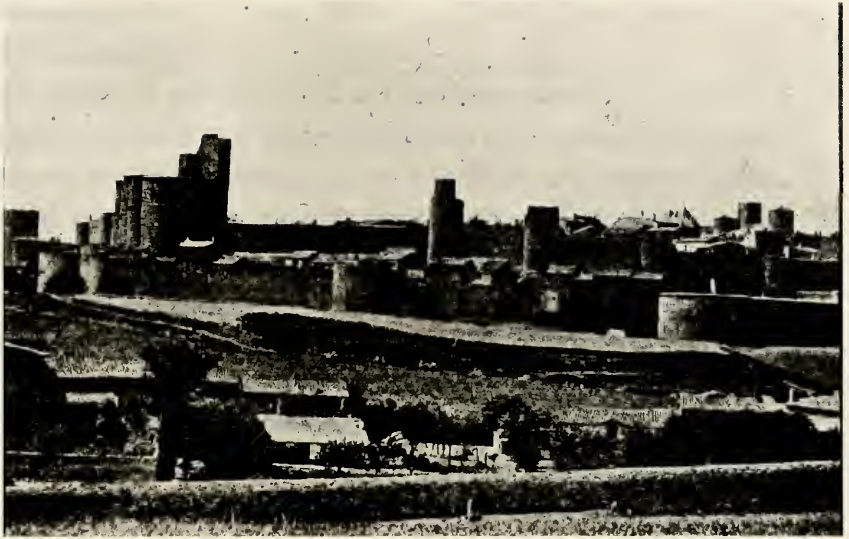
Carcassonne: View before restoration (pre-1852)

Contemporary

Restoration/ Integration

The current policy for preservation requires a contextual understanding of the site or monument. Architecture is not be saved in isolation but with its context. This is evident in the laws that imply that the domain of a monument extends to at least 500m around it and includes supplementary buildings. Stylistic restoration is still allowed but other alternatives can also be exercised. But all recommendations have to undergo a scrutiny and get approved by the many relevant departments of the government, before they can be implemented in any way.

However, the restoration carried out by Viollet-le-Duc is itself historical and has therefore not been completely reversed. The maintainence of Carcassonne today is limited to retaining the now historical character given to the walls and within by Viollet-le-Duc. Archaeological work is carried out under supervision of the concerned authorities as detailed in the Historic Monuments Act 1913 [*loi du 31 decembre 1913 sur les monuments historiques*]   and the Act of 27 September 1941, (for permission for excavation).

Planning

Viollet-leDuc

Integration

The planning was initially limited to a 'historically accurate' restoration, as carried out by Viollet-le-Duc. The living town that was associated with the walls was effectively destroyed and acquired a tourist town character; it is a tourist town even today. All the habitations connected with the walls were destroyed. The Citè, which used to be a densely inhabited neighbourhood, was transformed into an isolated monument. The restoration work began in 1852 with the first purchase and destruction of the tiltyard habitations (*baraques*) and the process of freeing the surroundings of the Citè lasted for fifty-seven years toll 1909. Though French policy is very much pro-integration today, Carcassonne has to live with its second historic legacy of being created as an isolated monument.

Phasing

The restoration started with the classification of Saint-Nazaire as a historic monument in 1840 by the newly created Commission des Monument Historiques. Viollet-le-Duc started on the west front of the inner wall, possibly because this was the most visible part from the lower town of Carcassonne. His advances were not systematic but driven by economic consideration. He undertook parts that could be complete with each financial installment.

By the end of the 1850s he realized that he would not be able to complete the restoration and therefore decided to execute the most exemplary parts first. It is not surprising that the parts he chose to restore coincided with the elements he had selected to illustrate his articles on military literature. The site is more stratified than phased.

Technological

Viollet-le-Duc

Obsessive in his pursuit of an epic past, Viollet-le-Duc spent his life rebuilding medieval ruins. When he wasn't repairing the stones of a fallen monument, Viollet-le-Duc was painstakingly drawing every detail of medieval life he could find for his *Annotated Dictionary of Architecture* and his *Dictionary of Furniture*. The ten volumes of the former work contain some 4,000 pages of close commentary and 4,500 woodcuts illustrating everything from knuckle protectors to the most complex war machines, castle plans and city grids.

This dictionary authored by him produced the building vocabulary and the associated technology for constructing those building types and forms.

After architecture, the major preoccupation of the *Dictionary* is weapons, armor and the privacy of medieval life. Reasoned and analytical, both books are an immersion into Viollet-le-Duc's obsession with covering the body for war or for modesty, with keeping out real and imaginary enemies.

Economical Impact

Viollet-le-Duc

During Implementation

In the eighteenth century, the town was a miserable district. The army abandoned the town in 1804; roofs were decaying, walls cracking, and the inhabitants of the town did not hesitate to use the bulwarks as stone quarries for their personal use and the Administration of Domains, on which the town depended, sold off plots of land.

Prosper Mérimée, Inspector General of Ancient memorials, visited the place, and described the town as a magnificent monument of the middle ages.

The restoration was funded almost entirely by the state and its agencies. This was made possible due to individuals in the various ministries and the connections that they had with Carcassonne or Viollet-le-Duc.

Viollet-le-Duc realized that he would not be able to complete the restoration and chose to restore coincided with the elements he had selected to illustrate his articles on military literature; this could be in order to generate favourable publicity.

The Conseil Municipal de Carcassonne, the Ministere de la Guerre, the Commission des Monuments Historiques, the Ministere de l'Education and des Cultes et des Beaux-Arts were the principal contributors to the whole project. These contributions were made between 1851 and 1876.

Post-implementation

The tourist traffic around Carcassonne may be attributed to the fact that the citadel has been a center for interpretation of history since the first 'restorations' were attempted. The towns and villages around Aude and Cathar have benefited from increased tourism, but this has been at the cost of more traditional or agriculture-based means of livelihood in the region. It would be an easy counter-argument to state that these traditions would have died out in any case. Even if that is true, the whole change was accelerated by a

local economy that is reliant on tourism. To be fair, it is also possible that vestigial cultural practices might have died out altogether had it not been for tourism.

Social/ Psychological Impact

The nineteenth century with its "unprecedented relationship with the past" decided to restore Carcassonne. Viollet-le-Duc did not envision the recreation of a medieval town as Carcassonne had been, but as a fortress in its critical moment. He was never involved with any urban projects like Baron Haussman's radical transformation of Paris. His *Dictionnaire* does not contain a single article on urban elements. Ignoring Carcassonne as a town, he established a direct analogy between the fortress and the spirit of the nation.

This was necessarily Viollet-le-Duc's approach, for whom the restoration of the fortress was desirable as an instrument of learning: it would be a complete course on medieval military architecture, a historical lesson. Such an intention accounts for the anti-urban activities that accompanied the restoration, otherwise known as *dègagement*: all the habitations attached to the walls, or within the perimeter of servitude, were destroyed. The Citè was transformed from a densely inhabited neighbourhood to an isolated monument. Today, it is a town active only during the tourist season.
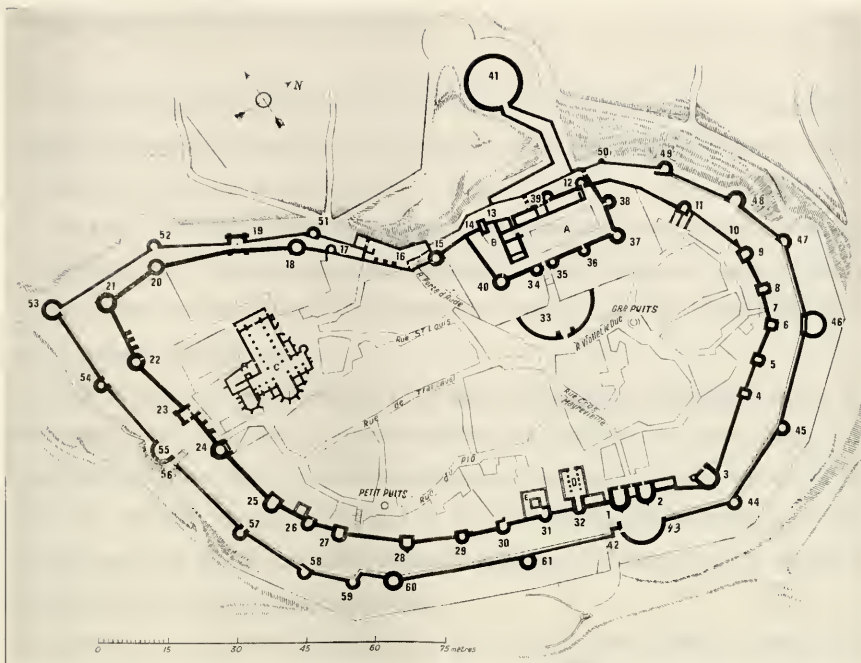
THE INNER ENCEINTE.

1 and 2. Narbonnaise Towers.
3. Tresau Tower.
4. Constable's Mill Tower.
5. Vieulas Tower.
6. La Marquiere Tower.
7. The Bourg Doorway.
8. Samson's Tower.
9. The Avar Mill Tower.
10. The Avar Postern.
11. The Charpentiere Tower.
12. The Chapel Tower.
13. The Pinte Tower.
14. The Pinte Postern.
15. The Justice Tower.
16. The Aude Doorway.
17. The Visigothic Tower.
18. The Bishop's Round Tower
    called the Inquisition
    Tower.
19. The Bishop's Square Tower.
20. The Cahuzac Tower.
21. The Mipadre Tower.
22. The South Mill Tower.
23. The Saint Nazaire Tower.
24. Saint Martin's Tower.
25. The Prison Tower.
26. The Castera Tower.
27. The Plo Tower.
28. The Balthazar Tower.
29. The Davejean Tower.
30. Saint Laurent Tower.
31. The Trauquet Tower.
32. The Sacraire Saint-Sernin
    Tower.

CASTLE.

33. The East Barbican.
34 and 35. Towers of the East
    Doorway.
36. Barracks Tower.

37. The Major's Tower.
38. The Staircase Tower.
39. The Powder Tower.
40. Saint Paul's Tower.
41. The Aude or West Barbican.

THE OUTER ENCEINTE.

42. The Narbonnaise Outer
    Gateway.
43. The Saint Louis Barbican.
44. The Berard Tower.
45. The Benazet Tower.
46. The Notre-Dame Barbican
    and postern.
47. The Moreti Tower.
48. The Glaciere Tower.
49. The Red Doorway Tower.
50. The West Bartizan.
51. The Small Canissou Tower.
52. The Big Canissou Tower.
53. The Ourliac Tower.
54. The Grenade Barbican.
55. The Razes Postern.
56. The Cautiere Tower.
57. Ponleto Tower.
58. East Bartizan.
59. La Vade Tower.
60. La Peyre Tower.

MISCELLANEOUS.

A. Great courtyard of the
   castle.
B. Small courtyard of the
   castle.
C. Saint-Nazaire Cathedral.
D. Saint Sernin's church
   (destroyed).
E. The Trauquet Annex
   (destroyed).

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Salient Features of the Conservation Plan

1. The whole legislative system is full of checks and counterbalances; such a mechanism cannot be designed but has to evolve. This reflects the political history of France, which is rooted in a socialist democratic system.

2. The case for the protection and restoration of Carcassonne was initiated and pushed by the efforts of a few individuals in the nineteenth century, such as Prosper Mérimée, Viollet-le-Duc and Jean-Pierre Cros-Mayrevieille, who was the Carcassonne Inspecteur des Monuments Historiques.

3. Even though the standards regarding the upkeep, maintainence and repairs as also the interpretation and investigation of archaeological and historical sites have changed, the intervention that was done by Viollet-le-Duc is now a history of another phase of the same site, and this has been recognised by the government. This is unlike other sites around the world where incumbent regimes, political or ideological, have tended to obliterate the work done by their predecessors.

4. There never was a master plan for the whole Cité. The work started as a study at the Porte Narbonnaise at Carcassonne, and was gradually extended to restore many portions of the fortification.

5. The whole procedural system now is relatively inflexible, with institutionalised participants. The authority and the power are all centralised. However, the maintainence and management by themselves are open to different theories, approaches and practices.

Conclusion

Viollet-le-Duc's method of reconstruction was 'vertical', completing each part of the walls and towers according to the last stratum preserved. What is now seen is a compressed state that never existed; that represents a long process that happened over a period of nine hundred years. His aim in restoring the Cité was to reintroduce meaning into a set of ruins: meaning, of course, for the culture of nineteenth century France. Carcassonne therefore stands as a meaningful architectural monument of the nineteenth century, speaking for its nationalist passion for history. Carcassonne is an example of an architectural intervention that, despite the most rigorous levels of archaeological accuracy of its time, is a full expression of contemporary architectural thought. From a contemporary point of view, Viollet-le-Duc's restoration is as expressive of the architect, time and era as the medieval ruins were to them. The retention of this comparatively recent period in the history of the walls has made the site a richer resource.

Introduction

History

The City Walls of Chester are Roman in origin. Turf ramparts constructed during the first Roman occupation of 70-90AD were replaced in the second and third centuries by stone walls, which were repaired and altered during the later Roman period. The walls apparently survived the period of desertion following the Roman withdrawal in the early fifth century, and were refurbished by the Mercians under Aethelflaed in the early tenth century.[55]

The original Roman fortress was of the standard 'playing-card' plan[56], but in the late twelfth century, the walls were extended down to the river on the western side of the city. Damage sustained during the Civil War[57] when the city was besieged by Parliamentary forces (1642-6) was only slowly repaired. During the 18th century, the walls were converted to a promenade, where citizens could walk on summer evenings. This process involved considerable alteration to the walls, with the laying out of a proper walkway on the top of the Roman/ Medieval structure, and the replacement of the medieval gates.

The Walls as they currently appear, therefore, are largely an eighteenth century refurbishment of the medieval structure, but still containing a large amount of Roman masonry. In the last 20 years or so there has been a major program of conservation and repair of the walls, funded largely by the City Council and English Heritage, although grants from other sources have also been used.

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[55] 907 AD, according to the "Anglo-Saxon Chronicle". The Anglo-Saxon Chronicle is a complex set of interrelated manuscripts, of which the earliest is known as the Parker Chronicle.
Details of the ASC are available at http://www.georgetown.edu/labyrinth/library/oe/texts/asc/index.html
[56] Fortresses were often typically of the Roman 'playing card' shape - rectangular with rounded corners.
[57] Civil War broke out between King Charles I and Parliament in 1642, which ultimately led to the execution of the king.

The repair program was instigated because of concerns about the stability of sections of the structure. Structural investigation of the areas of concern was carried out under the archaeological supervision of Chester Archaeology. The opportunity was taken in a couple of areas to completely dismantle the structure and to investigate the ground beneath; this work gave a far better idea of the survival of Roman masonry, and the extent of later rebuilding.

Reconstruction of these sections, and repairs to others, involved the introduction of internal ties to hold the faces of the wall together, underpinning to prevent further movement, the filling up of internal voids with mortar grout to create a more solid structure, and the re-pointing of the wall faces in a lime-based mortar (thus allowing the structure to "breathe" more effectively, and preventing water becoming trapped in the core of the wall. All this is very much in the well-established tradition of conservation repairs in Britain.[58]

It was not possible to preserve the walls unchanged. Not only do they require continuing maintenance, but there are also occasions when alterations have to be made (as they have been throughout the history of the walls). For example, there are areas where handrails have had to be installed in recent years to ensure the safety of people using the walls, and also areas where access arrangements have been revised to allow disabled access. Alterations are designed as far as possible to be reversible. All alterations are carried out under archaeological supervision, and a record is kept of all such work.

The alterations are of a different sort than the eighteenth century reuse as a promenade.

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[58] Personal correspondence with Mike Morris (City Archaeologist) and Paul Hartley (Design and Conservation Officer) of the city of Chester.
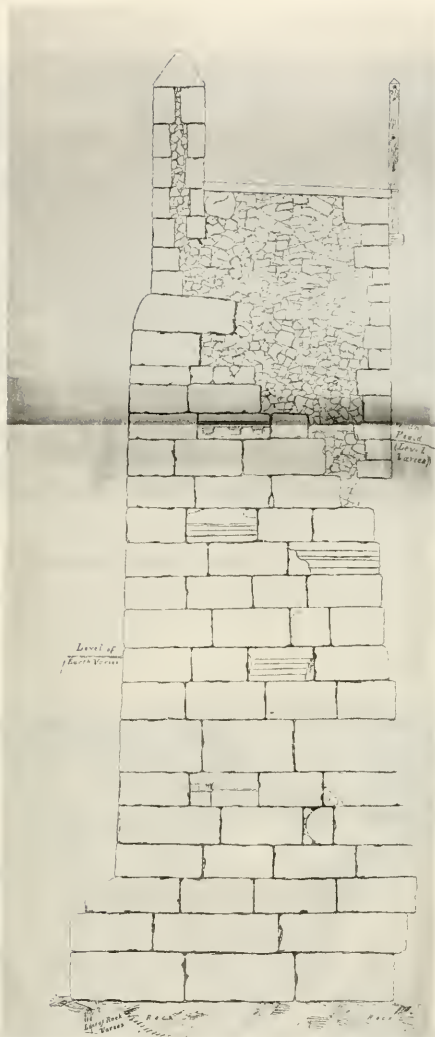
(source: *The Recent Discoveries of Roman Remains
found in repairing The North Wall of the City of
Chester.* (ed.) J.P. Earwaker.)

Diagrammatic   section   of   city   wall   by   city   surveyor   in   1888
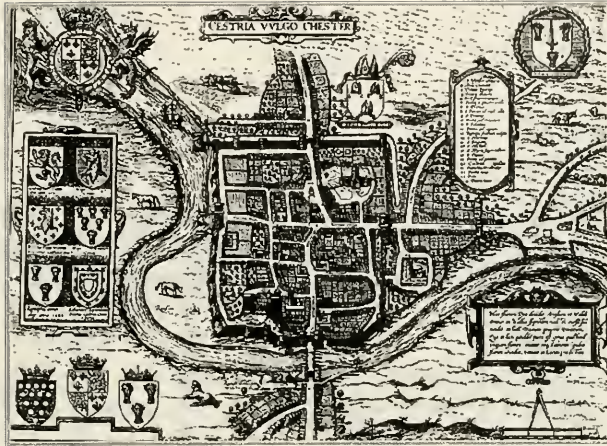
Chester: Braun's map 1571
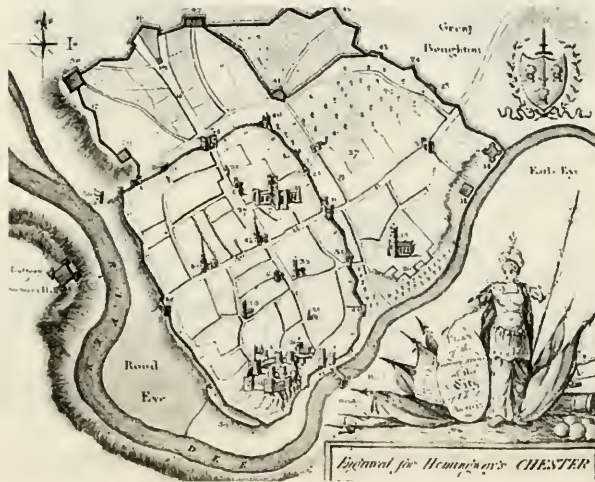
Chester: Hemingway's Map c. 1645.
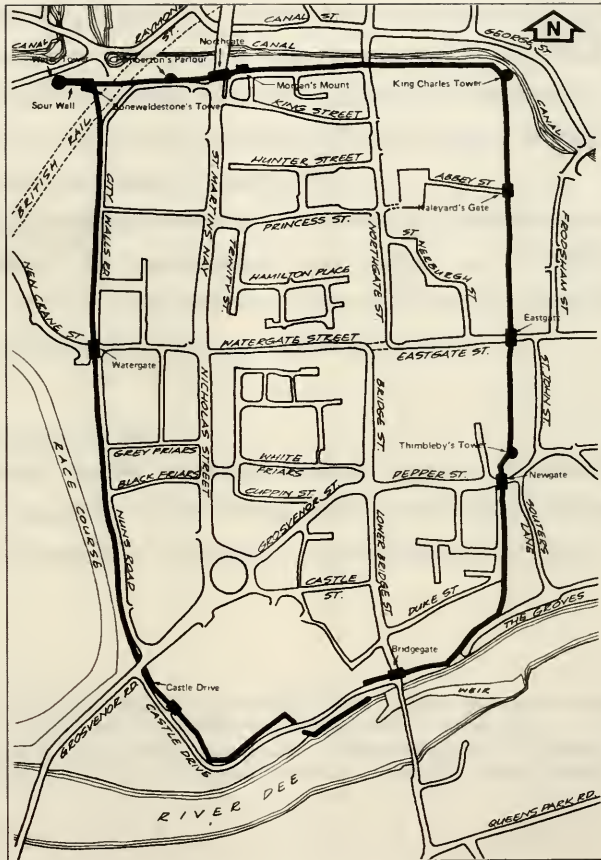
(source:. *Conservation in Chester.* Chester City Council Conservation Review Study, 1986)

Definition of the heritage

- archaeological heritage

In the United Kingdom the term 'monument' is associated with the archaeological heritage, as broadly defined in the Malta Convention.[59] It can include unexcavated archaeological sites where there is evidence of archaeological significance.

The primary legislation for the protection of the archaeological heritage is the Ancient Monuments and Archaeological Areas Act 1979.

Key criteria for assessing archaeological monuments for scheduling are historic period, rarity, existence of documentation, group value, survival/condition, fragility/ vulnerability, diversity (scheduling may be suitable because of a combination of factors or a single attribute) and, importantly, archaeological potential.

- architectural heritage

The architectural heritage, as defined under the Granada Convention[60], is protected through the categories of listed buildings and conservation areas, which do not neatly map on to the categories of 'monuments', 'groups of buildings' and 'sites'.

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[59] Definition of the archaeological heritage: Article 1 of the *European convention on the protection of the archaeological heritage* (revised) at Valletta - La Valette, Malta. 16 January 1992.
"The archaeological heritage shall include structures, constructions, groups of buildings, developed sites, moveable objects, monuments of other kinds as well as their context, whether situated on land or under water."

The monuments, groups of buildings, and sites as defined in the Granada Convention are not necessarily given the designation that the convention may suggest, but are identified using the same criteria and have a protected status.

Individual buildings defined as being of architectural or historic interest are 'listed', though a factor in the decision to list might be the 'group value' of an ensemble of buildings. Such a grouping may also be defined and designated as a 'conservation area', as may larger or less coherent areas of architectural or historic interest.

There is no direct equivalent of the 'site' category set out in the convention, though such ensembles clearly exist. Examples of the suggested synthesis of cultural and natural landscape may have a variety of designations.

The terminology used to classify architectural heritage is applied to architectural heritage as identified by the Granada Convention.[61]

- listed buildings

The duty of the Secretary of State to compile lists of historic buildings is currently set out in the Planning (Listed Buildings and Conservation Areas) Act 1990. Listed buildings are defined as being of 'special architectural or historic interest'. Government guidance on listed buildings is set out in Planning Policy Guidance Note 15 (Planning and the Historic

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[60] *Definition of the architectural heritage: Article 1 of the* Convention for the protection of the architectural heritage of Europe *at Granada, Spain. 3 Oct 1985.*
"For the purposes of this Convention, the expression "architectural heritage" shall be considered to comprise the following permanent properties:
Monuments: all buildings and structures of conspicuous historical, archaeological, artistic, scientific, social or technical interest, including their fixtures and fittings;
Groups of buildings: homogeneous groups of urban or rural buildings conspicuous for their historical, archaeological, artistic, scientific, social or technical interest which are sufficiently coherent to form topographically definable units;
Sites: the combined works of man and nature, being areas which are partially built upon and sufficiently distinctive and homogeneous to be topographically definable and are of conspicuous historical, archaeological, artistic, scientific, social or technical interest."

[61]Convention for the protection of the architectural heritage of Europe. 3 October 1985 [see footnote 60]

Environment)[62] and defines architectural interest, historic interest, 'close historical associations' and 'group value'. These definitions make the parameters applied very broad and accommodating.

- conservation areas

The national system for the protection of historic areas, introduced in 1967, is quite distinct and different from that for monuments and buildings. Though conservation areas are defined by the same national legislation as listed buildings, and the subject of central government policy advice in PPG 15 (refer footnote 7), the primary responsibility for defining and designating conservation areas lies with local planning authorities.

No attempt has been made at a national level to prescribe criteria for which areas are suitable beyond the statutory definition of 'areas of special architectural or historic interest the character of which it is desirable to preserve or enhance' (section 69 of the 1990 Act). Besides, there is no grading system for the relative importance of conservation areas.

The Register of Parks and Gardens of Special Historic Interest, the Register of Historic Battlefields and UNESCO World Heritage Sites are the three new inventories that have appeared in the past few decades.

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[62] Department of the Environment, Transport and the Regions, *Planning Policy Guidance Notes* (PPGs) *PPG 15: Planning and the Historic Environment* (September 1994)
"Criteria applied in deciding the inclusion of a building in the statutory list:
-architectural interest: the lists are meant to include all buildings which are of importance to the nation for the interest of their architectural design, decoration and craftsmanship; also important examples of particular building types and techniques (eg. buildings displaying technological innovation or virtuosity) and significant plan forms;
-historic interest: this includes buildings which illustrate important aspects of the nation's social, economic, cultural or military history;
-close historical associations with nationally important people or events;
-group value, especially where buildings comprise an important architectural or historic unity or a fine example of planning (eg. squares, terraces or model villages)."
All PPGs are available at http://www.planning.dtlr.gov.uk/ppg

Identification of the heritage

Until relatively recently monuments were added to the schedule incrementally, and somewhat haphazardly. After the creation of English Heritage in 1984 it was decided that a more systematic approach was needed. This eventually led to the on-going Monuments Protection Programme (MPP). The non-inclusion of an element of a building cannot be taken to imply that it is of no interest. This may be particularly important with complex buildings with concealed layers of historical evolution. Furthermore, many historic buildings were only inspected externally at the time of listing.

- documentation

Recording of monuments and buildings has been undertaken as a largely separate activity from their identification for statutory protection.

The key recording body has been the Royal Commission for the Historical Monuments of England (RCHME), established in 1908, though the RCHME was merged with English Heritage in 1999.

- protection of scheduled ancient monuments

Scheduled monuments have the strictest series of statutory controls of the various heritage categories, reflecting a policy emphasis that is to retain these monuments in the condition they are found in. This cultural heritage category probably has the highest proportion of any in state ownership or care; however, the vast majority of monuments are in private hands. All works to a scheduled monument, including works of maintenance, require scheduled monument consent from the Secretary of State. No right of appeal exists against the refusal of permission, though an applicant does have a right to an informal hearing or public inquiry prior to the determination of an application.

Management agreements between the government and owners are allowed, whereby owners can proceed with a defined series of works and/or management operations over a period of time.

- protection of listed buildings

Works affecting the character of a listed building as a building of special architectural or historic interest are subject to listed building control. Consent is not generally required for works of 'like for like' repair. Most decision-making has been delegated by the Secretary of State to local authorities, though applicants have the right of appeal against the refusal of permission. Applications for works to grade I and II 'listed buildings', and for the demolition of grade II buildings, are subject to greater scrutiny due to various requirements placed on local authorities to consult on and to refer such applications to English Heritage, the Department of Environment, Transport and the Regions (DETR) and national amenity bodies. PPG 15[63] sets out criteria against which all applications should be appraised. These are the importance of the building (which may be suggested by its grading), the particular features of the building which justify its listing, the building's setting and contribution to the wider townscape and the extent to which the

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[63] Department of the Environment, Transport and the Regions (*DETR*), *Planning Policy Guidance Notes (PPGs)* PPG 15: Planning and the Historic Environment *(September 1994)*

works proposed would bring substantial benefits for the community, including the regeneration of an area or the enhancement of its environment.

Government policy emphasizes a general presumption in favour of the retention of listed buildings and sets out further criteria for those applications involving total or substantial demolition. These are: the condition of the building; and the cost of repairing and maintaining it in relation to is importance and the value derived from its continued use; the adequacy of efforts made to retain the building in use; and the merits of alternative proposals for the site. This last criterion is considered only of relevance in exceptional cases where a substantial community benefit would result; claims for the architectural merits of proposed replacement buildings are not seen in themselves as justifying the demolition of listed buildings.

Two further issues which can be significant in achieving the successful continued use of listed buildings are adaptive re-use and enabling development. Government policy on the former is cautious, stating that 'the best use will very often be the use for which the building was designed, and the continuation or reinstatement of that use should certainly be the first option when the future of the building is considered'.[64] This attitude perhaps in part reflects concerns that unskilful adaptation can destroy much of the character of a building.

- protection of conservation areas

The added weight conservation area status gives to normal planning decisions is a key factor. a local authority will often find it easier to resist a planning application on design grounds in a conservation area than elsewhere. The key additional control a conservation area brings is control over demolition, though this has been subject to the same problems of definition noted for listed buildings. Section 101 of the Town and Country Planning Act 1971 gives local authorities powers to carry out conservation work only of unoccupied buildings in the conservation areas.

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[64]Policy Notes, Department of the Environment and Department of National Heritage, 1994. (3:10)

The Registers of Historic Parks and Gardens, Battlefields and World Heritage Site status do not bring additional statutory controls, though following government guidance in PPG 15 they should be the subjects of planning policies in development plans.

Conservation Philosophy

- Reconstruction/ Repair/ Visual Conservation

'Modern' approaches to conservation in the United Kingdom developed from the nineteenth-century writings of John Ruskin[65]. It is an approach that stresses the retention of historic fabric and can be best encapsulated by the phrase 'conservative repair'. Integrity and honesty are considered vital. 'Restoration', and especially the use of conjecture, is considered to be unacceptable. From its nineteenth-century origins it has evolved to encompass principles such as the reversibility of contemporary intervention. The stress placed on the repair of historic fabric and the antipathy towards conjectural restoration or reconstruction has become embodied in international statements of conservation philosophy, such as The Venice Charter (International Charter for the Conservation and the Restoration of Monuments and Sites, Venice 1964).

There is also a very strong visual/aesthetic tradition in British conservation and architecture, albeit not articulated as coherently as the conservative repair tradition. This visual approach was evident in the formulation of the system of conservation areas where initially emphasis was placed on visual enhancement. This is evident in the Civic Trust's pioneering schemes in historic areas from the late 1950s.

A third philosophical tradition, relating specifically to historic areas, is that of urban morphology derived from academic writing. It is an approach based on the study of the historical development of a settlement. The development of the townscape is a physical manifestation of the development of society and is imbued with cultural meaning, and becomes the spirit of the place, the *genius loci*. Townscape form is derived from three

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[65] 'The Lamp of Memory' by John Ruskin in *The seven lamps of architecture* (John Wiley, New York 1849)

principal components; the town plan, building form and land-use. The town plan is considered as generally the most enduring of these and land-use the most ephemeral. For conservation, an appreciation of urban morphology means valuing this historic form and 'grain', as well as the buildings that occupy it.[66]

Laws/ Legislations/ Acts/ Agreements/ Motions/ Conventions/ Treaties

1. Ancient Monuments and Archaeological Areas Act 1979
2. Department for Transport, Local Government and the Regions
Planning Policy Guidance Note 16: Archaeology and Planning
3. Sections 55 and 101 of the Town and Country Planning Act 1971.
4. Department for Transport, Local Government and the Regions
Planning Policy Guidance Note 15: *Planning and the Historic Environment*
5. Planning (Listed Buildings and Conservation Areas) Act 1990
6. Venice Charter
International Charter for the Conservation and the Restoration of Monuments and Sites (1964).
7. Granada Convention
Convention for the Protection of the Architectural Heritage of Europe (Granada, Spain. 1985)

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[66] Pickard, Robert. (ed.) *Policy and Law in Heritage Conservation.* (Spon Press, London 2001)

Case Specific Mechanism

Political

Ownership

The local authority, Chester City Council, owns the city walls. But other government concerns are also responsible for their well being and preservation; one such being Chester Archaeology, which monitors all work on the walls.

Management/ Maintenance

The Chester City Council is responsible for the management and maintenance of the city walls, although as the entire circuit is "scheduled" as an ancient monument (that is, legally protected) they cannot actually carry out any work to them without written permission from the Secretary of State for Culture, Media and Sport (the Government department which has responsibility for the preservation of archaeological sites and monuments).

Maintenance of the public footway is technically the responsibility of the County Council although this is carried out by the City Council under an agency agreement.

All works (whether of repair or alteration) to the walls require the 'Scheduled Monument Consent' and it is a criminal offence to carry out work without this permission or to damage the walls in any way. English Heritage advises the Secretary of State on applications for permission (i.e.for the Scheduled Monument Consent).

The walls are regularly monitored by the City Engineers to measure structural movement. Regular monitoring of walkways and railings; defects are remedied within 24 hours.

A regular regime of gully clearance and vegetation removal; a scientific survey of weathering processes affecting stonework decay has been carried out. Chester Archaeology monitors all the work on the walls.

Lighting of the Walls walkways is the responsibility of Cheshire County Council; floodlighting of the walls is the responsibility of the City.

Planning

Political commitment and financial provision were complemented by the setting up a conservation team. The team comprised mainly the Conservation Section in the Planning Department and the consultants.

Another important contributor to the conservation team was the Development and Planning Committee started by the former County Borough Council.

The prime responsibility for conservation was with the Planning Department of the Council, first as a division of the City Engineer's Department and then, as a Division of the Directorate of the Technical Services.

In 1971, the new post of a conservation officer was created to establish a rapport between property owners and the local people, as also the civic body.[67]

The conservation consultants, Donald W. Insall and Associates, who made available the resources of specialists in architectural, structural and quantity surveying work on historic buildings, had a key role to play in the planning and they served as the catalyst for many of the smaller components.

The whole planning was supported by the Department of the Environment and the Historic Buildings Council for England. Because the whole city center is a conservation area, development affecting the setting and views of the walls is closely constrained. This encourages people to walk below the walls and to appreciate their presence. Interpretation panels and features form an integral part of this garden.

Special Laws, Acts, Bodies etc.

Donald W. Insall and Associates, Consultants

Conservation Section in the Planning Department

Chester Archaeology

Cheshire County Council and the Chester City Council

English Heritage

Secretary of State for Culture, Media and Sport

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[67] *Conservation in Chester* (Chester City Council Conservation Review Study, 1986) p.18.

Conservation Philosophy

Repair/ Reconstruction/ Rehabilitation

The city walls of Chester were a small component of a larger Conservation Plan for the old city of Chester. Studies were commissioned jointly by Bath, Chester, Chichester and York with the central government to propose solutions for specific local problems and to suggest general lessons that would be relevant to all historic towns. The report was published in 1968. The Conservation Plan was prepared as a direct result of this report. The scientific conservation of the city walls is therefore, neither the objective nor a central concern for the plan.

Environmental improvements, replacement, restoration and repairs, reversible installation of amenities are all part of the work carried out. In all cases where alterations are made, they are designed as far as possible to be reversible - that is, the original configuration of that section of the Walls could be replaced, if necessary. All alterations have been under archaeological supervision, and careful documentation maintained.

In the last few years, work to the walls has been limited to installing handrails and other safety measures on some of the more uneven stretches.

Planning

<u>Integration</u>

The whole to part approach in surveying and studying a planning area itself is indicative of an integrated approach.

"The Chester study is organised as a gradually focussed spotlight trained first upon a region, then a city, then the central area and then upon the sample buildings within them."[68]

Integration is evident not just in the scale but also in the encompassing nature of the plan, where city planning, traffic flow patterns, architecture, economics of the region and a host of other studies are drawn upon to create a comprehensive plan.

<u>Principles</u>

Survey: The survey methodology used was working from the whole to the part. Any specific issue was addressed with an awareness of its context.

Analysis: Defining the essential and the essence of the place was the result of this analysis, and this determined some of the end objectives of the conservation plan. The identity of the place was studied through many analytical and mapping research processes. This enabled the rationale for determining and grading the significance of built structures in relation to the environment, and allowed decisions pertaining to the deletion of negative elements and unwanted additions.

Traffic: Integrating the static with the dynamic, the building structures and the traffic and pedestrians were used to make the planning exercise complete.

Planning: Capacity Planning and Opportunity Planning were employed, where the untapped potential of the site was exploited to a certain extent without overextending the healthy capacity of the site.

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[68] Donald W. Insall in *Action for Conservation: Chester* (July/ August 1970 *Journal*, Vol.56 No.7)

Phasing

The phasing was partly planned, but the availability of grants and the time taken by certain components of the project also influenced it.

The studies commissioned jointly by Chester and other cities with the central government to propose solutions for specific local problems were published in 1968. The Conservation Plan was prepared as a direct result of this report. In 1971, the Council appointed the consultants to concentrate on one section of the old city, and make specific recommendations for this Bridgegate Action area. The early 1970s saw the acquisition and restoration of key properties in this area. After the success of this area, other areas were taken up for implementation of the plan. Other events like the completion of an inner ring road around Chester in January 1972 did help to catalyse certain recommendations in the plan. By the mid 80s, most of the recommendations had been put in place. Winning many awards for completed phases of the plan, en route the complete implementation helped in the acquisition of funds.

Views of Chester City Walls

Views of Chester City Walls

Technological

Material and Technology

Reconstruction of sections of the walls, and repairs to others, involved the introduction of internal ties to hold the faces of the wall together, underpinning to prevent further movement, the filling up of internal voids with mortar grout to create a more solid structure, and the repointing of the wall faces in a lime-based mortar (thus allowing the structure to "breathe" more effectively, and preventing water becoming trapped in the core of the wall. All this is very much in the well-established tradition of conservation repairs in Britain.

It would not be possible to preserve the Walls unchanged. Not only do they require continuing maintenance, but there are also occasions when alterations have to be made (as they have been throughout the history of the Walls.

Trades/ Guilds/ Education/ Training/ Local Labour

Recognising the shortage of skilled craftsmen in the building trades, a 'Guild of Restorers' was proposed to train craftsmen and carry out repairs using traditional methods.[69] It hoped to start with stone masons because this skill was fast disappearing. But the project failed to materialise. It is being proposed again now.

It has been proposed that grants or payments be withheld from those guilty of repairs or construction that do not conform with the standards laid down for historic structures.

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[69] *Conservation in Chester* (Chester City Council Conservation Review Study, 1986) p.111.

Economical Impact

<u>During Implementation</u>

Although scheduling does place restrictions on what can be done to the walls, it also makes them eligible for financial assistance from English Heritage towards the cost of major repairs. Major repairs were carried out in the late 1980s and early 1990s on a number of sections of the walls, with English Heritage providing approximately half of the finance for the work.

Following the conservation study, the City Council made a study to commit to the program. A special conservation rate was applied. Each year, the product of a 2d rate was applied (then £ 29,000) was put in to a Conservation Fund which could be carried over onto the next year. This Fund has fluctuated through time and in 1979 it was at £ 90,000.[70] Many grants and departmental funds contributed to this Fund over a period of time. Grants and loans were made available through various public organisations and government agencies, and the acquisition of one-time grants, particularly for emergency stabilisation and repairs were used on many portions of the walls.

Where major intervention is required to stabilize the walls, repair schemes have been prepared and funded by the City Council (usually grant assisted by English Heritage). Grant assistance from the European Community enabled a number of major schemes to be carried in the 1980s/early 1990s).

<u>Post-implementation</u>

The economic impact of the conservation plan cannot be isolated for the walls, because it does not have any private ownership in any part. However, the emergency actions, stabilisation, retrofitting for active public use and the impact on tourism has been positive.

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[70] Donald W. Insall, Conservation in Action: Chester's Bridgegate (HMSO, London 1982) p.11.

Salient Features of the Conservation Plan

1. The walls of Chester are protected under the general framework of existing legislation for the protection of architectural heritage.

2. The setting up of a conservation team after commissioning a study was the unique feature of this plan. Members of this team were carefully selected.

3. The conservation plan was for the whole town, the walls being only a component of a comprehensive plan.

4. The walls were partially rehabilitated for contemporary needs, uses and laws; their historical and archaeological character and significance were kept intact.

5. Local participation was the greatest: the residents, the labour, the fund-raisers, etc. The whole system is localised, even though it is connected at the national level.

6. Novel means of funding were employed, and the funds were obtained form all levels of government, including the local, where the residents agreed to a levy.

7. The integration of broader planning issues with localised conservation efforts caused delays, but the program eventually proved successful because of this comprehensive planning.

8. Extensive analytical studies helped set up a framework of reason for determining the significance of any structure with sensitivity to the character of the whole city.

9. A Contract Record Form was filled in by the architect in charge of a job. This served as a future reference that reflected the capacity of the contractor involved. This record was confidential.

10. Historic Record Building Forms were made for every structure within the scope of the plan, and the contents were assessment of the building, recommendations, and the action and finance to be undertaken.

11. Key properties identified in the 1971 survey on the basis of their quality and situation, deemed as the essence of Chester, were acquired. These properties were mostly in a critical state so as to be unattractive to private investment.

Conclusion

There is no overall conservation plan for the City Walls in Chester – perhaps because the ownership and maintenance arrangements are relatively simple and long established, and it is regarded as one of the city's major symbols and tourist attractions. However, one could strongly recommend the value of such a plan where preservation/conservation controls are less clear-cut or are in the process of evolution. English Heritage has a template for such plans and is currently carrying them out on many of their historic properties. In Chester these have been done for the castle and the Roman amphitheatre. Their value is that all stakeholders are involved in the process rather than policies being dictated from above; the theory being that if everyone 'owns' it then its more likely to be followed.

"Strategically located on the Bosphorus peninsula between the Balkans and Anatolia, the Black Sea and the Mediterranean, Istanbul has been associated with major political, religious and artistic events for more than two thousand years. Its masterpieces include the ancient Hippodrome of Constantine, the 6th-century Hagia Sophia and the 16th- century Suleymaniye Mosque, which are now jeopardized by overpopulation, industrial pollution and uncontrolled urbanization."

[WHS Status 1985] C (i) (ii) (iii) (iv)

Introduction

History

Five different sets of walls have been built around the city of Constantinople, the most important of which was the last, built under the reign of Theodosius II, who came to power in 408 AD. Also known as the wall of Anthemius, it was erected in 413 AD, and stretched across the peninsula, protecting the city from a land invasion. In 439, a system of sea walls was added to protect the coastline from attack. After a disastrous earthquake in 447, the land walls were rebuilt, this time with an outer curtain and a new moat, completing what we know today as the fortifications of Constantinople.

The defensive system added by Theodosius II in the early fifth century combined two lines of defense with a moat. They are perhaps the most significant work of military architecture to come down to us from the Middle Ages. The seven-kilometer land walls of Constantinople are one of the remarkable accomplishments of antiquity. The fortification was deemed invincible because of its superior design, the strength of its building materials, and details of its construction. The imagination and amount of manpower involved in the design and execution of this magnificent work is stupendous. Even in their ruinous state, the wall sections and towers bear testimony to the grandeur of fifth century military architecture.

Today, the Theodosian walls stand as a landmark delineating the western border of the ancient city. The inhabitants of Istanbul are privileged to have a cultural heritage of outstanding importance and beauty, but preservation of such a gigantic monument is a difficult task, requiring substantial financial resources and expertise.[71]

There have been campaigns in the 1980s and 90s to repair and restore these walls. But large portions of the wall have been lost to development pressures, weathering and recently, the earthquake in August 1999.

A report on the restoration of the southernmost section (Towers 1-6) has recently been published by M. Ahunbay.[72]

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[71] http://www.arch.uiuc.edu/research/rgouster/
[72] Metin Ahunbay and Zeynep Ahunbay. 'Recent Work on the Land Walls of Istanbul'. *Dumbarton Oaks Symposium 1998.*

Map of Istanbul c.1572

George Braun & Franz Hogenberg from *civitates orbis terrarum.*

Map of Istanbul (Constaninople)

Existing General Mechanism

Definition of the heritage

Law No.: 2863 SECTION I Article 3: (a)

- cultural assets

"Cultural Assets"; are all over-ground, underground or submarine movable and fixed assets related with science, culture, religion and fine arts, belonging to prehistoric and historic eras.

- protected sites

(3) "Protected Sites"; are cities and city relics that are the make of various civilizations extending from the prehistoric era to date and that reflect the social, economic, architectural and similar characteristics of their periods, the places where important historical events had taken place and the sites that should be protected with the determined natural characteristics.

- protection areas

(5) "Protection Areas"; are the areas that must be protected, effective in the preservation or protection within the historical environment of fixed cultural and natural assets.

Identification of heritage

- Determination and registration

Law No.: 2863   SECTION II   Article 7: (as amended through Law no. 3386 dated 17.6.1987)

The determination of fixed cultural and natural assets that should be protected is made either directly by the Ministry or through the utilization of the assistance of the experts of other relevant organizations and institutions.

In the determinations, the historical, artistic, regional and other characteristics of the cultural and natural assets are taken into consideration. Through the consideration of state

means, sufficient number of works posing examples and reflecting the characteristics of the era that they belong to are determined as cultural assets that should be protected.

Determinations made with respect to fixed cultural and natural assets are registered through the decision of the Board of Protection. Procedures, principles and criteria related with determination and registration are stated in the regulations.

Determination and inventorying of the fixed cultural and natural assets belonging to registered and subsidiary foundations under the rule or supervision of the General Directorate for Foundations, and the mosques, mausoleums, caravansaries, madrasahs, inns, hammams, masjids, convents, charity fountains, convents of Mevlevi dervishes, fountains and similar fixed cultural and natural assets owned by real and corporate persons are carried out by the General Directorate for Foundations.

Announcement, notification and recording in the land registry log of the decisions on registration are arranged through the regulations.

- Decision authority regarding protection areas

Law No.: 2863 SECTION II Article 8:

Determination of the protection areas of the cultural and natural assets registered under Article 7 that should be protected and the decision authority as to whether constructions and installations can be made within these areas rest with the Board of Protection. Objections can be lodged against the decisions of the Boards of Protection according to the second paragraph of article 61.

- Documentation: Liability of the owners to give permissions

Law No.: 2863 SECTION II Article 19:

Owners of the fixed cultural and natural assets are obliged to permit the experts assigned by the Ministry of Culture and Tourism to control, inspect, map, plan and relieve the assets, take their photographs and make out their shapes and to provide the required facility. However, the assigned persons carry out the activities in a manner as not to violate domicile immunity and family intimacy.

Protection in Heritage Conservation

- preservation and protection of the heritage

Law No.: 2863 SECTION II   Article 7:

Fixed cultural and natural assets that should be protected are as follows:

a) Fixed natural assets that should be protected and fixed assets built until the end of 19th century,

b) Fixed assets that were built after the stated date and considered necessary to be protected by the Ministry of Culture and Tourism with respect to their importance and characteristics,

c) Fixed cultural assets located within protected sites,

d) Buildings and sites to be determined, where great historical events have taken place during the National War of Liberty and the foundation of the Republic of Turkey, and the houses used by Mustafa Kemal Atatürk, notwithstanding the concept of time and registration.

However, the fixed assets that are decided unnecessary to be protected with respect to their architectural, historical, esthetical, archeological and other importance and characteristics by the Boards of Protection are not considered as fixed cultural assets that should be protected.[73]

- protection of fixed cultural assets

Law No.: 2863 SECTION II

Decision authority regarding protection areas

Article 8:

Determination of the protection areas of the cultural and natural assets registered under Article 7 that should be protected and the decision authority as to whether constructions and installations can be made within these areas rest with the Board of Protection.

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[73] Article 7 declares that all monuments built by the end of the nineteenth century should be protected. It concludes by saying that the Board of Protection has the discretion of not protecting certain such fixed assets. This seems to be incongruous with the first statement.

Objections can be lodged against the decisions of the Boards of Protection according to the second paragraph of Article 61.

In the determination of the protection areas, availability of sufficient protection area for the protection of cultural and natural assets that should be protected, and the maintenance of their appearances and harmony with their surroundings is taken into consideration. Principles pertaining thereto are stated in the regulations to be prepared by the Ministry of Culture and Tourism.

Prohibition on unauthorized intervention and utilization

Article 9: (as amended through Law no. 3386 dated 17.6.1987)

It is prohibited to make any building and physical intervention in, to reintroduce to usage or alter the usage of the fixed cultural and natural assets that should be protected, in contradiction to the decisions taken by the Boards of Protection within the framework of the principle resolutions of the Supreme Board of Protection. Repair, construction, installation, drilling, partial or complete destruction, excavation or similar works are considered building and physical interventions.

Authorization and method

Article 10: (as amended through Law no. 3386 dated 17.6.1987)

Taking and making others take the measures required for the protection of fixed cultural and natural assets and carrying out all supervision thereof, notwithstanding their possessor or administrator, rest with the Ministry of Culture and Tourism.

Protection of cultural and natural assets administrated and controlled by Turkish Grand National Assembly is performed by the Chief Office of Turkish Grand National Assembly. In the achievement of such protection, the technical assistance and cooperation of the Ministry of Culture and Tourism is provided where required.

Protection and assessment of the cultural and natural assets under the administration and supervision of the Ministry of National Defense or located at borders and restricted areas are performed by the Ministry of National Defense.

The achievement of such protection is carried out on the basis of the principles of the protocol to be concluded between the Ministry of National Defense and the Ministry of Culture and Tourism.

Protection and assessment of the fixed cultural and natural assets belonging to registered and subsidiary foundations under the rule or supervision of the General Directorate for Foundations, and the mosques, mausoleums, caravansaries, madrasahs, inns, hammams, masjids, convents, convents of Mevlevi dervishes, fountains and similar fixed cultural and natural assets owned by real and corporate persons are carried out by the General Directorate for Foundations after the decision of the boards of protection are taken.

Protection and assessment of the fixed cultural and natural assets owned by other public organizations and institutions are carried out by themselves in accordance with the provisions of this Law.

Protection of the fixed cultural and natural assets owned by public organizations and institutions is performed through the appropriations to be included in the budgets of these institutions every year.

Sufficient appropriation is reserved to the budget of the Ministry of Culture and Tourism every year in order to perform such services.

Protection and assessment of the areas where research, excavations and drilling is made rests with the Ministry.

Transfer of fixed cultural assets

Article 20:

It is essential that the fixed cultural assets and their parts be reserved where they are located. However, in case it is imperative to transfer such fixed cultural assets to another place or it is required with respect to their characteristics, they may be transferred by the Ministry of Culture and Tourism to the desired place upon the consent of the Boards of Protection and by taking the required safety measures. If the owner of the fixed asset is exposed to any damage because of the transfer of the cultural asset, an indemnity to be determined by a commission to be set up by the Ministry of Culture and Tourism is paid to the injured party.

Conservation Philosophy

- Restoration/ Reconstruction/ Interpretation

The monuments, sites and immovable cultural assets in Turkey do not seem to be governed by one single conservation philosophy but are prone to the vagaries of the political, academic or ideological regimes operating at a given time. Restoration and reconstruction are common, and this may have to do with the interpretation that incumbents in power would like to reinforce.

Laws/ Legislations/ Acts/ Agreements/ Motions/ Conventions/ Treaties

Law on the Protection of Cultural and Natural Assets (1)

Law No.: 2863   Date of Acceptance: 21.7.1983

Political

Ownership

The municipality of Istanbul is the authority responsible for the land and sea walls surrounding the historic city.

Management/ Maintainence

As early as 1939, with the first urban development plan for Istanbul, the land walls and their environs were designated as a conservation area. A large, green belt was envisaged in the master plan to border the historic city on the west.

The repairs, additions and modifications to the walls are very much a part of the history of the city. They were kept in constant repair throughout the Middle Ages, until Mehmet II in 1453 invaded them and, more recently, they were subject to 'heavy-handed restorations' of the 1980s and early 1990s. The restorations were financed in part by UNESCO, but the pressures of the municipal authority caused the project to be rushed. The work was divided among eleven contractors, with a 'scientific consultant' assigned to each. In many areas, the walls have been over-restored and refaced in some sections.

Perhaps the walls now project a better understanding of how the elaborate defensive system once worked, but some historical evidence was destroyed in the process. There does not appear to be any co-ordination between teams, and not all the results have been published. The work abruptly halted with the change of government in 1994.[74]

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[74] The Constantinople Page by Robert Ousterhout: The Land Walls
http://www.arch.uiuc.edu/research/rgouster/

Planning

After 1939, when the area around the walls along with the land walls were designated a conservation area in the first development plan, the walls have not been successfully integrated into the larger planning efforts; the co-ordination between the local authorities or the lack of it leaves a lot to be desired. The municipal authorities of Istanbul, with various departments such as the authorities concerning the services for sewage, telephones, roads etc. each have their own agendas and priorities which hamper co-ordination.

Map showing the southern end of the Land Wall and the industrial development around Kazlıçeşme in 1939.

[Archive, ITU, faculty of Architecture, 1939]

Conservation Philosophy

Localized efforts from T1 to T6 of the land walls:

Restoration/ Reconstruction/ Stabilization

The main objective of the restoration work from 1991 onwards was to strengthen the existing fabric of the walls, so the towers would suffer less from climatic factors and future earthquakes. The towers were particularly prone to earthquakes and structural damage, according to the report published. The tremors caused by earthquakes set up cracks and failures which were later difficult to rectify. It was stated in the report that some towers were totally renewed, others were restored and the remaining wall sections were preserved after the larger earthquakes. However, different phases of construction and repair can be distinguished by the building materials and techniques used; these provide a means for deriving a relative chronology. The repairs can also be dated going by some of the inscriptions on some of the towers. The conservation of old repairs along with the original fifth-century fabric was the challenge that was perceived by the teams working on the restoration. The restoration of the walls to a given phase in their long history, the retention of certain features while reversing others, and some other actions was not adequately explained or justified. Political pressures yielding to the populist understanding of history seem to have been the guiding rationale for some of the decisions.

Planning

Localized efforts from T1 to T6 of the land walls:

Integration

The first step in the work carried out was the removal of accretions. The transfer of the tanneries near the southern end of the land walls to another site and the demolition of dreary buildings on or near the walls was the first task. Aided by judicial interference, the

municipality of Istanbul succeeded in removing industrial plants from the land wall conservation area and demolished the tanneries. In 1991, the area near the shore of the Sea of Marmara was cleared. This revealed a 200 meter section of the wall that had been concealed for nearly a century[75]. Several changes had taken place around this part of the land walls since the nineteenth century, if not earlier. Rail was introduced into the historic city around this stretch of the walls, breaking through between Towers 6 and 8 (T6 and T8). At the beginning of the twentieth century, Kazlıçeşme,[76] which is an industrial district outside the city walls, started growing eastwards. Small scale industrial development occurred adjacent to the wall, damaging and obliterating some parts of the wall. In the late 1950s, the motorway along the Marmara coast of the historic center was constructed, changing the landscape completely. The new road passed between the Marble Tower (the first tower of the sea wall) and the first tower of the land walls. There is now no contextual connection between the city wall and the surrounding development in this section.

However, not all the breaches in the wall are because of planning authorities. A strange trapezoidal opening disrupts the curtain wall close to T2. This opening can be seen from the east side, being screened by a thin wall on the field side. The breach was probably a later defensive measure intended to isolate a strategically important section.[77]

Phasing

Phasing has been dictated by the political will and the availability of funding. No schedule has been drawn up for the restoration or the stabilization. There does not appear to be any co-ordination between teams, nor a plan for the publication of the results.

After UNESCO's designation of the historic quarters and monuments of Istanbul as a World Heritage Site in 1985, the municipality initiated a project for the preservation of the land walls and their environs.

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[75] Metin Ahunbay and Zeynep Ahunbay in 'Recent Work on the Land Walls of Istanbul'.
Dumbarton Oaks Symposium 1998.
[76] Kazlıçeşme is a settlement founded in the 15th century.
[77] Robert Ousterhout quoted in 'Recent Work on the Land Walls of Istanbul'.

During the first campaign, which took place between 1987 and 1989, the Belgrade, Silivri, and Mevlevihane Gates were restored according to projects developed by the Foundation for the Preservation of Turkey's Monumental, Environmental, and Touristic Assets. The second campaign started in 1991, and several teams worked along the land walls, Golden Horn, and sea walls until 1994.[78]

With the change of government in 1994, the work was abruptly halted.[79]

Survey

A comprehensive survey of the land walls was carried out in the 1920s and 1930s and was published in 1943 by B. Platt and A. M. Schneider[80], but the documentation of certain segments of the wall could not be carried out because of difficult access. The portion of the walls from T1 to T5 was not surveyed because of the tanneries. After clearing the area in 1991, the walls and towers in that section were examined. The main wall was preserved almost to its full height between TI and T6. The outer wall was not in very good shape. .

'Nothing from the moat was visible above ground, except some merlons near T5. The wall surfaces had been stained by dyes or chemicals used in tanning; several cavities had been sunk in the wall surfaces and flues had been dug into the wall mass. A thick layer of earth was deposited above the rampart walk and towers, providing sufficient soil to support fully-grown trees. The rundown appearance of the site was an eyesore at one of the main entrances to the historic city; its repair had priority for archaeological and cityscape reasons.'[81]

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[78] The project involving walls from T1 to T6 is one of the six teams.
[79] Robert Ousterhout, University of Illinois, Urbana-Champaign. The Constantinople Page http://www.arch.uiuc.edu/research/rgouster/
[80] B. Platt and A. M. Schneider, *Die Landmauer von Konstantinopel* (Berlin, 1943).
[81] Metin Ahunbay and Zeynep Ahunbay in 'Recent Work on the Land Walls of Istanbul'. *Dumbarton Oaks Symposium 1998.*

Land Walls of Istanbul

Technological

Localized efforts from T1 to T6 of the land walls:

In 1991, the Technical University of Istanbul (ITU) was appointed to prepare a restoration project for the wall section T1-T6. M. Ahunbay (architect and archaeologist) and Z. Ahunbay (conservation architect) from the Faculty of Architecture directed the team, which comprised experts from several disciplines. Photogrammetric surveys were prepared by the Faculty of Civil Engineering (1TU). A large team of architect-restorers, architects, and students of architecture were involved in the architectural surveys and restoration proposals. Vegetation and the earth deposits above the rampart walk were carefully removed and 1:50 scale surveys (plans, cross-sections, and elevations) produced. The rampart floors were examined and documented with 1:20 scale plans and cross-sections. On the eastern side of the wall, access to the towers was very difficult because of the accumulation of earth and debris to a height of about three meters.

The report claims that the selection and use of materials compatible with the originals were an important aspect, and goes on to explain the original mortar being a mixture of lime, crushed brick, and brick powder. For restoring the walls, the composition of mortar mixes and new mixes with matching colors and compositions were studied and developed by laboratory research.

Economical Impact

Localized efforts from T1 to T6 of the land walls:

After the designation of areas and monuments of Istanbul as a World Heritage Site in 1985, the municipality of Istanbul initiated a project for the preservation of the land walls and their environs. The World Heritage Committee, the municipal authorities of Istanbul and other public and international bodies have funded the whole conservation effort. The industrial development around the walls was adversely affected by the clearing of areas

around the walls to create a park. This has not been economically beneficial to the residents around the walls; the disjointed conservation plan has not considered the people in the capacity of stakeholders at any time. The communities around the walls, whether residential or economic, have not been involved in any aspect of the conservation efforts. Increased tourism, handled in a competent way, may well be the only economic justification of preservation attempts.

Istanbul: General view of Tower 1 to Tower 4, after restoration (1994)

Social/ Psychological Impact

The original relationship between the urban settlement of Istanbul and the walls that defended the city has been lost. The contextual framework for the appreciation of this historical fabric has been allowed to change completely, thus undermining contemporary understanding of the nature and function of the walls. This has meant a change in the perception of the city residents with regard to the wall; the functions and the context for those functions of the wall have been changed completely.

Salient Features of the Conservation Plan

1.   The preservation effort lacks the understanding not just between involved parties but also the changes through time; the repairs carried out by the contractors in 1988 between Tower 1 and Tower 2 were questioned by those who restored the same stretch of wall later.
2.   There is no continuity to the preservation effort. It was done in a piecemeal fashion, without the implementation of a synchronized approach or master plan.
3.   The people in the vicinity of the walls, whether as residents or workers, have not been involved with the preservation efforts in any way. They have, however, been affected by the changes taking place. The only involvement of industrial units in the proximity of the walls has been the legal battles with the municipal authorities.
4.   The rationale for the 'removal of accretions' was to restore the wall to its perceived appearance at a point in history that is significant because of contemporary political trends.
5.   There are no hard guidelines to establish a distinction between what could be the significant accretions and what the dispensable additions might be.
6.   The regulating law can be seemingly self-contradictory at times,[82]and this can lead to an interpretation of regulations that is concurrent with the view of the incumbent

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[82] E.g. Article 7 of Law 2863, as explained in footnote 3.

official. This flexibility is an asset only when the whole system is adequately balanced with checks at every stage.

7.   The structural implications of the preservation efforts have been questioned. In August 1999, there was an earthquake of magnitude 7.4 on the Richter scale, causing damage to the land walls. Tower 17, which was octagonal, lost the southern half. Five towers were damaged seriously. Several rectangular towers were damaged near the Belgrade Gate. Towers 89 and 90, which had been restored in the 1970s, and a segment of wall near the Adrianople Gate were also damaged. The cosmetic repairs and restorations of the early 1980s gave way and caused damage.

To quote Prof. Dr. Zeynep Ahunbay, chair of Historic Preservation at Istanbul Technical University,

> "The restoration campaign of the 1980s has been criticized due to its resort to reconstructions of ruined towers and gates instead of stabilizing and consolidating the dangerous structures. The behavior of twentieth-century repairs during the recent earthquake constitutes a good lesson for future restorations."[83]

As a result, UNESCO, The International Council on Monuments and Sites (ICOMOS) and the Turkish Ministry of Culture organized an international conference to investigate the built cultural heritage that traditional architecture represents, together with its impressive performance in earthquakes.

In the words of UNESCO's Francis Childe,

> "the question is whether, in importing convenient, reinforced-concrete construction methods into areas of high seismic risk, traditional construction methods, better adapted to such areas, may not have been overlooked. And if they have been overlooked, it is our duty to ask what could be learned from such techniques."[84]

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[83]The Constantinople Page by Robert Ousterhout: The Land Walls
http://www.arch.uiuc.edu/research/rgouster/

[84] UNESCO *Sources* (12 December 2000)
Information also available at http://www.conservationtech.com/IstanCon/Sources.htm

It is assumed that the shortcomings of the earlier work on the walls have been realized and most of the later reconstruction and repairs have survived the earthquake in 1999. However, it is very difficult to assess this because the repairs and reconstruction have often been at the same location, enabling acquittal from the allegations of poor work. The division of the preservation effort between teams having varying levels of professional expertise has also produced an inconsistency in the quality of work.

Conclusion

The whole attempt at restoring the wall was driven by an ideology not completely unlike Viollet-le-Duc's attempts at Carcassonne. The walls were 'restored' to their 'original' or 'completed' state, an intervention that is more an expression of contemporary architecture. The walls have been restored to a current historical and political understanding of what they were intended to be. However, un-coordinated efforts from a multitude of organizations and institutions coupled with sporadic and politically driven funding programs have made it impossible to evaluate the city walls as one operation. The historic nature of the changes that the walls underwent through the passage of time were not evaluated. The decisions to retain some of those changes and discard some do not seem to be based on any historical research.

"Québec was founded by the French explorer Champlain in the early 17th century. It is the only North American city to have preserved its ramparts, together with the numerous bastions, gates and defensive works which still surround Old Québec. The Upper Town, built on the cliff, has remained the religious and administrative center, with its churches, convents and other monuments like the Dauphine Redoubt, the Citadel and Château Frontenac. Together with the Lower Town and its ancient quarters, it forms an urban ensemble which is one of the best examples of a fortified colonial city."

[WHS Status 1985] C (iv) (vi)

Introduction

History

Fortifications of Québec National Historic Site of Canada is a 4.6 km network of walls, gates and squares, dating from the 17th century to the 20th century.

In 1690, Québec was already divided into two distinct quarters; the Lower town on a narrow strip of land running alongside the river and Upper town located on the headland, which dominated the banks. Lower town was not protected by a natural defense system. Consequently, several ambitious attempts were made by French engineers to build defense works near the port and link them to the urban layout of Lower town. However, the quarter was to only be protected by various batteries built near the shore, such as the Royal Battery set up in 1691.

Unlike Lower town, Upper town was secured by a natural defense system on two of its three sides. The city's west end faced the countryside and was open to enemy attack. Therefore, a classic rampart had to be built. Defending Upper Town on the west side against a potential siege became the top priority for Québec's engineers.

In 1690, Admiral Phips and his fleet sailed from New England to attack Québec. Colonial authorities were in constant fear of a European siege. Several solutions, which both did and did not follow the classic maxims of military engineering, were put forward. In 1693,

a second enceinte was built to replace the temporary one set up in 1690. This time, Josué Boisberthelot de Beaucours' design was used; the earthwork enceinte was revetted with a palisade and interrupted by bastions. However, the fortifications presented defects concerning their location in relation to the topography. Most of the fortress works were enfiladed or seen in reverse from various heights outside the fortifications.

Although Québec was a vast site between 1700 and 1720, its defense system was incomplete and inadequate. The city was indeed a maze of temporary and permanent structures, isolated works, and entrenchments, all of which were the results of three different projects. In the next quarter century, the engineer Chaussegros de Léry proposed a series of projects to fortify Québec. Time and time again, his efforts were in vain. The new Minister of the Marine, Count de Maurepas, believed that the colony's defense policy should be based on the geographical and economical realities of North America. The Fortress of Louisbourg and the navigational difficulties created by the St. Lawrence River became Québec's bastion.

The fall of Louisbourg in 1745 triggered a state of panic among Québec's inhabitants. Governor Beauharnois, without awaiting approval from France, authorized that a new enceinte laden with masonry be built. These fortifications, modeled after Chaussegros de Léry's design, permanently closed the city at the end facing the countryside and integrated components of previous enceintes. However, the new enceinte was set up farther west that Beaucours' works (1693) and therefore allowed for the city to expand.

The project did have certain weaknesses. The flanks, for example, could be seen from some of the high grounds further west. Yet, it must be noted that the rampart was hastily built lest there be an imminent attack. This explains why Chaussegros de Léry, at the beginning of the 18th century, tried to join both old and new structures. During the siege of 1759, Montcalm and other French officers made harsh judgments on the fortifications. In some aspects, they were right; a part of the parapet and covered way had not been completed. On the other hand, criticism concerning the enceinte's adaptation to the terrain and geometrical layout was unfounded. The enceinte's weaknesses did not cause the 1759

surrender. Moreover, James Murray, who was in charge of defending Québec, used the rampart effectively when Lévis laid siege in 1760. Similarly, the existing enceinte discouraged the Americans from continuing their attacks on this front of the city.

Shortly after the Conquest of Canada, the British victors were faced with new defense requirements. From 1760 to 1775, military authorities feared a reaction from the Francophone population. Furthermore, they were concerned that France would try to recapture Québec. Due to England's economic woes, Québec's defense system was not to be strengthened. Instead, the British took the necessary precautions to preserve the fortifications. One idea nevertheless prevailed: a citadel had to be built. The city's enceinte, deemed inadequate, was virtually ignored for a quarter of a century.

The American Revolution gave rise to the British's first project. Between 1778 and 1783, the army set up a series of wood and earth works, which formed a réduit along the heights of Cape Diamond. Based upon William Twiss' plans, these works were designated as Québec's "temporary citadel." What was most striking about the British's attempts to build a citadel was that Twiss, and even more so his successor Gother Mann, recognized the defense value of the 1745 rampart. After a comprehensive analysis of Québec's defense system, Mann proposed a project that consisted of four specific elements:

1. Complete the enceinte around the city to protect it from a coup de main (attack);

2. Build outworks in front of the enceinte to hamper the enemy's approach;

3. Place defense works on the heights of Abraham located west of the city;

4. Erect a citadel on Cape Diamond so that the British garrison could take ultimate refuge if need be.

Mann's project was almost entirely carried out. The last element in his defense plan was carried out between 1819 and 1832: Elias Walker Durnford engineered the building of Québec's Citadel on Cape Diamond. The structure consisted of an irregular pentagon with two sides located on the edge of the cliff, one near the country on the west and two facing Upper Town. Ravelins located in front of the curtain walls reinforced the two fronts on the city's side. Casemates were also built under the rampart on this side. The western front was safeguarded by a ravelin and two counterguards.

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Durnford therefore integrated a section of the 1745 enceinte with the Citadel. The only real new fronts were those that faced the city. This meant that the Citadel was to be the final refuge for the British garrison in case of a siege or citizen uprising. It is important to mention that the Citadel was built during a time when military authorities distrusted the conquered population and when political unrest was rampant.

The reason why a conventional structure was built in Québec: In Europe, engineers were building innovative strongholds known as detached forts. One reason appears to be the most likely; the rebellion of 1837 in Lower Canada justified the engineers' choice for erecting a classic citadel. Once the prison was built in the King's Bastion in 1842, no pretext was needed to integrate the necessary parts with the layout of the second "ultimate réduit," which was located inside the Citadel.

A site of strategic military importance, Artillery Park was the first military quarters built in Québec during the 18th century. First used by French soldiers, the barracks later housed the British garrison until 1871. This military site was then converted into an industrial complex after the military's departure.

When Québec was founded, its military works turned out to be a crucial factor in the settlement of the French. Technically speaking, the trading post's fortifications were basically makeshift works that were built to meet the colony's most pressing needs and revealed that European warfare was in a state of transition. The first Habitation, built by Champlain in 1608, was reminiscent of a medieval castle; the structure included a residence, merchandise and supply store, and a *réduit* for defense with its elevated vertical walls. However, new features were also added to the stronghold. One in particular was typical of the 15th century and provided a place from which to fire artillery; Champlain's "*pointes d'éperons*", placed in front of both the ditch and vertical walls, resembled 15th-century "*boulevards*" that were laid out in front of fort walls.

The Fortifications of Québec tell the tale of over three centuries of Québec's military past. This National Historic Site, along with Artillery Park National Historic Site, the Citadel of Québec, the Martello Towers, and Fort No. 1 at Pointe de Lévy National Historic Site, commemorate Québec's defense system.

Governor-General Dufferin began a conservation movement in 1874 to preserve the old enceinte; it is precisely this effort which will remain forever etched in the minds of Québecers. The renowned Dufferin Terrace was soon built over the cliffs and new gates were put up as gateways to the intramural city. Both ensured the transition from fortified to heritage city.

The heritage campaign reached its peak in the 20th century when the fortifications were designated a site of national historic importance in 1957. At the same time, the Québec government began restoring all the houses and buildings at Place Royale in Lower Town; this area was once the city's main commercial and residential sector as well as the cradle of French civilization in North America. In December 1985, following a recommendation made by the International Council on Monuments and Sites (ICOMOS), Québec's historic district was placed on UNESCO's world heritage list. Today, Old Québec City is completely encircled by fortification walls and is the only remaining city north of Mexico with intact surrounding walls.

(source: National Gallery, NMC, LO 80333)

Military Fortifications contributed to the division of the city into distinct areas as shown in this 1820s watercolor of Quebec, where the walls physically demarcate the Upper and Lower town.

Definition of the heritage

- Heritage

All the areas, monuments, sites and other concerns that are significant to the nation by being of natural or historic significance are considered to be national heritage. Performing arts, films, traditional industries, and other domains that relate to Canadian history, culture or values are also included in the broader definition of the heritage.

Department of Canadian Heritage Act 1995, c. 11

An Act to establish the Department of Canadian Heritage (and to amend and repeal certain other Acts)

Assented to 15th June, 1995

4. (1) The powers, duties and functions of the Minister extend to and include all matters over which Parliament has jurisdiction, not by law assigned to any other department, board or agency of the Government of Canada, relating to Canadian identity and values, cultural development, heritage and areas of natural or historical significance to the nation.

(*d*) cultural heritage and industries, including performing arts, visual and audio-visual arts, publishing, sound recording, film, video and literature;

(*e*) national parks, national historic sites, historic canals, national battlefields, national marine conservation areas, heritage railway stations and federal heritage buildings;

- National Historic Site

Subjects that qualify for national historic significance will meet one or more of the following criteria:

1. A place may be designated of national historic significance by virtue of a direct association with a nationally significant aspect of Canadian history. An archaeological site, structure, building, group of buildings, district, or cultural landscape of potential national historic significance will:

a) illustrate an exceptional creative achievement in concept and design, technology, and/or planning, or a significant stage in the development of Canada; b) illustrate or symbolize in whole or in part a cultural tradition, a way of life, or ideas important in the development of Canada; or

b) be most explicitly and meaningfully associated or identified with persons who are deemed of national historic importance; or d) be most explicitly and meaningfully associated or identified with events that are deemed of national historic importance.

2. A person (or persons) may be designated of national historic significance if that person individually or as the representative of a group made an outstanding and lasting contribution to Canadian history.

3. An event may be designated of national historic significance if it represents a defining action, episode, movement, or experience in Canadian history.

The Historic Sites and Monuments Board of Canada may receive and consider recommendations respecting the marking or commemoration of historic places, the establishment of historic museums and the administration, preservation and maintenance of historic places and historic museums.

In practice, the Board advises the Minister on the commemoration of those persons, events, sites, structures and places that represent nationally significant aspects of Canadian history.

Bill C-27 Royal Assent

Second Session, Thirty-sixth Parliament,

48-49 Elizabeth II, 1999-2000

Assented to 20th October, 2000

42. (1) The Governor in Council may set apart any land, the title to which is vested in Her Majesty in right of Canada, as a national historic site of Canada to which this Act applies in order to

(a) commemorate a historic event of national importance; or

(b) preserve a historic landmark, or any object of historic, prehistoric or scientific interest, that is of national importance.

Identification of the heritage

First Session, Thirty-sixth Parliament,
46-47 Elizabeth II, 1997-98
STATUTES OF CANADA 1998
CHAPTER 31
(Assented to December 3, 1998) An Act to establish the Parks Canada Agency and to amend other Acts

2) The Minister may designate any historic place as defined in section 2 of the *Historic Sites and Monuments Act* as a national historic site for the purposes of this Act.[85]

The Historic Sites and Monuments Board of Canada is a body whose agenda is largely driven by public concerns as it responds to requests that people, places and events be declared of national historic significance. It receives more than 200 requests each year, of which 50 to 70 will generate research papers from the Historical Services Branch or the Federal Archaeology Office of the National Historic Sites Directorate of Parks Canada to assist the Board in its deliberations.

Considerations of the Board for designation of national historic significance are made on a case-by-case basis, in accordance with the context of the wide spectrum of Canada's human history:

An exceptional achievement or outstanding contribution clearly stands above other achievements or contributions in terms of importance and/or excellence of quality. A representative example may warrant a designation of national historic significance because it eminently typifies a nationally important aspect of Canadian history.

An explicit and meaningful association is direct and understandable, and is relevant to the reasons associated with the national significance of the associated person or event.

Uniqueness or rarity are not, in themselves, evidence of national historic significance, but may be considered in connection with the above criteria for national historic significance.

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[85] Historic Sites and Monuments Act Chapter H-4
"historic place" means a site, building or other place of national historic interest or significance, and includes buildings or structures that are of national interest by reason of age or architectural design;

- <u>preservation and management of national parks and historic sites</u>

48-49 ELIZABETH II

CHAPTER 32

An Act respecting the national parks of Canada

Assented to 20th October, 2000

11. (1) The Minister shall, within five years after a park is established, prepare a management plan for the park containing a long-term ecological vision for the park, a set of ecological integrity objectives and indicators and provisions for resource protection and restoration, zoning, visitor use, public awareness and performance evaluation, which shall be tabled in each House of Parliament

(2) The Minister shall review the management plan for each park every five years, and any amendments to a plan shall be tabled with the plan in each House of Parliament.

12. (1) The Minister shall, where applicable, provide opportunities for public participation at the national, regional and local levels, including participation by aboriginal organizations, bodies established under land claims agreements and representatives of park communities, in the development of parks policy and regulations, the establishment of parks, the formulation of management plans, land use planning and development in relation to park communities and any other matters that the Minister considers relevant.

(2) At least every two years, the Minister shall cause to be tabled in each House of Parliament a report on the state of the parks and on progress made towards the establishment of new parks.

5. In exercising the powers and performing the duties and functions assigned to the Minister by section 4, the Minister shall initiate, recommend, coordinate, implement and promote national policies, projects and programs with respect to Canadian identity and values, cultural development, heritage and areas of natural or historical significance to the nation.

7. To facilitate the implementation of any program of the Minister under this Act, the Minister may

(i) acquire or seek to acquire any property by way of gift, bequest or other form of donation.

In addition, the members of the Historic Sites and Monuments Board are appointed at pleasure by the Governor in Council. There are two representatives for each of the provinces of Ontario and Québec, and one representative for each of the other eight provinces, Yukon, and the Northwest Territories. A member must reside in the province or territory that he or she represents. As well, the National Archivist and an officer of the National Museums are members. A member may be appointed for no longer than five years and may be re-appointed for additional terms. The Chairperson of the Board is appointed by the Governor in Council from the members of the Board.

The Cultural Resource Management Policy is defined by the Parks Canada. The Cultural Resource Management operates on two levels. It applies to the overall management of a national historic site or a historic canal (which can be considered as cultural resources), as well as to the individual cultural resources that are contained in a national historic site, national park, or historic canal.

Conservation Philosophy

The principles of this policy apply to all agreements that Parks Canada makes with others respecting the management of cultural resources.

Principles of Value

Parks Canada will value most highly those cultural resources of national historic significance.

Parks Canada will value cultural resources in their context and will consider resources as a whole as well as discrete parts.

National historic sites and canals with extensive areas may be zoned in order to indicate the types of activities that are appropriate in different parts of the site or canal.

Principles of Public Benefit

Public benefit of cultural resources will be most appropriately achieved by the protection and presentation of that which is of national historic significance.

The continuing public benefit of a resource will be assured through ongoing maintenance and care.

Appropriate uses of cultural resources will be those uses and activities that respect the historic value and physical integrity of the resource, and that promote public understanding and appreciation.

In the interest of long-term public benefit, new uses that threaten cultural resources of national historic significance will not be considered, and existing uses that threaten them will be discontinued or modified to remove the threat.

Principles of Understanding

Cultural resource management activities will be based on knowledge, and professional and technical skills and expertise.

Parks Canada will integrate the contributions of relevant disciplines in planning and implementing cultural resource management, and will place a particular importance on interdisciplinary teamwork.

Parks Canada will maintain up-to-date inventories and records on its cultural resources. Dossiers will contain basic data and related documentation, including the results of research and evaluation, records of decision and actions taken. Heritage recording will be carried out on cultural resources of national historic significance.

Parks Canada will avoid actions that reduce the potential for long-term conservation and for future understanding and appreciation of a cultural resource and the legacy that it represents.

Principles of Respect

Those who hold our heritage in trust are responsible for passing on that heritage in ways that maintain its potential for future understanding, appreciation and study. As an irreplaceable part of this heritage, cultural resources will be managed with continuous care and with respect for their historic character; that is, for the qualities for which they are valued.

Principles of Integrity

Parks Canada will present the past in a manner that accurately reflects the range and complexity of the human history commemorated at or represented in a national historic site, historic canal or national park.

Cultural resources should be distinguishable from, and not overwhelmed by, efforts to conserve, enhance and present them.

Laws/ Legislations/ Acts/ Agreements/ Motions/ Conventions/ Treaties

Historic Sites and Monuments Act CHAPTER H-4
Department of Canadian Heritage Act 1995, c. 11
STATUTES OF CANADA 1998 CHAPTER 31
STATUTES OF CANADA 1998 CHAPTER 32
Parks Canada National Historic Sites Policy: Guiding Principles and Operating Policies
Parks Canada: Principles of Cultural Resource Management

(source: Parks Canada, Francois Quirion)

Aerial view of Quebec

Case Specific Mechanism

Political

Ownership

The city walls around Québec that are part of the National Historic Site are owned by the Government of Canada.

Management

The Fortifications of Québec National Historic Site is part of the network of historic sites managed by Parks Canada. The main role of this National Site is to ensure the protection and development of the walls and gates of the city of Québec, the Governors' Garden and Montmorency Park as well as other important places such as Dufferin Terrace and the Governors' walkway.

Stretching over 4.6 km, the walls and ramparts bear witness to the evolution of Québec's defensive system from the 17th to the 19th century.

The Minister of Canadian Heritage, the Historic Sites and Monuments Board and Parks Canada are all responsible for the management of the site. Parks Canada is the administrators for the fortifications.

Parks Canada fulfills the Minister of Canadian Heritage's responsibility to provide a Secretary and other employees of the department necessary for conducting the business of the Historic Sites and Monuments Board of Canada.

The Historic Sites and Monuments Board of Canada advises the Minister on the form of commemoration it considers appropriate to recognize national historic significance, and may advise the Minister on any other matter relating to the commemoration of Canada's history.[86]

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[86] Parks Canada National Historic Sites Policy: Guiding Principles and Operating Policies
1.0.The Role of the Minister of Canadian Heritage.
1.2.The Role of the Historic Sites and Monuments Board of Canada.
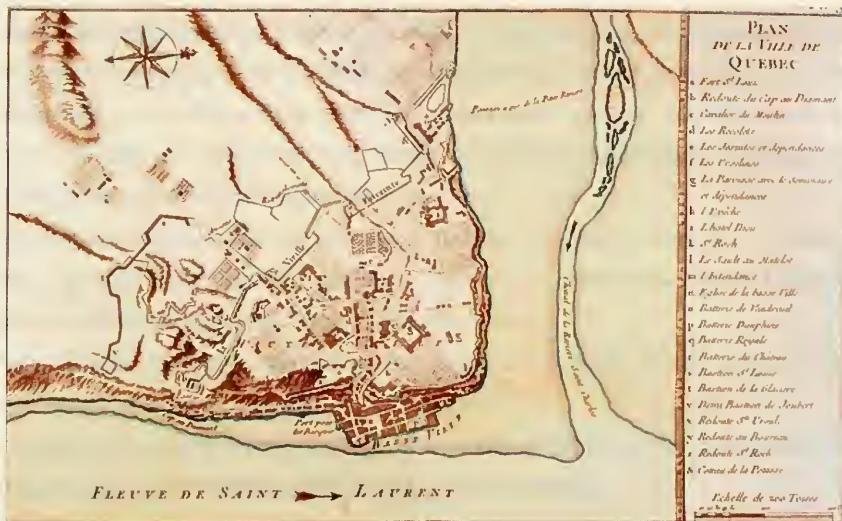
(source: National Archives of Canada)

Plan of Quebec Fortifications 1665

Planning

The Historic Sites and Monuments Board of Canada is the statutory advisory body to the Minister of Canadian Heritage and, through the minister, to the Government of Canada on the commemoration of nationally significant aspects of Canada's history. It forwards positive recommendation to the Minister, and provides advice on an appropriate federal involvement regarding erecting a bilingual commemorative plaque, entering into a cost-sharing agreement with a third party, and rarely, when resources are of exceptional quality or rarity and associated with themes of particular significance, acquiring and developing a major national historic site.

Parks Canada also maintains and periodically updates long-range systems plan to identify and address gaps in the commemorative program and provides a basis for making systematic decisions regarding forms of commemoration.

Parks Canada provides opportunities for public involvement in the identification, development and operation of national historic sites.[87]

Management planning for the national historic site is based on the commemorative objectives that led to the designation and acquisition of the site.

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[87] Parks Canada National Historic Sites Policy: Guiding Principles and Operating Policies 1.3.The Role of Parks Canada.
http://www.parcscanada.gc.ca/parks/quebec/fortifications/en/frame_welcome_e.html

Maintenance

The Historic Resource Conservation branch of parks Canada is the agency responsible for conservation of large historic objects such as canons and machinery on the site. They are active in many professional associations by providing direction as members of the executive or special committees, by writing publications and by participating in conferences, seminars and workshops. The protection and presentation of national historic sites, regardless of ownership, are major objectives of Canada's national commemorative program.[88] In rare cases where the integrity of a site and its resources would be threatened will information about the location be withheld.

Special Laws, Acts, Bodies etc. in effect

Historic Sites and Monuments Board of Canada

Parks Canada

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[88] Parks Canada National Historic Sites Policy:Guiding Principles and Operating Policies
Principles of Cultural Resource Management

Conservation Philosophy

<u>Restoration/ Interpretation</u>

In managing cultural resources Parks Canada adheres to the principles of value, public benefit, understanding, respect, and integrity, and proceeds on a case-by-case basis. These principles are not mutually exclusive; they share common elements and work most effectively when considered as a whole rather than individually. The principles provide the means for determining the appropriateness of actions affecting cultural resources. Given the complexity of cultural resources, it is apparent that they cannot be managed on the basis of a general list of approved or prohibited activities. Consequently, all activities that might affect cultural resources, including activities relating to conservation and presentation, are evaluated, and when approved, implemented in accordance with these principles. An activity that compromises the commemorative integrity of a national historic site is not permitted. The principles provide requisite guidance for treating both the material and non-material aspects of heritage conservation and presentation.

The guidance provided by the principles of Parks Canada is made more explicit in directives, manuals, standards and guidelines developed them.

Planning

Integration

The city wall of Quebec has always been a barrier between the civilian population of the city and the military establishment. The walls always enclosed a restricted area that was limited to those in power and emloyed in the defense of the city. This legacy has persisted even today to an extent, in the sense that the city wall still encloses certain areas that are restricted to those in power.

Phasing

The repairs and restoration of the walls has been a continuous project as a part of ongoing maintenance carried out and there have not been any strong one-time effort. The protocol for any work is laid down within the guidelines that Parks Canada has laid down, and budgeting and project planning also follows those procedures.

Technological

Material

More than 5,000 linear feet of walls surround the Old City, averaging 12 meters (40 ft.), in height, and 1.5 m (4 ft.) to 3.5 m (7 ft.) in thickness. The exposed face of the walls is green and gray granite, the inner face is composed of a local limestoneand the infill is rubble.

In *Specification of Work and Materials Required for Taking Down and Rebuilding Sundry Portions of Fortifications Walls*, Québec 1879, the procedure of grouting is described as "grout with liquid mortar at every two feet."

In the past decade, historic procedures have been followed with testing and scientific data collection at every step. That involved the attempt to precisely determine the flow of the grout through the masonry, and the quantity of voids filled. Several approaches devised

by an "in house" government team for the private contractors selected through a public tendering process, were adopted to prepare, execute and supervise the work. [89]

Technique

Before any serious work is done to repair and stabilize the walls, archaeological investigations are carried out. In the past, this procedure has confirmed the presence of hidden buttresses and revealed the poor condition of the masonry. Further engineering investigations determine the causes of deterioration, soil conditions and properties, water table, bedrock and the percentage of voids in the walls.

The restoration technique used involves removing the fill behind the fortification walls, installing a drainage system, repointing the sound masonry, replacing the rotten stones, drilling vertical and horizontal injection holes at regular intervals, inserting steel reinforcing bars in the holes, and injecting a special cement grout.

Trades/ Guilds/ Education/ Training/ Local Labour/ Tradition

Though traditional methods are often used with an overlay of modern scientific analysis and understanding, the work is done by professionals in the modern sense. Their expertise is in the fields of cultural resource management, engineering, architecture, conservation sciences and so on. Contractors are chosen by the tenders that they submit and there are guidelines to award work to contractors, who work under the direction of experts appointed by the agency that is the site custodian, in this case Parks Canada.

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[89] http://www.icomos.org/~fleblanc/pub_quebec_walls.html

(source: Parks Canada, Louis Jacob)

Fortifications of Quebec: St.Louis Gate

Economical Impact

<u>During Implementation</u>
The fortification shave been under the stewardship of Parks Canada and most of the funds channeled into the restoration have come from government and public resources. The last major campaign for restoring the walls was in 1976 when the average cost for consolidating the Québec City walls was approximately $3,500 per linear meter ($1,000 per linear foot) in 1976. This cost covered all work except the professional services to prepare the plans and specifications and do the site supervision.

<u>Post-implementation</u>
The source of funding for the maintenance of the walls has made evaluation of economical impact after conservation difficult. Besides, there has been a continous ongoing regime of maintaining the wall, which was never in a really neglected or abandoned state. The positive impact that Quebec has had in terms of tourism cannot be singularly atrributable to the fortifications alone, and that makes any assessment of the economic consequences of the city wall and its restoration very difficult.

Salient Features of the Conservation Plan

1. There is not one single, concentrated conservation plan that was carried out but a continuous instituted process of maintaining the city walls.
2. The systems, procedures and protocol governing the management of the wall is dictated by guidelines specified for the purpose. These are rigidly followed; however, the actual guidelines are flexible enough to be adapted for any site as per specific needs. They are indeed guidelines, and not rules.
3. The monitoring of the wall and the subsequent repairs may be carried out by contractors, but these contractors are always supervised by appointed experts, whether from Parks Canda or otherwise. The appointment of these experts is stipulated in the rules and guidleines for management.

4. The factors that threaten the wall have been reduced to heavy traffic, accumulation of water due to poor drainage, effect of freeze-thaw cycles, differential thermal expansion and weak bonding between the wall's outer and inner skins. There are efforts to resolve these potential threats or at least to reduce them.

Conclusion

The management and maintainence of the city wall of Quebec is guided by a system of guidelines, manuals and procedures laid down in a way so as to be flexsible enough to cater to the individual requirements of different historic sites. The regulating agencies operating through a system of checks and balances. The emphasis is on long term procedural systems than the one-time efforts that very often fade away. This approach has dictated the phasing and planning of all activities.

Political

Ownership

The ownership of the walls is almost a non-issue with respect to the conservation planning and implementation of the walls. The different walls studied are under different types ownership. The important common feature is that all the walls are owned by a government or a semi-government body, a public sector institution. It is expected that this can facilitate and expedite the work related to conservation, since policy decisions related to the wall are often with the agreement with other infrastructure and service providing authorities. This is proved wrong with the authorities like the Istanbul municipal body, which has not been able to ease or speed the restoration process because of its strained relations with other public-sector departments operating within the city. The Chester City Council, on the other hand, with a similar kind of ownership status, managed to take on board, people from across all the related institutions, to ensure consensus on all preservation related decisions.

Management/ Maintainence

The management and maintainence should be carried out by a specialised and professional body with experts in all the related matters. This approach is seen in Carcassonne, Quebec and Chester, where professional bodies, committees or commissions are empowered with making recommendations, and in some cases, decisions. These systems are full of checks and balances, where such recommendations are debated, tested or discussed by other professional bodies. If the loops and procedures are at a relatively local level, as in Chester, decisiosn can be made faster and more specific to the issues. In Carcassonne and Quebec, the procedures are extremely

centralised, which tends to cause a generalisation of many of the involved issues, as inputs from across the whole country try and deal with a local or specific problem.

The maintainence and management decisions in Istanbul have often been taken by non-experts and elected representatives; these people can be called non-professionals or quasi-professional at best, and this kind of intervention often proves to be politically and economically motivated in a very narrow sense. It is not consistent over time.

Planning and Phasing

The phasing and planning are a critical component of the whole plan. If this is not conceptualised and structured before actual implementation of the plan, the end objectives are not met. In Chester, the program was a well-phased and structured one, which was implemented as per the schedule. The magnitude of the effort and of the agencies responsible for the management of the walls around Quebec and Carcassonne already ensured the planning, policies and the phasing of their conservation plans. Istanbul has not been consistent with its planning, or its phasing, partly resulting from a lack of clarity in the ideological reasons for preservation.

Technological

Material and Technology

The use of historic material and techniques has been effective wherever it has been practised. The wall of Chester was rehabilitated to accommodate a few newer uses, so material and technology has been compromised at times to allow the urban living character of the wall. Carcassonne and Quebec are both non-urban in a cetain sense, but more inclined towards their use as tourist destinations, and the use of newer technology and materials has complemented their objectives. In Istanbul, certain portions of the wall have been reconstructed using traditional methods and materials, and that approach has worked well. Wherever incompatible materials have been used, the wall as an

Continent / Region			America	Middle East	Europe		AFRICA
Classification of Factors for Study	Factors for Comparison		Quebec, Canada	Istanbul, Turkey	Chester, England	Carcassonne, France	CAIRO
Philosophical	Restoration						
	Rehabilitation						
	Reconstruction						
	Interpretation						
Physical	Traffic Flow						
	Relation to Outside					N A	
Technological	New						
	Traditional						
Social	Living	Original					
		Non-original					
		Tourist					
	Dead						
Economical	State						
	Other Institutional						
	Other						
Political	Planning		Parks Canada	Ministry of Culture	Planning Dept	Advisory State Institutions	
(It is mandatory for most of the institutions mentioned here to carry out their functions after consultation and approval from other bodies)	Ownership		Government of Canada	Government of Turkey	Chester City Council	Min. of Culture & Commn	
	Management		Parks Canada	Municipality of Istanbul	Chester City Council	NFHMS	
Planning	Integrated	Regional					
		City					
		Precinct					
	Insulated						
Period of Plan	Phased	Planned					
		Circumstancial					
	One-time						
World Heritage Site							

Evaluation of Conservation Plans

Based on the comparative evaluation of the case studies chosen, some lacunae observed in the conservation plans and their implementation should be avoided. This is based on a partial assumption that the commonalities in the requirements for the preservation of city walls indicate that these common aspects can be resolved by similar means. However, the uniqueness of sites and cities, rooted in different cultural milieus would be appreciated and given due consideration.

Some of the observations might have been rediscovered, but this rediscovery is an affirmation of those principles. This is common in the social sciences, where self-discovery through a complex search for an absolute understanding is the basic theme.

1. **The policy and implementation should be consistent over a period of time; it should not be contingent on political, ideological or other shifts in power.**

    This trait is seen in all conservation plans and their mode of implementation. Since the history of conservation itself shows dynamism in the philosophy of preservation, it would be utopian to expect the same ideological model used for the preservation of a site. As our understanding of history and the rationale for preserving material traces of it is enhanced, there shall be academic shifts in the acceptable philosophy. But these shifts should be based on strictly academic criteria. In Istanbul, within a decade, the whole motivation for preservation changed, and preservation plans are driven by financial and political inputs. In Carcassonne, the change in preservation philosophy has shifted over a century, with an academic impetus in the field of preservation.

2. **There has to be an ideological and monetary continuity to the whole preservation effort.**

    The principal reasons for the discontinuity of ideology are changes in monetary and political participation as discussed above. This consistency and continuity would be possible with the retention of certain key bodies and organizations through the planning and implementation of the conservation plan. This is seen in Chester, where

the consultants, the planning agencies and the advisory bodies were involved since the phase of surveys to the implementation, till a sustainable process was set up to govern the preservation efforts. In Carcassonne, the whole system is institutionalized, and that gives it a sense of continuity.

3. **The local people, the residents, and all those likely to be affected by any change (physical, interpretive or perceptive) to the wall should be involved in the whole plan.**

The participation of the people is crucial to the success of the conservation plan. Since the city walls are in the public domain, it would be unwise to exclude the people, particularly the residents of the area involved. In addition, the contribution of academic institutions and professional bodies should also be encouraged, with prudence against any agenda that they might have to promote. A largely democratic process should be employed to reach consensus on issues that the concerned people might be affected by. Participation shall also heighten a sense of belonging to the conservation plan. Ensuring the participation of residents is a step towards retaining the living character of the area.

4. **The interests of these groups should be the consideration for any plan without compromising the focus, that is the preservation of the wall.**

The stakeholders, once defined, shall be the prime beneficiaries of the conservation plan. The conservation plan shall aim beyond the material preservation of the wall and shall tackle the broader issues of preserving the urban character, which would circumscribe the issue of being sensitive to social patterns. This would not be possible unless the people are involved, for which certain projected benefits would add an incentive value. These potential benefits need to be communicated to the people involved and the consultation for the participation of the people would be a good forum for this purpose. None of the potential benefits shall be at the cost of any of the objectives of the conservation plan, which would be defined.

5. **The stakeholders should be people or organizations or groups that not only benefit from any plan implemented but also have an investment (material or otherwise), the fruition of which depends on the success of the plan.**

Citizen participation is critical and apart from the benefits that may be projected, the success of the conservation plan would also be contingent on the negative effects of an unsuccessful program being used as a deterrent for non-committal participation. Unless the stakeholders have something to lose just as they have many things to gain from the implementation of a conservation plan, solid support and firm commitments would not be possible. This stake in the program could be an investment proportional to the expected benefits and could be as a collective or co-operative participatory contribution.

6. **The integration of the plan into the larger planning schemes, as also into the planning of different public agencies, is important and ensures a level of amalgamation into the larger body of the whole city or region.**

This interconnectedness ensures a level of stability for the conservation plan and a greater sense of public responsibility and participation. Many of the issues that are part of the conservation plan are tied into larger themes in the city or region. Unless this co-ordination between agencies at, at least the immediately adjacent levels of planning, is not in effect, the conservation plan would not be a successful program. Istanbul has had a problem of synchronizing the activities of the various civic agencies that fulfill the functions relating to the different services. Since every agency comes with its own agenda, there is an overlap of interests and the brunt of this disharmony is borne by the subject of the preservation concerns.

7. **The relationship of the city enclosure to the fabric of the city should not be destroyed. Part of the essence of a city wall is its relation to the city and people.**

The living character of the walls should be retained through any conservation plans. The interaction of the people of the city with the city walls, as also the interaction of the urban architectural elements, is important.

In Carcassonne, the whole connection between the human settlement and the fortifications was lost. The fortifications now stand like a museum. Istanbul, where the people in areas around the walls, such as the tanneries, were not involved in the planning, has not seen success in retaining the character of the wall. The traditional setting of the wall, where the interaction of the local populace kept it alive as part of the city, has been lost. The city wall has been transformed from an internal organ of the city to a monument moved away from the people, an edifice that has no living relevance to the city. In Chester, the original use for the city wall has been lost for long, as is the case with most city walls, but the citizens still interact with the wall by using it as a promenade. New uses are better than an approach of detachment. The social component in the preservation of enceintes is an important issue, which is often disregarded.

Objective

Focus of preservation

The environment to be preserved would comprise of the physical, social and cultural aspects of the areas surrounding the city walls. These domains are not mutually exclusive and changes to any one of these facets would necessarily change the balance of the others. However, this change is acceptable within limits determined by sensitivity to the history and character of the place.

Moving from the physical to the intangible, architectural heritage in terms of buildings and the built environment should be preserved. The retention of these spaces would help preserve the historic urban character of the whole area, which in turn would reinforce the social patterns and a way of life that exists.

Reason for preservation

The preservation of the city walls has a twofold purpose. The city walls and the old city of Cairo with its historic fabric and living character are recognized as elements of cultural heritage, which need to be saved. At the same time, the need for the welfare of the living part of the city should also be recognized. Combining these two can result in a plan that generates a new resource such as tourism to earn money from. The activity of tourism is an unavoidable fallout of successful conservation plans. It is therefore best to include it as an objective and design policies that include tourism as part of the solution.

Stakeholders and Beneficiaries

The stakeholders would be the beneficiaries. The people with property adjoining the wall would be the most affected by any intervention. This degree of being affected would be directly proportional to the distance from the wall. However, other beneficiaries would be the people in a position to exploit the economic growth that the conservation of the city walls may spark off in the neighborhoods around. Apart from the residents and the tourists, humanity at large is a beneficiary for a structure that is the heritage for the world.

Proposal

<u>Introduction</u>

The effort of these recommendations must be more than just the restoration of selected monuments in Cairo and the protection of urban character. Adequate attention to the renewal of the economic base and an increase in investment must also be addressed. These would be essential for the payment of restoration costs as also for the maintenance of a restored environment.

The social characteristics of the older districts adjacent to the city walls have undergone a change. Patterns of invasion-succession of immigrant populations have been superimposed on neighborhoods originally based on guild membership or ethnicity. Unless these changes are acknowledged in the planning, any proposals would be redundant. In these areas, historic buildings need to be restored and new buildings need to be erected, with the area's established character in mind, and past intervention that has had a negative impact needs to be corrected. Much of the physical work needs to be upgrading infrastructure, which is not directly visible. The kinds of activities that could add to the rejuvenation of the economic bases of the historic cities are commonly perceived as only being related to the tourist industry. Hotels, entertainment, restaurants, shops, art galleries, craft shops as well as a myriad of micro-enterprises that accompany tourism are often the backbone of a new economic base. But professional offices of individuals or associations could also be the responsible users within an adaptive reuse approach.

Another option worth considering is developing services. This approach focuses entirely on old cities as uniquely well placed centers for particular types of service activities other than tourism. This option used judiciously could prove helpful in protecting key parts of old cities.

This kind of creative and adaptive reuse, aimed at matching suitable clients with the availability of space in restored buildings, is intended to expand the economic base and at the same time preserve the buildings.

All the recommendations made are possible within the framework of existing legislation, if interpreted and applied in a way conducive to preservation.

Broader Issues

Apart from all the issues connected with the wall itself, there are many broader issues, which need to be tackled as a part of the solution even if they are not directly connected. The matter of these problems may be outside the purview of the study but the solutions shall form an integral part of the recommendations.

Land Divisions and Ownership

Like most old cities, old Cairo is divided into small parcels of land, making any effort at consolidation of significant tracts for decision-making, if not for outright redevelopment, very difficult. The acquisition of key properties for undertaking any rehabilitation program for old cities is critical. Many public buildings are monuments under lease or linked to trust arrangements, making negotiations difficult.

As in many Muslim countries, Waqf has posed problems for efforts at physical restoration and economic renewal. Private buildings are frequently owned by absentee owners and inhabited by squatters or poor families who are protected by rent control and anti-eviction laws. Few, if any, incentives exist to restore the buildings in a financially sound way. The empty, abandoned or vacant lots within and adjacent to the city wall could be effectively used as instruments of negotiation and would be an incentive for recommended appropriate development. The freeze on new construction in the old city needs to be reviewed.

Waqf properties pose a problem as they tend to be non-transactional by virtue of being tied up in trust. However, scholarly studies within the Islamic tradition underline the possibility of exchange, if not outright sales, of Waqf properties, whether of historic value or not. The Waqf authorities could be allotted land or property as compensation in other locations through negotiation, but only where it is inevitable.

Infrastructure Development

The lack of infrastructure development to keep pace with increased habitation is the pressure of the growth of cities goes beyond what the traditional fiber of the urban tissue can sustain[90], resulting in situations where the basic infrastructure suffers from systematic overload and where low-cost sanitation technologies are unlikely to be successful. The negative effects of an underdeveloped infrastructure or a poorly maintained system are a lesson for the need to have good infrastructure support for any rehabilitation program. The rehabilitation of the areas around the city wall is a critical factor in the preservation of the city wall.

Tourism and Cultural Conflicts

The conferring of 'heritage' status resulting in the commodification and the marketing of symbols from history involves an inherent selectivity, which promotes certain value systems over others and can result in the 'disinheritance' of non-participatory, marginalized groups.

For the developing economy in Cairo, the natural resource base is not capable of being exploited, and cultural tourism would appear to provide a fast way of generating money and creating employment. Utilizing the cultural and ethnic resources of parts of the city for tourism may well be the only way to stimulate the economy.

Compared to the development of manufacturing industry it would appear to have multiple benefits. The establishment of tourism infrastructure can be undertaken reasonably quickly, and once started, it can grow, sometimes out of control. However, the wider needs of the population are served and the environmental costs are perceived to be low. However, the development of tourism can generate inter-cultural conflicts broadly centered upon the competition for environmental resources, the commodification of a living culture and a lifestyle. The most dangerous threat is the extent to which the host culture can find itself economically dependent upon tourism.

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[90] Ismael Serageldin in *Medina.*

1.0.0   Creation of an Authority for a defined Historic Area

The fragmentation of responsibilities among multiple agencies, municipalities, central governments, local governments, Waqf and public works authorities, and also private parties has been an obstacle to the efforts of reviving the older area of the city, which is part of the solution for the preservation of the city wall. Sweeping authority and powers for the preservation of the city wall and other associated monuments would be counterbalanced by strict accountability.

1.1.0   Definition of the Historic Area

1.1.1   A geographically defined Historic Conservation Area could be outlined using the historic city wall as a key factor in demarcating such an area.

1.1.2   This area shall include the city walls across all neighborhoods, the buildings and structures connected with these walls. The buildings and structures associated with the walls shall be called associated on the basis of :

1.   physical association

2.   visual association

3.   historic association

4.   folklore association

1.1.3   This area would also incorporate the key elements of the old city area as well as some of the interconnecting spaces for a meaningful and comprehensive urban design.

1.1.4   It is important that this designated area is large enough to capture the elements associated with the city wall in need of conservation but not large enough to threaten the role of municipal authorities responsible for the entire city.

1.2.0   Composition of the Authority

1.2.1   An Authority that studies, documents, supervises development around, and is the authority responsible, for the city walls shall be formed.

1.2.2   The city walls are a secular architectural heritage and this body may not have any religious affiliations.

1.2.3   It shall be very unfair to exclude larger planning issues of the city, the region and so on and so forth. To this end, the Authority shall be represented across planning organizations of all the relevant scales, and conversely, all planning bodies shall be represented in some way on the Board of this Authority.

1.3.0   Responsibilities of the Authority

1.3.1   The responsibility of the authority would extend to restoration and preservation of monuments. Defining and enforcing building codes and regulations to conserve the character of the area would also be a part of its functions. This authority would undertake mandatory reviews of new construction.

1.3.2   Flexibility in its policy, where inevitable, through negotiation should be acceptable in situations where this approach is justified.

1.3.3   The authority would also be responsible for the bulk of infrastructure and commercial development of the area.

1.3.4   The activities and functions of the many services and authorities connected with these services affect the physical fabric of the city walls. A mechanism to co-ordinate these functions in the best interests of the preservation of the walls should be worked out.

1.3.5   Responsibility for the overall financial management of the area shall rest with this authority.

2.0.0 Integration

A comprehensive approach where larger involvement of community, infrastructure, economic and tourism development and other issues is inherent in the policy and planning shall be adopted. This shall avoid the conflicts in the implementation of development plans for all these domains. Mere aestheticization would distract attention from real social and economic issues. But these issues need to be studied and acted upon at a higher level, in terms of planning and scale.

2.1.0 New Construction

2.1.1 All new construction would have to be pre-approved by the Authority.

2.1.2 Any construction or repair or alteration would conform to the guidelines laid down by the Authority. These guidelines shall be in accordance with the policy of maintaining the character of the area.

2.1.3 The residents or occupants of any building, if deemed structurally unsound or unsafe by the Authority, shall be offered financial assistance by means of soft loans or cost-sharing agreements. Any works carried out shall be monitored by the Authority.

2.1.4 Only certified or approved contractors shall work in areas that are under the conservation plan.

2.2.0 Public Participation

2.2.1 The concerned citizens resident within protected areas, as also others who can prove their legitimate interests within that area, shall be involved in every proposal, recommendation, and regulation for the conservation area. The regulations can be enacted only if the citizens' body ratifies them.

2.2.2 The residents, occupants and citizens connected with areas that are under the conservation plan shall be given financial incentives to enhance their properties, if they follow guidelines.

2.2.3   3.0.0   Preservation

One of the goals of the conservation plan is to protect the historic fabric of the protected areas by approaches that are sensitive to the living inhabitants and society. If one interest is being served at the expense of the other, the implementation of the plan must be questioned and the whole case in question must be reviewed. The history, the archaeological artifacts and structures, and certain traditional aspects of lifestyles should be maintained.

3.1.0   Conservation

3.1.1   The documentation of the conservation area shall be undertaken and this extensive documentation shall conform to standards laid down by the authority.

3.1.2   The analysis and treatment recommendations for any historic structure shall be scrutinized and approved by relevant conservation experts in the Authority.

3.1.3   Any construction work shall be pre-approved and monitored by conservation experts listed by the Authority.

3.1.4   Any archaeological finds shall be reported to the Authority. New archaeological investigations shall be subject to the legislation in effect.

3.2.0   Tourism/ Interpretation

3.2.1   The walls would increase tourist traffic; this might spawn the growth of commercial activities of a nature that are not rooted in the local tradition. To fulfill this tourism-borne demand for a certain kind of commerce, the local workshop-crafts should be adapted in sensitive ways.

3.2.2   Walking tours of the walls and their contextual setting shall be set up taking care that the residents and local people are not inconvenienced in any way. The city is very much a living city and the walls are built into the fabric of this city. Monumentalization of the walls without taking cognizance of the living qualities of their setting would not be appropriate.

3.2.3   Ensure that the lines of sight connecting important monuments and the city walls are not disrupted in any way. The emphasis on connections between structures

from the same era should be made to facilitate a better understanding of social, political, aesthetic and other mechanisms from that era.

3.4.0   Building Crafts and Traditions

3.4.1   A training course that results in certification for the local masons and craftsmen should be set up.

3.4.2   The quality of local techniques and labor shall be controlled to conform to the standards set.

3.4.3   An increased awareness of the cultural heritage shall be disseminated upwards from a lower level.

3.4.4   The certification may become prestigious over a period of time, and used as an incentive for the labor.

3.4.5   The use and practice of traditional knowledge shall be kept as an integral component of the city walls.

4.0.0   Infrastructure

The infrastructure development and maintenance shall be coordinated between the various agencies responsible by the Authority for the conservation area. The issues of transportation, water supply, sewage, and other services shall be discussed by the Authority in joint consultation with the residents and the respective agencies responsible.

5.0.0 Financial Management

The financial planning for the conservation area shall be handled by the Authority, and with initial assistance from the government, a financial system for the conservation plan shall be set up. This system shall be self-sustainable after a set period of time and all expenses towards maintenance and betterment in the protected area shall be borne by the conservation Authority.

The fund set up shall be a measure of self-sufficiency and sustainable economics in action.

5.1.0 Seed Fund

5.1.1 It is proposed that a seed fund be set up using government grants and loans. This fund shall function as the base capital.

5.1.2 The seed fund shall have regular audits done by the municipal authorities. These shall also be made public.

5.1.3 The seed fund shall be exempt from taxes and donations and endowments would be welcomed.

5.2.0 Loans and Incentives

5.2.1 It should be projected that the fund shall be in a position to give small loans and financial incentives, to residents for maintenance of their properties, within a few years of being set up.

5.2.2 The fund would be supplemented by the inflow of finances that result form the proper management and leasing out of key commercial properties.

Concluding Notes

1. Many of the proposed guidelines, or judicial powers conferred upon the authority, may already be part of the legislation in effect. Being a part of special guidelines shall just help to reactivate these laws.

2. The proposed Authority could be replaced by other existing law-enforcement agencies and still be effective. But political will would be the driving force behind any successful implementation.

3. The specifics of many of the proposed rules and policies have not been detailed. e.g. the guidelines for new construction, alterations or repairs.

Policies

Residential Development

The residential development around the historic core comprising the old city and the walls that define it shall have to undergo studies and reviews to link the problems and concerns with the socio-economic realities that they can be attributed to.

Tourism

Protect the built environment, which is one of the city's attractions for tourists.

Encourage and promote the spread of tourism development throughout the city but only in suitable locations. Suitability shall be decided by applying certain measures.

Discourage the over-development of tourism in any one section of the walls, determined by work with the relevant bodies to establish tourism thresholds for each segment. It is however recognized that certain potions of the walls shall have greater architectural merit and certain surrounds of the walls shall have greater cultural appeal.

Encourage the development of tourism, which supports social and economic prosperity while protecting and enhancing environments.

Encourage and promote pedestrian tourist routes throughout the city by linking major tourist attractions and incorporating wall segments and features in these trails.

Increase existing support facilities for tourism and to promote the development of facilities, for the future growth in tourism, such as public transport, coach parks, shops, recreation and entertainment facilities.

Establish suitable areas for the provision of dedicated coach pick-up/set-down facilities at strategic locations throughout the city. This shall be an important part of the traffic recommendations.

<u>Conservation</u>

The physical form of the city has evolved through many historical periods. The process continues in the rebuilding, which is taking place.

The existing character of the city is thus a compound of the various layers of development from earliest times to the present day, and it is important to recognize the value of each period of its evolution.

The urban character of Cairo has unique and varying qualities embracing the medieval core, characterized by its street pattern and historic sites and buildings of historical significance. The preservation of the elements of our heritage which contribute to the present is also important, as is the need to maintain the qualities of the environmental context or setting. The relationship of old Cairo to the city wall is recognized but this connection needs to be renewed as a major attraction of the city.

Preserve and protect the city walls as features and sites of historical, architectural and artistic interest, which contribute to the character of the city.

Prevent the demolition or any material alteration, without planning permission. Procedures listed separately.

Provide advice to owners of adjacent or abutting buildings of the city walls on the best practices in relation to maintenance, repair, and, where necessary, painting, refurbishment of walls, treatment of stonework, and alterations.

Assist in the maintenance of the historic core of the city.

Encourage the appropriate rehabilitation, renovation and reuse of older buildings, which may be considered to have some connection with the city walls, physical, historical or based on folklore. Rehabilitation of such retained buildings must incorporate the use of appropriate materials and techniques.

Professional architectural expertise in conservation will be a relevant consideration in the assessment of applications for development involving alterations or extensions to the walls and associated buildings, interventions in key spaces.

New building proposals will be required to fit in sympathetically with the existing built form in terms of scale and architectural design.

Archaeology

Cairo is a medieval urban settlement of acknowledged international archaeological importance. Although on occasion the upper layers of archaeological strata have been disturbed by the foundations of buildings, there is evidence that substantial archaeological remains exist in the undisturbed substrata. The preservation of these archaeological remains in situ or by record is essential.

Protect archaeological material in situ by ensuring that only minimal impact on archaeological layers be allowed.

Ensure that archaeological material is protected by encouraging archaeological investigation and reporting at an early stage.

The Restoration of the City Wall or the Line of the City Wall shall be achieved by the marking out of the line of the city wall where the wall only exists below ground, or where it has been lost altogether.

Wall

Develop a framework to bring greater cohesion, unity and vitality to the inner city, while building and reinforcing local identity and distinctiveness to reconnect the city wall's disparate parts through the expansion.

Develop a response that recognizes and enhances the physical diversity of the disparate parts of the city walls.

Preserve the city wall's authentic fabric and form, and create a new contemporary fabric which can coexist in harmony with the old where possible and necessary.

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