

# A STUDY OF THE DOCUMENTATION PROCESS FOR CONSERVATION OF ARCHITECTURAL HERITAGE SITES : ILLUSTRATED BY EXAMPLES FROM EGYPT AND BELGIUM

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## ABSTRACT:

Aguideline for recording historical structures is provided by the National Park Service of the U.S. Department of the Interior. On the other hand there are the guiding principles for recording, documentation and information management for the conservation of heritage places as formulated by The Getty Conservation Institute. Based on these guidelines the model for the documentation flow following the different steps of a conservation project is described. This model is then applied on two examples of documentation that was made during two case studies: of the conservation intervention site in Islamic Cairo, Egypt, and of the St-Jacobs Church in Leuven, Belgium.

When documentation is carried out, it is always necessary to use tools for recording. However the selection process of tools has become a complicated process due to great developments in the technology used and the variety in tools. By observing two case studies the Guideline for the tool selection for the documentation of a conservation project was formulated.

## 1. INTRODUCTION

The guideline for recording historical structures by the National Park Service of the U.S. Department of the Interior (National Park Service of the U.S. Department of the Interior, 2004) is focused on the production methods and techniques of documentation for archival collections. This guideline is a very efficient tool when surveying and describing buildings and also provides solutions on how to archive the created documents. However, they were not created for use during conservation activities.

Since the documentation for architectural heritage sites cannot be considered without its conservation project, the guideline for the documentation will be created with the conservation process in mind.

On the other hand, the guiding principles for recording, documentation and information management for the conservation of heritage places as formulated by The Getty Conservation Institute (The Getty Conservation Institute, 2007) are taken under consideration.

Even though this provided a comprehensive overview of the fundamental principles and guidelines for documenting cultural heritage places, they do not show concrete examples of documentation.

Therefore it is important to draw up the documentation flow following the different steps of a conservation project and describe concrete examples of documentation.

When documentation is carried out, it is always necessary to use tools for recording. There have been great developments in the technology used and the procedure has become more varied and inevitably, more complex. [1]

Because the selection process has become such a complicated process, it is useful to document the tool-selection process of a conservation project.

### 1.1 Goal and method

The goal of this thesis is to draw up a guideline for documentation processes and the selection for tools used during conservation activities.

The research questions are:

- | What kind of documents should be created during a conservation project?
- | How should these documentation steps be taken?
- | How are tools selected?

The first step is an extensive literature study. The general literature on conservation processes and recording is studied. According to the findings of the literature study, a classification of the conservation process, its documents and their accuracy is created in order to classify the documents made during a conservation project.

In a second part, two historical sites which have undergone conservation activities and have specific characters are analyzed, the Aslam al-Silahdar Mosque in Cairo Egypt and the St-Jacobs Church in Leuven Belgium.

Each of these case studies contains:

- | The historical context based on literature and archive documents.
- | The evaluation of the documentation.

The evaluation contains an assessment of the project on three different items. Firstly, the case study is checked against the general conclusion of the literature study. Secondly, an assessment of the specific values of the monuments is to assess on which points the documentation activity must be focussed. The Nara-grid<sup>1</sup> is applied as a tool for the value

assessment. Thirdly, the effectiveness of the documentation activity of the conservation project is analyzed using a SWOT-analysis<sup>2</sup>.

- | The description of the documentation process of the project, analyzed through interviews with restoration architects and conservators, and the experience of the author who was personally involved the project (in the case of Aslam al-Silahdar Mosque), and also through the study of archival literatures.
- | The suggestions and recommendations for the documentation
- | Following the results, the case studies are compared and a general conclusion is drawn up to support the formulation of the specific guideline.

Finally a general conclusion is made which contains a concrete guideline for the documentation for conservation of architectural sites and a discussion about the proposed guideline.

## 2. LITERATURE STUDY

### 2.1 Literature review

Because the conservation activities are multidisciplinary and highly complex tasks, to understand and work efficiently it is necessary to classify the documents created during a conservation project in 'conservation phases' and different 'types of documents'.

Firstly, based on the literature study of the conservation process, the documents created during the conservation activity will be divided into several phases, types and levels according to their accuracy and moment of creation. Then all of these classification systems will be put into a single table, called the 'Delivered documents table'. According to the literature study and the author's experience, who followed the Master Program in Conservation of Sites and Monuments (R.Lemaire International Centre for Conservation, K.U.Leuven), the table was completed.

-Reconnaissance: blue / -Preliminary: green /-Detailed: red

	Administration	Architectural documentation	Photographical documentation	Periodical report	Management Strategy/decision
Initiation	-owner -whole budget -donor -executor	-former drawings	-overview	-initial reports -historical documents and researches -old pictures	-vision of project -maintenance strategy -site management
Assessment	-management system -structural assessment	-existing/detail drawings -physical condition drawings	-actual pictures of each room/facade/important decorations -ongoing pictures	-project reports (evaluation) -structural reports	
Assessment	-budget management -scope of work	-proposal drawings -intervention approval		-proposal reports(PPT)	-scenario of project
Project development	-scope of work detail			-work progress reports -laboratory examinations	-collective choices
Implementation	-cash flow -annual budget plan	-intervention drawings	-ongoing pictures for each action	-selective technical reports -annual report	
Operation		-collections	-collections	-publications -HP	

Figure 1: Ideal derivable documentation table

### 2.2 Definition of conservation process

According to the book of 'Recording, Documentation, and Information Management for the Conservation of Heritage Places Guiding Principles' [2: p20-25] the conservation process could be divided to six important steps.

- 1. Initiation
- 2. Assessment
- 3. Options
- 4. Project development
- 5. Implementation
- 6. Operation

### 2.3 Classification of created document

Throughout and after the conservation project, many documents are needed and created. Those are classified into several types.

- | administration
- | architectural documentation
- | photographic documentation
- | periodical report
- | management strategy/decision

### 2.4 Required accuracy

Architectural and Photographical documentation are classified into three levels according to The Getty Conservation Institute.

[2: p36-37]

- | Reconnaissance:
- | Preliminary:
- | Detailed:

### 3. CASE STUDIES

#### CASE STUDY1: ASLAM AL-SILAH DAR MOSQUE



Figure 2: Aslam al-Silahdar Mosque and Islamic Cairo

The Aslam al-Silahdar Mosque is located in the heart of Islamic Cairo, Egypt, in one of the historically important quarters of Cairo.

The timeframe for the conservation project on the Aslam al-Silahdar Mosque was planned for June 2006 until April 2009<sup>3</sup>.

Before the project started, the mosque was used by the local community. The main aim of the project is to effectuate conservation interventions which include addressing the general deterioration, reinforcing the structural system and conserving all architectural and decorative features of the monument. The main intervention areas are the roof and the minaret, the exterior facades, the ablution area and the interior of the mosque. [3, p.1-2] After the restoration work, the mosque will be returned to the Supreme Council of Antiquities and to the Ministry of Endowment, and will serve its original purpose again.

#### Conclusion of the case study on the Aslam al-Silahdar mosque:

##### 1) Phases:

It is difficult to completely separate each phase. Especially between the option and implementation phase, each action is decided on following a similar process: proposal → examination → (again proposal?) → implementation.

##### 2) Contents of the table:

Most of the contents of Administrative, Architectural and Photographic documents are overlapping.

During the phase of the Implementation, periodical reports were created and displayed on 'project panels'.

##### 3) Documentation during the maintenance phase

It was already determined before the start of this conservation project that the maintenance of the mosque was not included in the project.

However, the documentation carried out during the conservation project could prove to be a useful asset if it was decided to take the last step in this conservation process and install a proper maintenance system.

#### CASE STUDY2: ST-JACOBS CHURCH



Figure 3: St-Jacobs Church

The St-Jacobs Church is located in Leuven, which is famous for its University. The "Katholieke Universiteit Leuven" (K.U.Leuven) was founded in 1425.

The church was closed in 1963, because there was a danger of collapse due to serious structural problems. Since the closure of the church, the city of the Leuven has been the owner of the church, and it did a 'Global restoration work' in 2005, this project mainly focussed on the maintenance of the roof. Since no future usage for the church has been specified, the church is now used as an experimental site. The K.U. Leuven has performed several research projects to analyze its structure and organized several workshops.

#### Conclusion of the case study on the St. Jacobs church:

##### 1) Phases:

Because there is no concrete proposal for a future use of the church, the conservation project has come to a halt after the 'assessment' phase. In order to move forward to the 'option' phase, it is necessary to determine a new usage for the church.

##### 2) Contents of the table:

Until the 'assessment' phase, most of the documents in the proposed classification system have been created.

##### 3) Documentation management

There is a vast amount of information on the St-Jacobs church that has been gathered through the years and is still being gathered. To avoid losing documents, like it happened once in the past already, and to share the results of the researches, a proper system for information management should be established.

#### 4. CONCLUSIONS FROM CASE STUDIES

The conservation phases proposed by the Getty Conservation Institute are a very strong tool for the preparation of the documents created during a conservation project and conservation flow-chart for an architectural heritage site. However, case studies show several needs for modification in order to build up documentation flow-chart. From the literature study useful guidelines can be deduced for each phase.

In both case studies the existing documents were gathered during the initiation phase of the conservation, this process is the same for both documentation and conservation activities. Based on the research performed during the 'initiation' phase of the conservation, the needs for recording (what needs be recorded, precision level, etc.) and the required conservation activities are stated.

After considering the needs for the recording and the application possibilities of the different tools, the most suitable tools are selected. To facilitate this selection process a guideline for tool-selection should be created.

During the assessment, the actual state recording of the monument is carried out with the selected tools.

After that, during the option, project development and implementation phases of the conservation project, the decision making processes for different objects ('proposal → examination → (again proposal?) → Implementation'), are carried out parallel to each other. This was clearly demonstrated in the case of the Aslam mosque.

During the last part of the operation phase, the final project report is circulated and a final publication will be produced. Then the method of archiving for the documents of the project is chosen so that the created documents will be accessible for use in future research or conservation projects.

The GCI proposed to share the data over the internet. On the other hand, HABS archives its created documents and stores them long term in collaboration with the library of congress. The other important consideration for archival is that the information is updatable.

This issue connects to the next step: the maintenance. The existing documents (created during the conservation process) could be used to form the base of the maintenance activities that follow the conservation process.

As both case studies showed, there is a clear need for maintenance and its documentation.

The problem is the lack of official maintenance guidelines and procedures.

An important point of discussion is whether a maintenance phase should be included in the conservation process. Ideally speaking, the maintenance phase can be considered as a part of the implementation phase. On the other hand, John H. Stubbs (2009) [4] doesn't integrate the conservation phase into the implementation phase, he suggests a 'Maintenance and Protection phase'.

However, as to the point of the documentation process, more data will be collected during the operation phase. Therefore the documentation of maintenance activities is a part of the

documentation of the conservation process. This research states that the operation phase and the maintenance phase should be united.

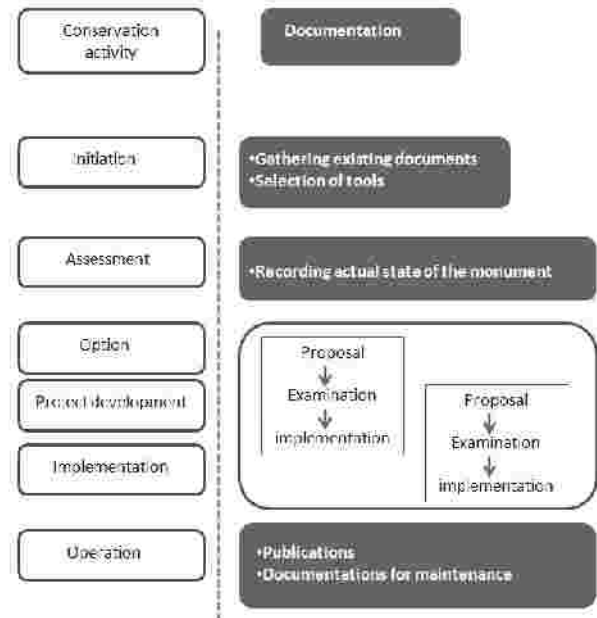


Figure 4: documentation flow-chart following a conservation activity

#### The tool-selection process for documentation of a conservation project

The different steps and criteria for the tool selection process were explained clearly for both case studies.

At the end of the initiation phase, the needs for the conservation and recording were stated according to the value assessment of the monument.

The book of 'The English Heritage' agency shows survey techniques characterised by scale and object size and says that: The recording of position, dimensions and/ or shapes is a necessary part of almost every project related to the conservation of cultural heritage, forming an important element of the documentation and analysis. [5, p3]

This means that defining an object's scale and complexity is important when selecting surveying tools. Both case studies showed that this idea is applied when the tools are chosen for documentation of conservation.

When selecting the tools there are two main issues to be considered. On the one hand the tools need to fit the requirements posed by the object and the project, on the other hand, as both case studies showed, each tool also poses different demands, for example the cost or the usability (operator's skill). Taking both of these factors into consideration the most suitable tools will be selected. After this decision the conservation will be taken to the assessment phase.

## 5. CONCLUSIONS

### 5.1 Documentation and conservation flow-chart

For a good understanding of the documentation of architectural heritage sites, the documentation-conservation flow-chart needs to be drawn up. This flow-chart shows the main documentation and conservation activities during the different conservation phases, and provides useful guidelines for each documentation phase.

GCI: Getty Conservation Institute,

EH: English Heritage,

HABS: National Park Service of the U. S Department of the Interior,

MWV: Monumentenwacht Vlaanderen VZW

Architectural documentation and photographic documentation have several levels of accuracy: reconnaissance: **blue**, preliminary: **green**, detailed: **red**

Conservation phases					Documentation phases	Useful guidelines for documentation
	Administration	Architectural documentation	Photographical documentation	Periodical, comprehensive report		
Initiation	-owner -whole budget -donor -executor	-former drawings	-overview	-initial report - historical document and research -old pictures	Initiation	- HABS -GCI -Guideline for selecting the tools
Assessment	-emergency structural assessment	-actual/detail drawing (physical condition drawing)	-actual picture each room/facade/important decorations -ongoing picture	-project report (evaluation) -result report -structural report	Assessment	-EH - HABS
Option	-budget management -scope of work	-proposal drawings -intervention approval		-proposal report (PPT) -Initial project report	proposal	-GCI
Project development	-detail of scope of work (schedule)			-work progress report -laboratory examination	Examination	
Implementation	-cash flow -annual budget plan -annual planning	-intervention drawing	-ongoing pictures of all actions -Relative pictures -comparison pictures	-technical selection report -annual report -project panels -progress report -monthly report	Implementation	
Operation		-Photographic report collections	Graphic documents collections	Final project report	Operation	-GCI -HABS
Maintenance		-maintenance drawings	-ongoing pictures of all actions	-maintenance reports	Maintenance	- EPOCH Know How Book by MWV

### 5.2 Guideline for the tool selection for the documentation of a conservation project

There are two types of criteria, one comes from the object and project needs, the other comes from the demands of the tools themselves.

Object & project criteria	The significance of the monument the conservation activity
Demands of tools	the usability the environment the cost

#### Object & process criteria

##### The significance of the monument

- | Scientific research about the significance of the monument
- | The scale of the object and its complexity

##### The conservation activity

- | The needs and the process of the conservation project
- | The types of drawing
- | The aim of the project
- | The level of detail and the scale of maps

#### Demands of tools

##### The usability

- | The skills to handle the tools and their software
- | The length of the training period for inexperienced users
- | The ease of use of the instruments
- | The time it will take to use tools on the field and the time it will take to manipulate the data in the office

##### The environment

- | The weather and environmental condition on the site
- | The condition of the object
- | The time and process to install tools
- | The safety considerations

##### The cost

- | The cost of the instrument
- | The human resources should be considered

## 6. Acknowledgments

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## 7. Notes

1: The Nara-grid is based on the Nara Document in Authenticity.  
[6] The grid is a methodology to evaluate complex problems as tangible and intangible aspects.

2: A SWOT analysis is a planning tool used to understand the Strengths, Weaknesses, Opportunities, and Threats involved in a project or in a business. It involves stating the objective of the business or project and identifying the internal and external factors.

3: The project was co-founded by the American Research Center in Egypt (ARCE) and Aga Khan Trust for Culture (AKTC) and received initial funding from the US Ambassador Fund, and then the project was carried out and coordinated by Aga Khan Cultural Services-Egypt (AKCS-E) and the local agency of AKTC.

## 8. Bibliography

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[5] The English Heritage (2007) 3D Laser Scanning for Heritage

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