A MODERN MASTERPIECE IN UGANDA

UGANDA NATIONAL MUSEUM CONSERVATION MANAGEMENT PLAN

KEEPING IT MODERN

UGANDA MUSEUM

MINISTRY OF TOURISM,
WILDLIFE AND ANTIQUITIES
THE REPUBLIC OF UGANDA

Figure 1 – Cover design: Melanie Wavamunno, graphic designer, photo by Franklin Kasumba

Uganda National Museum
Conservation Management Plan
2021-2026

Ministry of Tourism, Wildlife, and Antiquities
The Republic of Uganda

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This plan was prepared by numerous contributors from Uganda and international external advisors from 2019-2021. It is because of their dedication and contribution that it could be created. It is intended as a framework for continued work to improve the management and conservation of the Uganda National Museum. The CMP is as much a process as it is a publication product and should be considered a living document. Much was learned from the continued collaboration between all involved.

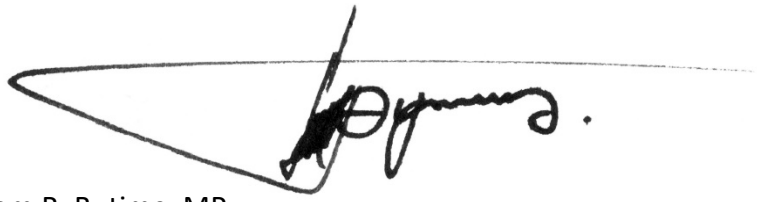
Foreword

It gives me great pleasure to endorse this important document for the conservation of Uganda Museum Building, not only as the Government Institute that spearheads the preservation of the country's cultural heritage, but because the building has been described as 'a modern masterpiece of Uganda' that testifies to the birth of a planned Kampala city.

Historic buildings are very important because of the character they add to a neighborhood or a place's understanding of our architectural past to give a sense of where we are and where we want to be in the future. It is through the protection, maintenance, and restoration of such properties that we can perpetuate the link between our heritage and the times of our ancestors.

I commend the Getty Foundation for their support through this prestigious initiative. I also thank the comprehensive team of experts who have done a thorough analysis of the building, its systems, and values while following the International Council on Monuments and Sites (ICOMOS) conservaton and restoration of architectural heritage standards.

May this Conservation Management Plan encourage Ugandans in the years to come to pursue the preservation and rehabilitation of the historic architectural heritage, in accordance with the safegards promoted by the Historic Monuments Act of Uganda. This endeavor provides the basis for sustainable development and the renewed hope for a dialogue between people and their cultures.



Tom R. Butime, MP

MINISTER OF TOURISM WILDLIFE AND ANTIQUITIES

Foreword

There are three great pillars of Uganda - our nature with its wildlife, cultural traditions, and antiquities. We believe that these pillars are the basis for advancing social and economic development and the transformation of the country. We also believe that at the Uganda Museum we must share these riches through welcoming visitors from around the World.

The Uganda Museum was designed in 1952 by a prominent German architect and town planner, Ernst May. He adopted elements of local East African designs for the building he planned. He combined a high level of organization and structure with the need for individualism and established recreational areas surrounding people's living spaces. Uganda Museum, one of his major works in East Africa, remains a landmark of Kampala attracting thousands of visitors every year.

Historic buildings are very important because of the character they add to a neighborhood or a place's understanding of our architectural past to give a sense of where we are and where we want to be in the future. It is through the protection, maintenance and restoration of such properties that we can perpetuate the link between our heritage and the times of our ancestors. The preparation of the conservation management plan has been a wonderful opportunity to raise awareness of a unique modern masterpiece.

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Doreen S. Katusiime (Mrs)

Permanent Secretary, Ministry of Tourism, Wildlife and Antiquities

Commissioner's Message

Architecture and urban planning were designed as a tribute to the rapidly expanding and modern rising of the city of Kampala. The building activity seems to reach new heights every day, with office buildings, shopping malls, and residential developments springing up at an ever-increasing pace. Of course, sometimes this progress comes at the cost of tearing down existing buildings, which has led to some controversial debates in the city. Urbanity as a living condition has become a cultural and social reality for many people. Respecting and conserving the urban heritage of different provenances and times in Uganda to include vernacular, Asian as well as early post-colonial buildings needs to be balanced with the necessary process of modernization.

The Uganda National Museum was designed in 1952 by a prominent German architect and town planner, Ernst May. He adopted elements of local East African designs for the building. He combined a high level of organization and structure with the need for individualism and established recreational areas surrounding people's living spaces. Uganda Museum is one of his major works in East Africa and remains a landmark of Kampala, attracting thousands of visitors every year.

The preparation of the Conservation Management Plan has been a wonderful opportunity to raise awareness of our home – The Uganda National Museum – as a unique modern masterpiece, purposely designed and built for the people of Uganda to celebrate their history and rich culture. Therefore, we appreciate the generosity of the Getty Foundation and are excited to present this Conservation Management Plan.

Mwanja Nkaale Rose

Commissioner, Museums and Monuments, Uganda

Keeping it Modern

It is with distinct pleasure that I write this foreword to the Conservation Management Plan for the Uganda National Museum. This carefully crafted document is the result of thorough, multidisciplinary research into the design, construction, and material condition of Ernst May's modernist gem, designed by the pioneering German architect and city planner in 1954. Six decades later in 2019, the Getty Foundation awarded a Keeping it Modern architectural conservation grant in recognition of the museum's distinct role as the first modern building in Uganda and one of the earliest cast-in-place concrete structures in the capital city of Kampala. The Getty Foundation launched the international grantmaking initiative Keeping it Modern to support the conservation of significant 20th-century buildings around the world. Modern architecture emerged at a global scale in the decades following the First World War and was based largely on the "rational" use of modern materials, the principles of functionalist planning, and the rejection of historical precedent and ornament. However, the experimental materials and engineering techniques of many modern architects have resulted in long-term conservation challenges. In the case of the Uganda National Museum, the passage of time has led to such issues as cracks in the concrete frame and moisture infiltration related to ground water below the foundation. Real estate development pressures have also increased, making assessments of the building's current condition and significance to the community and the architectural record even more imperative. The Getty Foundation believes that comprehensive research and planning lie at the heart of conservation best practices. Practitioners must determine the underlying causes of deterioration before implementing conservation interventions. Keeping it Modern grants, therefore, support activities such as the investigation of building conditions; the testing and analysis of modern materials; and the creation of conservation management plans that guide maintenance and conservation policies. At the Uganda National Museum, an intrepid team of local and international experts has pursued such aims by undertaking a climate assessment, a rapid condition assessment, archival research, community engagement with local stakeholders, and a workshop attended by international participants who inspected the building and contributed to the knowledge of the site, among many other fruitful activities. The plan resulting from these efforts will guide preservation efforts to come and set a model for the systematic care of other modernist structures across Uganda.

We wholeheartedly commend the leadership of Rose Nkaale Mwanja, Commissioner for Museums and Monuments, project manager Joseph Ssebunya, architects Doreen Adengo and Denis Lukwago, and museum conservators Nelson Abiti, Catherine Ajiambo, and Eunice Ngangeyu. They were joined by many other experts, including Rand Eppich, Bart Ankersmit, Iga Perzyna, and Berend van der Lans who also played key roles in preparing this plan. Together the team has worked tirelessly to deepen our understanding of the Uganda National Museum's conservation challenges and pave the way for the preservation of this beloved landmark, ensuring continued enjoyment by the thousands of school children, international tourists, and locals who visit each year.

Antoine Wilmering, Senior Program Officer, The Getty Foundation

Acknowledgments

This project has been a wonderful opportunity to raise awareness of our home – a unique modern masterpiece – the Uganda National Museum. While most efforts in the past have been on the collection and its conservation, display, and storage, this is the first time we have had the opportunity to focus on the building itself. Therefore, we appreciate the generosity of the Getty Foundation and are excited to present this plan - the first effort to address the home of the museum in a holistic manner.

Every week we welcome hundreds of school children and international visitors to our museum to learn about Uganda´s rich cultural heritage and natural environment – and we have just begun to tell them about our modern building, our city, and country´s more recent history. Therefore, this is truly an opportunity. We also had the opportunity to tell others, young students, museum professionals, political leaders, and the press during our recent International Workshop. Within this plan, you will learn more about an international workshop and our other ongoing efforts to write a comprehensive conservation and Conservation Management Plan for our unique building.

The Uganda National Museum would like to express profound thanks, first, to the Getty Foundation and all the professionals within, for the much-needed grant that allows us to take a step back and evaluate our facilities and plan positively for the future. We would also like to thank all the professionals who have contributed to this report and were involved in the 2020 International Workshop. This includes Rand Eppich, Conservation Architect; Africa Architecture Matters: Iga Perzyna and Berend van der Lans; Cultural Heritage Laboratory Cultural Heritage Agency of the Netherlands, Bart Ankersmit on the environmental needs of the collection; and Adengo Architecture, Doreen Adengo, and Franklin Kasumba. Finally, the internal staff of the museum must also be thanked, including Denis Lukwago, Catherine Ajiambo, Abiti Nelson, Eunice Ngageyu, and others. This small team has been working on the project since crafting a conservation and Conservation Management Plan that will protect the Museum and its contents. This plan will help us tell the story of the museum and our home.

Joseph Ssebunya, Project Manager

CONTENTS

Abbreviations

AFRICOM	African Council of Museums
AWHF	African Fund
BIM	Building Information Modelling
CAD	Computer-Aided Design
CSI	Construction Specification System
CMP	Conservation Management Plan
CTAD	Culture, Tourism & Antiquities Department
DB	Database
DGAD	Directorate General Antiquities Department
DG	Director-General
DRM	Disaster Risk Management
DRPMP	Disaster Risk Prevention Conservation Management Plan
GIS	Geographic Information System
HFP	Heritage Foundation Uganda
HGIS	Historical Geographic Information System
ICOMOS	International Council on Monuments and Sites
MC	Monuments Committee
MP	Conservation Management Plan
NGO	Non-Government Organization
OW/MPW	Ministry of Public Works
MoCTA	Ministry of Culture, Tourism & Antiquities
RO	Ministry of Regional Development
SOC	State of Conservation
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHC	World Heritage Centre
CBOs	Community Based Organizations
CSOs	Civil Society Organizations
EAC	East African Community
EIA	Environmental Impact Assessment
ICCROM	International Centre for the Conservation and Restoration of Monuments
ICOM	International Council of Museums
ICOMOS	International Council of Monuments and Sites
IDF	Institutional Development Facility
MFPED	Ministry of Finance, Planning, and Economic Development
MGLSD	Ministry of Gender, Labor and Social Development
MMD	Museums and Monuments Department
MOES	Ministry of Education and Sports
MOLG	Ministry of Local Government
MTTI	Ministry of Tourism, Trade, and Industry
MTWA	Ministry of Tourism, Wildlife, and Antiquities
NDP	National Development Plan
NEMA	National Environment Management Authority
NGOs	Non-Governmental Organizations
NHP	National Heritage Plan
NPA	National Planning Authority
PAMSU	Protected Areas Management and Sustainable Use
PCR	Physical Cultural Resources
UNCST	Uganda National Council for Science and Technology

Uganda National Museum

The Uganda Museum began as early as 1902 when the ethnographical specimens were collected from all over the country. In that year, the Special Commissioner, Sir Harry Johnston, sent a directive to all the colonial agents throughout the country to collect ethnographic objects to set up a museum.

In 1908, the Uganda museum was officially established and opened to the public in a small Sikh Temple at Lugard's Fort on Old Kampala Hill, under the Botanical Forestry and Scientific Department, with the chief Forestry officer as the officer in charge. Thereafter the collections increased at a faster rate and became overcrowded in the tiny floor space. It was physically impossible to display all the specimens for public viewing.

In 1941 Margaret Trowel, the founder of the School of Fine Art at the then Makerere University College, took over the duties of the curator. Therefore, in that year, the collections in the museum were transferred from Old Kampala hill to a larger space at Makerere School of fine art. Funds were raised to build a purpose museum on the land at Kitante Hill. The Museum was designed by one of the pioneers of modern architecture and a founding member of CIAM (Congrès Internationaux d'Architecture Moderne), Ernst May, in 1947, including the Kampala major buildings. The Uganda Museum building was officially opened by Sir Andrew Cohen in June 1954.

Aims and Methods – the Museum seeks to portray Uganda and the activities of its people by preserving and disseminating information about it and its peoples to the visitors. Functions:

- Conservation, preservation, documentation of important collections
- Research about the natural and cultural heritage
- Exhibiting and interpretation of specimens for public study, enjoyment
- Publication of the research findings in appropriate publications

MISSION AND MANDATE

"To impart knowledge of cultural and natural heritage to the present and future generations for their enjoyment."

"Promote, protect and present the cultural and natural heritage of Uganda through collections, conservation, preservation, study and information dissemination for delectation and education."

The Getty Foundation

The Getty Foundation supports institutions and individuals committed to advancing the greater understanding and preservation of the visual arts throughout the world. This is done through grant initiatives that increase access to museum collections, strengthen art history as a global discipline, advance conservation practice, and support current and future leaders. Since 1984, we have awarded more than 8,000 grants benefiting over 180 countries on all seven continents. Modern architecture is one of the defining artistic forms of the 20th century. Set free from traditional structural requirements, architects and engineers used experimental materials and novel construction techniques to create innovative forms and advance new philosophical approaches to architecture. Today this modern architectural heritage is at considerable risk. The cutting-edge building materials and structural systems that define the modern movement were often untested and have not always performed well. Heritage professionals do not always have enough data on the nature and behavior of these materials and systems to develop the necessary protocols for conservation treatment. To address these challenges, the Foundation developed Keeping it Modern, an international grant initiative that continues our deep commitment to architectural conservation with a focus on important buildings of the twentieth century. Since 2014, Keeping it Modern has supported 77 projects of outstanding architectural significance that contribute to advancing conservation practice. Grants focus on the creation of Conservation Management Plans that guide long-term maintenance and conservation policies, the thorough investigation of building conditions, and the testing and analysis of modern materials. The project teams are spreading awareness of the need for research-based planning and forming international networks.

KEEPING IT MODERN

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Getty
Foundation

Executive Summary

This Conservation Management Plan is designed to be a living document to help guide the directors, managers, and staff in both the long-term and daily challenges of housing a collection in a historic building. The team has worked hard to create a useful document, not to be placed on a shelf but used frequently to made decisions - especially important with limited resources. The team also realizes that the creation of the CMP was as much a process as this product. This product is organized into two main parts.

Part 1 – THE MUSEUM

It is important to understand the current situation before proposing management or conservation plans. This part begins with an introduction that includes a history of modernism in Uganda, the potential of the museum, and an outline of the challenges and role of the CMP. This section also includes the methodology, existing legal framework, location, and boundaries. This is followed by a focus on the museum, the history of the building, the various expansions, followed by a statement of cultural significance. Importantly, this part includes a condition assessment of the building, documentation, and recent necessary interventions. This is followed by the museum collection, also important, but not the primary focus of this CMP, and finally, a section on current management.

Part 2 – CONSERVATION MANAGEMENT PLAN

While the first part outlined the past, current management, challenges, and the condition of the building, this second part focuses on the future – the Conservation Management Plan. Given such a daunting task, where was the team to start? It was tempting to address the problems and focus on the short-term aspects that would demonstrate quick wins and concrete solutions. However, this is not in the long-term interests of the museum or its iconic building. Therefore, the team thought of a long-term vision.

To carefully preserve the museum and its historic, aesthetic, educational, and social values while welcoming the surrounding communities and international visitors.

To maintain and respect its use as an important educational site while encouraging greater visitation.

But it is insufficient just to have an inspiring vision. A vision must have a strategy. Therefore, the supporting goals, objectives, and tasks have been structured hierarchically in short, medium, and long-term timelines. The first level below the vision contains four main goals:

1) Strengthen Management
2) Improve Conservation
3) Prepare for Disasters, Mitigate Risks
4) Enhance Visitation, Public Awareness, Community Involvement

Each of these four goals is reinforced by three or more objectives which in turn are supported by individual tasks. Each task was designed to be modular in order that the entire plan did not rest upon one short-term result. The breakdown in the organization also informs individuals of their own role in the success of this plan. It is in this way that the vision can be achieved and not seem overwhelming to those involved. The division also lends itself easier to Individual fundraising opportunities. The next section of the CMP is an Action Plan in a hierarchical matrix format summarizing the goals, objectives, and tasks while assigning responsibility. This last section also includes a preliminary overall budget. The management plan is finalized by an Appendix that includes maps, descriptions of team members, stakeholders, a bibliography, potential partners and their involvement, and an index of figures.

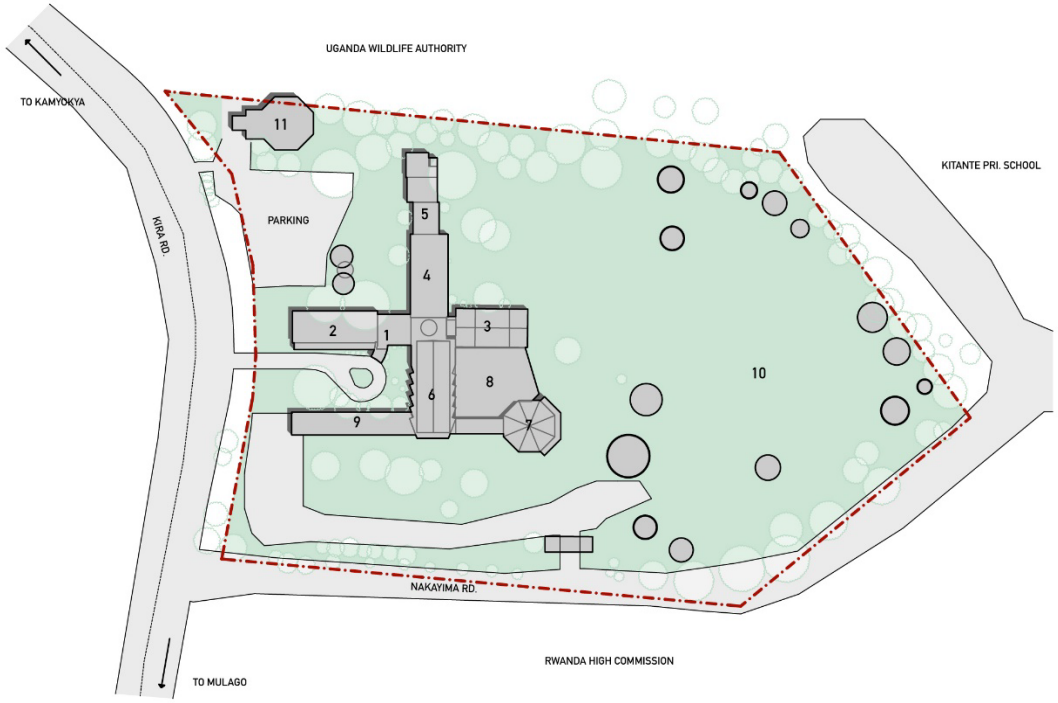


Figure 2 – Site plan of the museum

PART I – THE MUSEUM

"The national museum is a national treasure. It preserves and presents the diversity of cultural expressions from most of Uganda's ethnic groups as represented by the different vernacular architectural designs of the cultural village behind the national museum. This has inspired many Ugandans to preserve and promote their cultures."

Frederick Nsibambi, Cross-Cultural Foundation of Uganda

Figure 3 – Overview, the iconic dome and concrete mesh of the main entry hall

0 INTRODUCTION

This Conservation Management Plan (CMP) is an example of just this – In Uganda, it is unusual to prepare such plans and more unusual to prepare them for the preservation of modern buildings. This is the first Conservation Management Plan (CMP) for a museum in Uganda and introduces a new form of professional practice in a context where protection of built heritage is uncommon.

This project, led by the museum, brought together a multidisciplinary, international team made up of conservators, historians, engineers, museum professionals, and conservation architects to craft this plan, along with the involvement of several institutional and community stakeholders. This CMP presents the findings and experiences related to the development of the plan for the Uganda National Museum funded by the Getty Foundation's Keeping it Modern initiative.

The Uganda National Museum is a built-for-purpose museum, designed by one of the pioneers of modern architecture and a founding member of CIAM (*Congrès Internationaux d' Architecture Moderne*), Ernst May. May came to East Africa in 1934 and settled in Nairobi, where he became influential in the development of modern architecture. In 1947, he developed the first modern urban master plan for Kampala and thus became involved in the design of the museum. The museum was his last project before he left Africa and returned to post-war Germany. The Museum is a complex structure, with the core originally constructed in the 1950s, then added to with various extensions over the following decades. Each portion of the building has a specific purpose and a different method of construction, yet, for the most part, respects the original core.

Today, the museum works only marginally for its intended function as a museum and repository of culture and history for Uganda. The role and functions of the museum have morphed into an interpretation center for tourists and as an educational and cultural forum for the local community. The museum is facing numerous issues ranging from the need for more space for hosting events and temporary exhibits. Physically, the museum is also facing issues such as security, water infiltration, plumbing, and questionable electrical installations. Later additions, including a pitched roof to alleviate water infiltration caused by original design flaws of the flat roof and most recent repairs were executed in an *ad hoc* manner. To address these challenges, a Conservation Management Plan was needed. This plan had to consider all these issues along with limited resources. The project focused on three objectives:

1. Raise awareness of the significance and importance of modern architecture in Kampala, Uganda, and East Africa
2. Undertake exploratory investigations into original colors, materials, furnishings, including the gardens and context
3. Develop this Conservation Management Plan

To accomplish these objectives, a detailed study of the museum and its surroundings was conducted. An archival search in Kampala, Germany, and the United States was instigated. Numerous themes were explored, such as current use, intended future use and values, significance, and integrity. In addition, other topics needed to be addressed, such as utility, collection storage, visitor experience, and, importantly, the building's deteriorating condition. A public seminar and several press conferences were held to raise awareness of the significance of the Uganda National Museum. An international workshop was conducted for young architects, engineers, and museum professionals. The Uganda National Museum is considered a modern masterpiece. It is through the Getty Foundation initiative, Keeping it Modern, that this project is possible. Working within established boundaries is comfortable, predictable, justifiable. Expertise can be honed and built upon, and the path is assured and clear. However, it is when practitioners step outside boundaries that the human experience is enriched. This has been the process of developing the Conservation Management Plan for the Uganda National Museum.

Figure 4 – The music gallery and rear entrance to the gardens beyond (Eppich, 2018)

1 MODERNISM IN UGANDA

Uganda and Kampala have a rich history of modern architecture. The early and mid-20th century was a time of expansion and opportunity as the city of Kampala was rapidly growing. As a result, there was a building boom as people moved to the city, and architecture took new forms and used new materials. These new buildings were both inspired by the past and broke with tradition. In the 1950s, an ambitious masterplan for the city was executed by the famed architect Ernst May. Importantly, this plan included placement for cultural institutions such as the built-for-purpose Uganda National Museum and the Uganda National Theatre. New modern buildings also included religious structures, transportation hubs, and government buildings. This modernist boom was also occurring in other cities such as Jinja, Entebbe, and Mbale.

Uganda was a British protectorate and not a settler's colony. According to Richard Upjohn Light in his 1941 book *Focus on Africa*, "The governing policy in Uganda seems to have been a tightly controlled experiment. The existing Kingdom of the Great Buganda tribes supplied a well-developed political organization on which to build. There was a King, or Kabaka, a parliament, or Lukiko, and a system of great chiefs and subordinate chiefs. This structure was retained intact…."[1] The process of decolonization, therefore, unfolded through a series of peaceful talks and demonstrations.

Uganda gained Its independence on the 9th of October 1962. This was followed by a period of optimism in which experimentation with new building technologies and forms from Europe continued to be explored in large, ambitious projects. In *Uhuru; Minor Accidents,* the photography of Ugandan Engineer M.W. Wambwa in the early 1960s showing a world in which roads were built, cities constructed, and independence was celebrated[2].

Figure 5 – Uganda and Kampala have a rich inventory of modern architecture, the 1959 National Theatre of Uganda by architects Peatfield and Bodgener (Eppich, 2018)

[1] Richard Upjohn Light, Focus on Africa

[2] Wanmba, M.W (2016) Uhuru; Minor Accidents. Ydoc Publishing

These modernist buildings represented the formation of a new Uganda and range in typologies from the university buildings, banks, hotels, and conference centers. Critical to the state-building process, the government built twelve new district hospitals. In *African Modernism: The Architecture of Independence*, Manuel Herz documents modernist buildings in select African countries, and what is common is that the architects were not local[3]. In post-colonial Kampala, the modernist buildings were still designed by foreign architects from Britain, South Africa, Yugoslavia, and Israel; Many of these projects were designed by the same British Architecture firm, Peatfield & Bogner, who are still based in Kampala today.

While some of these architects designed for the climatic and topographical conditions, others did not, ignoring the heavy monsoon rains and trusting new building technologies - sacrificing practically for the clean lines of modernism. The flat roof of the Uganda National Museum, designed by Ernst May, is just one example. The designs also did not sufficiently consider local culture and the way of life in Uganda. As a result, there was a growing need for greater inclusivity regarding design, more adaptable buildings, and other cultural consideration.

Unfortunately, the period after independence was followed by a time of political turbulence. Many archives were destroyed, and numerous actors within the building industry left the country. The brutal dictatorship of Idi Amin in the 1970s was characterized by human rights abuses, political repression, social upheaval, and understandably an absence in creating substantial architecture. A destructive civil war followed. As a result, there is a knowledge gap, and the most basic questions need answers; who commissioned these earlier ambitious projects? Who were the architects? What governed their design choices? And most importantly, who were the builders? Undoubtedly, Ugandans.

Clearly, there was a need for more inclusivity regarding who tells the story of Architecture in Africa. One specific project, *African Modernism: Kampala*, led by Architect Doreen Adengo and Manuel Herz, tells the story of the early modernist buildings from the local user's perspective, exploring how buildings were adapted over time to meet the occupants' needs, the contemporary city, local culture, and climate. This initiative included a workshop where participants were tasked with discovering the story of the buildings as told by the current users. The work was documented through a series of photographs and investigations. By interviewing current occupants, collecting photographs and drawings from the past and present, this project explored how modernist buildings were modified over time to meet the demands of Ugandan contemporary society. An exhibition followed this initiative at the Makerere Art Galley that celebrated Architecture as an Art, allowing the public to engage with photographs of the modernist buildings. As part of the exhibition, an independent photographer and designer, Timothy Latim, documented eleven modernist buildings in Kampala, selected based on a range of typologies: institutional, residential, commercial, and industrial. The documentation included The National Theatre, residential halls at Makerere University, Uganda House, and the Conference Centre, among others[4].

Following the exhibition, guided walking tours were organized that visited the Central Business District, industrial zones, and Makerere University. These tours Included discussions about modernism and its importance during the era of independence. The most provocative question from the audience was - What is African about African Modernism? A response is that these foreign architects often did not consider the African culture. It was left to the audience, especially the young architects and architecture students, to think for themselves what it means to design a building with an African identity.

[3] Herz, M (2015) African Modernism - Architecture of Independence. Park Books, Zurich

[4] School of Architecture alumna leads 'African Modernism' exhibition (2019). Yale News

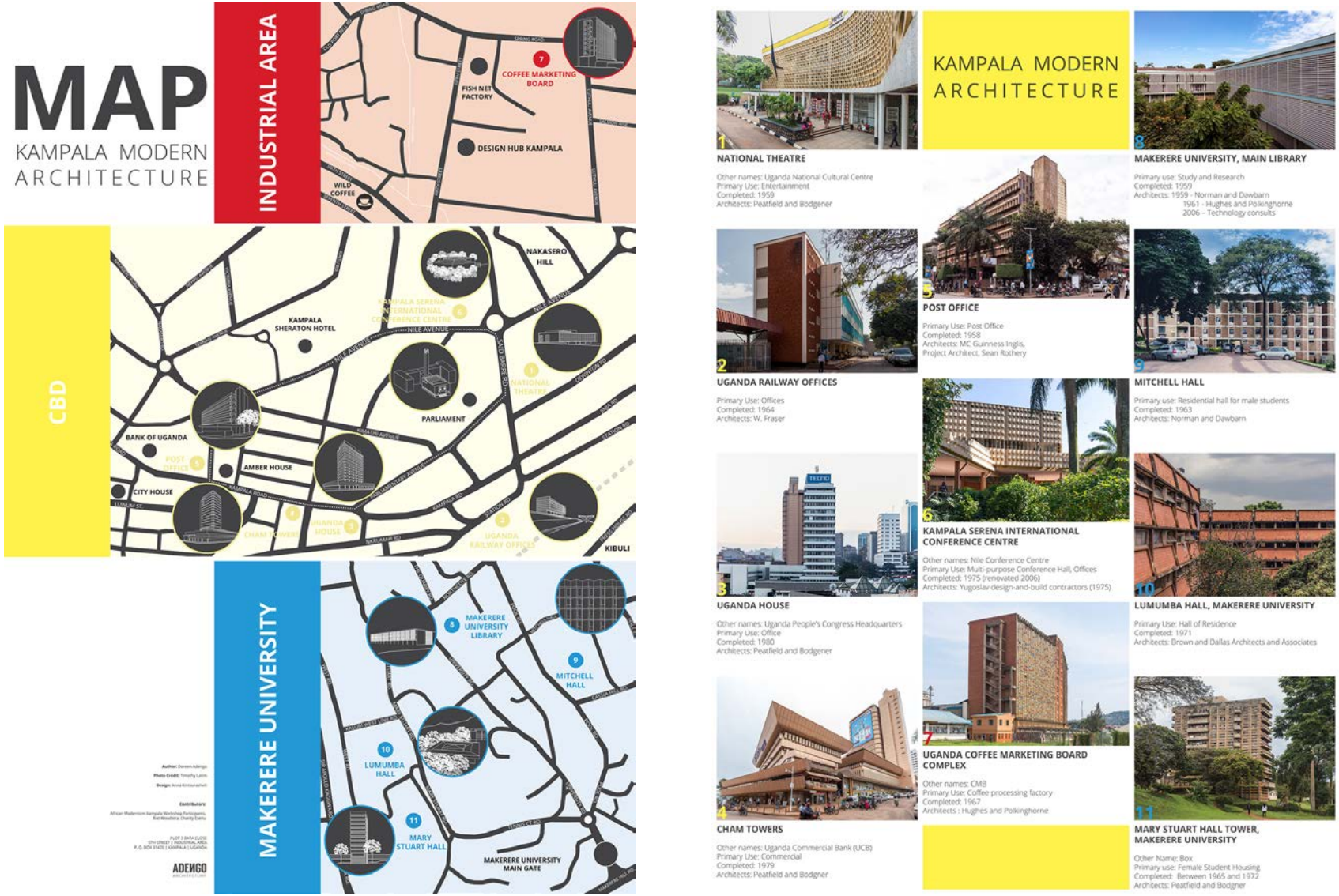


Figure 6 – Map of Kampala Modern Architecture Walking tour – (Adengo Architecture)

Figure 7 – Left, guided tour of African Modernism, Architecture of Independence (Tony Musiimwe) Figure 8 – Right, the Uganda Commercial Bank, Peatfield & Bodgener.

1.1 CHALLENGES

While Uganda National Museum is a unique heritage institute, it is faced with many challenges. The state of the museum is a matter of serious concern and threaten the collection within as well as the historic building itself if management actions are not implemented in the short term. To date, the measures taken have been of an ad hoc nature with the short-term in mind and a holistic approach is needed.

The Museum is generally constructed out of unfired or low temperature fired masonry with a reinforced (mild steel) concrete frame and horizontal roof deck. The original single-story centrally located Main Entry Hall welcomes visitors provides interpretation and orientation and directs access to the other exhibitions. The structure is a single-story reinforced concrete frame with masonry infill walls and a concrete dome supported by four concrete ceiling beams. There are several cracks along in the concrete frame that requires further study. There are signs of aggressive moisture infiltration from groundwater below and leaking roof above. There are numerous signs of rising damp and flaking paint on most walls and brown stains on the white plaster ceilings and walls. The roof is a built-up bitumen system that has failed in several places and has been repaired with corrugated galvanized steel sheets, including the dome.

The Lecture Hall, which houses the gift shop, Library, and Uganda Book Society, was also built starting in 1954 and is utilized the same construction system as the Entry Hall. This portion of the museum is in better condition with the first-floor slabs and beams with fewer cracks. However, this portion also suffers from water infiltration, and the roof is leaking with brown rings and stains throughout. Sometime in the 1970s, the built-up bitumen roof was replaced with a polyvinyl tarpaulin, but this has failed.

The Science and Industry Gallery is a single-story masonry structure, and there is no serious structural damage, but like the other areas suffers from water infiltration. There is also evidence of poorly installed electrical work. The Musical Instruments Hall housed musical instruments but is not used for temporary exhibitions while the office of the museum exists above. There are no obvious signs of structural distress, and the structure is in good condition, but there is poor quality of the finishes of recent alterations, and there is significant water infiltration.

The most critical portion of the museum is the main exhibition space, the History and Ethnography Hall. This area, along with the Entry Hall, is the most iconic of the work of Ernst May with its scalloped walls to allow indirect light to enter the exhibition space. The walls of unfired brick infill are failing near the ground level due to rising dampness and require detailed investigation. These areas exhibit signs of failure, especially near the basement. There are also large structural cracks on the decorative fieldstone retaining wall.

The remaining portions of the museum are in better condition. The Natural History Gallery toward the rear of the museum is an octagonal reinforced concrete frame with masonry infill walls that support a timber roof. There is some minor evidence of structural cracking. The Science and Hall of Industry also show some signs of structural cracks.

By far, the most serious issues of the building are related to the roof and electrical systems. In all parts of the museum, the roof is failing and allowing water to enter the galleries, basement, stores, and offices. This raises the humidity levels and allows mold to prosper. This is a serious concern because most of the collection is made up of delicate organic pieces. The other serious concern is the electrical system. As the museum expanded, the electrical system was altered in an *ad hoc* manner.

A detailed geotechnical and structural integrity report on the museum was conducted by ZyFirm Consults, Engineering Division, in 2015 that included laboratory tests of the materials taken by core sample of the unfired brick as well as the concrete columns. This report served as the starting point for investigations described in this plan. This earlier report also offered recommendations that include water site drainage, investigations in the roof, including repair, replacement, and maintenance.

It seems that the roof has been a continual problem as there were reports in the 1980s concerning the roof from M. A. Trone in a report Priorities for Conservation, in 1983 as well as a report in 1981 from Mr. J. O. Lengyel, a civil engineer who investigated repairs to the roof. These reports were confirmed by a UNESCO report by René Rivard in 1984. Since this time, there have been patches and repairs to the roof, but it is hoped that through this project, a better solution will be devised as this is the most important problem of the structure.

This Conservation Management Plan is intended to address these issues and show a way forward for Uganda National Museum. This document considers the previous documentation, site visits by international experts, changes in Uganda National Museum, and, importantly, extensive stakeholder input.

Figure 9 – In 2010, the Uganda National Museum was threatened with demolition (The Observer, 2020)

1.2 ROLE OF THE CMP

A Conservation Management Plan serves as a guideline for the owner or manager of a historic property on how to maintain and manage the property in such a way that the building keeps on serving its function while its specific architectural and historically important features and values remain intact. Proper management and maintenance of a historic building start with an understanding of what exists. Therefore, historical research is essential, giving a basis for a valuation of parts of a building, specific details, etc., and indicates what is significant for the building.

In the case of the Uganda National Museum, the building has greatly expanded over time; therefore, a critical analysis of the various building parts and the role they play in the mission of the museum and their significance and authenticity must also be studied. The technical analysis of the building, its parts, and components in comparison – if possible – with the original design helps in an understanding of the concept of the original design, its possible failures, and challenges along the way.

With the above as a basis, tools and guidelines will be proposed for conservation management, including advice on the implementation as well as monitoring and evaluation. This structured approach is the role of the Conservation Management Plan for the Uganda National Museum.

Figure 10 – The Getty Foundation grant made national press and has resulted in increased visitation to the museum (Daily Monitor, 2020). This series of outreach to the press has served to introduce the public to conservation and Conservation Management Planning.

Figure 11 – The unique entry display (Oskar Proctor, 2018)

1.3 METHODOLOGY

The methodology for creating this Conservation Management Plan was straightforward and first involved multiple stakeholder meetings with upper-level decision makers in Kampala, followed by work with the on-site management team. The team then collected and discussed the numerous *ad hoc* management policies, reviewed them, and adapted them for this Plan. Another review that was required was to read the reports, inspections, and other documentation that was developed over the years, as this contained some elements concerning management. The methodology also consisted of an extensive inspection of the building and site over the course of this project and talking with several international and local experts about Uganda National Museum and its management. The International Workshop was helpful in this regard, as well as the opening of the project when the public was invited, along with a press conference. One of the critical parts of the methodology was the discussions concerning the vision and objectives. The desire to attract more visitors and expand the educational opportunities of the museum was paramount. While there are certainly challenges, the technical approach and methodology were based upon desk research, followed by several inspections of the site and stakeholder outreach meetings. This straightforward approach was supplemented by contacting past experts, reading and studying previous reports. This included incorporating numerous discussions concerning successful and less than successful elements, including the important action plan. The final step of this methodology was to verify the contents of the Conservation Management Plan in a draft form. This version incorporates some of the feedback, but a final version of the plan must be translated and then officially submitted to the government for endorsement, publication, and implementation.

1.4 LEGAL FRAMEWORK

Understanding the existing legal framework is necessary to understand the limits placed upon the museum's management and the responsibilities endowed to the organization. It is also important to know this framework to take advantage of the existing rights and privileges of the museum and understand any gaps in legal protection.

The Constitution of Uganda 1995, Part XXV, tasks the State and the citizens to preserve, protect, and promote the culture of preserving public property and Uganda's heritage. Furthermore, in article 189(1) schedule 6(10), the Constitution mandates that the Central Government is to manage and protect national monuments, antiquities, and archives as Parliament shall determine. Article 178 (13) also provides for the enactment of laws by Parliament to gazette national cultural heritage sites[5].

The existing law on monuments and sites is aligned with a stated objective of the Constitution - the Historical Monuments Act, Cap 46, which provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical, and traditional interest and other related matters. However, the present law has weakness in addressing the protection of historical monuments such as the museum building due to low penalties or limited sentences in the event of vandalizing cultural sites and monuments, preventing illicit trafficking of antiques, and encroachment on land of cultural assets. The weakness in legal protection was demonstrated in 2011, with a threat to demolish the museum. However, the existing monuments and antiquities legislation somewhat safeguarded the building, thus delaying demolition. Fortunately, the government recalled the existing law to protect the museum building - Article 178 (13) provides for the enactment of laws by Parliament to gazette national cultural heritage sites.

The government is currently reviewing the old Historical Monuments Act of 1967 to enable more protection and development of the museum. However, even with the existing laws and regulations, there are risks and threats to Uganda's historical buildings and cultural heritage sites.

Recently, the Ministry of Tourism, Wildlife, and Antiquities developed a guiding policy for Museums and Monuments. The National Museums and Monuments Policy proposes addressing this challenge by identifying strategies and actions to enhance cultural education and sustainable development. These strategies include advocating for conservation and sustainable use of heritage, capacity building, research, and dissemination of information, promoting collaboration with stakeholders, and mobilizing resources for natural and cultural heritage promotion and development. The Museums and Monuments policy aims to create a framework for the preservation and sustainable development of Uganda's Museums and Monuments for the benefit of the people of Uganda and their posterity.

The third National Development Plan (NDP III 2020/21 -2024/5) identified the infrastructural facility for the Uganda National Museum as the only national museum with limited capacity for international exhibitions, conservation labs, and increased visitation. It also showed that existing information on cultural heritage, including the Uganda National Museum, is mainly paper-based with inadequate Information and Communication Technology (ICT). This plan was also echoed in NDP II 2010/2011-2014/15 that acknowledged the intrinsic value of culture and the importance of cultural identity as a form of capital, potentially moving people out of poverty. However, in Uganda, there is still a lack of appreciation of the significance and value of cultural heritage, its economic and social potential, and incorporation and utilization in Uganda's national development goals.

[5] https://www.statehouse.go.ug/government/constitution

1.5 LOCATION & CONTEXT

Kampala is in the central region of Uganda surrounded by Wakiso District and bordering Lake Victoria. It is the largest and most populous urban center in the country with a population of over two million people - but this was not the case in the early 20th century, so planners were faced with many open areas. Every district of Kampala is a segment that starts from the old city center reaching out to the city limits, so that central areas and peripheral areas are part of the same administrative district. The planned precincts and plots are not identified by names but numbers, for instance, the Uganda National Museum is located In Plot 5, Kira Road.

The museum is to the north of the hill of Old Kampala, initially planned to be away from the busy commotion of the city center with its business and industrial districts. To the west is Kusubi Hill, the last official Kibuga/Buganda Kingdom urban center/town. The museum is in the Mulago neighborhood, a historical and spiritual healing site and one of the five historic administrative divisions of Kampala. The rise of the Kitante Hill in the neighborhood of Kamwokya provides views and fresh breezes, important because with the expansion of the city outward, the area has been surrounded by dense urban fabric. Fortunately, the insightful early planning protected the museum with an ample garden which sets the museum apart and today provides for a pleasant experience. The limits of the site are bounded by Kira and Nakayima Roads, with the perimeter well established and protected by a fence and gates. The museum was initially planned to on the periphery of the young city, but today is in the heart of Kampala. The site was set aside during the first master plans and the architect of the museum, Ernst May, was actively involved in the city's future planning.

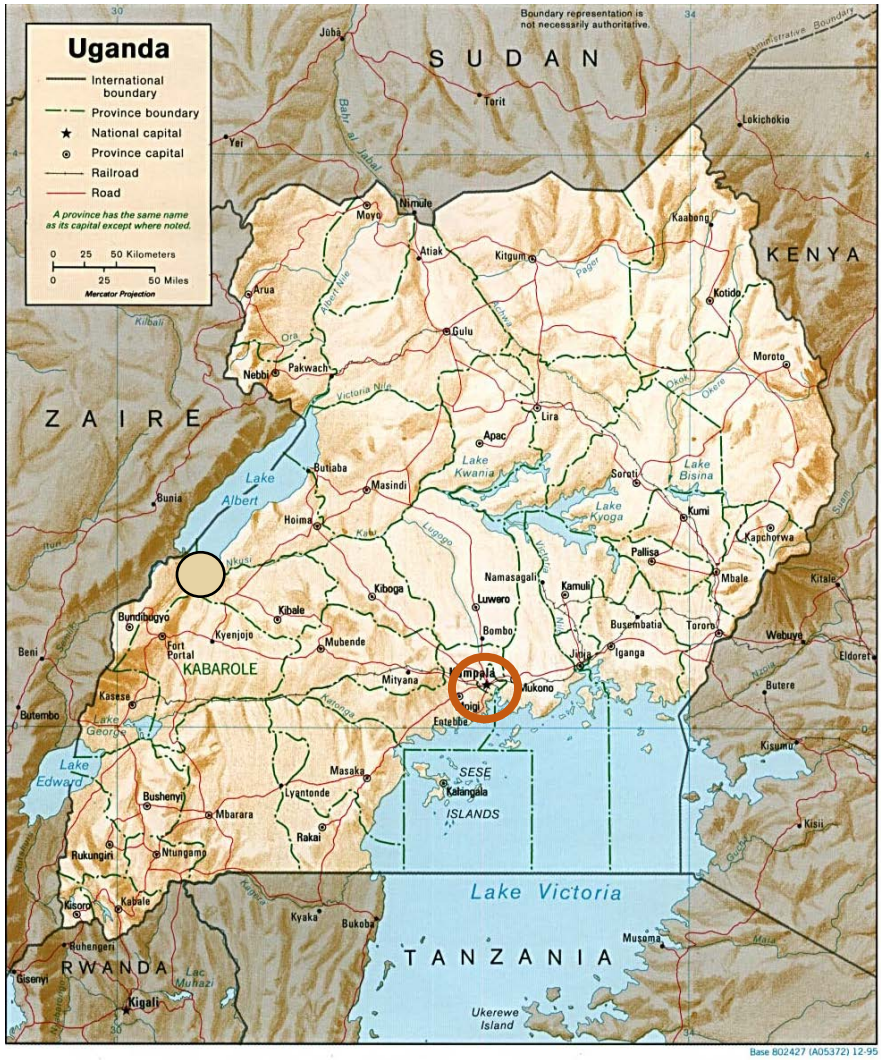


Figure 12 – Historical map of Uganda (Uganda National Mapping Agency, c. 1960)

1.5.1 Land Use Planning in Kampala

Land use planning for Kampala is integral to the history of the city and museum. During the initial planning, the key location and early inclusion of a museum demonstrated the importance of culture to Kampala. “May was hired by the British colonial authorities in January 1945 to institute a plan for the rapidly expanding city in the post-war building and economic boom.” He began his plan observing that the existing city “was a beautiful garden city.” He stated that “…institutions such as museums, theaters, cinemas and exhibition buildings within the part were to serve “as a kind of propaganda… to contribute very essentially to preparing African masses for their future development”[6]. While his plan has been criticized as colonial and specifically designed to segregate inhabitants, the plan nevertheless emphasized cultural institutions such as the museum.

Planning for the future of Kampala in the mid-20th century was important to the Protectorate and later Independent Governments. Ernst May, their head planner, was a founding member of the professional organization Congrès Internationaux d'Architecture Moderne (CIAM). One of the key tenents of this organization was that architecture and, specifically planning could improve the quality of life. The CIAM's Athens Charter of 1933 laid down guidelines for urban planning and the design of cities, considering social and economic needs of its citizens. Therefore, understanding the city´s planning is essential to understand the context for which the museum was designed and constructed.

Land use planning was well understood by those involved . Theydefined the process as one win Their objective of planning land use was to influence, control, or direct changes in the use of land so that the area was dedicated to the most beneficial uses to maintain the quality of the environment while promoting conservation of resources. Land use planning nearly always requires land-use regulation, which typically encompasses zoning. Zoning regulates the types of activities that can be accommodated on a given piece of land and the amount of space devoted to those activities and the ways that buildings may be situated and shaped. In many countries, a city authority or local municipal council is the body responsible for the environment. The national government frequently assumes land use planning functions; among them, the corresponding function to order the territory. For this reason, the planning entities have, among other responsibilities, the promotion of the conservation and sustainable use of natural resources, establishing policies, criteria, tools, and procedures of the most appropriate efficient and sustainable territorial order in coordination with any other relevant corresponding entities such as construction companies and the public. Today, successful planning involves a balanced mix of analysis of the existing conditions and constraints, extensive public engagement, practical planning and design, and financially and politically feasible strategies for implementation.

Changes in the museum area and the neighborhood land–use over the years were influenced by the different planning systems that emerged and evolved throughout the mid to late 20th century. These planning systems included the traditional or comprehensive planning before the 1950s, Systems Planning, such as from May in the 1950s–1960s, followed by Democratic Planning during the 1960s. These were followed by Advocacy and Equity Planning from the 1960s until the 1970s and Strategic and Environmental Planning from the 1970s. Tenure Responsive Planning has recently been implemented - a hybrid approach whereby traditional, advocacy, democratic, and bottom-up efforts are merged.

[6] D. M., A Uganda Letter, Ernst May, 1948

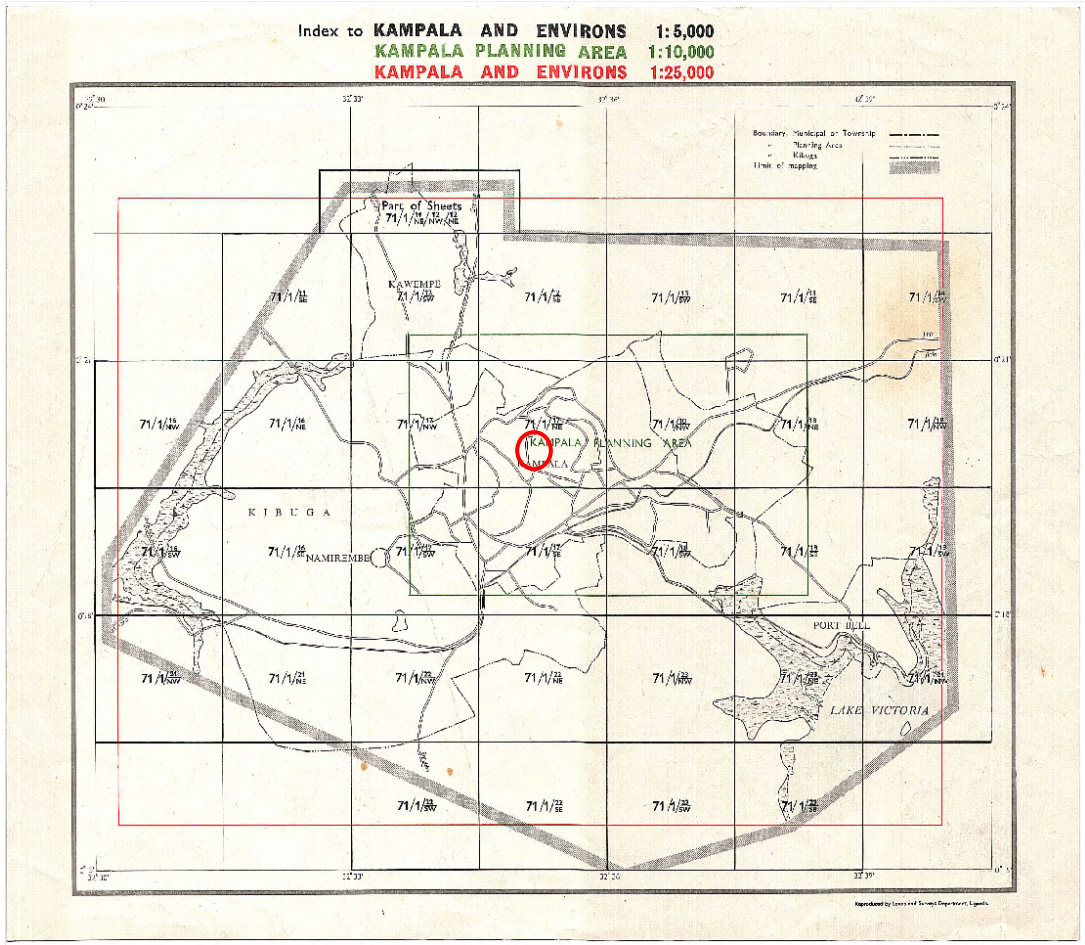


Figure 13 – Kampala Planning Area, 1944 (Compilation by D. Lukwago, Department of Museums and Monuments)

Before 1944, The Protectorate Government initiated the Planning Kampala Area. The Survey, Land, and Mines Department in Entebbe prepared the Kampala Planning Area, which included some of the major elements of the natural landscape for the first time. This early Kampala map was critical in developing subsequent efforts, including The Statutory Plan, Social Structure Plan, and the Plan for Green Areas.

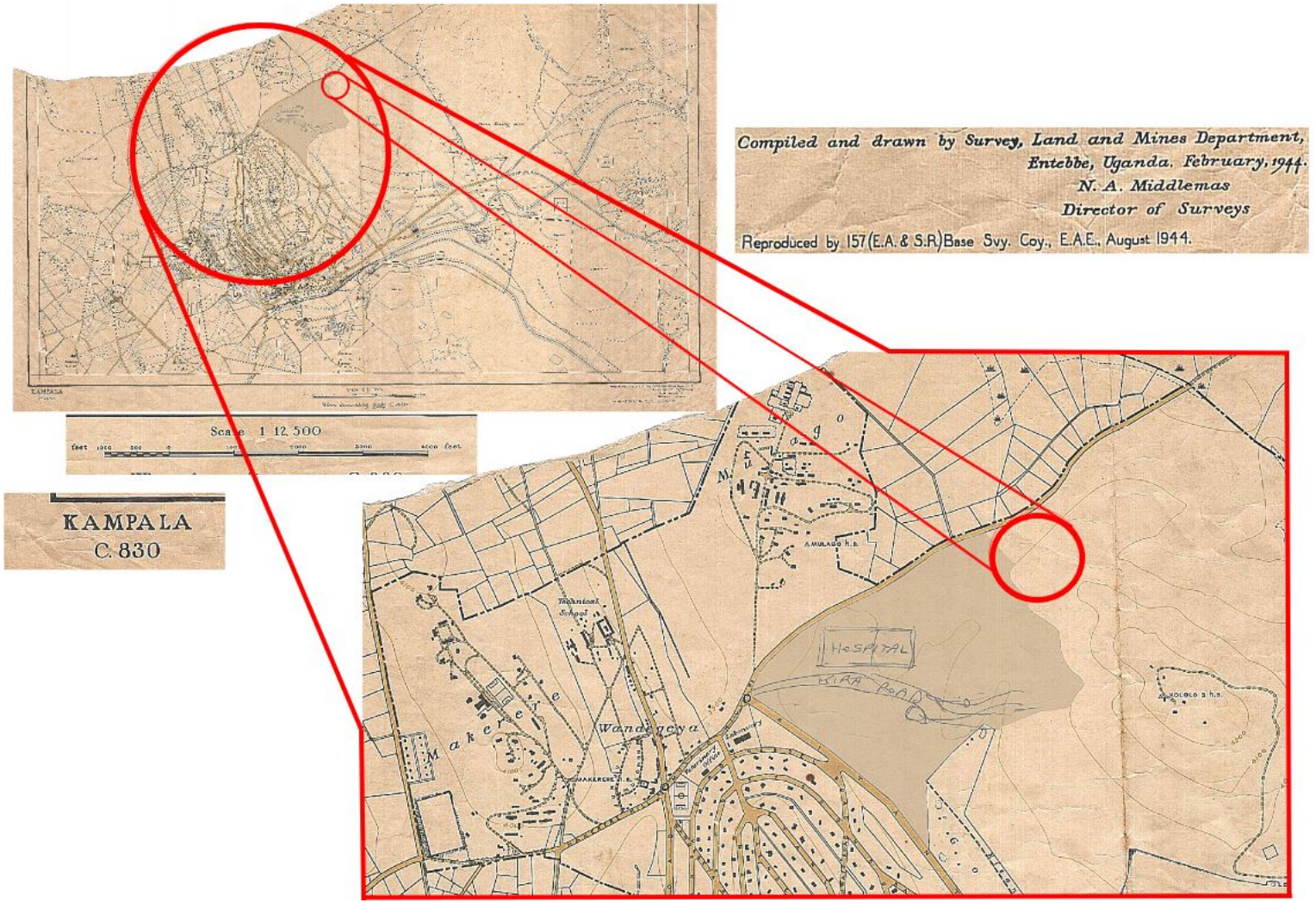


Figure 14 – Present museum site without planning, 1944 (Compilation by D. Lukwago, Department of Museums and Monuments)

By August 1944, the area of the present museum site, its immediate surrounding areas, and areas to the East, particularly the present-day neighborhood of Kololo, had not been planned for any land-use zones.

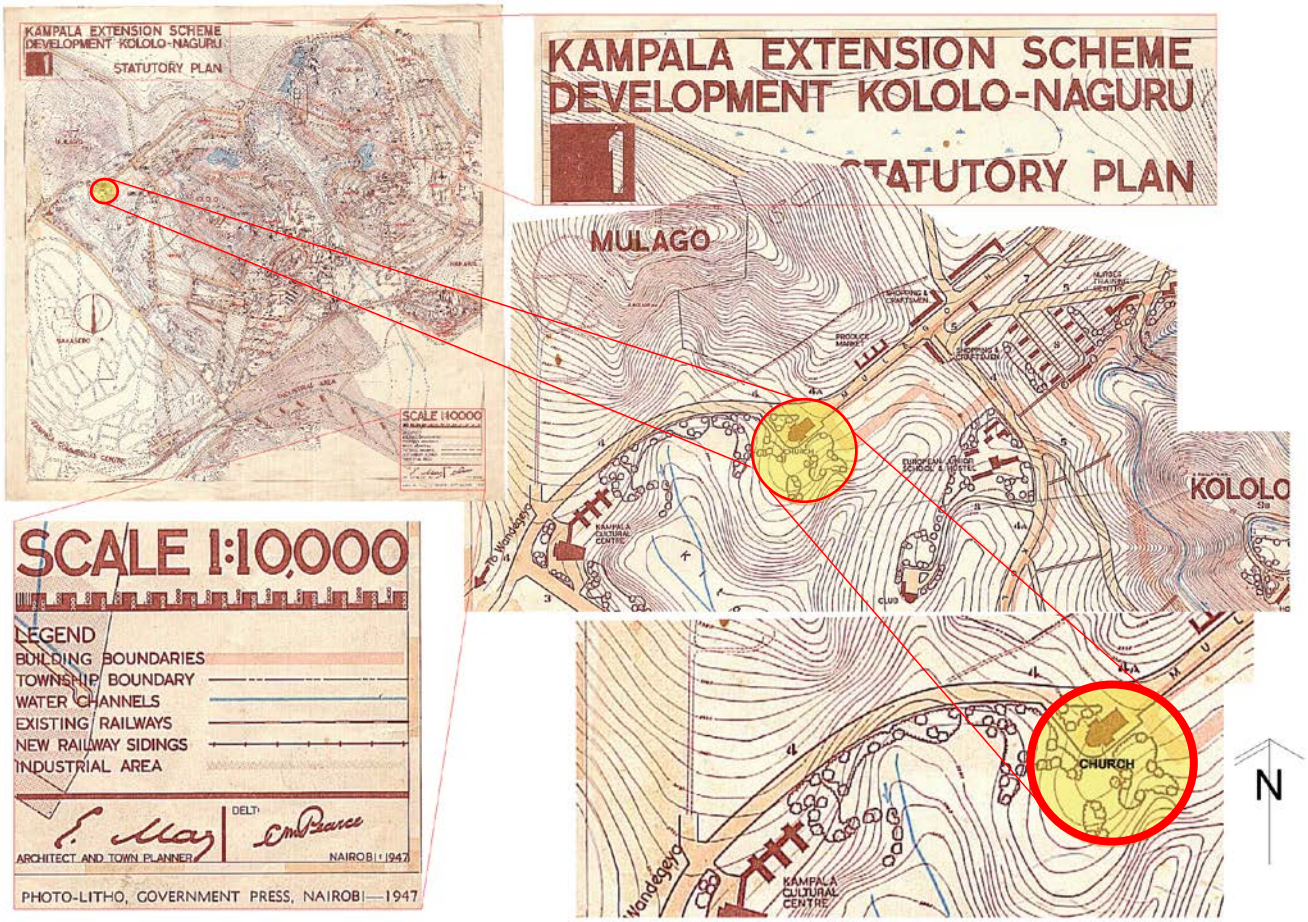


Figure 15 – By 1947, the areas of the museum had been planned for a religious institution (Compilation by D. Lukwago, Department of Museums and Monuments)

By 1947, the area for the present museum site had been planned for a religious institution, while the immediate surrounding areas had still not been planned for any land-use zone.

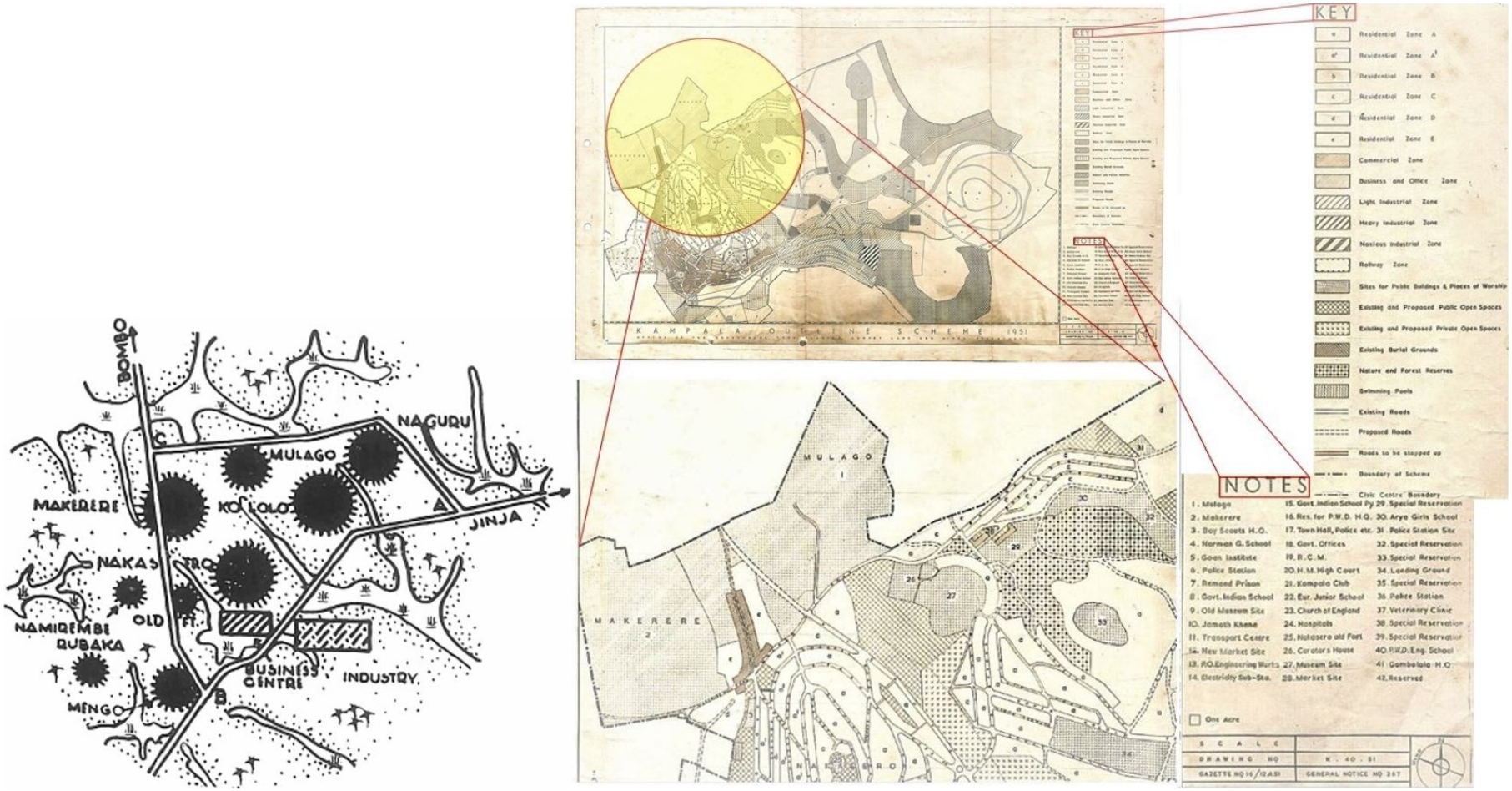


Figure 16 – Left, Ernst May's sketch plan for Kampala (Ernst May 1947) *The museum was planned near the multi-pointed star of the Mulago neighborhood.*

Figure 17 – Right, the site was partitioned in 1951 for a proposed museum site (Compilation by D. Lukwago, Department of Museums and Monuments)

In 1951, numerous changes were made in the area of the present Uganda National Museum. However, the exact site had been partitioned as a residential area, particularly for the Museum Curator`s House "Part 26" and included a Museum Proposed Site "Part 27". The site was also apportioned for the present "British High Commission premises" and part of present-day Kitante Secondary School. This part of Kampala was also zoned for "Public Building Sites and Places of Worship," while the immediate surrounding areas were zoned for residential spaces in the North, East & part of the South, and public open spaces.

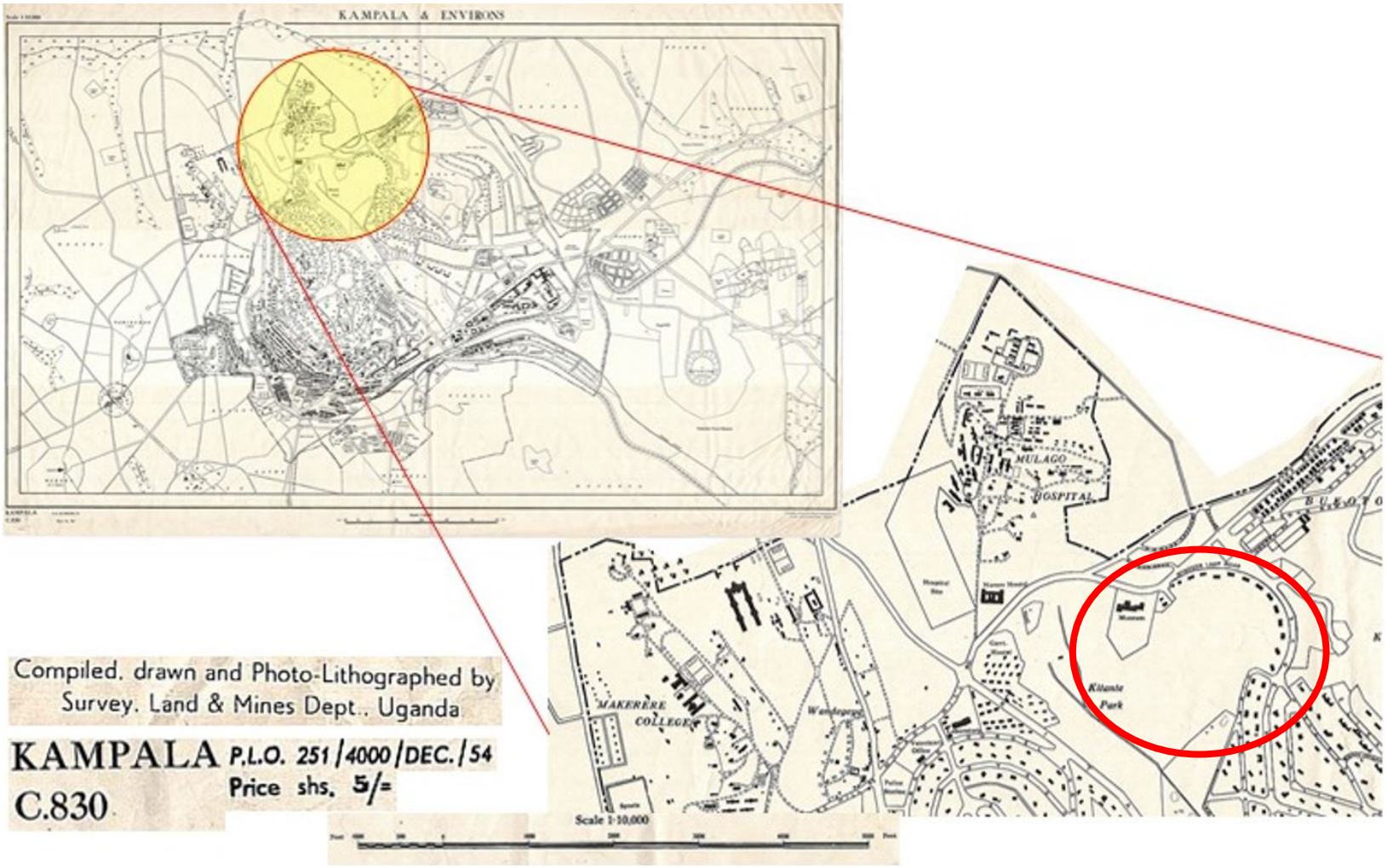


Figure 18 – By 1954, the Museum and Curator`s buildings had been planned (Compiled by D. Lukwago, Department of Museums and Monuments)

By 1954, the museum and curator`s buildings were planned in detail, and the residential area to the East had been established, as shown in the circled area in the figure above. However, the earlier planned zones for the museum and the curator's residence were interchanged. No actual construction had yet been executed In the Immediate neighboring planned areas to the north. The immediate east, south, and west had private open spaces next to the residential area and the public open spaces, respectively, as had been planned earlier.

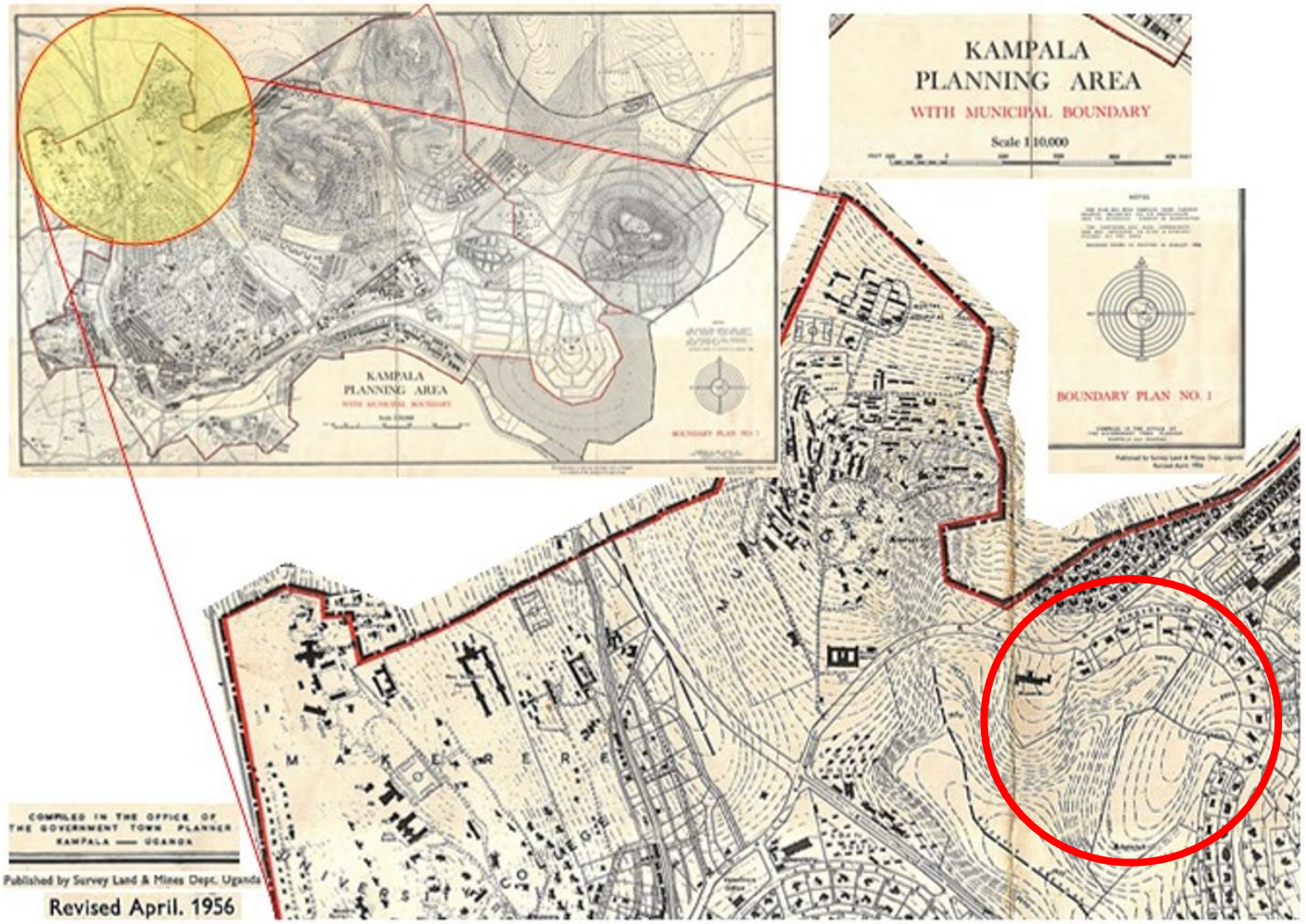
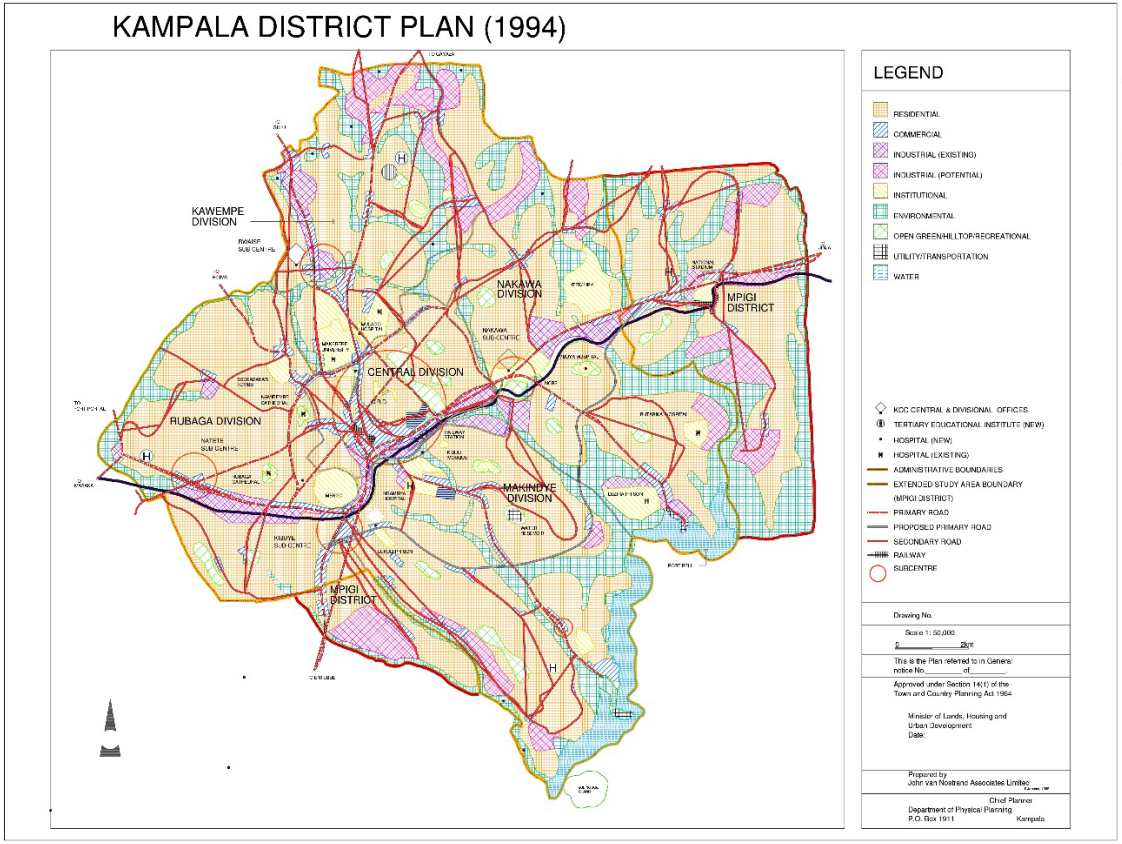


Figure 19 – By 1956, No substantial developments had been established in the immediate planned areas (Compiled by D. Lukwago, Department of Museums and Monuments)



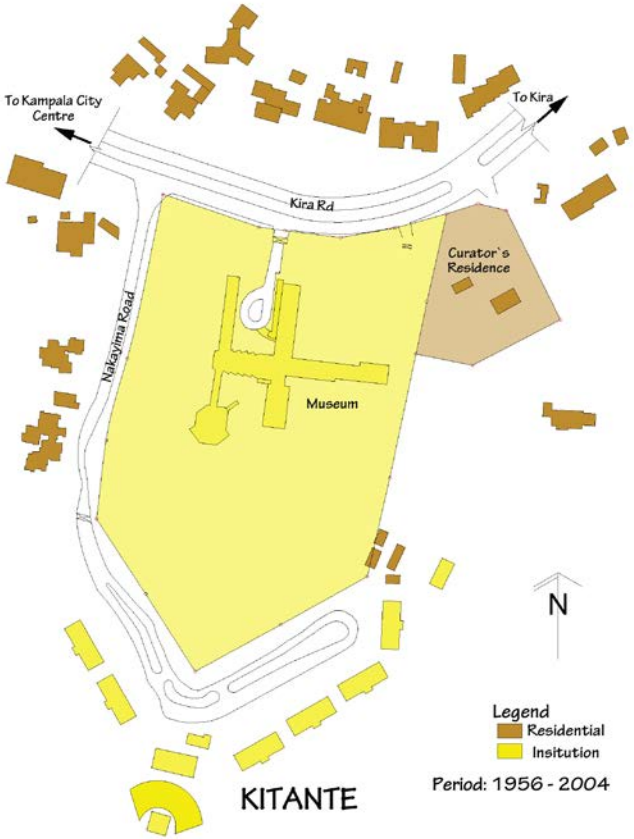


Figure 20 – Left, the Kampala District Plan of 1994

Figure 21 – Between 1956 and 2004, the area was extensively built-out (Compiled by D. Lukwago, Department of Museums and Monuments)

The period after these initial plans for Kampala was fraught with difficulties. There were few, if any, planning exercises during the Idi Amin regime from 1970-1979 or during the Uganda Bush War from 1980-1985, which toppled the government of President Milton Obote. It was not until the early 1990s under the government of his excellency Kaguta Museven that planning resumed with the 1994 Kampala District Plan. However, construction did not cease from the 1960s until the 1990s, and substantial developments were established near the museum, including the Kitante Primary and Secondary School to the South and surrounding residential buildings. This construction changed the earlier planned spaces, zoned for the existing and proposed public open spaces. However, to the North, the planned residential area was maintained. This highlights the resilience of the earlier plans and the importance of the survival of the Uganda National Museum and its surrounding natural buffer.

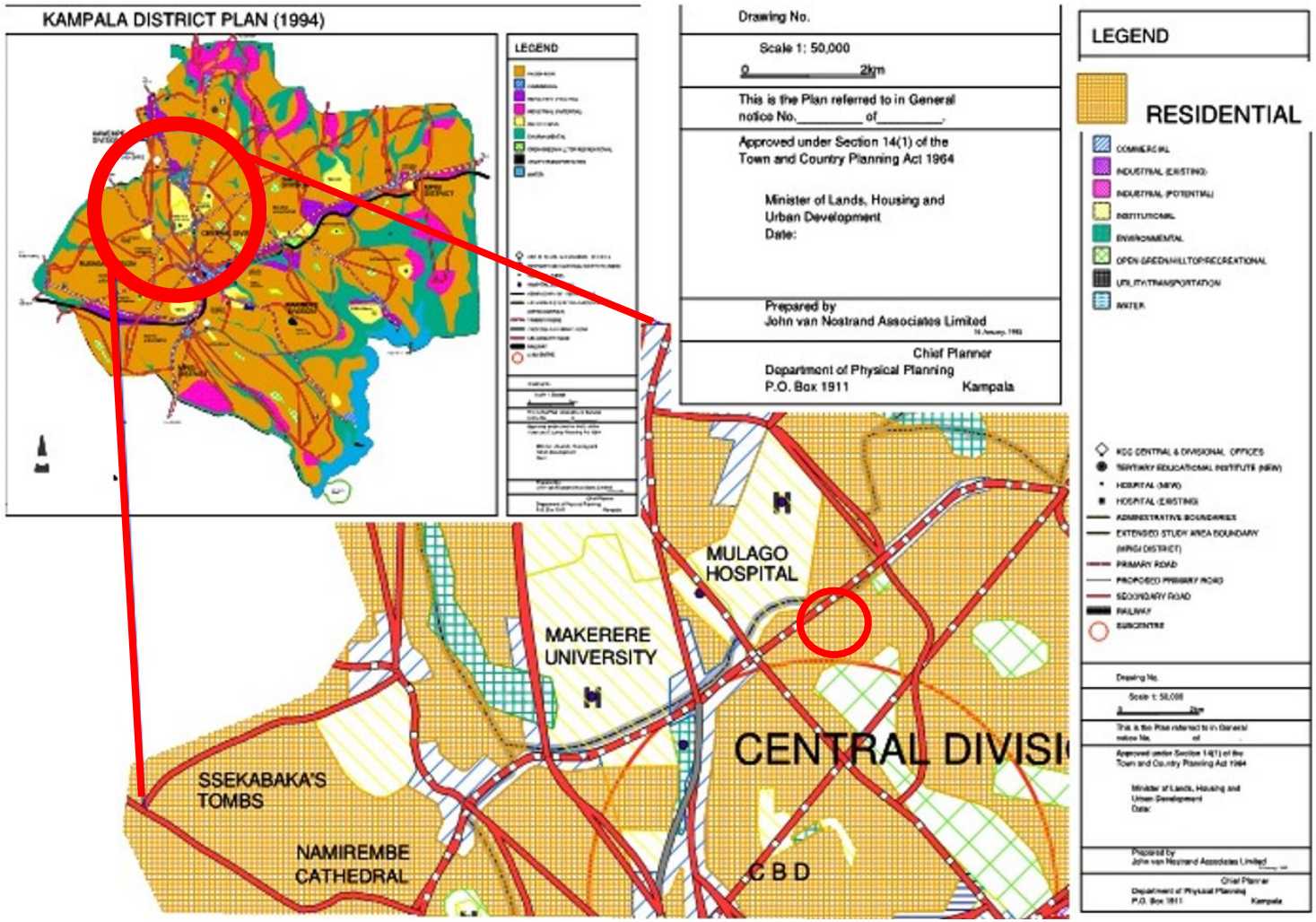


Figure 22 – Changes in the earlier planned land-use zones related to the museum site (Compilation by D. Lukwago, Department of Museums and Monuments)

The above-indicated plan illustrates changes of the earlier planned land-use zones, particularly the museum site and its immediate neighborhood, which were zoned residential. These key areas affected included the museum, Kitante Primary and Secondary Schools with their green open spaces, including the playgrounds.

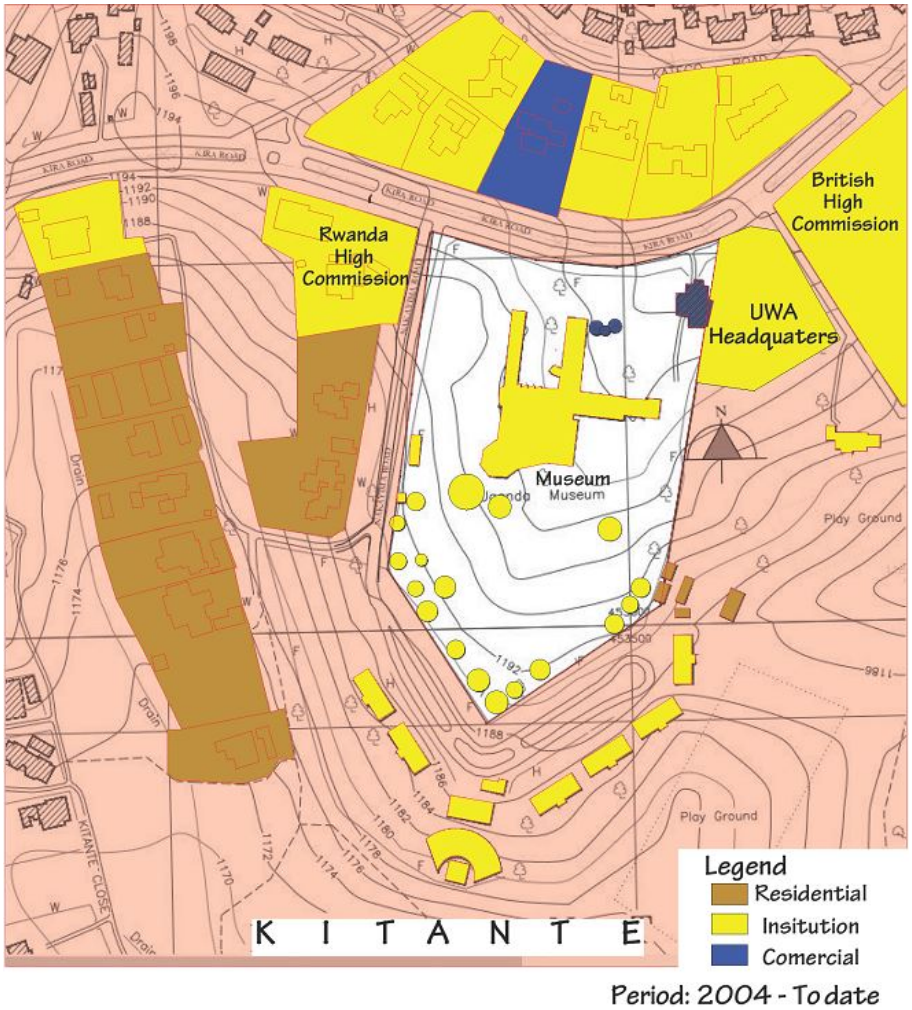
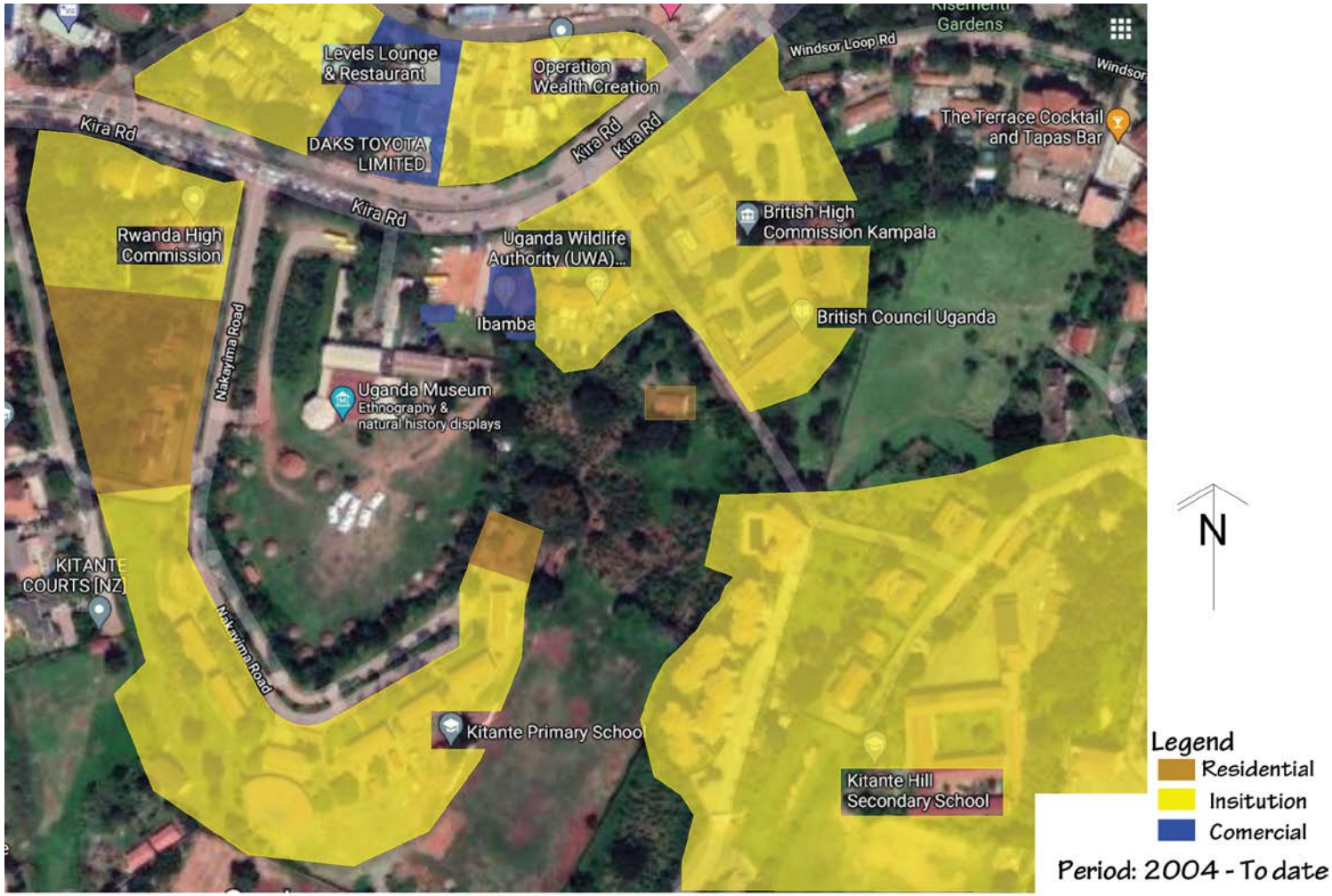


Figure 23 – No action in accordance with the 1993 plan (Compiled by D. Lukwago, Department of Museums and Monuments)

This map indicates no action took place in accordance with the 1994 – Kampala District Approved Plan, particularly within the areas around the museum. From 2004 to the present time, several substantial changes took place in the immediate neighboring areas. Institutions and commercial areas have been implemented in the earlier designated spaces for public and residential areas, such as the British and Rwanda High Commission, Ibamba Building, craft shops, bars, and restaurants.



Google Map Showing the Existing Land-use

Figure 24 – Present land-use situation around the museum (Compiled by D. Lukwago, Department of Museums and Monuments)

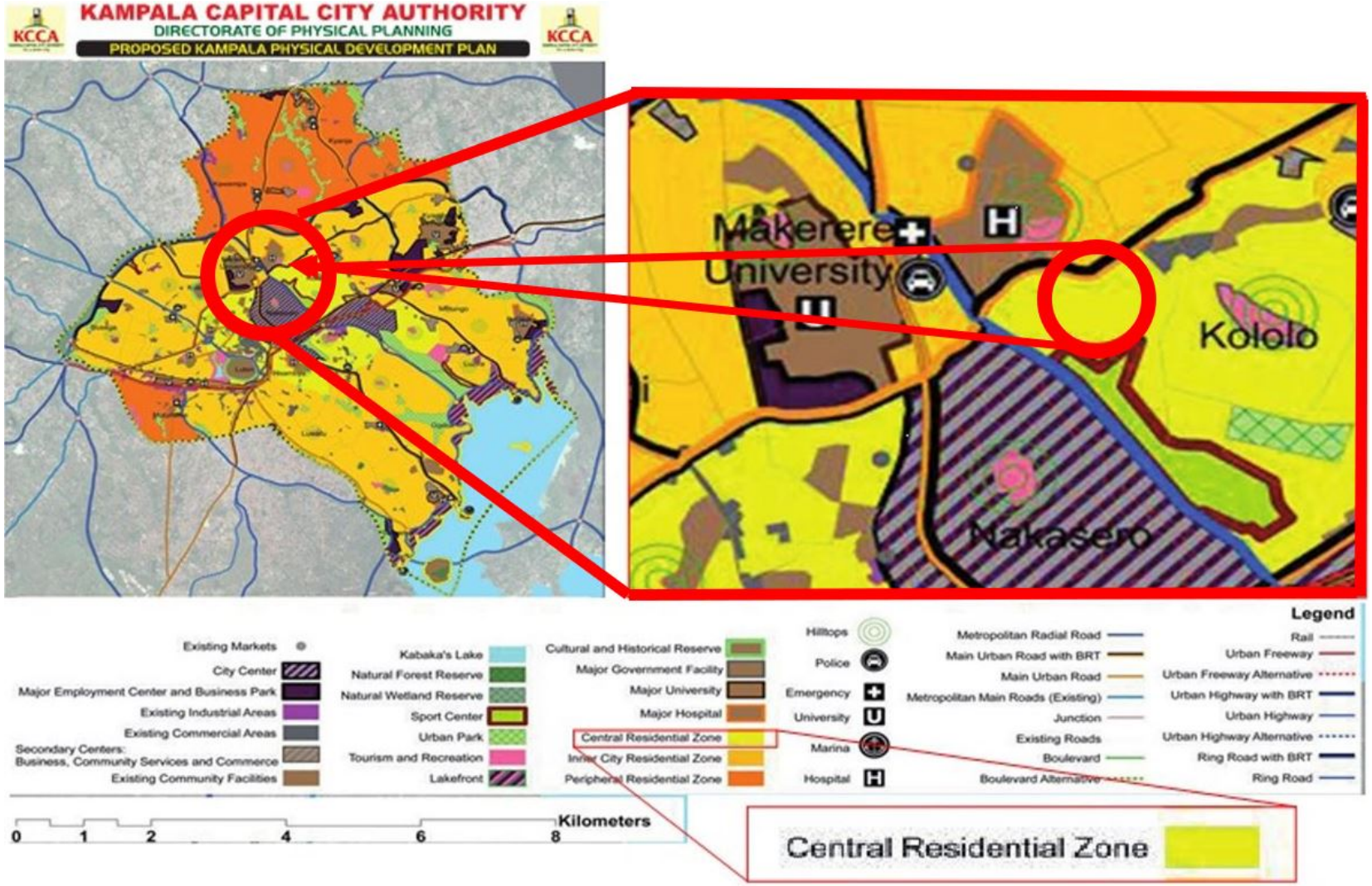


Figure 25 – Proposed Kampala Physical and Development Plan (Compiled by D. Lukwago, Department of Museums and Monuments)

The figure above indicates the presently proposed Kampala Physical and Development Plan, which still emphasizes the proposals of the Kampala District Plan (1994). This plan considers the areas within and around the museum to be in a residential zone.

2 UGANDA NATIONAL MUSEUM

2.1 HISTORY

The Uganda Museum is the oldest existing museum in East Africa, established in 1908 under the Botanical, Forestry, and Scientific Department. The institution was initially located on the Old Kampala Hill in Fort Lugard. The first museum building was designed in the form of a small Greek Temple by Sir Hesketh Bell, the Special Commissioner to Uganda and an amateur architect. Bell's temple-like building containing one exhibition hall soon proved inadequate. While plans were made to add two extra wings to the building, they were likely prevented by the outbreak of World War I.[7] The search for a new place for the Museum started in the late 1930s and continued until 1947 when the Museum was allocated its current site on Kira Road 5. In the meantime, the institution remained at Fort Lugard until 1941 and was temporary housed in the buildings of the Makerere University College in the years 1942-1952. Various concepts for the Museum have been discussed through the years. In 1938, the idea to create a Cultural Centre including an art gallery, library, classrooms, and a school of art and technology in addition to the Museum was mentioned for the first time. The Cultural Centre, whose purpose was to target a larger community than the Museum itself would be able to do, was to be a recurring theme over the next decade. While never realized, due to financial constraints, some of the concepts outlined for the Cultural Centre, such as the library, lecture hall, or the idea to include a theatre, can be found in the eventual design as well as the various unfulfilled development plans for the Museum.

In parallel to the discussions about the Cultural Centre, a discussion about uniting the Museum under one roof with the Uganda Society, an academic society established in 1923, was also held. The Museum maintained an intimate relationship with Society over the years. However, the plans to build a home for both institutions were not fulfilled in its anticipated form even though still discussed in 1951. Eventually, the Uganda Society was granted a place within the premises of the Museum through the Ford Foundation grant, which financed the construction of a lecture hall and a library for the Uganda Society.[8] Finding a suitable location for the new Museum proved a lengthy and daunting task. For the Uganda Museum Committee, the new site had to fulfill two conditions. The first one was to provide ample room for expansion in the future; the second one was to provide a space that was not appropriated in the public mind by a particular race or community.[9] The outbreak of World War II halted the search for a new site. When the process was resumed, new development, plans were made for Kampala, and it was felt that allocating a place for the Museum, which had a lease at the Makerere University until 1951, was no longer a priority. It was also feared that all the best sites in the city would be given to departments with a higher building priority.[10] In 1947, Ernst May, responsible for the development of the Kololo-Naguru Kampala extension scheme, was asked for assistance in selecting a site for the Museum and later in 1949 to advise on the plans for the new building. In 1948 the Central Town Planning Board assigned the Museum a 3-acre site at Kitante Valley, later increased to 9 acres.[11] The construction of the building started in 1951, and the Museum was officially opened on the 30th of June 1954 after being closed to the public since the 15th of April 1952.

[7] Deming, L. M (1966) The history of the Uganda Museum, Occasional Paper 10. Kampala: The Uganda Museum, p. 2.
[8] Deming, 19.
[9] Report of the Uganda Museum Committee (1939). Uganda: The Government Printer, 38.
[10] Correspondence between G.M. Greenwood and [name not legible], 29th October 1947. Source: File: Box.no.1, series Q, ref.no. Q. 009/03, Alt.no G.2, Year: 1947, Title: Uganda Museum – Siting of (Start date: 11 September 1947, End date: 17 December 1949).
[11] Deming, 12.

2.2 HERITAGE & POTENTIAL

The Uganda National Museum combines its function as a repository of the country's history, culture, and natural environment and its people. Over the 100 years of the museum's existence, It has accumulated an invaluable repository of artifacts and specimens that provide scientific and intrinsic value for society. The core role of the museum is to inform, education, and entertain visitors within a welcoming environment.

A summary of the presentation given at the leadership workshop addressed the following questions:

- What are the values and the significance of the Uganda Museum?
- How can the country benefit from it?
- How can these values be protected and enhanced?
- What is the future vision for the museum?

Repository of the history of the country

The collection of the Uganda Museum informs visitors about the history of the country and its people. The core role of the museum is to inform, educate and contribute to identity building. It serves as a reference for all Ugandans, not the least to many school kids visiting the museum.

An iconic building

The Uganda National Museum, designed by the renowned architect Ernest May, can be seen as one of East Africa's most important modernist buildings. It is an architectural highlight that is an icon that contributes to the promotion of Kampala as a place to visit. Reference can be made to, for instance, the Notre Dame in Paris, the Statue of Liberty in New York, or more closely, the Independence Arch in Accra, or the House of Wonders in Stone Town, Zanzibar.

The building is part of a layer to the city

Urban landscapes are dynamic and change over time. Representations of the city's history can be found in its many layers. The Uganda Museum, as an institute, was founded in the early 20th century out of a motivation to bring together valuable information on Uganda's culture. The building was realized in the colonial period, just after the 2nd World War, when Modernist Architecture represented the belief in modern society. Colonial powers used this architecture of the future to prove that they had the best in mind for their colonies. After independence, many newly independent young nations used modern architecture to show that they were ready to play an important role in the world. Together with many other modernist buildings in Kampala, the Uganda National Museum is an essential part of this period during which the museum played an important role in nation-building.

Source of income and cultural capital

The value of a museum and its collection are not easy to measure in economic terms. While the museum's contribution to nation-building cannot be underestimated (many Ugandans have visited the museum during their school years offering them cultural reference), the museum can also be seen as an economic venture. As such, it deserves a solid business model, in which activities that come with costs are balanced with income-generating activities. Therefore, a museum needs creative as well as commercial leadership that develops models that bind visitors to the museum by programming, strategic alliances, and responding to current affairs with a variety of activities. In addition, a museum promoting Kampala and Uganda as a place to visit generates income from other sectors such as tourism and leisure. In that sense, its benefits extend beyond the museum itself.

2.3 MUSEUM'S COLLECTION

The museum was built to house its extensive collection. This collection is represented in nine units. This does not necessarily mean some sections are less important than others since all artifacts in the museum are priceless, but rather due to some aspects while some sections are more functional than others.

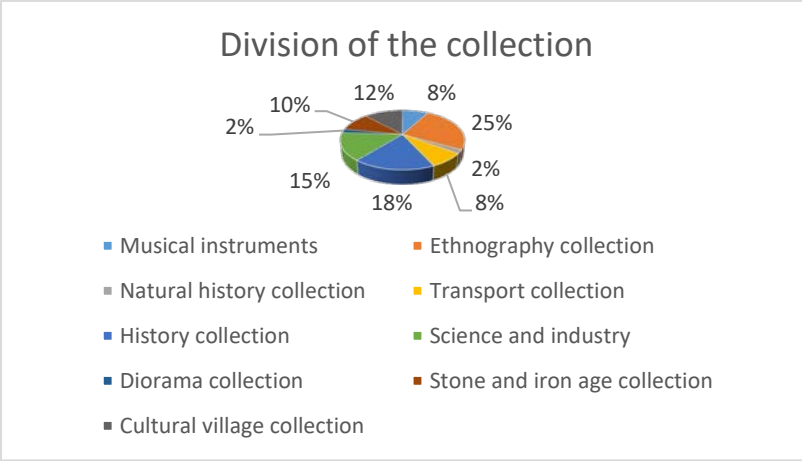


Figure 26 – Division of the collection

The Ethnography Collection is the most valued at the Uganda National Museum as this was the initial focus of the museum. The collection centers on artifacts that tell the stories of the cultures and practices of the people of Uganda. A story easily understood by all age groups. In addition, the gallery that houses this collection is the largest space of the original building, which adds to the experience of the visitors. The History Collection provides the background story of the Uganda National Museum from its first location at Fort Lugard, Makerere University School of Fine Arts, to its present location on Kitante Hill. The history collection describes the foundation and establishment of the museum, the early history of the country, and how Uganda got its current boundaries.

The Science and Industry Collection was opened on 8th October 1962 to celebrate the independence of Uganda and highlight the country's achievements in science and industry.

Cultural Village Collection is located behind the museum and is viewed as a summary of Uganda through the communities, cultures, locations, and traditional architecture.

Fifth is the Stone and Iron Age Collection. This is a very static section but important in the school curriculum, especially with the younger children.

Musical Instruments is one of the most popular collections, and this section houses historical artifacts but also enables visitors to handle objects. The collection is familiar to all age groups and generations and is viewed as a form of hands-on entertainment in the museum. However, today, it is somewhat dormant now compared to years past years and has limited information.

Transport gallery collection. Despite the structure being unfavorable with its conditions for the artifacts in there, the section has no documentation and labeling whatsoever, the artifacts themselves are not in good condition, and the section has never been officially opened and yet is accessed by the public.

Natural History collection. This static section comes second last simply because of its Franco-Uganda paleontological exhibition that was put in place by researchers in 1992. The exhibition is mostly understood by elites who are researchers or experts in the field. The reason for which many visitors simply pass through it.

Diorama collection is a separated part of Natural History that comes last as it seems the most 'neglected' section in the museum. It has poor lighting, artifacts, and the display showcases are not in good condition despite having no labels, and some showcases are empty. Just for the record, it used to be one of the most loved and interactive spaces of the museum back in the day.

2.4 BUILDING HISTORY

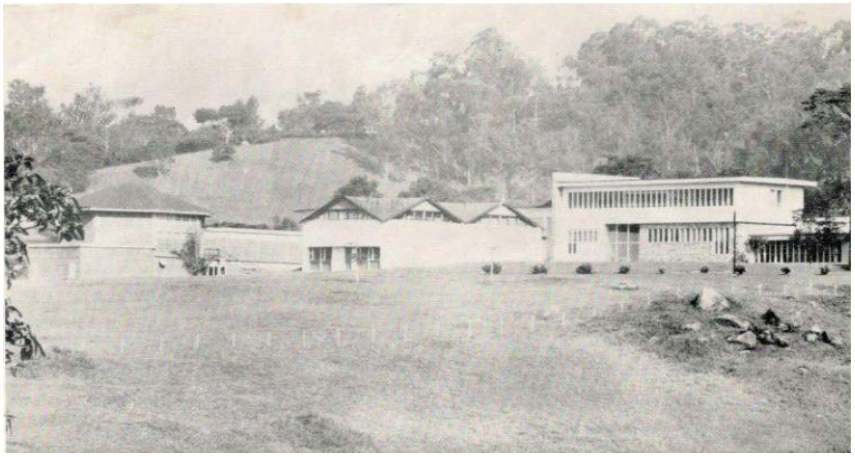


Figure 27 – Photo of the museum building in 1966 (Uganda National Museum archive)

Building brief and design inspirations

The available archival material, including correspondence between the Museum Trustees and Colonial Officials and the museum reports from the years 1939-1952, give no indication of a building brief.[12] A schematic diagram indicated the size of the building required for the museum. This diagram was prepared upon the request of the Museum Trustees probably in the early 1940s and provides an early clue to the building brief. The archival diagram includes the following departments and uses of ethnography, natural history, history and prehistory, comparative cultures of other lands, educational facilities, special exhibitions, permanent exhibitions, a wing for the Uganda Society, spaces for the administration and facilities. In the diagram, exhibition galleries are intertwined with courtyards which are described as having a practical function as a location for larger objects and an aesthetic function giving "… an atmosphere of peace and dignity to the building".[13]

According to the Curator's Report in 1949, sketch plans were produced for the Museum to indicate the accommodation needed if all the functions were to be addressed. The plans were approved in principle, but it was felt that a project of such importance as the Museum required advice from a competent architect.[14] Correspondence between K.P. Wachsmann, the Museum Curator, and the Secretary of State for the Colonies from October to December of the same year shows that attempts were made by the Curator to access plans and sketches of *other museums designed for the tropics*. While it is not known whether the Museum ever got in possession of the requested material, the Secretary of State for the Colonies suggested inquiring with the Directors of Public Works of the Federation of Malaya and Nigeria, where new museums were considered respectively in Kuala Lumpur and Lagos. In addition, a reference was made to the Raffles Museum in Singapore and Rhodes-Livingstone Institute in Northern Rhodesia.[15]

[12] In an email Mr. Posnansky stated that "In the minds of the Curators, we had a sort of master plan, conceptual rather than a written statement" (Posnansky, private correspondence, 2020).

[13] Diagrams Indicating the Size of Building Required for the Uganda Museum. Source: 1. File: Box.no.1, series V, ref.no. V. 201, Alt.no S.1, Year: 1930, Title: Uganda Museum.

[14] The Uganda Museum. Report for the Year 1949 (1950). *Nairobi: The English Press Ltd*, 3.

[15] Saving 809. From the Secretary of State for the Colonies. To the Officer Administering the Government of Uganda. 17th December 1949. File: Box.no.1, series Q, ref.no. Q. 009/03, Alt.no G.2, Year: 1947, Title: Uganda Museum – Siting of (Start date: 11 September 1947, End date: 17 December 1949)

The first sketch of the museum

The first known sketch plan of the museum dates to September 1949. The sketch is not signed, making it difficult to assess whether Ernst May was involved in preparing it at any point. Judging by the available archival material, it is more likely that this sketch is the one to which Wachsmann is referring in his Curator's Report from 1949. It is plausible to think that the sketch visualizes the diagram created in the 1940s and that it was to serve as a starting point for the development of the eventual design.

The sketch shows the institution drawn on a U-shaped plan with three rectangular wings with gable-roofs housing the administration and exhibition galleries enclosed by an open terrace to the south. An arc-shaped music studio is in the southwest corner, and a lecture hall is in the southeast corner. The buildings, together with the terrace, form a square with a generous courtyard in the middle and a statue and pool indicated at its center. Cutting across the courtyard in the east-west direction are two retaining walls indicating the terraces in the slope on which the building was to be built. The entrance to the museum is in the northern corner, from which the administration wing extends to the south while the exhibition wings run to the west and south. The administration wing consists of several smaller rooms. The exhibition gallery wings are both envisioned along two axes with rooms running in parallel. Verandas running on the inner side of the three blocks provide an intermediate space between the inside and the outside of the building and are typical features of colonial architecture from the period. From a stylistic point of view, the design of the building is quite conservative and can be compared to other institutional buildings found across the British Empire.

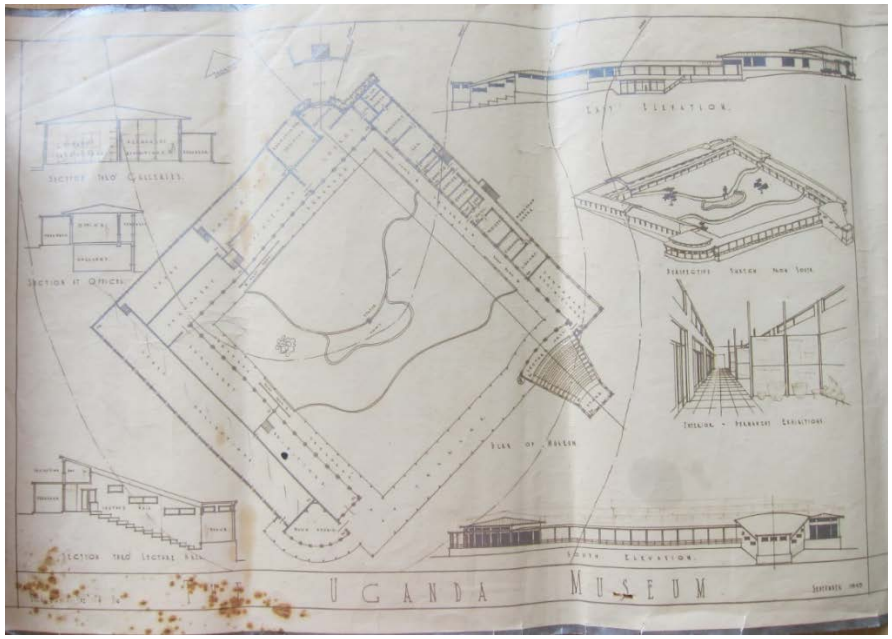


Figure 28 – Uganda Museum, plan of museum, section galleries, section offices, section lecture hall, east and south elevation, perspective sketch, 1949 (not realized) (Uganda National Museum archive)

Ernst May - Commission, Plans, and Drawings

Ernst May was appointed architect to the Museum in 1950. As a part of his assignment, he produced sketch plans for the complete layout of the Museum, designed the first of the three large exhibition halls planned for the Museum, a large entrance hall with space for temporary exhibitions, office accommodation, workshops, and storage space and designed the Curator's House. In addition, he produced a detailed plan for the landscaping around the Museum and two imaginative drawings of the Museum depicting the front and the rear of the building. Whether May produced a separate site plan for the Museum and landscaping is not known. In his description of the landscaping around the Museum, he refers to a plan with outlined Museum buildings and retaining walls of the terraces with plants and flowers slightly indicated on the plan. The only site plan we are able to refer to is included in drawing no.6 of the Uganda Museum depicting the ground floor plan and does not indicate the mentioned plants and flowers.[16]

Design of the Museum

<u>The layout of the site</u>

May drew a schematic sketch of the site plan of the museum showing the blueprint of the core building and indicating the location of the two additional exhibition galleries shown as rectangular structures steeped in the sloping hill adjacent to the core building. Both extensions are linked with the main structure through galleries. May describes the idea behind the layout as "(…) having the site stepped down in three large terraces towards Kitande Valley, [with] each [terrace] taking one section of the building."[17] The site plan also shows the location of the future lecture hall to the north and Curator's House to the north-west.

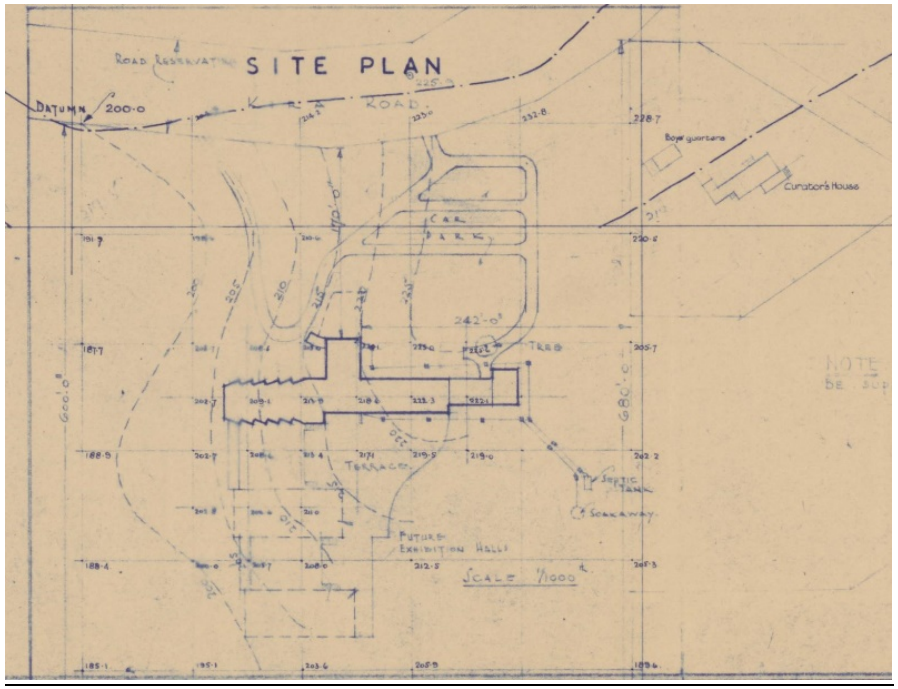


Figure 29 – Uganda Museum, drawing no.6., detail: a schematic sketch of the site plan, 1951, Ernst May (Architekturmuseum der TU München)

<u>The imaginative drawings</u>

The two imaginative drawings represent the Museum as an unequivocally modern institution, a culmination of the long-lasting attempts of the Museum Committee to create a place open to the various communities living in Kampala. While the drawing of the front of the building conveys, above all, ideas of the Museum as an institution, the drawing of the rear is a close to reality visualization of the Museum building and its yard as May intended it to be.

[16] The known plans and designs of the Museum by Ernst May start with no.6 and end with no.9.

[17] May, E. Landscaping round Uganda Museum, Kampala, 7th June 1952.

In his drawings, May depicts the one-storied exhibition hall with the characteristic vertical window bands, extending by its height, inserted into the saw-leaf-like exterior walls. The gallery is joined by the entrance hall with a brise-soleil wall providing access to the yard of the Museum. A high stone-clad wall projecting beyond the roofs of the surrounding buildings separates the entrance hall from the two-storied east wing. The east wing has a horizontal band of windows running across the façade on the first floor, while the ground floor is fitted with a large glass wall consisting of double-height windows at the center and horizontal bands of windows on both sides. The east wing is joined by a lower section. The drawing also shows a separate building to the north joined with the core structure by a wall. As confirmed by the site plan drawn by May, this shows the planned lecture hall. From the exhibition hall, a gallery is running in the direction south, linking it with what was to be the second gallery hall.

The Museum buildings are complemented by an elaborated backyard occupying the first of the three planned terraces supported by a retaining wall of cobbled stones. A pergola is located on the southern end of the terrace, creating a small, rounded patio with indicated sitting place (restaurant garden). The design picks up some of the ideas seen in the 1949 sketch, such as the pond cutting through the garden, with one difference, in May's drawing, the pond appears to start from the interior and runs in the west direction where it drops to what seems to be a lower level. A footpath leading from the entrance hall to the staircase is cutting through the middle of the yard; the same footpath extends from the entrance hall towards the sitting area enclosing the lawn in the middle.

Figure 30 – Imaginative sketch of the Uganda Museum, front of the building, 1951, Ernst May (Uganda National Museum archive)

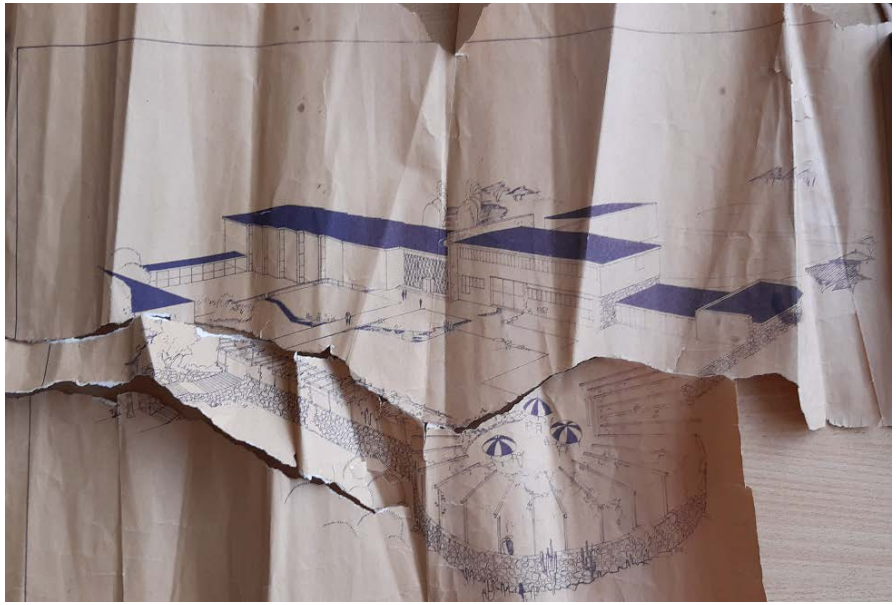


Figure 31 – Imaginative sketch of the Uganda Museum, rear of the building, 1951, Ernst May (Uganda National Museum archive)

A modernist building

Herrel Eckhard, the author of the book on Ernst May's work in East Africa, suggests that the Corydon Memorial Museum in Nairobi (today National Museum), headed by the British archaeologist and anthropologist Louis S. B. Leakey (1903-1972), served as a model for the project.[18] To which degree this is true is hard to determine. If the museum in Nairobi served as a model for the architect, it would have to be on a conceptual level. While the floor plan of the Uganda Museum, with the wings branching off from a central entrance hall, follows a classical museum design, its formal language is distinctly modern. The rectilinear shapes of the Museum buildings, flat roofs, and ribbon windows firmly place the building in the global tradition of modernist architecture. Whereas the straightforward, functional design, fused with aesthetic considerations, manifested through elements such as brise- soleil or louvered windows, link the Museum to the contemporary architectural tendencies on the continent known as *tropical modernism*. Last but not least, the use of natural stone on the exterior of the buildings to enliven the façades is one of the characteristic features of May's designs in East Africa and gives the building a distinctly local touch.

Figure 32 – Early photograph of the museum from the north, date and author unknown (Uganda National Museum archive)

[18] Eckhard, H. (2001) Ernst May. Architekt und Stadtplaner in Afrika 1934–1953. Frankfurt: Deutsches Architekture Museum & Wasmuth Verlag, 101.

2.5 ERNST MAY

architect and urban planner (1886-1970)[19]

Ernst May was a German architect and urban planner, and a founding member of the *Congrès Internationaux d'Architecture Moderne* (CIAM). He was born in 1886 in the German city of Frankfurt/ Main and went to university in London and Darmstadt before finishing his studies in Munich. He spent his early career as an architect training under the eye of Sir Raymond Unwin where he was exposed to the ideas of garden city planning, an approach that would have a significant bearing on his own work as an architect and urban planner - with a direct impact on Kampala.

May established an independent architectural firm in his home city in 1912 with his first commissions for private clients. Following his service in the army during the First World War (1914-1918) he was made the head of *Schlesische Heimstätte*, an organization that aimed to expand rural settlements in two large provinces of the German Silesia. In the years 1919-1925, he oversaw the construction of around 3000 housing units and designed his first urban expansion scheme for the provincial capital of Breslau (Wrocław). In the years 1925-1930 May headed the team behind the affordable public housing programme known as New Frankfurt, initiated by the mayor Ludwig Landmann. Under the scheme May's team designed and constructed 26 settlements ranging from 50 to 1500 housing units, comprising a total of 15000 new homes. The *Siedlung Römerstadt* is probably the best known of the constructed settlements. Through this work he became a central figure in the early modernist movement.

In 1930, the team behind the New Frankfurt programme moved to the Soviet Union, where they began work in numerous Russian cities to apply the planning and housing concepts developed in Germany. However, due to the increasingly difficult political climate in the Soviet Union, May's involvement was short-lived. His contract in the Soviet Union was terminated in 1933, and in 1934, instead of returning to Germany where the Nazis had come to power, May moved to Kenya.[20]

May spent nearly two decades living and working in East Africa. After moving to Kenya, he settled on a coffee farm near Mount Kilimanjaro, where he worked as a farmer. In 1937 he moved to Nairobi and opened an architectural firm. In Kenya, he designed several private residences and commercial and public buildings, including the Aga Kahn School (1952) and the Aga Khan Maternity Hospital (1952), both in Kisumu. Other notable projects from that period are the Kenwood House (1937) in Nairobi and the Oceanic Hotel (1950-1958) in Mombasa, demolished in 2000. May's involvement in building and urban projects in Uganda lasted from 1938 to 1952. He was involved in the design of 11 projects, of which seven were realized or partly realized. His most notable planning and housing projects are the Extension Plan for Kololo-Naguru (1945-1952), the masterplan for the city of Jinja (1947-1950), and Nakawa settlement in Kampala (1947-1949, demolished in 2011). Three of his building designs were built in Kampala, including the City House (1938/1939), Cigarette Factory (1938/1939), and Uganda Museum (1950-1954).

During his time in East Africa, May worked in a colonial context that undeniably impacted his approach to urban planning.[21] Nevertheless, like other representatives of the modernist movement, he strongly believed in

[19] https://ernst-may-gesellschaft.de/home.html; Herrel, E. (2001) Ernst May. Architekt und Stadtplaner in Afrika 1934–1953. Wasmuth: Auflage: 1.; Ogura, N. (2005) 'Ernst May and Modern Architecture in East Africa,' in Archiafrika conference proceedings:

[20] Simon Huber (2013) 'Ernst May in East Africa,' Ernst May - Architecture and Urban Planning in Kampala: An Exhibition at the Uganda National Museum

[21] Göckede, R. (2012) 'The Architect as a Colonial Technocrat of Dependent Modernisation', in Pinther K., Förster, L. and Hanussek, Ch. (eds.) Afropolis. City, Media, Art. Auckland Park: Jacana Media, pp. 54–65. Gutschow, Kai K. (2012) 'Das Neue Afrika: Ernst May's 1947 Kampala Plan as Cultural Program' in Demisse, F. (ed.) Colonial Architecture and Urbanism in Africa: Intertwined and Contested Histories. London: Ashgate, pp. 373–406.

the “city as a social space that should provide good living conditions for all its inhabitants.” Thus, he translated and adapted the essential tenants of modernist urban planning and architecture to the context where he found himself working during his years on the continent. His architectural projects are characterized, among others, by attention to climate, use of *brise-solei*, and a combination of white brick and local stone masonry.

Ernst May was involved in 54 projects on the African continent, of which 13 were either not realized, or there is no evidence of their realization.[22] May returned to Germany in 1953, where he led the planning department in Hamburg in the years 1954 through 1956 and was involved in numerous housing projects in other cities. From 1957 he taught as an honorary professor of the Technische Universität Darmstadt. After his return to Germany, May also wrote several books on urbanism. He died in Hamburg in 1970, at the age of 84.

Congrès Internationaux d'Architecture Moderne (CIAM).

The International Congress of Modern Architecture was first organized in 1928 to promote the cause of architecture as a social art holistically incorporating landscape, urbanism, and industrial design. Founded by the famed Le Corbusier with Ernst May and 25 other prominent architects, the group was influential in disseminating ideas that architecture was a political and economic tool that must be used to improve the world. A series of eleven congresses were held across Europe to develop the concepts of the Modern Movement including urban planning. The unpublished proceedings of the 1933 congress were later unilaterally published by Le Corbusier in 1944 as the Athens Charter which cemented his reputation as a leader of the movement. While the organization survived the Second World War, and many of its tenents were put Into action, it unfortunately was disbanded in 1959.

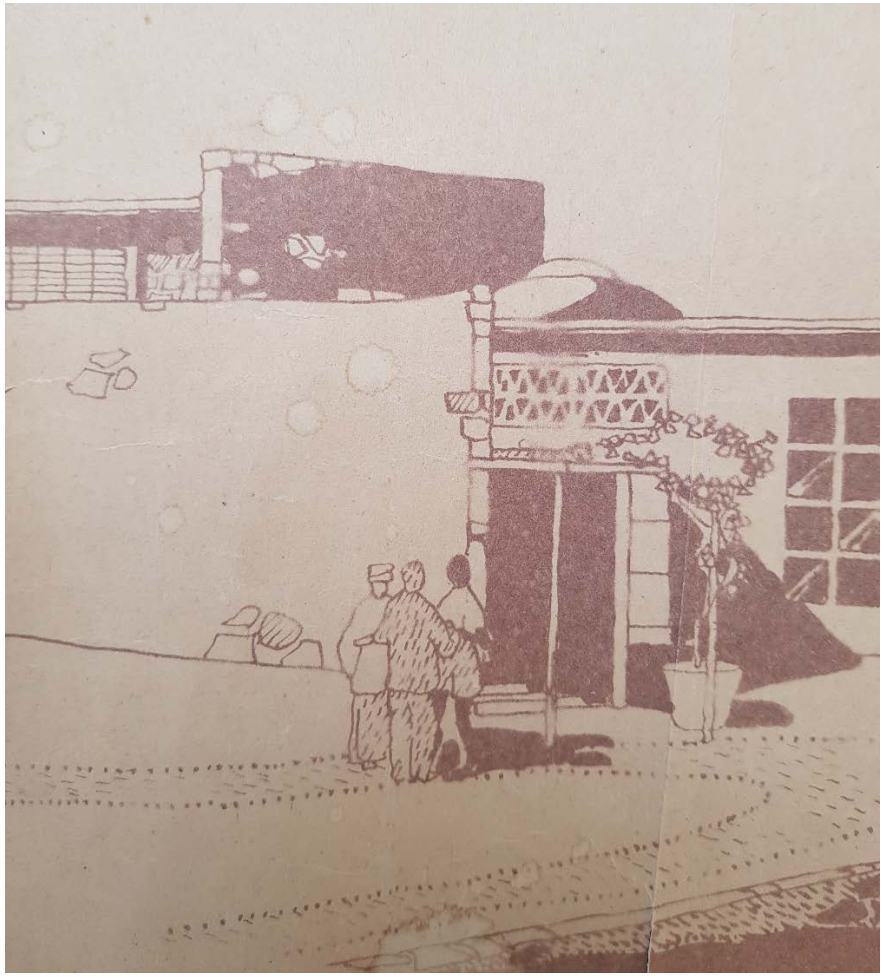


Figure 33 – Sketch of the entrance to the Uganda Museum attributed to Ernst May (Uganda National Museum archives) May believed in the “city as a social space that should provide good living conditions for all its inhabitants”

[22] Source: https://ernst-may-gesellschaft.de/en/ernst-may/catalogue-raisonne/east-africa-1934-1954.html

2.6 BUILDING, LAYOUT, LANDSCAPE

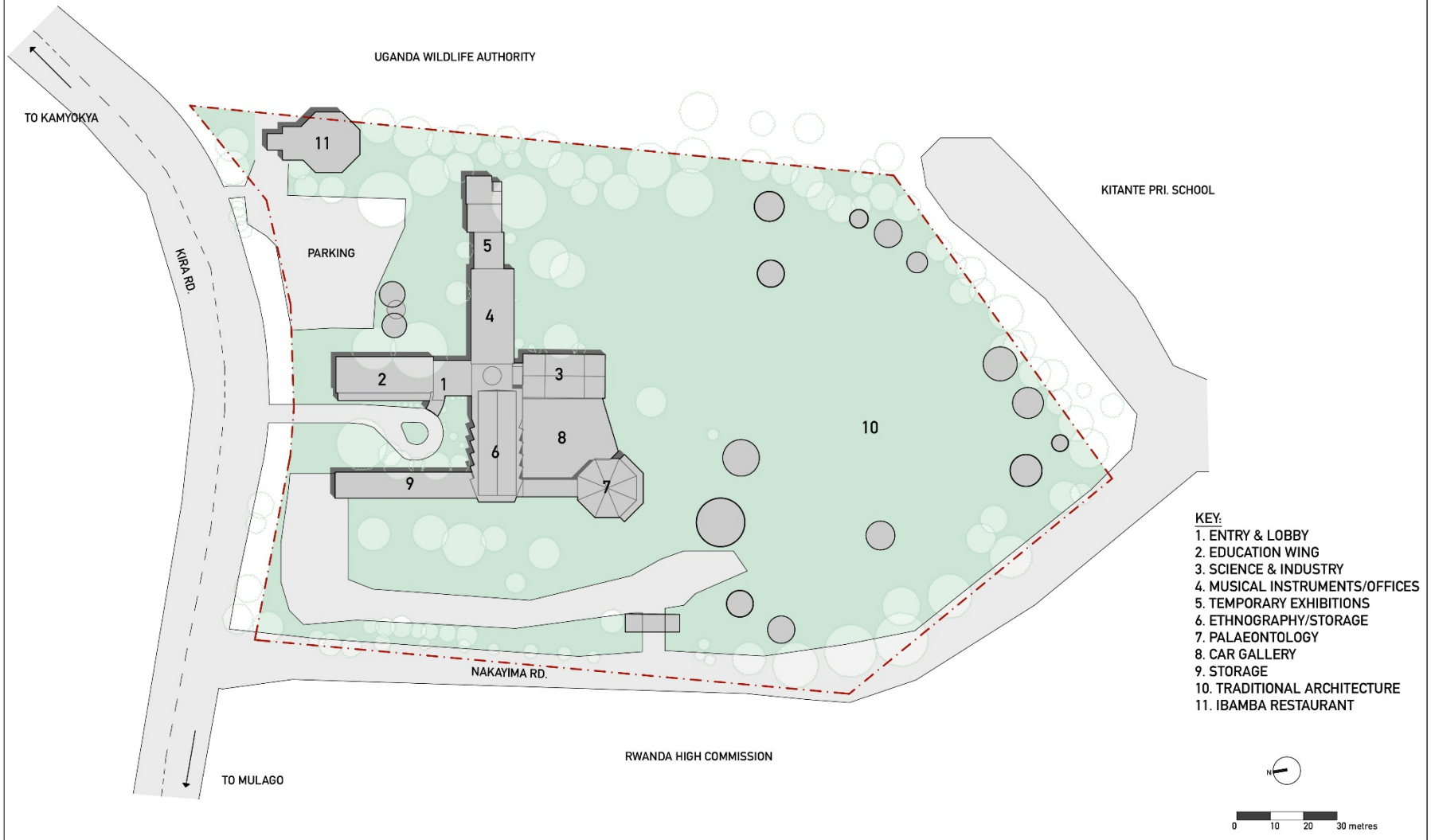
2.6.1 The Core Building 1954

The core building of the Museum consists of a central entrance hall from which exhibition spaces branch to the east and west. The building is entered through a door located to the northwest indicated on the exterior by a small canopy supported by pillars. The western wall, where the door is located, is glazed with louvered windows. Toilets and a reading alcove are located along the northern part of the hall. The entrance hall is topped by a large milk glass dome located at its southern end, which provides the interior with a diffused light. Originally, the room was enclosed by a brise-soleil wall providing access to the lawn at the rear of the building.

The main exhibition gallery is located to the west. The smaller rectangular part of the gallery is accessed directly from the entrance hall. It is lit through louvered windows arranged vertically in two rows. The exhibition cases are arranged along the walls. From this room, access is provided to the large exhibition hall with saw-leaf-like exterior walls. The exhibition cases are located within the alcoves created by the receding walls. In addition, a raised floor section was provided with showcasing below. Entrance to the workshops and study collections located in the basement is at the end of the hall.

The two-storied east wing is arranged along with one axis with a long corridor leading to the temporary exhibition halls added to the building in 1961. This space, conceived as a temporary exhibition hall, later became the Music Gallery, a function it performs until today. The space is lit through a horizontal band of windows intertwined with rounded columns which *emulate* the columns in the entrance hall. The windows are located in the upper part of the northern wall. Light to the interior is also provided through a large glass door located in the southern wall between a small exhibition room and two service rooms. The exhibition cases are arranged along the northern wall. A small pond also referred to as the musician's pit, was once located in front of the glass door. According to the designs, the pond was to continue to the exterior through a narrow channel. The temporary exhibition gallery is a single room with a horizontal band of windows inserted in its southern façade. Further to the east, a service yard and garage accessed from the outside are located.

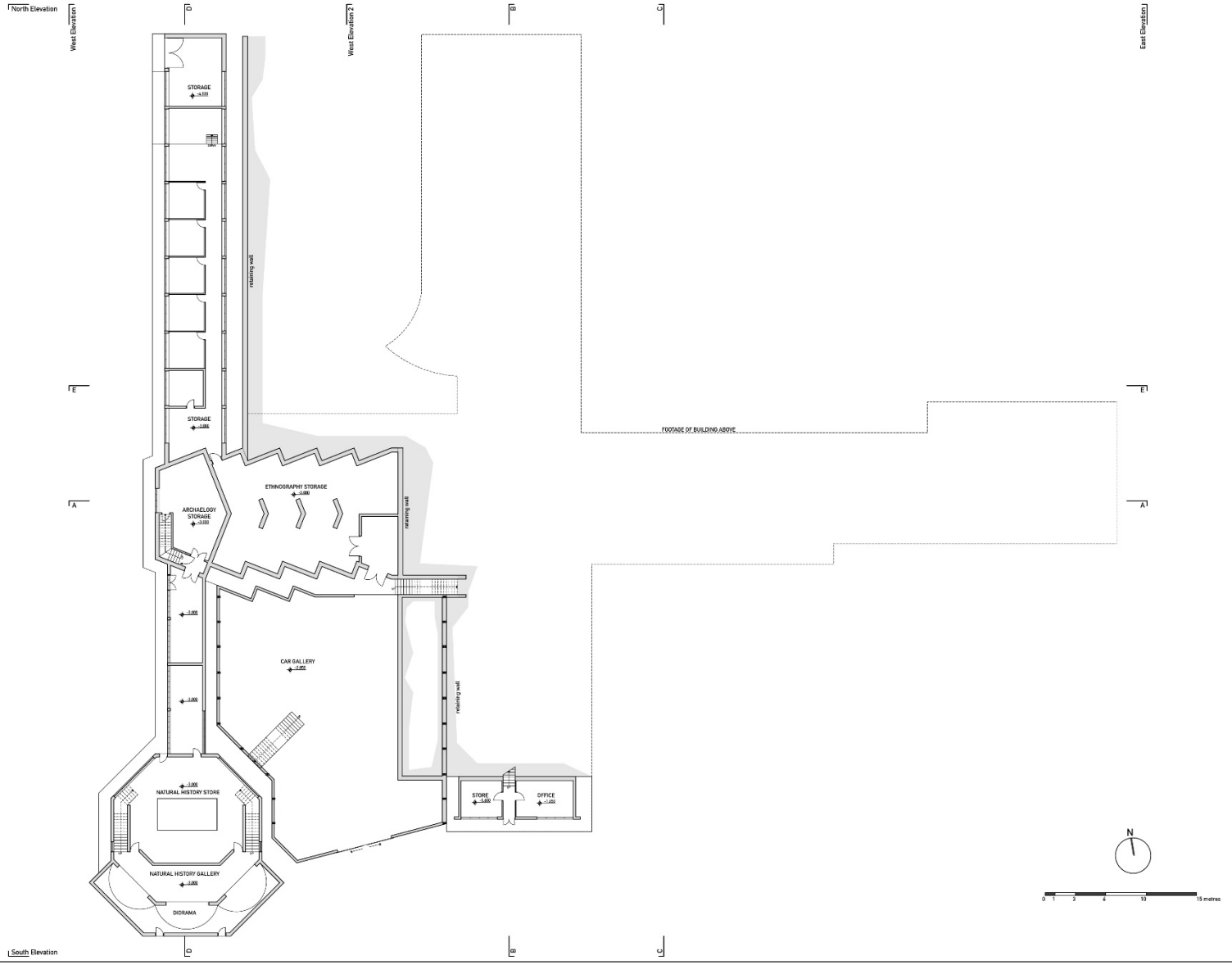
Access to the upper story where the offices are located is provided through a staircase located in the western end of the wing. The upper story is planned along a corridor, with office rooms on both sides and a larger room at its end. A horizontal band of windows echoing the windows on the first floor runs on both sides of the building.



Site Plan

Uganda Museum - as built drawings
Keeping It Modern Project 2019, Getty Foundation

Getty ADEMGO ARCHITECTURE



Lower Level

Uganda Museum - as built drawings

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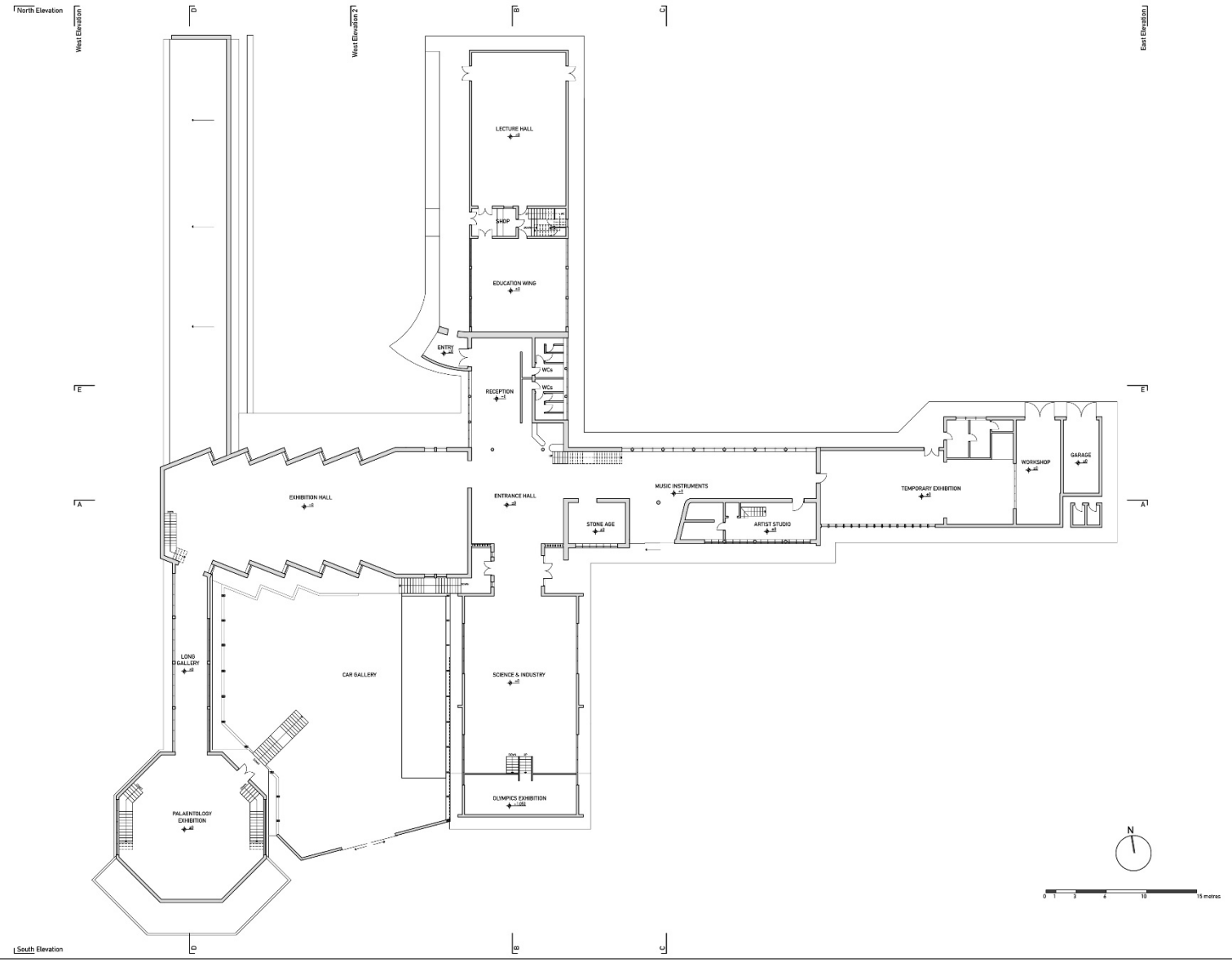
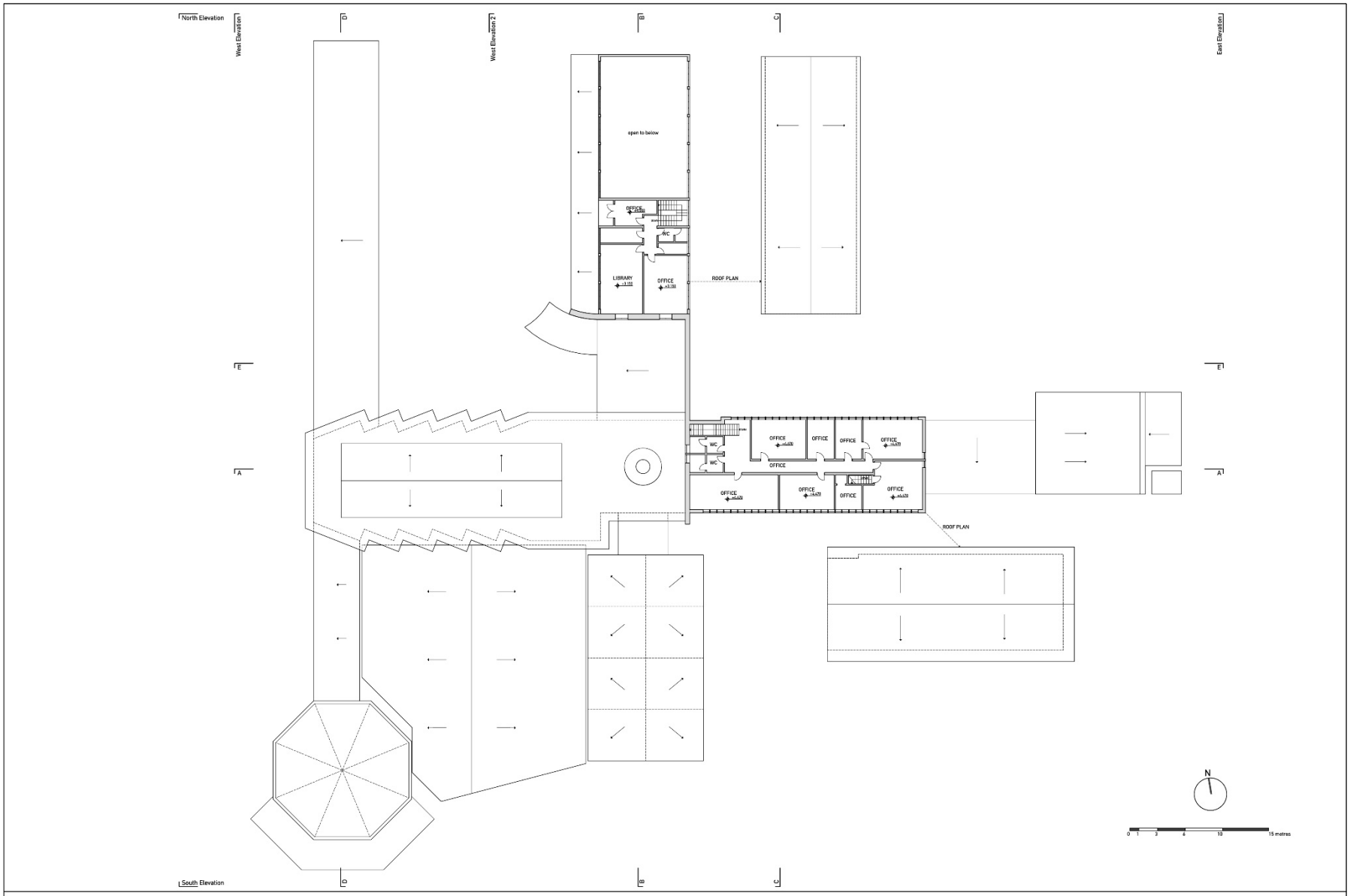


Ground Level

Uganda Museum - as built drawings

Keeping It Modern Project 2019, Getty Foundation



Upper Level

Uganda Museum - as built drawings

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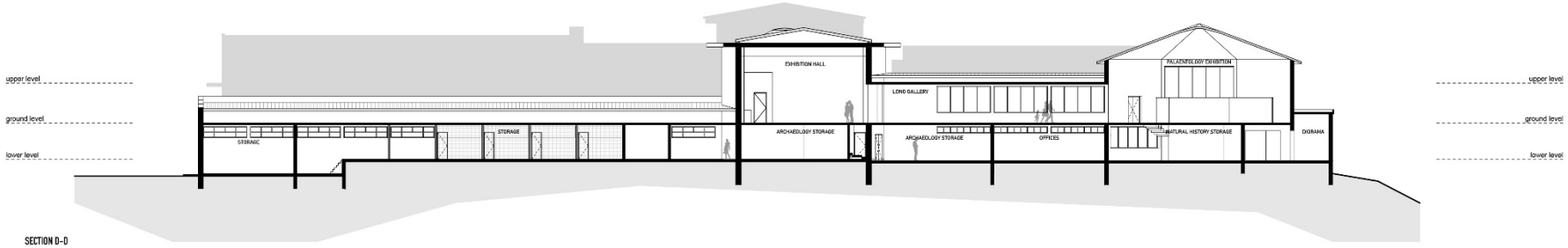
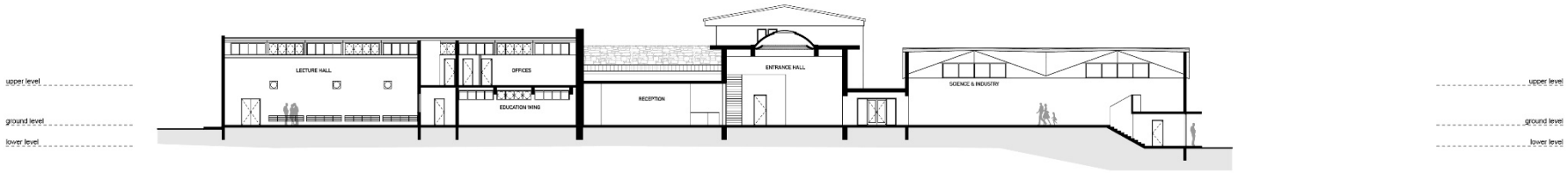


SECTION D-D



SECTION B-B

SECTION C-C

Sections

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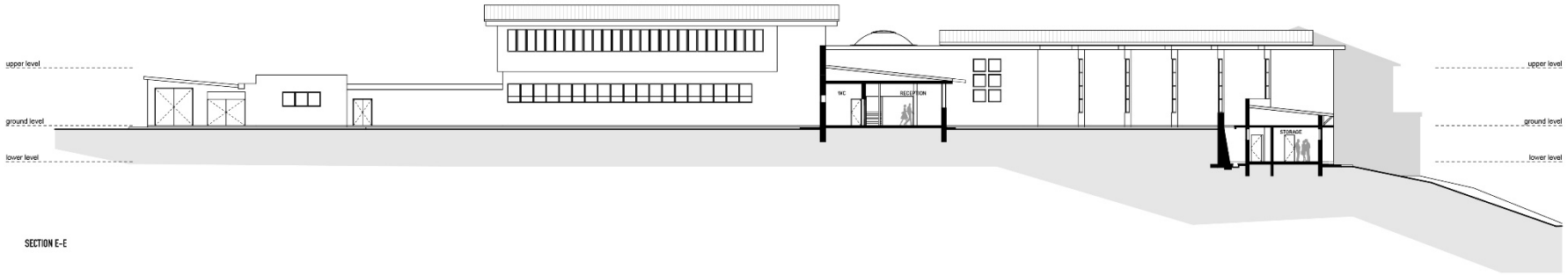
ADEMGO ARCHITECTURE



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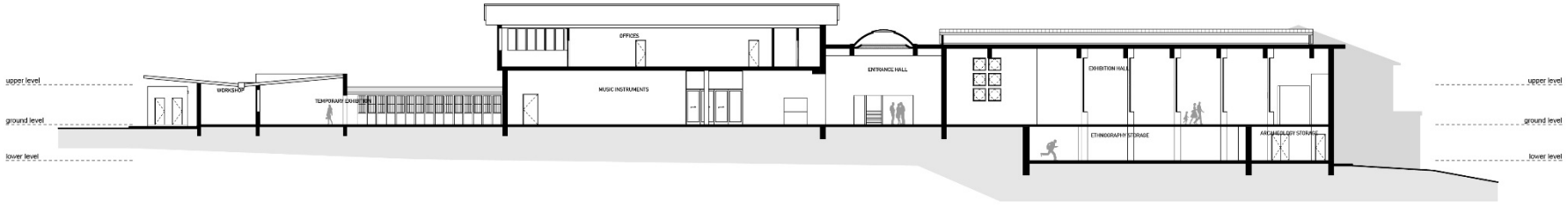

SECTION A-A

Sections

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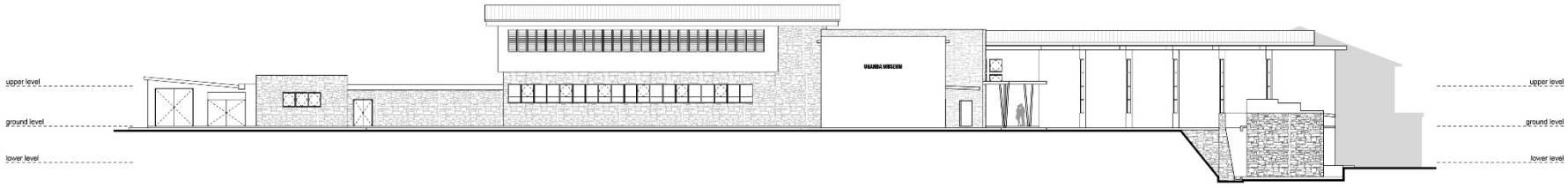
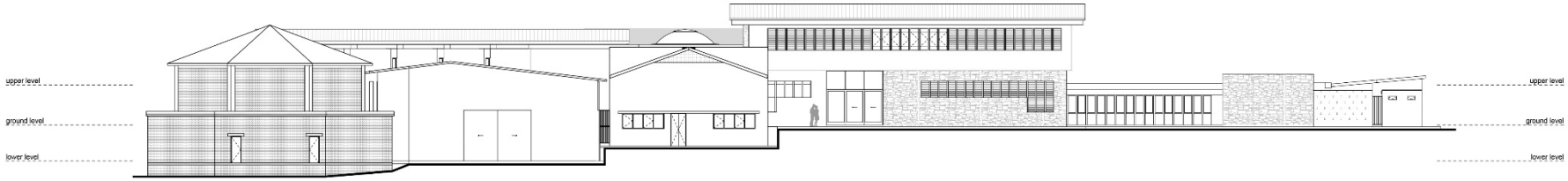


NORTH ELEVATION



SOUTH ELEVATION

EAST ELEVATION

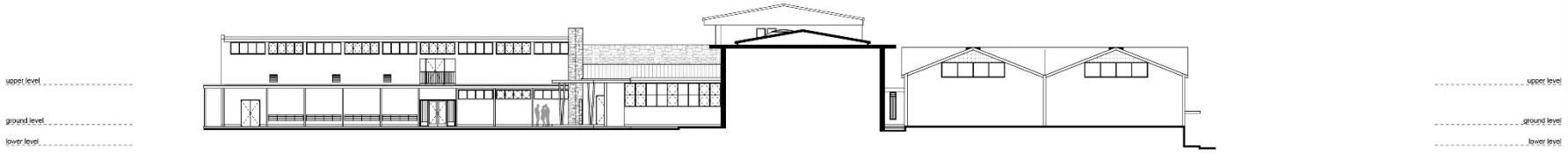
Elevations

Uganda Museum - as built drawings

Keeping It Modern Project 2019, Getty Foundation

Getty ADEMGO ARCHITECTURE

WEST ELEVATION



WEST ELEVATION 2

Elevations

Uganda Museum - as built drawings
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Getty ADEMGO ARCHITECTURE

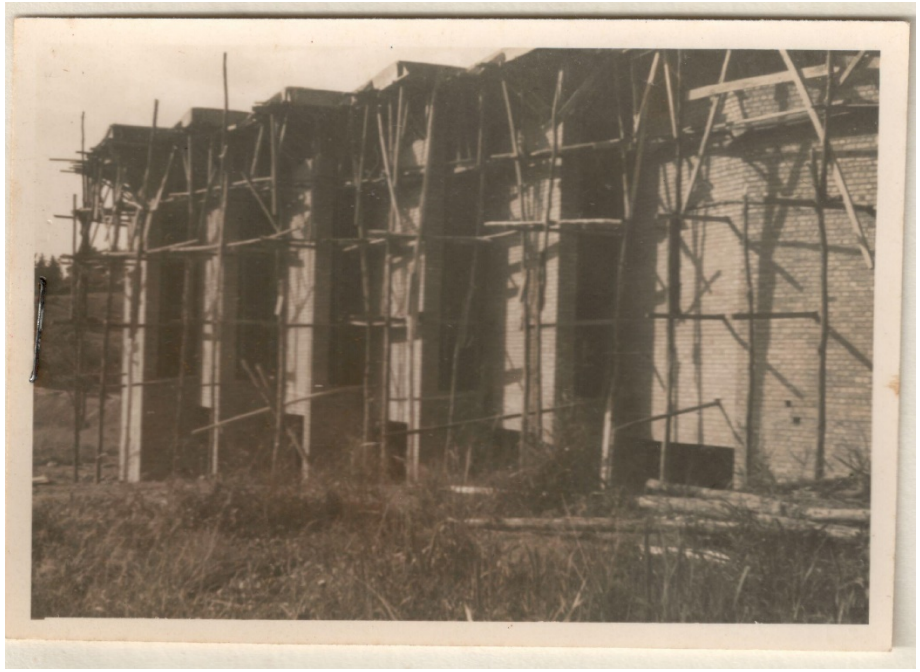


Figure 34 – Uganda National Museum under construction, 1952, Ernst May (Uganda National Museum archive)

Cross-ventilation and lighting

The strongly penetrated façades provide the interior with sufficient daylight, which likely led to the decision to dispense with roof lighting. However, as the subsequent covering up of the windows in the core building indicates, the architect underestimated the impact of the equatorial sun. In his text on the Museum building from 1963, the curator Merrick Posnansky remarks that the high ceilings and insulated roof provided a cool working condition in the building, which made it possible to save costs on air-conditioning. It is not known whether the roof insulation was a part of the original design by May or if it was added at a later point by the Museum staff. Posnansky notes in the same text that in certain spaces, in particular the large exhibition hall, the heat and glare from the long windows had to be reduced by the use of venetian blinds.[23]

Exterior

The steel-reinforced concrete ribs of the building are bricked, and the façades are partly covered with natural stones. The color contrast and the different surface structures of the materials enliven the simple façades.

Major alterations and additions – based on comparison of plans and archival images:

- Snowcem masonry paint– the original building, was planned to be covered with this substance, but this proved unsatisfactory as an exterior material as it was weathering badly; therefore, the brickwork was left exposed.
- Replacement of the roof – the flat roof over the main exhibition hall was replaced in 1958. Due to structural repairs to the roof, the main hall remained closed to the public since 1956.
- Addition of the temporary gallery and garage – in 1961, the Music Gallery was extended to the east with a temporary gallery room, service yard, and a garage. The extension of the hall could have been planned in May's original design but was never realized.
- Part replacement of the brise-soleil wall – due to the extension constructed in 1962, the brise-soleil wall in the southern end of the entrance hall has been altered.
- Filling-up of the pond – the pond in the music gallery has been covered, how is unknown and requires investigation. The exact date of its removal is not known. The pond formed a part of the original design, and according to the drawings, the intention was

[23] Posnansky, 149.

to link the pond through a channel with a larger pond in the gardens of the building.

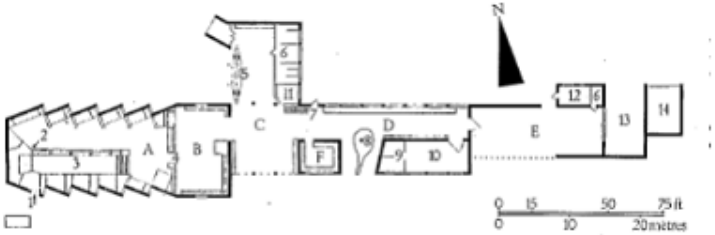
- Re-painting of the columns of the entrance canopy – according to available descriptions of the building, the columns supporting the canopy were originally painted red.
- Painting of the natural stone on the exterior – the mortar between the natural stone used by May as cladding on the exterior of the building has been partly painted over.
- Covering of windows – windows which are an important part of the original design, have been covered with venetian blinds or foils. From a functional perspective, this is understandable given the heating of the interior it caused as well as the over lighting of the interior. However, from an aesthetic point of view, this is to the detriment of the overall experience of the building.
- The original flooring – the original tiles have been partly replaced in the main entrance hall.

Elements of significance:

- The dome – the inconspicuous dome, barely visible from the outside, is one of the defining elements of the interior design. It provides a dimed light changing throughout the day, increasing the aesthetic experience of the hall.
- The saw leaf wall with vertical window bands is one of the defining elements of the architectural design.
- The brise-soleil wall and insertions – these elements found across the building, in particular above the entrance part and in the southern end of the entrance hall, are architectural features associated with tropical modernism; they play an aesthetic function and a practical one providing cross-ventilation to the building.
- The natural-stone cladding - the use of natural stone is one of the characteristics of May's designs in East Africa. The natural stone also plays an important aesthetic function by enlivening the otherwise white elevations.
- Glass-wall and window bands – the windows in the building are an important element of the overall design contributing to its aesthetics.
- Exhibition cases and elevated platform – the exhibition cases in the main exhibition hall are from 1954 and are likely purpose-designed to fit the interior. Otherwise, there is no confirmation of the dating of the remaining cases.
- Wooden screen – a wooden decorative screen attached to the wall opposite the entrance in 1964
- Entrance canopy – the modernist entrance canopy is an important architectural element indicating access to the Museum.
- The sign – the Museum sign was gifted to the Museum by the Shell Company of East Africa in 1961.
- The interior-exterior relationship *or* the relationship of the building to the landscape

Significance and impact:

The core building is of high historical and architectural interest linked to the fact that it was designed by Ernst May and represented a culmination of a long process initiated by the Museum in the 1930s to find a permanent location for the institution. It is an important example of tropical modernism and one of the first buildings in Kampala to use brise-soleil in its design. The contribution of the building to the group value is paramount.



26. UGANDA MUSEUM, Kampala. Plan of ground floor: A. Ethnology; B. Ethnohistory and ecology; C. Pavilion for palaeontology, recent accessions and publications; D. Music gallery with provision for numismatics; E. Temporary exhibitions; F. Stone Age room.

1. Entrance at basement level to workshops; 2. Entrance to workshops (basement) and to study collections; 3. Raised floor with showcasing below; 4. Traditional reed doorway into ethnology gallery, ecological displays on either side; 5. Large Kiganda sewn boat; 6. Toilets; 7. To upstairs offices, library, study rooms, etc.; 8. Musicians' pit; 9. Photographic rooms; 10. Mounting room for displays; 11. Publications and periodicals reading alcove; 12. Storeroom; 13. Service yard; 14. Garage.

Figure 35 – Uganda Museum: Plan of ground floor (Posnansky, M. (1963) The Uganda Museum, Kampala, Museum International, 16:3, p. 151)

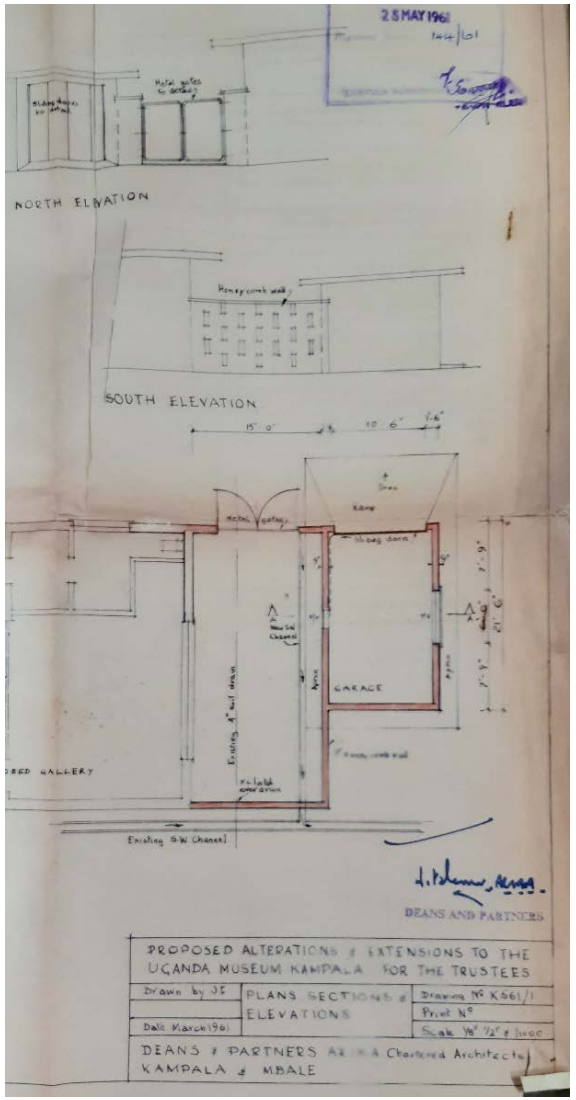


Figure 36 – Proposed alternation & extension to the Uganda Museum, detail showing the garage. Plan by Deans & Partners ARIBA Charted Architects Kampala& Mbale, 21.11.1963 (Kampala Capital City Authority Archive)

2.6.2 Science and Industry Gallery 1962

The Science and Industry Gallery is a 260 square meter rectangular gallery located in front of the entrance hall and accessed through a wide corridor. The building has a hyperbolic paraboloid roof in laminated Kenya cypress sheathed with copper.[24] It was designed by Deans & Partners (plans and sections submitted to the Kampala Municipal Council with the date 30th April 1962). Its design was praised in the 1962-1963 Report for meeting the needs of the Museum and incorporating the views of the Trustees in what was seen as an *attractive design*.[25] The construction of the building was supported by The Uganda Government Independence Celebration Committee. The open hall has been divided into exhibition bays by movable screens; the hall ends with an elevated platform accessed through stairs. Below the upper gallery, there is a lower ground floor housing a laboratory and office accessed from the exterior. The hall is lit through horizontal bands of windows set into the roof gables.

The exhibition

The exhibition in the Science and Industry Pavilion depicts the application of science in the development of industry in Uganda between 1862 and 1962. The theme is developed successively, starting with Natural Resources, Power, Industry, and Communication, the Fight against Disease, and ending with The Future, suggestively located on the elevated platform.

Exterior:

The brickwork of the building is painted white. This is countered by the brown windows and red elements in the gables of the roof.

Major alterations and additions – based on comparison of plans and archival images:

- Doors and windows in the lower ground
- Covering up of windows in the pavilion

Elements of significance:

- Roof
- Movable screens

Significance and impact:

The Industry and Science Pavilion is of special historical interest as it was designed and built to mark the Independence of Uganda and was opened to the public by Prime Minister Obote on the 8th of October 1962. The architectural interest of the building, on the other hand, is low. Apart from the attractive ceiling, which defines the interior of the hall, the building is plane and sits awkwardly in its surroundings. Its contribution to the group value of the buildings is rather negative as it interferes with the original design concept and *covers* the core building designed by Ernst May. The Pavilion is a listed monument.

[24] The Uganda Museum. Report for the Years 1962-63 (1964). Published by the Trustees of the Uganda Museum

[25] The Uganda Museum. Report for the Years 1962-63 (1964). Published by the Trustees of the Uganda Museum, 7.

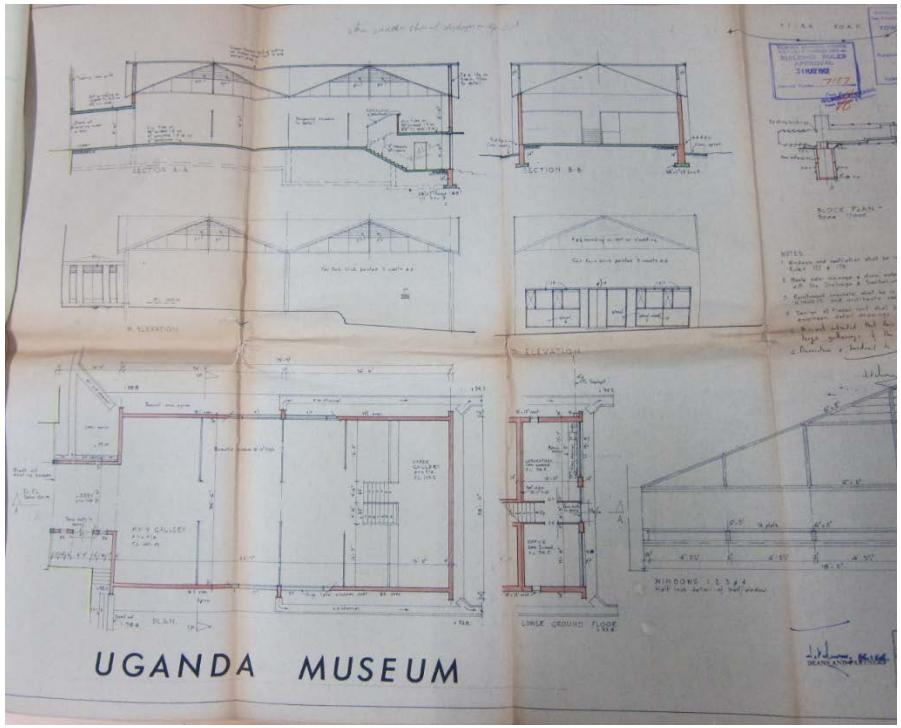


Figure 37 – Proposed Science and Industry Gallery at the Uganda Museum. Plans Sections and Elevations by Deans & Partners ARIBA Charted Architects Kampala& Mbale, 30.04.1962 (Kampala Capital City Authority Archive)

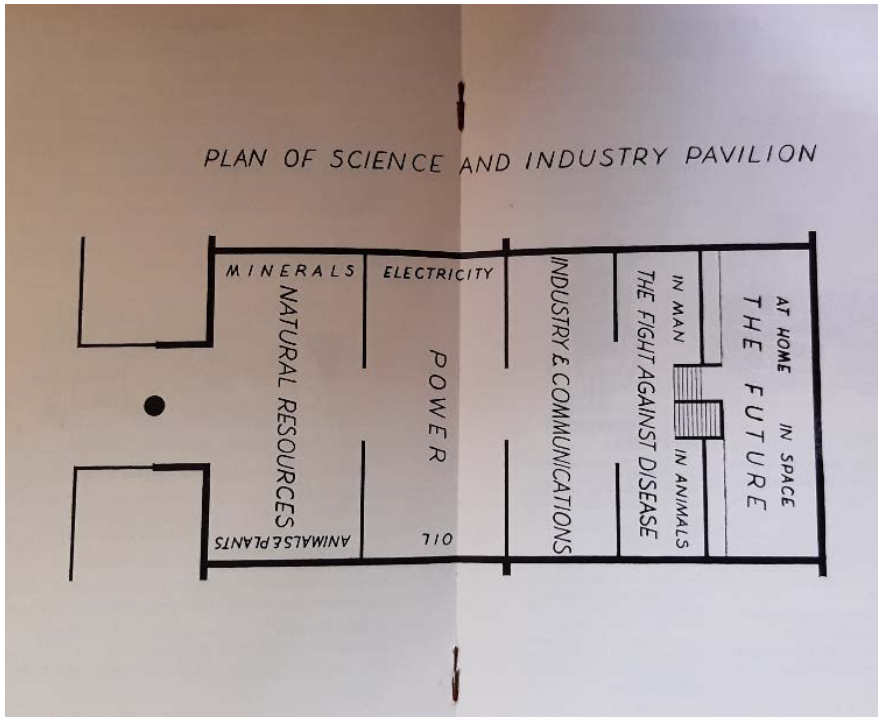


Figure 38 – Plan of the exhibition in the Science and Industry Pavilion (Uganda Museum, Science and Industry, leaflet for the inauguration of the Independence Pavilion, 8th October 1962)

2.6.3 Education Wing 1964

The building was designed by Deans & Partners (plans and sections submitted to the Kampala Municipal Council with the title New Extension 1963/64 for the Uganda Museum Part.1 Education Wing at Kira Rd. date to 30th April 1962, architectural design drawings are missing, but the structural drawings are partially in the archives). The construction of the building was supported by a grant from the Ford Foundation. The two-storied building consists of two parts: the double-height lecture hall to the north and the two-storied section rooming the Uganda Society Library on the ground floor and reading/ study rooms and offices on the first floor. The lecture hall covers 142 m^2 and has the capacity to seat approximately 200 people. The library covers 84 m^2.[26] Both parts are accessed through a joint lobby—horizontal bands of rectangular sash windows located below the roof eave run across the western and eastern elevation. Similar windows are also located on both sides of the building in the section corresponding with the library. In addition to the windows providing cross-ventilation, the lecture hall also has air vents inserted in its lower part.

Exterior:

The building is built with bricks and a concrete frame painted in white. The white painting appears in early pictures of the building, suggesting that it was intended as a part of its original design. What seems like a light corrugated sunshade supported by thin steel columns was originally attached to the western elevation providing shadow for the walkway.

Major alterations and additions – based on comparison of plans and archival images:

- False ceiling in the lecture hall
- Replacement of the light sunshade with a corrugated iron roof on the exterior of the building and painting of the columns in grey

Elements of significance:

- Band of horizontal windows – the windows emulate the windows found in the core building and enliven the otherwise plain façade.

Significance and impact:

The historical interest of this building is seen as a culmination of a long-lasting attempt to incorporate educational facilities and space for the Uganda Society within the premise that the Museum is of greater importance than its architectural interest. The wing is also of social importance, providing space for gatherings, lectures, and study in the library. The location of the wing was already indicated in the schematic layout of the Museum drawn by May, and its contribution to the group value of the buildings can be considered as positive despite its current rundown condition.

Figure 39 – View with the newly built Education Wing, mid-1960s, author unknown (Uganda National Museum Archives)

[26] Rivard, R. (1984) The Uganda Museum: Priorities for Improvement and Development. Restricted Technical Report PP/1981-1983/4/7.6/04. Serial No. FMR/CLT/CH/84/148. Paris: UNESCO, 17.

2.6.4 Natural History Gallery 1964?

The Natural History Gallery represents the second stage of the Museum development supported by the Ford Foundation grant. The building was most likely designed by Deans & Partners, who were also responsible for designing the Education Wing, but so far, no plans confirming this have been found. The extension was likely constructed by the end of 1964, but the exact date of its construction has not been confirmed. It is a double-story structure consisting of two parts; a gallery and a high octagonal exhibition hall. Additional exhibition space entered from the hall, and stores are located on the ground floor. The hall is linked with the core building through a gallery that is currently used for exhibitions. It is not known whether this was the intention. The windows running across the western wall of the gallery have been covered up, which suggests that the light and possibly heat they provided made it hard to enjoy the expositions located in this space. The gallery has air vents inserted in the upper part of the walls on both sides.

Exterior

The building is constructed with brick and concrete. The exposed concrete provides rhythm to the elevation by dividing it into sections. A staircase is leading from the octagonal hall to the outside. The southern elevation of the building lacks windows and appears unwelcoming.

Major alterations and additions – based on comparison of plans and archival images:

- Replacement of the roof in the 1980s
- The enclosure of the space created between the Natural History Wing and the Science and Industry Pavilion
- Covering of windows in the gallery
- Blocking part of the windows with brickwork

Elements of significance:

- Not identified

Significance and impact:

The architectural interest of this building is insignificant. The quality of its design and construction is low. The location of the gallery follows the original design concept; however, the octagonal hall breaks away from the rectilinear modernist vocabulary found in the remaining Museum buildings. Due to the lack of windows in the south elevation the building appears unwelcoming and dwarfs the remaining structures. Its contribution to the group value of the Museum buildings is rather negative.

2.6.5 Later Buildings 1972

In 1972 storage space was added to the building. The one-story structure is built facing the Education Wing and the Entrance Lobby but is hidden by the slope and shrubs.

An inner courtyard was created by enclosing the space between the core building and the two southern wings (date unknown). The courtyard is now used as a Car Exhibition gallery.

The post-1964 additions to the building are of no architectural and historical interest. They also do not contribute to the group value of the buildings comprising the Museum.

Development proposals

The Museum was, from the start, conceived as an institution that was to expand over the years according to the means.[27] An indicative master plan for the museum scheme was created by May in 1951 following input from the museum trustees. Initially, it was planned that the museum should have in total three large exhibition halls and an education wing with a lecture hall. In the years following the opening, many proposals have been made to expand the Museum:

1964: proposal to build a Conservation Laboratory between the Science and Industry Pavilion and the Natural History building

1965: proposal to implement an open-air museum and crafts village on the grounds at the back of the Museum[28]

1970: proposal for a new wing commemorating the Pope's visit, coupled with an open-air theatre

1972: proposal to build over the stores with a new Regalia Gallery, as well as a restaurant facing the Education Wing

1981: proposal to build a Departmental Workshop and Laboratory to the rear of the Science and Industry Pavilion[29]

An interesting note to these extensions is that Ernst May´s original proposal was to orient the halls in an east-west direction with the connecting galleries in the north-south direction. This would have been much more appropriate in the climate than the current north-south additions.

[27] Report of the Uganda Museum Committee (1939). Uganda: The Government Printer, 37.
[28] Rivard, i.
[29] Rivard, 12.

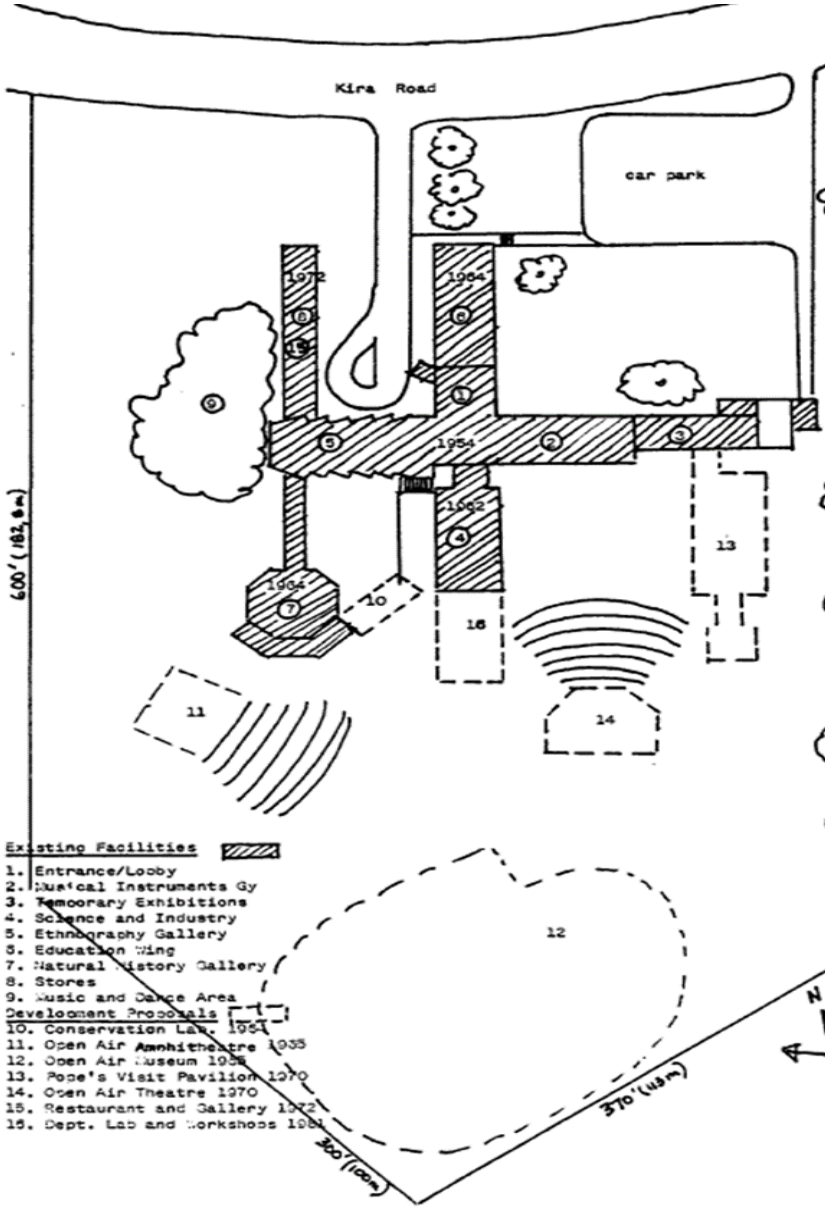


Figure 40 – Layout of the Uganda National Museum including existing facilities and development proposals, 1984 (From: Rivard, R. (1984) The Uganda Museum: Priorities for Improvement and Development. Restricted Technical Report PP/1981-1983/4/7.6/04. Serial No. FMR/CLT/CH/84/148. Paris: UNESCO, p. i.)

Museum surroundings

Figure 41 – Photo of the entrance driveway planted with Jacarandas in the 1950s, author unknown (Uganda National Museum archives)

A driveway planted with trees leads to the entrance of the Museum. The front yard is arranged with a lawn stretching along its western edge and a small island planted with trees. The space in front of the building, between the entrance and the main exhibition hall, is paved, and pot plants and plants are arranged on it. An ample lawn is stretching behind the building, with a crafts village situated at the bottom of the plot. A parking lot is located in the northeast corner.

In 1961, Posnansky noted that the location of the Museum, at a distance of two miles from the city center, is "…somewhat of a disadvantage as far as the casual visitor to Kampala is concerned, and it certainly means that the Museum misses many tourists."[30] He also mentions that the gardens around the museum are an attraction to the local weekend visitor, school parties, and the urban worker, who tend to spend rather long hours at the Museum for that reason.[31]

May was an avid gardener. His passion for plants and knowledge of East African horticulture is clearly visible in the landscape scheme prepared for the Museum, where he in detail describes the location and type of plants and flowers that were to be used. May sought to obtain effects by massing few varieties of flowers and succulents and chose strongly decorative and indigenous plants which, in his own words, were "… especially suitable for use with architecture."[32] From his account, it comes forth that he wanted to use the greenery to enhance the architecture by contrasting building parts with plants through colors and shapes (for instance, he indicates that a Cereus Tree planted in front of the entrance lobby will contrast attractively with the lobby glass windows), but also to hide the less attractive parts of the building.

The ambitious garden design was not realized. The precarious financial situation of the Museum prevented the works on the garden from starting in 1952. In the reports, we can read that the work on the Museum gardens

[30] Posnansky, 149
[31] Posnansky, 149.

[32] May, E. Landscaping round Uganda Museum, Kampala, 7th June 1952.

commenced in 1953 in spite of initial drawbacks and that paving-stones were laid in the courtyard, a cactus bed was planted, and considerable was planted with grass during that year. In 1954, the first bushes and trees were planted. In 1956, Schizolobium Excelsum was planted, and the Euphorbia Plants on the western terrace was extended in accordance with the architect's proposed garden layout. In 1961, new decorative plants were provided by the Curator of the Botanic Gardens. Overall, it appears from the Reports that the Museum staff was struggling with heavy soil erosion caused by the garden works and terracing.

The grounds surrounding the Museum should be an important part of the overall visitor experience. As it stands now, the Museum is not well integrated with its surroundings and, as such, does not fully use the potential offered by its setting. While the front yard provides an attractive and inviting space for gatherings and repose, frequently used by people, the back yard is not well developed and lacks coherent design. May's description of the landscaping around the Museum suggests that the works on the top terrace, which formed an integral part of the first section of the Museum, were already underway in June 1952. However, no images nor accounts confirming the extent of those works have been encountered so far. Regarding the layout of the front yard, from archival material, it appears that the overall layout of this space has remained largely unchanged. It is likely that some of the trees originally lining the driveway were cut down to accommodate new developments. The original crazy paving in front of the Museum buildings also seems to have been removed.

Significance and impact:

The arrangement of the front yard and selected planting around the building have an aesthetic value and are of significance as they reflect the original design intentions of the architect and contribute positively to the experience of the Museum.

Figure 42 – Photo of the entrance canopy, view from the south, ca. the 1950s, author unknown (Uganda National Museum archives)

2.6.6 Furnishings

Over the years, the museum has assembled noteworthy furniture and equipment, including fixed furniture such as display cases and movable furniture such as chairs. The display cases found throughout the museum are predominantly of the shop-window style used to display objects either in a diorama or in the context of other objects. The majority of the display cases in the museum likely date back to the 1950s and 1960s, when the respective sections of the museum were designed and built. Particularly attractive are the display cases found in the main gallery hall (ethnography gallery). It has not been possible to verify whether these were purpose-designed by May, nor the exact date of their construction. However, floor plans of the museum from 1963 show the display cases and the raised floor level, indicating that they were undoubtedly in place a few years after the opening of the museum. The condition and content of the display cases are described in more detail in the section about the Museum Collection; here, it suffices to note that, overall, their design and execution are appealing, and the dark wood of the cases nicely contrasts with the pale walls of the museum.

The display cases have become an integral part of the museum experience, and while their modernization is desirable, it should not happen at the expense of their integrity—the same counts for the attractive wooden paneling located in the entrance hall. From the museum reports, it is known that it became a part of the museum holdings sometime around the years 1962/1963. The panel demonstrates good craftmanship and provides the staff with an opportunity to present museum highlights/ other desirable information to the visitors in a clear, plausible for the eye and original manner.

The museum also features several interesting chairs and benches that can be found across the premises. The exact date of the origin of the individual examples is hard to determine, but the design of the more prominent examples suggests the 1950s and 1960s. Visitors may not fully realize the aesthetic value of the furniture in possession of the museum, but the original design, good craftsmanship, and vintage appeal will make them attractive objects.

Figure 43 – the wooden museum display cases are integral to the original design and must be retained and conserved (Adengo, 2020)

Figure 44 – Many original furnishings remain but are at risk given their intensive use, current condition, and ease of replacement (Adengo, 2020)

2.6.7 Landscaping

The landscaping of the museum forms an integral part of the original design and visitors' experience. To assess the landscape's authenticity, it was essential to conduct archival research, *in situ* investigations, and analyze Ernst May's original intention for the gardens. It is understandable that the landscaping was vital to him given he was a farmer, and early in his career, he was exposed to the ideas of garden city planning. A fragment of May's description of the landscape design is provided below and serves as a reference for the investigations.

Landscaping The Uganda Museum Premises, Kampala

by Dr. E. May & Partners, June 1952

The landscaping aimed at effects as obtained only by massing the varieties of flowers and succulents. The entrance drive was lined with jacarandas and edged with Euphorbia Splendens. Two large groups of Fiscus Hochstetteri line the entrance to this drive from the main road, and another tree of the same kind marked the end of the Jacaranda alley opposite the Auditorium. The rising ground between the drive and the access road to the car parks was lined to the west by a row of Plumbago Copensis. Large masses of verbena with some isolated plants of Plumeria will yield a harmonious color effect of blues, mauves, and white.

In the corner between the entrance wing and the main exhibition hall of the first section of the building a Cereus tree is planted which, with its snake-like branches, will attractively contrast with the glass windows of the entrance lobby. West of the retaining wall supporting the projection north of the exhibition hall from the steeply sloping soil west of it is planted a large area of Aloes of various kinds, the Aloe Rabaiensis dominating. At the higher edge of this field various Euphorbias to be interspersed.

Round the exhibition hall the Euphorbia Obovalifolia to be preference because of its beautiful structure. Towards the ends, Candelabra Euphorbia is to be pe planted. It will be seen from the many plants selected that the Author has endeavored to give preference to indigenous plants, many of which have a strongly decorative character and which are especially suitable for use with architecture. Where shown on the plan, a columnar type of Cereus dominates the picture with their large green spiked columns rising to a height of 20 inches and over.

Because of its dark foliage, another group of Fiscus has been provided at the south end of the gallery between the first section and extension. To the southwest of this group the sloping site will be covered with a sisal field, again interspersed with Euphorbias. Sisal, especially in flower, is a most attractive plant if used in the right position and kept clean.

Figure 45 – The Uganda National Museum is an oasis of green in the hustle of Kampala the famous Jacaranda Alley dates from the original construction

Figure 46 – clockwise from upper left: historic jacaranda trees planted soon after completion, the entry from another angle,

The museum's grounds reflect an integrated design process and the architect's fondness for shade trees and local plants. Some of the existing plantings date back to the early days of the museum and epitomize the first attempts in creating a suitable and sustainable landscape for visitors. The grounds contain many plants dating back to the mid-twentieth century, a period that saw the first broad use of plantings to beautify areas around public institutions. In the late twentieth century, the gardens were infused with native medicinal and decorative plants and crops to reflect a rising interest in a Ugandan national identity. These plantings remain particularly in the African Village zone.

As a large government establishment with a long history, the premises feature many trees and plants that represent the various phases of its development. The most prominent of these are the large mature trees which dot the landscape providing shade such as the Bambusa Vulgaris and Pomegranate Trees. However, it is the Jacaranda Trees that form the entrance that are the most memorable and a favorite of visitors, particularly when flowering. These trees were also planted along the site boundaries along Kira and Nakayima Roads.

Of particular historical interest are the natural site features that survive from the period preceding the establishment of the museum, in particular the slopes making the surroundings friendly to the users. The grounds also feature numerous art and memorials. The art includes the sculpture located at the front of the museum and the murals on the elevations of the stores and the Transportation Gallery. An artillery piece is also located next to the entry. The museum premises also contain numerous memorials that commemorate the museum's benefactors and important moments in the history of Uganda.

Alterations to the landscape

Much of the original landscape design has remained intact, and the major open spaces have not been compromised by alterations. Noticeable changes have occurred when it comes to the plant selection and green spaces that have been changed to vehicular driveways and parking spaces. The additions to the grounds over the years include the Uganda Wildlife Authority Headquarters, the Ibamba Restaurant, Nawou Shops, and the Cultural Village Architectural exhibits.

Recent developments of the gardens

Recent developments of the gardens are characterized by a mixture of local and foreign decorative and agricultural low maintenance plants.

Landscape in relation to the Museum buildings

The grounds of the Museum are culturally noteworthy as a reflection of its historical development. The premises have symbolic, aesthetic, and cultural values. The architecture, courtyards, and long vistas form a set of enormous appeal. The mature trees and garden create an important part of the museum and are enjoyed by visitors.

Figure 47 – site plan showing the various zones of planting at the Uganda National Museum

Figure 48 – Pomegranate Tree

Figure 49 – Jacaranda Alley, a favorite of visitors

Figure 50 – Mother-in-law´s Tongue, snake plant, Sansevieria Trifasciata

Figure 51 – Sisal Tree toward the rear of the museum

Figure 52 – Bambusa Vulgaris

Figure 53 – Banana Matooke and Cassava

Figure 54 –The historic entrance original Banana (Matooke)

Figure 55 – Areca Palms planted later near the entry and changes in the historical landscape

Figure 56 –Aloe Vera, most likely dating from the original construction

Figure 57 –Another view of Jacaranda Alley with a cut lawn

2.7 EXTENDING THE ORIGINAL

The Uganda National Museum is a living institution. As such, it has constantly been adapting and expanding to house its growing collection, fulfill its mandate, and welcome the public. This was anticipated by Ernst May. The original design for the museum included proposals for additional galleries on the same site. The proposed extension model was to make use of the sprawling site and slope of the terrain with the orientation of the buildings in line with a preferred direction to take advantage of the tropical climate (buildings stretched east-west, to avoid sunshine on the longest elevation). However, the first extensions that were adopted were neglecting this approach, and proposed wings turned 90 degrees from the main building. In 1961 the Science and Industry wing was connected to the entrance hall on the south side, in 1964, the Education Wing was planned to extend the entrance zone, and in the same year also the Natural History wing was planned at the west end of the main building towards the south. The stores were planned in 1972 in line with this on the north side of the building. The extension future extension model changed from several galleries planned parallel to the main building and interconnected through intermediate (external) corridors into a model in which the main building is serving as the backbone of the museum with additional wings perpendicularly connected. Although this model is not addressing climatic conditions best, it does reflect the historical development of the museum and, in that sense, should also be seen as an important historical layer. It is recommended to respect this choice and use this model for eventual future developments. However, in future improvements and developments, it is recommended to address the climatic challenges that are the result of the design decision for realizing buildings stretching south-north. A detailed description of all the museum extensions is provided in the appendix.

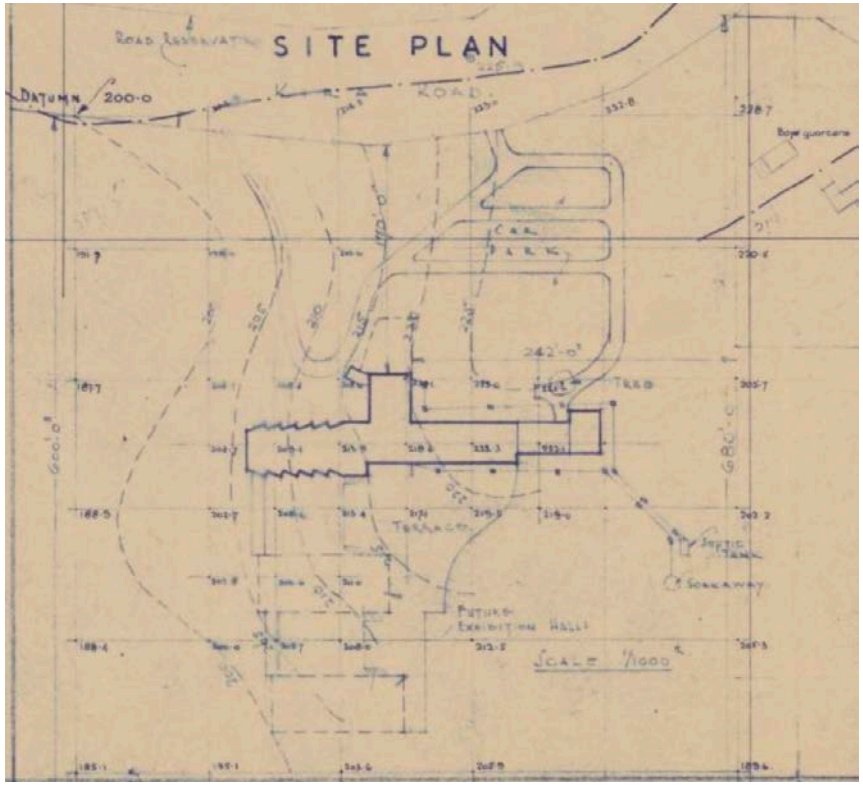


Figure 58 – Uganda Museum, drawings no. 6, detail: schematic sketch of the site plan, 1951, Ernst May (Architekturmuseum der TU Munchen) North is up.

Summary of the historical analysis

An intensive assessment of the building through drawings, historical documents, and images was conducted. This forms the basis of the following historical analysis.

- The original main building is regarded as significant for the monumental/historical status of the building:
  - The original building also includes mistakes regarding, for instance, rainwater discharge and too much direct sunlight in exhibition spaces. Over time this has been addressed through technical adaptations. These changes are generally acceptable, although they could respect the original design better. If intensive revisions are taking place, it is recommended to adjust the interventions in such a way that they complement the original design.
  - In some cases, functional changes have been made over time. This is acceptable, but if appropriate, it is recommended to respect the original design and make the interventions distinguishable.
  - The current temporal exhibition gallery used to be auxiliary spaces and miss the architectural and spatial quality of the rest of the original building. These spaces are regarded as of lesser significance than the rest of the original building.
- The Science and Industry wing is regarded as a monument since it has historical significance, is linked to Independence Day, and was opened by first President Obote. Although it is neglecting the architecture of the original building, its design is outstanding and characteristic.
  - This wing had climatic challenges over time, leading to reducing the window openings, for instance. This affected the characteristic appearance. It is suggested to bring back the original elevations but adjusts as the climatic issues must be addressed with better respect to the original design.
  - The original free floor for a more flexible exhibition concept has been lost by a fixed exhibition that is neglecting the space. It is recommended to review this situation and either adjust the position of this exhibition part or review its concept.
- The Education wing is not seen as significant but supportive of the historical value of the site and complex. The building has a modest appearance that matches the main building.
  - However, also here, over time, challenges have been met, mostly related to climatic and sometimes functional challenges.
  - These challenges should be addressed with respect to the original design. This includes the window strip and the ceiling and their relation, the climatic conditions in the top floor spaces, etc.
  - Fire escape routes and functional planning needs to be addressed
  - The canopy forms a valuable and pleasant outside space; it is recommended to bring back the elegance of the original canopy
- The Natural History Wing is seen as supportive of the historical value of the building and can be seen as characteristic, but in the way it has been elaborated, it is a problematic building.
  - The way the elevations have been constructed is leading to highly problematic climatic conditions. This will have an impact on the architectural appearance of the building, but this is acceptable.
- The Stores have a similar position as the Natural History Wing. The interior conditions and eventual effect on the artifacts should be leading for any possible interventions on passive climate control.
- The Car Gallery is interfering in the expansion model of the museum and is having a negative effect on the climatic conditions of the building parts around it. It has no architectural value or quality and should be taken out. It is recommended to dismantle the building part in such a way that the materials can be reused elsewhere.

Figure 59 – Site plan showing the various phases of construction

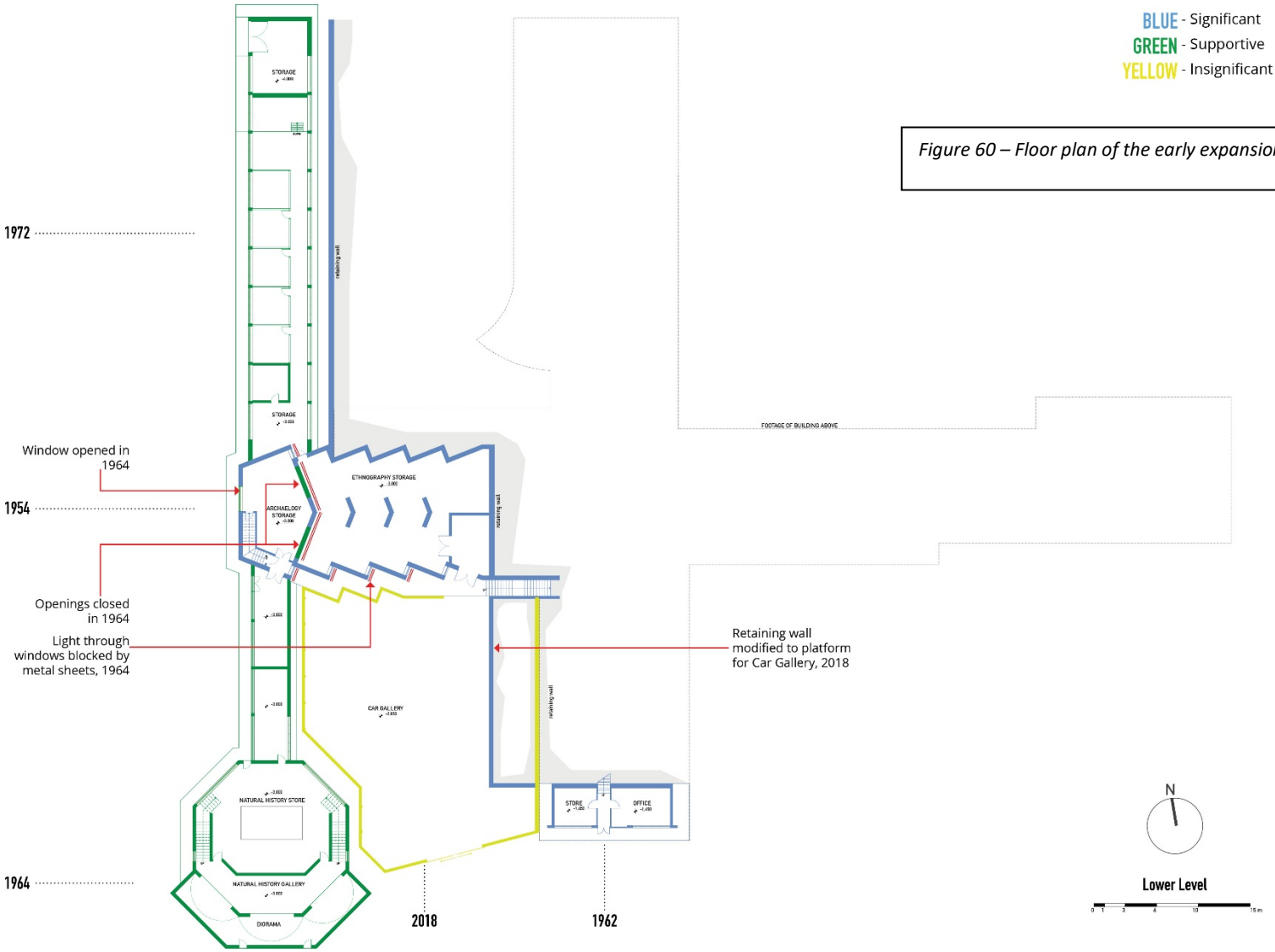


Figure 60 – Floor plan of the early expansion

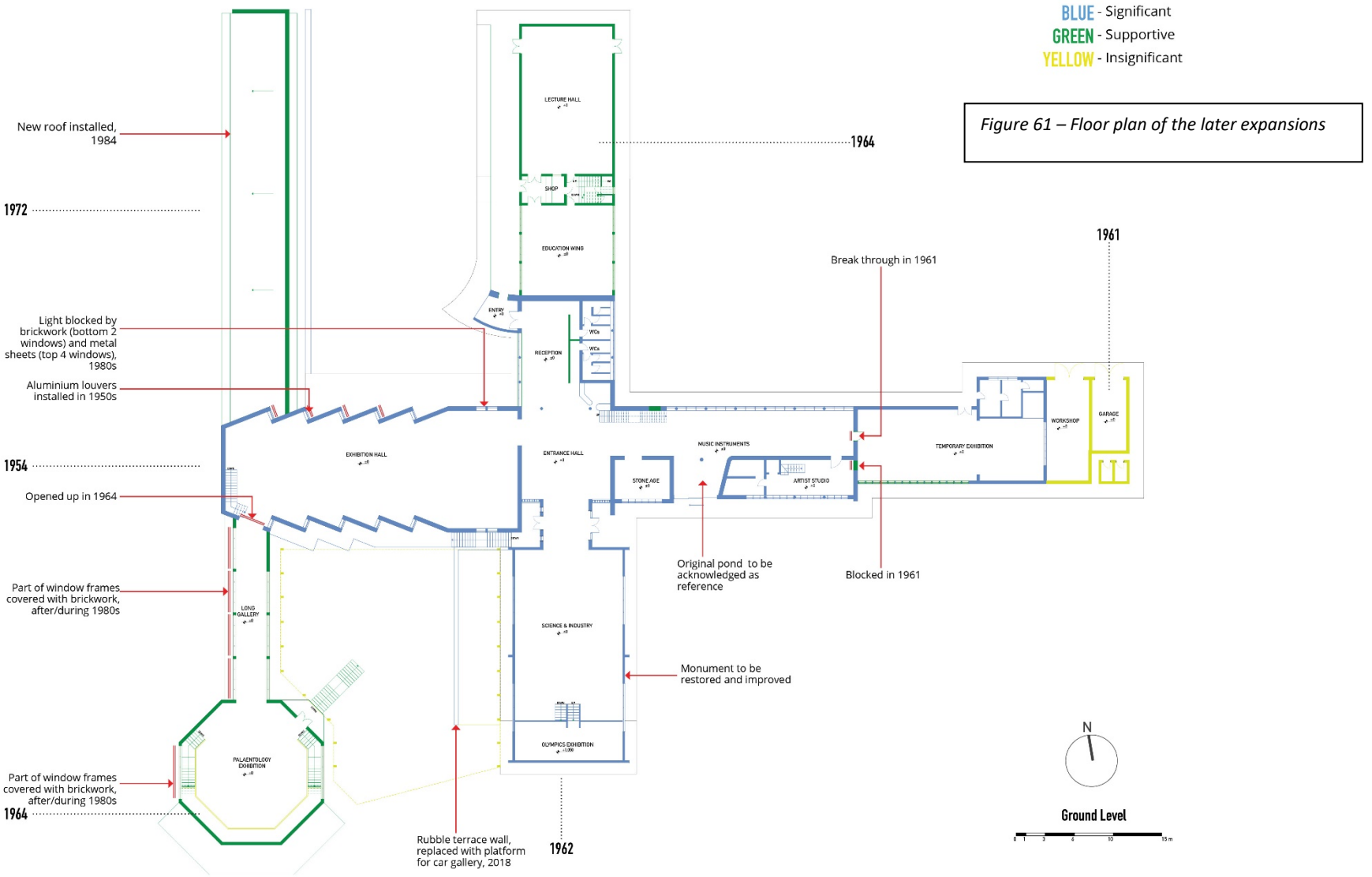


Figure 61 – Floor plan of the later expansions

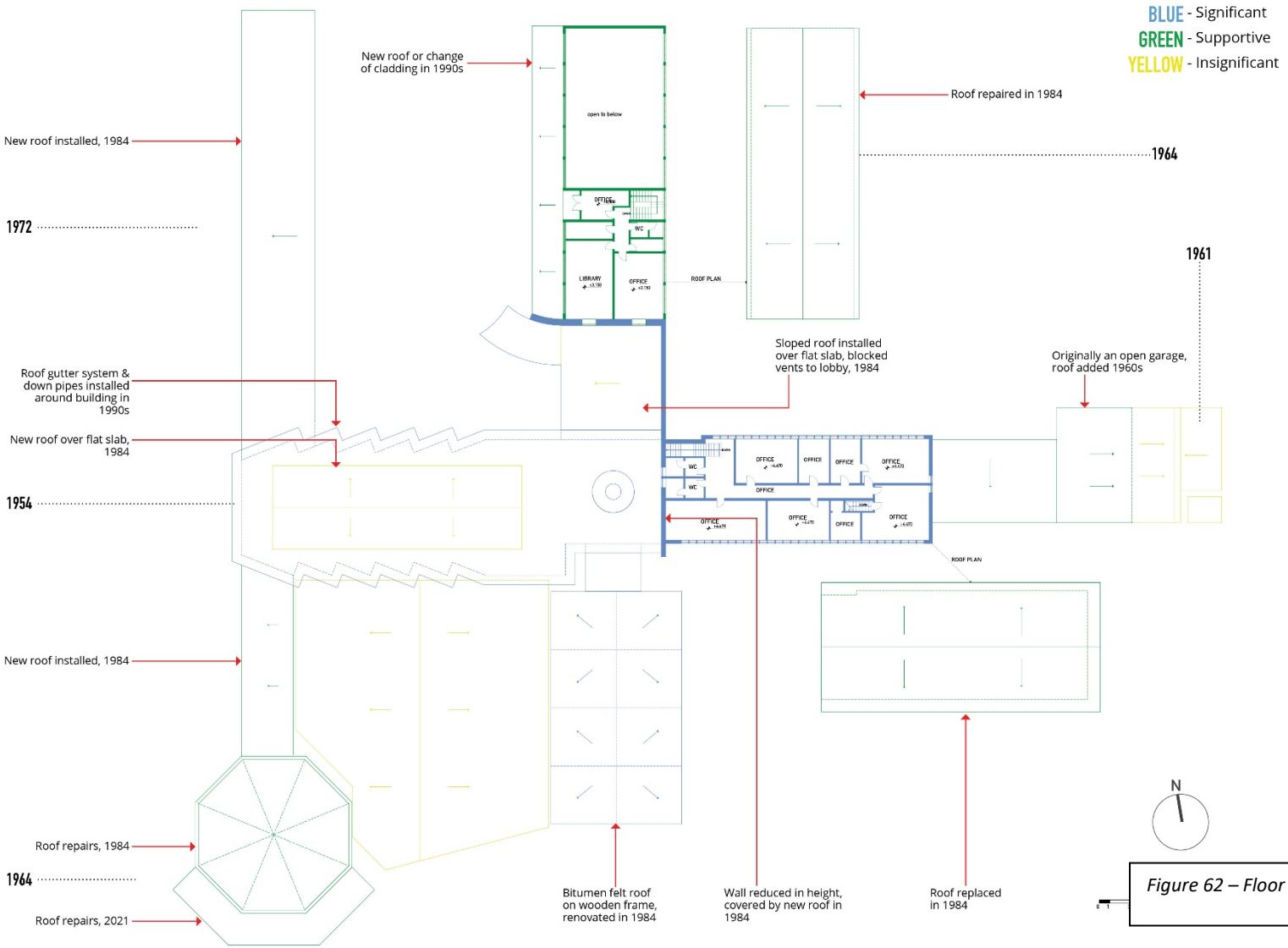


Figure 62 – Floor plan of the last major expansion

2.8 CULTURAL SIGNIFICANCE

The architecture of the Museum is varied and reflects different moments in its history. The architectural interest and group value of the individual parts range from high to insignificant. In general, the later the addition, the less historical and architectural interest it has. The museum scheme developed by May in the 1950s has only partly been followed in the subsequent post-1954 extensions. The decision to add the Science& Industry Pavilion as an extension to the entrance hall permanently altered the integrity of the core building. Its location also interferes with the original design layout for the backyard. In the case of the Natural History Wing, while the location of the building follows the original layout concept, its architecture departs from the modernist vocabulary found in the remaining structures. Seen from the south, the wing dominates the skyline and dwarfs the remaining Museum buildings. While not all changes are reversible, the core-building remains an important example of tropical modernism. Available archival material enables a better understanding of the original design concept and Museum layout scheme and could, as such, serve as a guideline for the future.

Statement of Cultural Significance

Internationally the Uganda Museum is culturally significant as:

- *As an important example of Ernst May's work in East Africa.*
- *As an early example of a purpose-built modernist museum in Africa*
- Nationally the Uganda Museum is culturally significant as:
- *As an early example of modernist architecture in Uganda.*
- *As a living and growing institution open to the public and dedicated to education.*

Figure 63 – An image showing the northern elevation from the 1950 or 1960 before the northern extension (Uganda National Museum archive)

3 CONDITION OF THE BUILDING

One of the most important aspects of understanding the museum was to understand its current condition. This was accomplished in three ways.

A) **Rapid condition assessment.** This was made using modified drawings based on the original drawings, which were checked for accuracy. Every space inside and outside the museum was inspected and spot measured. Notes and photographs were made on conditions such as water damage, security, broken windows, utilities, finishes, and furnishings.

B) **International workshop.** Apart from raising awareness of the museum and its significance, the workshop also was practical. A two-day condition inspection exercise was led by the CMP team leaders, with the participants made up of young architects and engineers, and students. This inspection was conducted by four teams in detail.

C) **Mechanical and electrical inspection.** Apart from the physical conditions of the materials and spaces, the building's electrical and mechanical systems were also inspected by certified engineers. This was detailed and understandably difficult given the numerous additions to the museum over the decades. While it would have been ideal to include in the first inspection, the timing was not appropriate.

These three inspections will be described in this section.

3.1 RAPID CONDITION ASSESSMENT

This inspection was based on the Construction Specifications Institute 16 Division format. This standard for organizing specifications and other written information was first published in 1963 and provided a master list of divisions and section numbers generally aligned with different trades. The purpose of this is to organize information into distinct groups. It quickly became the standard and is well-recognized. In 2004, the 16 divisions were expanded to 50 divisions. However, 50 divisions are often too complex for small historic buildings and rapid condition assessments. The division of the inspection into 16 areas permitted multiple groups to inspect different areas of the building simultaneously and for whole systems to be evaluated according to their materials, structural systems, and moisture protection. While the building could have been evaluated by the spatial organization, this often inhibits an understanding of the entire functioning of systems that cross different portions of the museum. This is essential given that while the architectural aspects of the building can easily be divided into phases, this does not align with systems such as electrical or mechanical that were installed later. This rapid condition assessment is briefly described below, with the full assessment available as a separate report.

1. General Requirements - This section relates to the general requirements for working on the museum. Basic information was included as to procedures for repairs, suppliers, and approved contractors. Also included are access to the site, boundaries, and other information was collected concerning the quality and safety requirements for any work on the museum. While these general requirements exist, they are seemingly reinvestigated for each physical action on the building, thus delaying essential or emergency work as evidenced by the recent repairs on the roof.

2. Site Conditions - this section address the site itself and the context around the museum. Given the heavy monsoons that Uganda experiences, it is no surprise that drainage and soil erosion is a challenge. Fortunately, the original siting of the museum on a hill effectively drains water away from the building. Nevertheless, there are numerous areas of erosion that create barren patches on the landscape. Poor site drainage also causes rivulets that are unsightly and allows drains to silt up and plant roots to grow in the drains, thus blocking the drains further. The inadequate drainage also retains moisture near the collection points and trenches around the foundations leading to the dampness encouraging the growth of mold and algae. In some limited areas, there are also stagnant pools of water. This drainage issue, while not severe, has led to some minor differential settlement and limited cracking in some sidewalks and trenches. Other site issues include the uncontrolled but necessary vehicular access to the rear of the museum and the other parking areas, which have compacted the soil. There are some other site issues, such as the storage of excess building materials, old exhibits, unused furniture, and stored vehicles which are not critical to the museum's mission. Finally, there are some missing drainage covers and coping stones which could create trip hazards. While these issues are not serious, they are unsightly and easily remedied.

Figure 64 – Soil erosion at the front of the museum by the stores

Figure 65 – Erosion and vehicular damage at the rear of the museum

Figure 66 – missing drainage covers and growth of mold

Figure 67 – stored vehicles are unsightly

4. Concrete – Much of the museum is concrete. Therefore, this was of particular interest during the assessment. Overall, the structural concrete is in acceptable shape with no major differential settlement or large cracks. This was confirmed by a later analysis by the structural engineer. However, there is significant water damage in areas where the drainage from the roof is inadequate and where the various phases of the building join. In particular, the cantilevered landing at the Natural History Building. Standing water has penetrated the concrete, and this is of concern as the water corrodes the steel reinforcing bars. This situation also occurs in other places, particularly in the stores where the lack of a drip edge has resulted in corrosion of the reinforcing bar and spalling. In other places, there are minor cracks that require monitoring. An area of serious concern is in the storage below the oldest portions of the museum. There is significant water penetration in both the concrete and masonry. In addition, it is unknown from the field investigations or archival research if the original reinforced concrete columns in the lower portions of the museum are adequately reinforced. This area was also identified in an earlier inspection where a destructive test on one column was performed. This requires further investigation and continuous monitoring.

Figure 68 – Soil erosion at the front of the museum by the stores

Figure 69 – Damage to concrete with the corrosion of steel reinforcing

Figure 70 –Inadequate drainage has led to concrete saturation

Figure 71 – Destructive concrete tests in the basement

4. Masonry - As concrete forms the frame and other elements of the museum, masonry units provide the infill. The masonry is of two general types, formed clay-based masonry units, bricks of various sizes, forms, and dates, and stone masonry. Ad hoc repairs were done on the stone wall, including mismatched mortar and stone infill. This could be because the original stone and mortar may not be available. The research will have to be done to investigate the source of the stone and the type of mortar mix used. Cracks in the masonry wall at the roof may be caused by age and stress. This appears to be an additional structure to the original flat roof of the building. It may only need minor repairs for now, with a possibility of having a new roof structure built to replace it—graffiti on facing bricks and stonewall. There is a need to make the walls more interesting so that the museum stays relevant to different ages and art movements. A solution would be to look into less intrusive ways to make the building more interactive, e.g., lighting, etc. Moisture damage to masonry walls in various locations around the building. An inspection could be done around the building, and emergency repairs are done where possible before embarking on major repairs, as moisture can damage the exhibits that are displayed and stored indoors. Ad hoc connection between masonry and roof with some elements not secured. Emergency repairs need to be done so as not to expose the walls to the elements. An extension to the original wall can be noticed in some areas and parapets, especially above the stone walls—ad hoc repairs on the brick wall. One can note the difference in brick and mortar used. Matching the original brick might be hard to achieve due to the differences in the sourcing of the materials and their inherent properties. Brick infill in windows using brick that does not match with the original wall, water damage.

Figure 72 –the masonry of the museum includes stone, fired brick, and concrete block

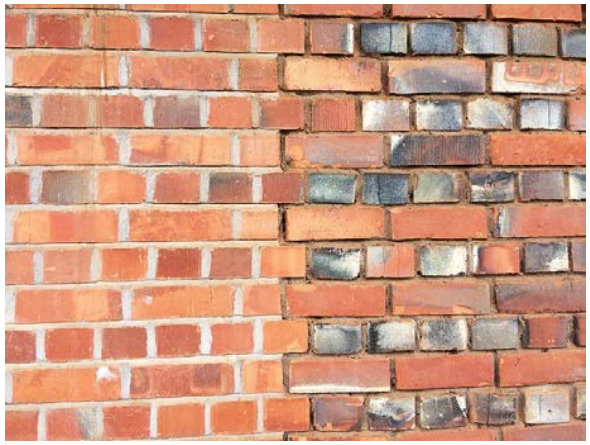


Figure 73 –excessive dampness and inappropriate paint in the masonry of the basement Figure 74 –a variety of bricks during the extensions were made.

Figure 75 –a variety of issues with the masonry, including water damage, microbiological growth, inappropriate treatment, and poor flashing details

4. Metals – Metals are used throughout the museum, from the structural steel of the roof of the South Pavilion and the frame of the Car Gallery to reinforcing steel bars in concrete, metal clips and fasteners, and flashings. Structurally, the exposed wide flange (I beam) in the South Pavilion seems to be in acceptable condition and the prefabricated frame of the Car Gallery. The condition of the embedded structural steel reinforcing bars within the concrete is unknown, but in many places saturated with water which leads to corrosion. Serious deformations or large cracks were not observed, but actions should be taken to resolve the water infiltration. There are also oxidized steel reinforcing bars that are exposed due to concrete spalling. This was also mentioned in the previous section on concrete and in the structural engineer's report. While not an immediate danger, it must be addressed. There are extensive areas of metal roof panels over the original museum, the Car Gallery, and the Education Wing. These were necessary to rectify the ineffectiveness of the original flat roof design. These metal panels are in various states of condition, including minor oxidation. Along with the panels, there are various metal waterproof flashings found throughout the building. The number of additions to the museum over the years, followed by a variety of roofing solutions and ad hoc repairs, have resulted in generations of flashings over flashings. This will be addressed in the section on moisture control. Other areas of metal include various metal clips which have failed or are close to failure, notably on the clips of the main dome, hardware, and window louvers, and sunshades.

Figure 76 –various metal clips have corroded and failed

Figure 77 –the metal structure of the South Pavilion is acceptable

Figure 78 –flashings, clips, and other elements are failing

Figure 79 - metal roofs and flashings are also failing

6. Wood – Wood is used throughout the museum structurally for finishes, doors, windows, and display cases. The most notable use is for the undulating roof structure of the Industrial Pavilion. While it is an acceptable shape, it has been suffered damage from water infiltration and insect infestation. This is evident at the most vulnerable portions of the roof near the corners where water drains. These areas have been previously treated but require constant monitoring and maintenance. Other areas of damage are the wooden soffit and eves of the Education wing where water has infiltrated; fortunately, these areas are less significant than the main exhibition spaces but still require attention, or the maintenance issue will grow into a structural problem. Finally, within the main exhibition spaces, all the cabinets, display cases, and wall panel finishes are also constructed of wood. The original display cases in the main exhibition space are in remarkably good condition. While they do not meet modern standards for display cases, nevertheless, they have been preserved. Unfortunately, the cabinetry in non-public areas needs repair after many years of neglect, understandable given that limited resources were devoted to the more public-facing building elements created from wood. Cabinets and display cases will be addressed in more detail in the section on furnishings.

Figure 80 –the wood structure of the Industrial Pavilion

Figure 81 – Insect infestation and water damage

Figure 82 –cabinets in non-public areas require maintenance

Figure 83 –wooded soffit has failed near the Office Extension

7. Moisture Control – Of all the systems that make up the Uganda National Museum, the most challenging is the roof, management of the water, and moisture protection. The original design of Ernst May, a flat roof, while the design was clean and conformed to the modern aesthetics of the mid-20th century, it failed almost immediately upon installation. With the heavy monsoon rainfall seasons of Kampala, this design must have been pushing the technical boundaries of the time, not an unusual situation of the modern movement. The problems with the roof are compounded by the shape of the scalloped shape of the original gallery, the numerous extensions added to the museum over the years, a variety of different materials, heights, and structural systems.

The structures of the roofs are made up of a variety of systems, including wooden trusses, steel wide flange, and reinforced concrete. The moisture protection also consists of a variety of materials, including corrugated galvanized steel sheets over the storage area and offices, an unidentified fabric over the Science and Technology Gallery, and the Natural History Gallery, and the education wing and bitumen built-up roofs over the remaining flat areas. This new roof system with wooden trusses and corrugated steel sheets was added on top of the original flat roof at the entry/lobby area. As a result, water collects underneath the iron sheets, stagnates, and sips into the lobby area; sections of the new roof gutters were not fastened correctly and are falling off some new roof gutters are misaligned, and ad hoc repairs have been done where the iron sheets meet the masonry wall This damage is further increased when maintenance staff walks on the roofing sheets as these cannot support their weight. The effects of water affecting the lobby may be controlled by replacing the damaged timber and replacing some of the warped steel sheets. This fabric has gotten damaged over time in some areas caused by several trees that shed their leaves onto it. These are later washed into the gutter, which puts strain on it. A repair job was done on one of the gutters, but the replacement material did not function well with the rest of the roof, which led to some water penetration into the room below. This part of the roof requires regular maintenance, and the trees may be pruned to reduce the number of dry leaves that end up in the gutter and drains. A section of the aluminum coping is loosely connected to the walls. This could be caused by the constant strain that the elements put on it and some loose connections to the wall. This coping requires constant checking so that loose connections are fixed to maintain the integrity of the wall Damage to eave detail of the roof around the offices, science & technology, and the garage shed caused by weather wear. Some of the sections of the fascia will have to be replaced with new material, while other areas require a coat or two of paint. Regular maintenance is required. The roof over the natural history wing of the museum pours onto the roofs below since it does not have a gutter around it/ This creates moisture problems as some of the water drains onto a flat roof that is just above a taxidermy display, stagnating there and creating dump conditions inside this space. Also, part of this water drains into the temporary exhibition space/ It might be necessary to add a gutter to this roof in a way that will not compromise the design of the building. There is evidence of a new roof having been constructed above the Natural History Gallery & the Stores. This must have been done because a pitched roof requires less maintenance in the tropics compared to a flat roof.

Figure 84 – Orthophoto of the roof of the museum demonstrates the numerous challenges that exist given the various extensions, materials, and levels.

A complete survey and detailed inspection were made of the entire roof and drainage system. Addressing the problems of the roof require a comprehensive solution.

Figure 85 –The flat roof over the Education Wing

Figure 86 –The metal roof over the Car Gallery looking to the Science and Industry Gallery

Figure 87 –the pyramid roof over the Natural History Gallery

Figure 88 –The ad hoc repairs over the oldest part of the building at the entry

Figure 89 –the failure of flashings between building components

Figure 90 –trees and lack of maintenance contribute to roof failure

Figure 91 –the sloped metal roof connecting the Natural History

Figure 92 –given the numerous extensions, roofing is a major challenge


Figure 93 and Figure 94 –various issues with the drainage system, flashings, ad hoc repairs, lack of maintenance


Figure 95 and Figure 96 –various issues with the drainage system, flashings, ad hoc repairs, lack of maintenance

8. Doors and Windows – The numerous extensions to the museum understandably all contain different types of windows and doors. As these elements, particularly doors, in the public areas are used daily, they receive a lot of wear and tear. Understandably, given the public-facing nature of the museum and security, these receive maintenance and attention and are in generally acceptable condition. However, those windows and doors in the offices and other non-public areas suffer. Most concerning are the broken glass panes found in the museum stores. This compromises the environmental conditions inside the stores by allowing additional moisture, insects, and dust into the stores. Fortunately, as part of this project, these windows were repaired. Broken glass is also found in the Education Wing and missing glass in the jalouse windows in the museum offices. Some of these have also been repaired. As part of measures to protect the exhibits from UV and light damage, many windows around the museum were painted over. Some of this paint is peeling off, and a replacement coat or two of paint might be necessary to prevent any future problems. In other windows, brick has been used for his purpose. To control the amount of light that gets into the exhibition spaces, some of the inoperable blinds require replacement.

Figure 97 – Broken glass in the store area

Figure 98 additional broken glass in the north wing

Figure 99 left, jalouse windows inoperable, right casement window require maintenance Figure 100 – glass covered to prevent light, west connection

9. Finishes – Finishes were especially important to modern mid-century architecture with emphasis on simplicity, functionality, and lack of ornamental trim. The was the case for the Uganda National Museum. The original floor of the museum was a simple polished concrete with scoring every 30 cm square; the walls were plastered and painted and lacked baseboards, the ceilings had a similar treatment. Later, the floors, the most wear-prone part of any space, were covered with vinyl tiles or as new exhibits were demanded. Many of these later floors have worn away to reveal the original concrete. The walls faired better with just the occasional paint and changing colors. The original colors were most likely chosen by May himself and reflected the period. These aspects of colors are addressed later in this section, given its importance. The walls and particularly the ceiling, have suffered considerably from humidity and moisture damage, and several layers of the subsequent paint have peeled away. Water damage, physical impacts, and ad hoc repairs where new utility systems were introduced into the building have also taken their toll on the finishes.


Figure 101 left, the original concrete scored floor, Figure 102 right, the elegant cast concrete steps without adornment


Figure 103 left, peeling paint at the mural in the Natural History Gallery Figure 104 left, holes in ceiling boards in the office

10. Specialties - The museum has many items stored away in various storage locations. Being sensitive areas, these need to be protected from intrusion by the elements and unauthorized people as well. In the future, more storage space (some of which will have to be specialized) will be needed as the museum is almost at full capacity. A few display cases have also been stored away in the stores, while others are left in any space that can be found. There is a later addition to the museum of a temporary exhibition space that holds a permanent exhibition of presidential cars of the past. This same space is also used to hold temporary exhibits of various items of art and as a training space. Care should be taken not to damage the permanent exhibits, especially when scaffolding is built around them to hold pieces of art or due to the high traffic that this place experiences. It is important that a balance is achieved, especially when permanent exhibits share spaces with temporary exhibits to create a harmonious environment for both In the corridor between the ethnography and natural history galleries, the display cases are missing their light fixtures. The lights can be replaced to restore them to their original function.

Figure 105 –shelves in the museum storage facilities various

Figure 106 –The storage is well organized but requires greater security

Figure 107 –various displays require renewal, Natural History

Figure 108 – The museum requires a renewed conservation laboratory

11. Equipment – This category is usually reserved for specific equipment such as appliances, kitchens, vehicles or vehicle service, library specialties, and audio-visual equipment. In all these categories, the museum can be improved. The priorities will be addressed in the action plan, but a short description of the conditions will be summarized here. First, the conditions of the conservation laboratory and equipment are in poor condition. This includes all the standard lab equipment such as microscopes, scales, vacuums, safety equipment, first aid kits, etc. Second, included in this category is the security of the museum, stores, and the collection. This requires CCTV cameras, a complete security system with alarms, a connection to the police system, and locks on all storage rooms. All fire extinguishers in the museum require replacement or recharging, including in the museum stores.

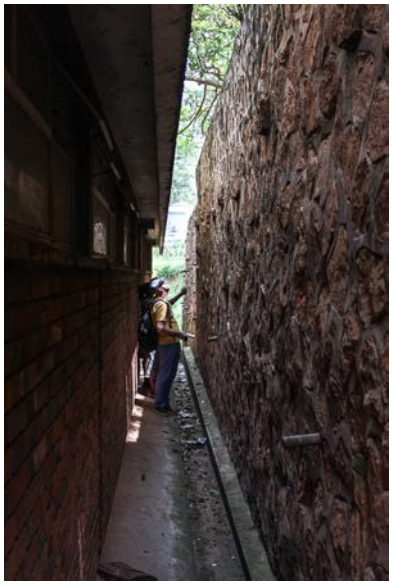


Figure 109 – The museum requires a renewed conservation laboratory Figure 110 –small hidden space between the retaining wall stores is a security risk

12. Furnishings – Furniture has always been an integral part of the architecture, and the museum has a fine collection with many pieces dating to the original building and others to the earliest extensions. There are even pieces that are suspected of having been designed by Earnt May. A full inventory was conducted with photography, and research is pending. These elements of the museum are a great risk as they are heavily used, their condition has suffered, their value is not recognized, and they are portable. Many of the pieces are in good condition, including the exterior metal benches and folding wood and metal chairs in the offices. However, the more public furniture, particularly the pieces with upholstery and painted benches are showing their age and level of use. One critical aspect of the furnishings is the original wooden display cases. These were designed by May and an integral part of the museum. They must be protected, conserved, and sensitively adapted to bring them to modern standards.

Figure 111 – from upper left clockwise, original armchair, folding wooden chair, metal office chair, public wood bench, garden bench

Figure 112 –original display cabinets are vulnerable

Figure 113 –cases are integrated into the architecture (Poctor, 2018)l

Figure 114 –display cases in the main entry hall (Proctor, 2018)

Figure 115 –Main gallery display cases (Proctor, 2018)

13. Special Construction – This category covers other aspects of the building and site that do not fit into other categories. This includes the recent murals that have been added to the masonry façade and the traditional architectural examples to the south and west of the site. It also includes elements added to the site to facilitate special events and temporary exhibitions.

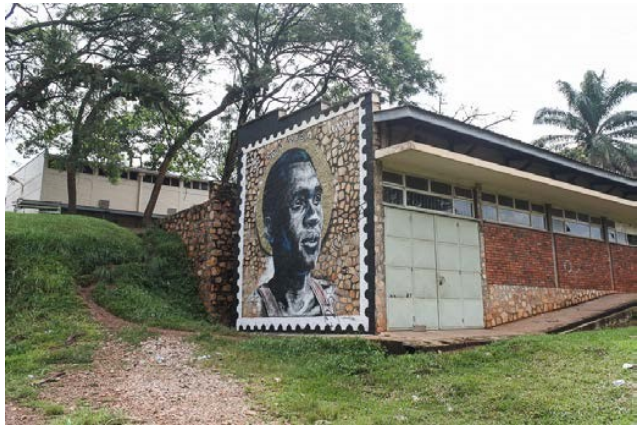


Figure 116 –mural on exterior stores wall

Figure 117 – cultural village to the south of the museum

14. Conveying Equipment

This section is not used yet included here for consistency. There are no elevators to the upper floors of the museum. While this is an issue related to accessibility to persons less mobile, these spaces are, for the most part, offices.

15. Mechanical (Plumbing and HVAC) – With any building that is approaching its 80th birthday, there are issues with plumbing. These issues include corrosion in all the older installations, worn finishes, leaky seals and taps, ad hoc repairs, and new surface-mounted supply lines and drains. There are some older toilet fixtures, and these are beyond repair. These problems are compounded by the number of extensions of the museum over the years and periods without maintenance. Water tanks have been installed at the top of the museum, and lines run exposed on the interior and exterior of the building. Toward the east, an outdoor toilet extension was added, presumable for events in the garden. A comprehensive museum-wide plumbing removal and replacement are advised. Ventilation is not much better. The museum was originally designed for natural ventilation, but this has slowly been replaced with fans and, in some areas, forced air systems that are no longer functioning.

Figure 118 –ad hoc plumbing repairs

Figure 119 –exterior toilets

Figure 120 –leaking exterior plumbing

Figure 121 – Plastic water tanks on roof

Figure 122 –inoperable phase-change HVAC

Figure 123 – ventilation fans inoperable

16. Electrical – The electrical system of the museum is in dire condition. This is due to the numerous additions to the main building, changes in the galleries, ad hoc repairs, and increasing use of modern technologies such as computers and wireless systems. Of all the problems with the museum, this is the most serious given the risk of electrical shock or even fire. As the building and its purpose have changed, the electrical system was not sufficiently upgraded, and there is a lack of an overall technically sound design. This has resulted in generations of systems, often with the old wiring left abandoned, leading to unsightly wires and electrical boxes. Infrequent or inexperienced maintenance resulted in exposed wiring and sockets at various points in the building that are hazardous to the user. The sockets need to be covered and the exposed wiring covered in conduits or similar provisions. In addition, some areas in the building are missing light fixtures that may be necessary for security and work purposes which should be replaced. It is unknown if the distribution boxes and circuit breakers are adequately sized, and there should be emergency and exit lighting. Finally, there are limited original fixtures that must be evaluated and adapted to modern standards. These issues prompted an inspection by a certified electrician with a summary following.

Figure 124 – Exposed electrical at the building exterior

Figure 125 – It is unknown if the electrical panels are adequately sized

Figure 126 – Unsupported electrical cables

Figure 127 – A number of critical light fixtures have been abandoned

Figure 128 –Original light fixtures must be conserved and adapted to modern standards

3.2 INTERNATIONAL WORKSHOP

Raising awareness about the significance and importance of modern architecture -Stakeholders were involved for an entire week during the International Workshop, which was divided into three separate sub-workshops. The first-day workshop was focused on organizations Leadership and Management and mainly involved decision-makers and managers. The following three days focused on young professionals, although many from the previous day attended. This included a tour of Kampala and other modern buildings for comparison and contrast. The final day was the Museum Forum which was an open discussion. In total, over 100 people attended the leadership workshop; 45 participants attended the three days' workshops. In the evenings, other events were planned, including a Panel Discussion with over 50 members of the public and a Press Conference.

Archival Research - Available literature on the history of the Uganda National Museum is predominantly concerned with its holdings and the development of the museum as an institution rather than the building itself. Reviewed literature on the work of Ernst May in Kampala focuses on the extension plan for the city.

Environmental Assessment - The thermal behavior of the building was investigated by measuring the ceiling temperatures using a FLIR thermal camera and comparing the results obtained in the morning with those collected in the late afternoon.

Rapid condition assessment – based on this investigation of the museum building by the project team, the building has no major structural defects, although there are several problems the need to be addressed. Some of these problems are understandable with the fact that conservation of modern buildings is a new field in the region; many custodians of these buildings do not have enough expertise and knowledge about the techniques and materials that were used. After some time, these materials have started failing, causing so many issues in these buildings, which has resulted in their demolition. The museum building has suffered majorly from the problem of a leaking roof, maintenance issues, fluctuating Relative Humidity, and lack of outstanding policies to affect the right measures of conservation.

Figure 129 – The International included a two-day walking tour of the most important modern buildings in Kampala (Adengo Architecture, 2020)

3.3 STRUCTURAL & MEP

A major part of the condition of the building can be divided into three aspects: structural and MEP or mechanical, electrical, and plumbing. Each of these sections was inspected separately given the schedules of the engineers, their availability, and the time needed. This portion will address these three aspects.

STRUCTURAL

This report is a brief analysis of the rapid structural assessment of the Uganda Museum basing mainly on visual inspections and documentary reviews. The structural frame of the Uganda National Museum is constructed out of a reinforced concrete frame with burnt clay masonry. The museum is composed of different building blocks that were built at different times but joined up together to form the museum. Most of the blocks are composed of two levels (double story) of average height eight meters high, while others are composed of a reinforced concrete frame of double-height. The rapid structural assessment of the building was carried out by:

1. Reviewing the available layouts, drawings, and documentation of the building, including the previous UNESCO report
2. Obtaining briefing about the maintenance history of the building through interviews with the director and maintenance personnel
3. Carrying out a rapid assessment of the structure to assess possible risks and structural defects
4. Making preliminary recommendations

Observed Issues of the Museum and Key Concerns

Core Building - This is largely a double-height block and block of reinforced concrete frame and block infill. The block has a dome and a flat reinforced concrete roof. The roof seemed to serve its purpose well, however evidence of poor maintenance. The addition of extra loads such as PVC water tanks, plumbing, and wires on the roof impacts the waterproof membrane. This impacts the efficiency of the drain.

Core Building Gallery - The block has a reinforced concrete frame and block infill. The block has a flat reinforced concrete roof that was overlaid by pitched iron sheet roofing for waterproofing. However, water collection boxes have failed, and drainage water flows along the walls instead of directing it into the downpipes and away from the building. There were cases of loosely fixed iron sheets observed on the roof. This could lead to some flying off and causing roof drainage issues or life safety issues. Drainage at the back of this block has an uneven slope and has to clog the area, thus causing ponding of water and its subsequent absorption by adjacent walls.

Core Building Gallery - The double-height block with a steep roof. The roof is effective in carrying off all the water, however the lack of gutters and drainage pipes affecting the walls. The water runoff from the roof trickles down along the walls, which leads to spalling of mortar and concrete on the external walls.

Education Wing - This is a two-level structure built using stone with a reinforced concrete framed structure and masonry infills with a bitumastic fiber membrane over a horizontal wood structure. Noted:

- Observed cracks on the splash apron at the base of the building
- Accumulation of rotten leaves and silt of the roof leading to clogged drains and ponding of water on the roof.
- Ingress of water into the walling due to poor failed adhesion of the mortar with the stone masonry at the joint between Blocks A & B
- Ceiling plates affected by seepage of water through the roof

Museum Stores - The block is mainly composed of reinforced concrete frames and stone masonry infills and noted that a section of the wall was filled with non-matching block masonry giving the building an unaesthetic look. Cracks were noted and on the stone masonry mainly and the joints

due to poor adhesion of stones with mortar and at points where service ducts were passed. Water ingress affecting the walls, and effervescence was was observed. Poor maintenance and cleaning of the roof were noted. The water collection gutters are full of debris and overgrown, causing the water to overflow and trickle down on the walls.

Natural History Gallery - The block has a reinforced concrete frame and block infill. The block has iron sheet roofing and over the window canopies. It was observed that the window canopies are failing due to poor maintenance. The block has several cracked lintels, perhaps due to seepage of water into the concrete that is leading to loss of strength of the concrete. This needs further investigation. There is an unorganized pile-up of old materials on the splash apron of the building, which is causing retention of water and algae growth. A section of the masonry retaining wall near this block needs to be reconstructed to avoid its failure.

Science and Technology - The block has a reinforced concrete frame and red brick infill walls. The block has a combination of both flat reinforced roofs and iron sheet roofing. There were no gutters on this building, and this leads to poor drainage of the rain, especially from the flat roof. The drainpipes from the flat roof do not drain into any downpipes but splash the water on or near the base, which is negatively affecting the walls of the building. The splashing of the water onto the wall has led to mortar washout and is gradually affecting the materials. There were visible signs of water seepage through the flat and causing foaming and algae growth on the walls. Cracks were noted in some rooms, which require further investigation.

Musical Instruments/Offices - The block is mainly composed of a reinforced concrete frame and a combination of block and stone masonry in-fill walls. Cracks were observed at the stone masonry joints due to poor adhesion of stones with mortar. Failed gutters are affecting the timbers, slats on the eaves of the roof, and the fascia. It was observed the splash apron for the lower side of the block settled, leaving cracks between the walls and the splash that is casing ingress of water into the plinth walls.

CONCLUSIONS - The building appears to be structurally stable but with many areas and points that continually affect the integrity of the building. The most apparent being the poor roof drainage and collections that are affecting the walls, roof, splash aprons, and buildings foundations. Water seepage through the roof and its ingress into the walls are causing effervescence and spalling of concrete, algae growth - all leading to a reduction in strength of the structure. The as-built structural drawings for the building were not available. However, a copy of the building layout and a copy of the Structural Integrity Report of the building that was done by ZyFirm Consultants in 11/2015 were reviewed. It was observed that, however, by the time the Conservation Management Plan is adopted, the assessment will have been over 5 years, which is the industry-acceptable time limit for the structural assessment. It was noted that few structural members of the building were tested, and the pits carried out were all close to each other instead of taking samples from the different areas of the building. Furthermore, some defects were apparent since the inspection time must be assessed. A detailed periodic structural assessment of the building is required. This must include a test on more structural members of the building and more pits to assess the soils from the different wings of the building. The museum must also carry out routine maintenance of the building such as cleaning of the roofs, channels, and installation of gutters around key areas to avoid further deterioration.

ELECTRICAL

An electrical inspection was carried out by a certified engineer. The findings are below:

a) The initial electrical cabling was through concealed conducting with four consumer units.
b) The routing network identification being a subject of further analysis.
c) The socket outlets were connected in ring circuits.
d) The lighting system adopted was for the incorporation of natural lighting in most spaces.
e) There were notable defects in the electrical works, including but not limited to the matrix below:



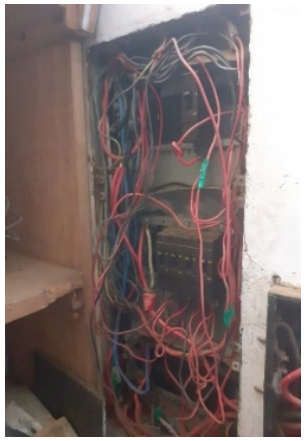



Figure 130 – Exposed socket outlets, Figure 131 – Faulty lighting fittings, Figure 132 – Unsheltered switch gear Figure 133, Exposed connections in the consumer units

Recommendations:

For efficient management of the facility, key technical considerations ought to be taken into consideration.

a) Current electrical deficiencies are a serious fire risk.
b) Detailed analysis of the existing electrical circuit network and power consumption
c) Re-design of circuit distribution in relation to existing power demand
d) Installation of modern energy-saving electrical fittings
e) Deployment of Building Management System (BMS).

MECHANICAL

The mechanical inspection included both plumbing and ventilation systems and was conducted by a certified inspector. Findings include:

a) The pipework for plumbing works is of black steel, concealed for water supply and wall for drainage.
b) The fixtures at the original installation have over time been replaced, but the water flow network is still functional.
c) Cited were defects in the plumbing system as in the pictorial matrix below
d) Most of the ventilation is through openings in the windows and screens.

Figure 134 – Leaking drainage pipes, Figure 135 – Incomplete pipe network, Figure 136 defective covers Figure 137, Open drainage channels

Recommendations

a. Further analysis to ascertain the independence of the waste, foul, and rainwater drainage systems and the endpoints thereof
b. Completion of the drainage pipe network to the external drainage system
c. Properly rod and replace the defective maintenance access holes and respective covers
d. Installation of state-of-the-art sanitary fittings, for example, hands-free electronic pillar taps, flush valves, etc.
e. Analysis to details pending includes analysis of the sufficiency of the cross-ventilation system as of the current working conditions,
f. Analysis of the heating and cooling loads of all spaces
g. Further work to detail to be carried out regarding Access control, surveillance, voice, and data systems.

3.4 RECENT REPAIRS

Given the rapid condition assessment and the recent damages to the museum caused by the severe monsoon rains and falling branches, several major and minor repairs were undertaken as part of this project. The philosophical basis in the conservation regarding stabilization and restoration were observed, including understanding the existing materials, the reasons for failure, and replacing like for like with minimal intervention. These interventions were adequate and suitable for the museum. Explicitly, the stabilization and restoration team of the Uganda National Museum project principally considered respect for the building and any original materials. The works returned the damaged parts of the building to their initial conditions and blended in any new materials while meeting modern standards. Detailed documentation of all the steps in the process was undertaken before, during, and after interventions. In addition, workers were sensitized to the importance of their work and to maintain a clean and tidy worksite. This helped in refining the execution of the work while imparting some conservation experience to the workers. Works included:

- Emergency repairs to the roof of the Education Hall that had been damaged by large falling branches during the 2020 monsoons. Trees were trimmed in this area and all around to prevent this from occurring. The roofs and gutters were cleaned.
- Roof repair to various parts of the main building and, in particular, the Education Hall and the area over the dioramas in the Natural History Gallery. This used the same fabric type and bitumen roof.
- Broken glazing was replaced in the museum stores, the office areas, and the Education Hall. This contributed to security.
- Interiors in the Education Hall were repaired and painted the same color following the water damage.

Figure 138 – left, repair of broken glass at the museum store roof, Right, painting of the eave of the Education Hall with the approved paint color (Denis, 2021)

Figure 139 – Left and right roof repairs at the library wing and over the diorama (Denis, 2021)

3.5 PAINT & FINISH ANALYSIS

After the completion of the Uganda Museum in 1952, the finishes on the walls, floors, doors, windows, and ceiling presented the characteristics of the modernist style in Uganda. The paint color and texture found in the museum showed similar characteristics to a painting authored by Ernest May in 1947. The white lime color was the dominant paint of both interior and external wall surfaces. The later refurbishment paint layers are different colors and consist of vinyl emulsions and acrylic resins that are easily washable.

External wall paint and finishes - The external walls were plastered and painted white with a possible original Snowcem finish[33]. Over the years, the wall has been repainted numerous times during renovations. The main paint color today is cream or light ivory, and this is mainly observed on the external walls of the Ethnography Gallery. However, the administrative offices and the Music Gallery have two finishes. The lower portion of the wall has stone cladding over the brick masonry. The upper wall is painted using the weather guard paint of a light cream color. The additional extension building blocks of the Science and Industry Pavilion and Education Hall have a white paint finish. All the external wall finish paints are oil-based paints.

The Core Building - The original interior wall was painted of white color. The skirting of the wall had a timber oil-based chocolate color. However, the skirting glossy paint has changed to black color from the original chocolate. At the same time, the front part of the Stone Age section was painted with light lime color paint and has retained some of the skirting timber chocolate colors. There is a possibility of tracing the original skirting paint of the building with the chocolate color on the lower parts of the display stands of wooden cases for the art of Gregory Maloba (Walumbe).

Ethnography Gallery - In 1953, the museum had the original cream or calico color paint applied to the sidewalls of the gallery. The original color was found behind the display cases as it was not painted over. A possible reason for the calico or light card color was to blend the ethnographic artifacts on display. However, in 1961, the paint was changed to white due to the transformation of the Hall of Man Gallery into ethnography and ethnohistory, including a small display section of archaeological materials such as the ceramics and the repatriated artifact from Cambridge University Museum of Archaeology and Anthropology.[34] The change of color was after the demarcation of the main hall gallery was transformed into two sections of ethnography and ethnohistory. The natural light from the lobby dome does not permit sufficient natural light to penetrate the ethnography gallery as there Is a reed fence partition. Therefore, there was a decision to paint the gallery white.

Figure 140 – Ethnography Gallery paint analysis

[33] Snowcem Is a name brand for a combination of white portland cement and natural minerals that allow the paint to combine with the substrate to prevent peeling or flaking.

[34] See Peterson Derek (2015), 'Introduction' In Peterson, D. R., Gavua, K., & Rassool, C. (Eds.). (2015). *The politics of heritage in Africa: Economies, histories, and infrastructures* (Vol. 48). Cambridge University Press.

Musical Gallery - At the traditional music display, the interior sidewalls and end walls have retained the white color of paints. Although the opposite wall has over the years being repainted numerous times for temporary art or photographic exhibits.

Science and Industry Gallery - The building section was added to the rear of the original structure of Ernest May. Its interior finishes were lighter blue in color. The interior walls have been repainted using water-based paint with light sky-blue color. The skirting of the wall has wooden chocolate that has oil-based glossy paints.

Natural History Gallery - The section of the Uganda Museum building called the Natural History was constructed in 1965. The external wall is kajjansi facing bricks. Its hexagonal form is well appreciated from the Makerere hill view. The interior of the building was originally painted of sky-blue gloss paint color. The light lime gloss paint color is found on the stairs towards the diorama basement gallery. You can see the original paints of the interior in natural lab and offices having sky-blue paint. However, the natural has been repainted due to renovations undertaken on the building section having roof leakages. The humidity in the section of the building is extremely high. The over-layered paints show high moisture content on the wall surface.

Figure 141 – Natural History Gallery and its original color on the right revealed after removing outer surface layers.

Education Wing - The extension of the Museum with its subsidiary Library and lecture room is addressed in this section. The Library section's interior wall has a portion of stone finish which was the original external wall of the first building. The interior sides of the wall and ceiling have white paint color. The education or lecturer section of the interior wall has also been repainted, and the paint color has changed spontaneously. The original paint color was white and light sky blue. However, there is a drastic change of color in the education offices of lime green. The drastic change of colors in the lecture room has negatively impacted the ambiance of the room.

4 MUSEUM COLLECTION

The reason for the museum building cannot be ignored. While the building is a modern icon and the focus of this CMP, the museum exists for the collection and to welcome visitors. Therefore, some aspects of housing the collection and how they relate to the building were addressed. One of the most critical aspects of a collection of organic objects is the environmental conditions.

4.1 ENVIRONMENTAL MONITORING

4.1.1 Introduction

Heritage connects us to the past, present, and future. To manage and curate heritage is to ensure that our heritage is well preserved and accessible for all. Preservation and responsible use of heritage collections is a continuous fight against the threats facing them. Thousands of potential risks could lead to loss. Fire, water, theft, vandalism, pests, contaminants, light and UV radiation, custodial neglect: these are only a few of the looming threats to heritage collections. In this part, the effect of the agents of deterioration on the collection of the National Museum is presented. The ten agents of deterioration and their descriptions. In this publication, Incorrect temperature and Incorrect relative humidity are discussed together as Incorrect indoor climate.

Figure 142 – the colorful corridor connecting the rear gallery. While useful as an exhibition and transition space, in the afternoons it becomes an oven due to its thin wall construction and western orientation (Eppich, 2019)

Agent of Deterioration	Description
Physical forces	All forces that act on objects, such as gravity, wear-and-tear, abrasion, vibrations, handling, shock, falling trees, collapsing buildings, and earthquakes, and that lead to physical or mechanical damage of objects.
Water	Water in liquid form, which makes objects wet by spillage, leakage, rising dampness, condensation, or floods.
Fire	The process by which a few or many objects, a room, or a building with collections are (partially) burned or damaged by fire, smoke, and soot.
Thieves & vandals	People, known or unknown, intentionally damage or remove one or more objects without authorization during or outside opening hours.
Pests & plants	Soiling and material loss in objects due to excrement or feeding by birds, rodents, and insects, or by the growth of roots or tendrils
Light, ultraviolet and infrared	Radiation from sunlight or electric light sources, such as direct sunlight, incoming daylight, lamps for object, background, work, or emergency lighting, which are used regularly or occasionally, such as for filming or photography. These can cause discoloring, yellowing, fading, embrittlement, or disintegration
Contaminants	Gases, vapors, liquids, and solids, varying from external air pollution to spilled coffee and yellowing adhesive tape.
Incorrect temperature	The temperature that is too low, too high, or that fluctuates too greatly, causing materials to become glasslike and brittle, deform and melt, expand and shrink, or undergo accelerated chemical degradation (oxidation and hydrolysis).
Incorrect relative humidity (RH)	RH that is too low, too high, or that fluctuates too greatly, causing materials to dehydrate and crack, suffer mold growth, expand and shrink, or undergo accelerated chemical degradation (particularly hydrolysis).
Dissociation	Disconnection between the object and knowledge and information about it, between an object and its recorded location, or separation of the parts of composite objects. They are caused, for instance, by detached labels, lost documentation, or employees leaving without recording their knowledge.

The Uganda National Museum has limited resources to manage the collections that are often being affected by deterioration agents, which often leads to a relatively high-risk profile. To determine which risks were potentially the most hazardous, a generic risk assessment was performed. This enabled priorities to be set for a preservation plan. For each of the agents of deterioration, an assessment was made to determine the percentage of collection that was potentially affected. This is a generic qualitative approach to find the arguments to improve the preservation of this important and unique collection. In the following sections, the effect of each of the ten agents of deterioration on collection at the Uganda National Museum is evaluated.

Figure 143 – the collection is overwhelmingly made up of fragile organic objects.

4.1.2 Collection Anatomy

The collection of the UM is varied and consists of #objects divided into several museum sections:

1) Musical instruments
2) Ethnographic collection
3) Natural history collection
4) Transport collection
5) History collection
6) Science and industry collection
7) Diorama collection
8) Stone and iron age collection
9) Cultural village collection

In order to assess the way objects are affected by the agents of deterioration, collection units of similar susceptibility, i.e., materials, are developed:

1) Wooden objects
2) Basketry
3) Metals
4) Textiles
5) Paper/leather
6) Stuffed animals
7) Inorganic (stone, minerals)
8) Skin/Feathers
9) Grass
10) Glass

4.2 VALUE AND RISKS

Valuing refers to the process of attaching the significance to an item or collection by testing them against previously established and defined criteria. Before embarking on a valuation, valuation the criteria must be decided upon that are relevant to the risk assessment. In the figure below, these criteria are provided.[35] The building and its original fitting, i.e., original display cases, floors, and paneling, are also considered to be of high cultural value. These values and elements are key contributing elements and must be aligned with the risks. This section will describe the various risks crom phyical forces and water to pests and other contaminants.

> "The museum's collections comprise the finest ethnographic collection ever made in eastern Africa. Many of the items are very fragile, most are irreplaceable as Uganda has moved on in the last 40 years into the modern world."
>
> Merrick Posnansky, former curator

	Criteria	Prompt questions
Features	Condition (state, intactness, material authenticity, material integrity)	Is the item/collection in good condition, is it complete, is it in its original state, is it suitable for reuse?
	Ensemble (completeness, unity, cohesion, conceptual integrity, conceptual authenticity, contextual authenticity)	Is the item/collection made up of parts which together form a whole? How? Is the whole complete?
	Provenance (documentation, life story, biography, source, pedigree)	Is the provenance of the item/collection known, documented, reliable?
	Rarity and representativeness (uniqueness, exemplar value, prototype, type exemplar)	Is the item/collection unique, internationally, nationally, within the collection? Is it highly representative of a particular period, place, style, movement, practice, theme, community?
Culture historical	Historical (biographical, social history, natural history, technological history, scientific history)	Is there an association with a particular historical person, group, event, place, activity? Is there an association with a particular period, process, theme, development, zeitgeist or way of life?
	Artistic (art historical, architectural history, design, workmanship, decorative)	Is the item/collection special in terms of its design, conception, execution, style, technique, creativity? Does it represent a particular style, movement, artist?
	Information value (scholarship, science, research, documentation, reference, testimony, archival)	Is the item/collection kept because of the information that it contains and can this be studied?
Social and societal	Social (social, spiritual, religious, political, symbolic, community, identity)	Does the item/collection fulfil a certain function for a particular group or community today? Are there groups that have a current special attachment to the item? Does it have a current social, religious, political, community meaning? Does the item currently play a decisive role in the identity of a group?
	Perception (emotions, senses, aesthetic, association)	Does the item/collection evoke a certain collective experience? Does it emanate a particular atmosphere? Does it evoke emotions? Does it play on the senses in a particular way?
Use	Museum (presentation, education, research)	Is the item/collection currently used for presentation, educational, research purposes? Does it play a special role in an exhibition? Is it the subject of publications?
	Economic (working capital, financial, PR, spin-off, tourism, reputation)	Does the item/collection generate revenue for the organisation? Does it attract vistors? Does it play a decisive role in the organisation's profile and reputation?

Figure 144 – Value framework for museum collections

[35] https://www.cultureelerfgoed.nl/publicaties/publicaties/2014/01/01/assessing-museum-collections

4.2.1 Physical Forces

Physical force can damage objects directly by causing rotation, deformation, stress, and pressure. It may also damage objects indirectly by causing a collision between objects or object parts. Damage from physical force ranges from undetectable hairline fissures and minute losses to large-scale effects such as crushing objects, collapsing floors, and, in extreme cases, destroying buildings. Five important force-related effects are impact, shock; vibration; pressure; and abrasion.[36]

Typical examples of risk scenarios that could occur in the UM are[37]:

- Storm leads to a damaged roof, falling trees, and crushed collection
- An accident during maintenance, restoration, or transportation (fall) leads to dents, scratches, or failures
- Continuous maintenance (cleaning) leads to material loss
- Vibrations (events, traffic, construction, or transportation) lead to moving objects, scratches, or material loss
- Use and handling objects lead to folds, scratches, or material loss
- Use and visitors lead to wear
- Poor maintenance leads to deformation
- Overcrowded storage leads to scratches or deformation

In the collection of the Uganda National Museum, several effects of this agent can be observed. Objects are deformed, bent, broken. Two examples are shown below.

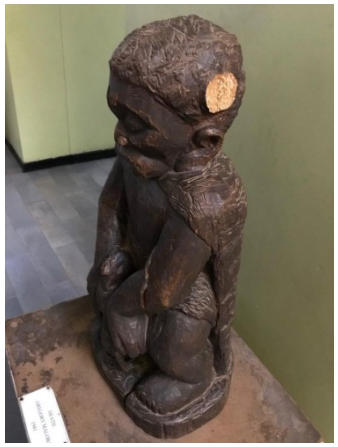


Figure 145 – During installation of a temporary exhibition the Walumbe statue was bumped into and fell of its pedestal. Both horns broke off.

Figure 146 – During a maintenance activity one of the front lights of Iddi Amin's Mercedes Benz in the transport gallery broke.

[36] https://www.canada.ca/en/conservation-institute/services/agents-deterioration/physical-forces.html

[37] Taken from Risk Management for Collections, RCE. https://www.cultureelerfgoed.nl/publicaties/publicaties/2017/01/01/risk-management-for-collections

In the table below, the susceptibility of the collection unit and the average damage that can be formed when exposed is qualitatively assessed by high, medium, and low.

	Susceptibility	Effect	Physical Forces
Wooden objects	High	High	
Basketry	High	High	
Metals	High	Medium	
Textiles	Low	Low	
Paper/leather	High	High	
Stuffed animals	High	High	
Inorganic (stone, minerals)	Low	Low	
Skin/Feathers	Low	Medium	
Grass	High	Medium	
Glass	High	High	

Figure 147 – Table of susceptibility of the collection HxH= red, HxM=MxH= orange, HxL= LxH= MxM= blue, MxL= LxM= green, LxL- light green

4.2.2 Water

This agent deals with water in its liquid form but also includes dampness resulting from condensation and rising moisture. Since its inception, it has been noted that the museum building has had a problem of leaking roofs to date, which is the main source of water in the museum. The leakage resulted in staining and even cracking of walls, rusting and corrosion of metal parts of artifacts, mold growth, the disintegration of unfired clay, swelling and shrinking of wood leading to their deformation, delamination of paint layers. Typical examples of risk scenarios that frequently occur in the museum[38]:

- Pouring rain, leaking roof leads to water entering the building
- Severe weather, flooding leads to water entering via sewers and other entrances
- Breakage in drainage pipes leads to wet objects
- Spills (i.e., air conditioning)
- Staining of materials due to wet cleaning

[38] Taken from Risk Management for Collections, RCE. https://www.cultureelerfgoed.nl/publicaties/publicaties/2017/01/01/risk-management-for-collections

Figure 148 – Cover Cracked and stained ceilings in the diorama section at the Museum. Evident also is the delamination of paint layers.

Figure 149 – Stained ceiling in the ethnography section due to leaking roof

In the table below, the susceptibility of the collection unit and the average damage that can be formed when exposed is qualitatively assessed by High, Medium, and Low.

	Susceptibility	Effect	Water
Wooden objects	High	Medium	
Basketry	High	Medium	
Metals	Medium	Medium	
Textiles	High	Medium	
Paper/leather	High	High	
Stuffed animals	High	High	
Inorganic (stone, minerals)	Low	Low	
Skin/Feathers	Low	Medium	
Grass	Medium	Medium	
Glass	Low	Medium	

HxH= red, HxM=MxH= orange, HxL= LxH= MxM= blue, MxL= LxM= green, LxL- light green

4.2.3 Fire

Fire is an agent of deterioration for which the risks are often underestimated. Fires usually affect other people – not us. But on closer examination, fire always has a high score in a risk assessment because, while the probability of fire in an institution is relatively low, the impact is great. Objects are usually seriously damaged in a fire, and a large part of a collection could be lost.

To identify the risks from fire, it helps to think of three types of scenarios. First, a small local fire, which might perhaps result from a fallen candle or a smoldering cigarette, but this can be dealt with quickly to limit the damage to a few objects. Second, a medium-sized fire is confined to a room or fire compartment and affecting only part of the collection. Third, a large fire that engulfs the entire building as well as the collection.[39]

Typical examples of risk scenarios that could occur in the UM are[40]:

- Extensive fire at the building level causes damage to a large part of the collection
- Fire limited to compartment damages part of the collection
- Local fire (rubbish bin, candle, or cigarette) leads to a total or partial loss of objects
- Damage can be burnt material, soot, smoke, water, or extinguisher residue

The sources for fire, i.e., arson, electrical short circuits, and improper use of heat during maintenance, can also start a fire in the UM.

Figure 150 – The old unused vehicles placed near the building façade will increase the risk of fire arson

Figure 151 – Fire extinguishers reduce the potential impact of a fire.

The institution is aware that most of its collection are organic objects that are highly flammable, thus being incredibly careful in relation to this as fire impacts could be great and are irreversible. Important to note is that when devising means to reduce fire risks, the entire safety chain should be considered. This involves pro-action, prevention, preparation, repression, and aftercare which are related to preventive conservation measures of avoiding, blocking, detecting, responding, and recovering or treating. Although the museum has put in place some measures to prevent and mitigate fire outbreaks like having smoking zones, installing portable and stationed fire extinguishers at several points, there are no fire detectors in the premises and mechanisms for recovery just in case of a fire outbreak.

[39] Risk Management for Collections, Cultural Heritage Agency of the Netherlands

[40] Taken from Risk Management for Collections, RCE. https://www.cultureelerfgoed.nl/publicaties/publicaties/2017/01/01/risk-management-for-collections

In the table below, the susceptibility of the collection unit and the average damage that can be formed when exposed is qualitatively assessed by High, Medium, and Low.

	Susceptibility	Effect	Fire
Wooden objects	High	Medium	
Basketry	High	Medium	
Metals	Medium	Medium	
Textiles	High	Medium	
Paper/leather	High	High	
Stuffed animals	High	High	
Inorganic (stone, minerals)	Low	Low	
Skin/Feathers	High	High	
Grass	High	High	
Glass	Medium	Medium	

HxH= red, HxM=MxH= orange, HxL= LxH= MxM= blue, MxL= LxM= green, LxL- light green

4.2.4 Theft and vandalism

Theft is the intentional, illegal removal of an object, either premeditated or because there was an opportunity to do so. The principal aim of every museum is to offer access to the collection, so it is impossible to keep the collection completely locked behind bars. Resultantly, there is always a conflict between security and accessibility.

Many instances of theft from museums are isolated cases and are not carried out by professional criminals but rather by someone who was given the opportunity. The thief – a visitor, guest, or employee – seizes the opportunity to take or 'borrow' something that was within reach or unprotected. This usually involves only a few objects or small objects of low value. This type of theft is normally not made public, which is why there is so little data available on the probability and type of objects stolen for this scenario.

Typical examples of risk scenarios that could occur in the museum[41]:

- Theft outside opening hours by external persons
- Theft during opening hours by external persons
- Internal theft by own employees
- Heavy damage due to vandalism
- Slight damage due to vandalism

There have been some cases of theft in the museum. These are attributed to isolated showcases, exhibitions, or sections. These have on occasions taken place in a blink of an eye when a temporary exhibition is left unattended. For example, flash disks and headphones for playing videos and audios during the Milk exhibition of 2017 went missing, flash disks for HIV AIDS (TASO) exhibition of Dec 2018 – Jan 2019 went missing, and on one occasion, a visitor was caught with one of them.

Objects normally stolen are those of small sizes that can easily be pocketed. Thefts normally go unnoticed for some time, probably because, thus far, only low-value items have been taken.

Theft of objects from the storage by museum staff has thus far not been observed but should be regarded as a relatively high risk due to the lighting, housing, and storing conditions of the collections. There is one recorded case of vandalism in the museum. During school visits, the window screens of the presidential cars were intentionally hit by students to find out how hard or strong the bulletproof presidential car windows really are.

[41] Taken from Risk Management for Collections, RCE. https://www.cultureelerfgoed.nl/publicaties/publicaties/2017/01/01/risk-management-for-collections

Figure 152 – The window screens of the presidential cars were intentionally hit by students during school visits and other visitors to find out how hard or strong the bulletproof presidential car windows were.

Figure 153 – During a measuring campaign, an RH/T-Data logger was stolen. Although this is not the collection, it shows that visitors might take anything within reach.

In the table below, the susceptibility of the collection unit and the average damage that can be formed when exposed is qualitatively assessed by high, medium, and low.

	Susceptibility	Effect	Thieves and vandals
Wooden objects	Medium	High	
Basketry	Low	High	
Metals	Medium	High	
Textiles	Low	High	
Paper/leather	Low	High	
Stuffed animals	Low	High	
Inorganic (stone, minerals)	Low	High	
Skin/Feathers	Low	High	
Grass	Low	High	
Glass	Medium	High	

HxH= red, HxM=MxH= orange, HxL= LxH= MxM= blue, MxL= LxM= green, LxL- light green

4.2.5 Pests

The agent of deterioration 'Pests and plants' encompasses causes of decay and damage from living organisms, which can be further divided into animals, plants, and the group comprising algae, mosses, and lichens. Mould and bacteria (micro-organisms) are not discussed here because the primary cause of their presence is high relative humidity. They are dealt with in the chapter 'Incorrect indoor climate.' Animal pests can be classified based on their number of legs: birds (two legs); rodents, bats, and pets (four legs); insects (six legs); spiders (eight legs); and woodlice and centipedes (more than eight legs).

The record has it that the institution has been faced with this agent of deterioration for a long time:

Typical examples of risk scenarios that could occur in the UM are:

- Silverfish mostly attacked paper material
- wood borers attacked wood
- carpet beetle larvae attacked organic material like skins, cloth, and feathers
- cockroaches, doodles, and termites

Recently, the museum is faced with cockroaches, doodles, and termites whose existence is attributed to poor disposal of organic material like food leftovers by both visitors and staff in the galleries and around the building. Silverfish have destroyed paper material in the stores that have limited light like maps, other documents, and paper material in poorly light showcases.

During the 1950s – 70s, infected objects were treated with chemicals. In later years' chemical treatment was deemed inappropriate and alternative measures such as preventing insects and pests from entering the museum. Unfortunately, this failed. It was decided to pack all the affected objects in

polythene bags and place these in direct sunlight or in deep freezers for hours to kill the pests and insects.

Figure 154 – Falling off of feathers and peeling off of skin from artifacts by carpet beetle larvae in the headgear showcase.

Figure 155 – Nyakangubi (Nyoro) drum affected by wood borers.

In the table below, the susceptibility of the collection unit and the average damage that can be formed when exposed is qualitatively assessed by high, medium, and low.

	Susceptibility	Effect	Pests
Wooden objects	High	High	
Basketry	High	High	
Metals	Low	Low	
Textiles	Low	Medium	
Paper/leather	High	High	
Stuffed animals	High	High	
Inorganic (stone, minerals)	Low	Low	
Skin/Feathers	High	High	
Grass	High	High	
Glass	Low	Low	

HxH= red, HxM=MxH= orange, HxL= LxH= MxM= blue, MxL= LxM= green, LxL- light green

4.2.6 Radiation

The museum is supposed to provide visitors with an inviting lit space and sufficient light to be able to see objects while being mindful of minimizing damage caused by light and other radiation because the damage caused is irreversible. Daylight and other types of unfiltered electric light contain ultraviolet radiation, which is extremely dangerous to museum artifacts most sensitive to UV and light. UV (present in daylight) is responsible for reactions in which molecules break and reactions in which molecules join, leading to yellowing of papers. Measures like infilling some windows, doors, and glazed panels with blockwork, painting of some windows, covering of some windows with exhibition pictures, and use of blinds in some openings.

For a particular material, the damage caused by radiation depends on the type of radiation (how much energy it possesses, the level of illumination (measured in lux), and the exposure time (measured in hours). When UV

and IR are reduced to the greatest extent possible, the cumulative light dose (measured in lux hours) determines the amount of damage caused and the rate at which damage will occur.

Typical examples of risk scenarios that could occur in the UM are:

- Daylight causing fading
- Artificial light causing fading
- UV causing yellowing of organic materials

Figure 156 – Textile fading and losing color over time due to direct exposure to unfiltered electric light.

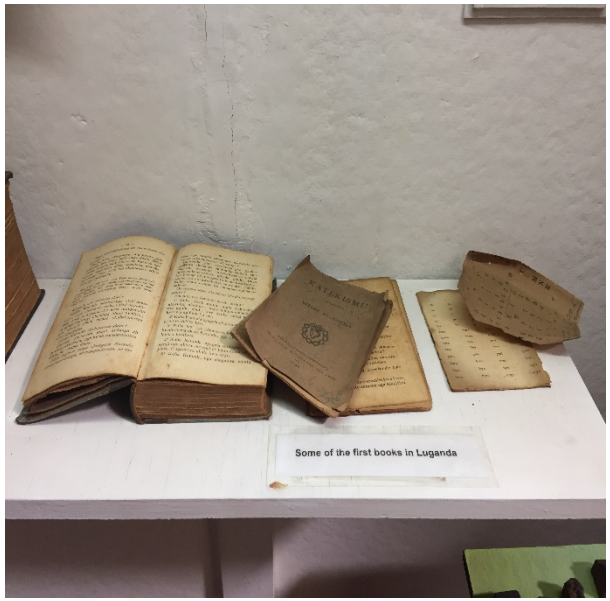


Figure 157 – Browning of paper due to prolonged exposure to ultraviolet radiation.

In the table below, the susceptibility of the collection unit and the average damage that can be formed when exposed is qualitatively assessed by high, medium, and low.

	Susceptibility	Effect	Radiation
Wooden objects	Low	Low	
Basketry	Medium	Medium	
Metals	Low	Low	
Textiles	High	High	
Paper/leather	High	High	
Stuffed animals	Medium	Medium	
Inorganic (stone, minerals)	Low	Low	
Skin/Feathers	Medium	Medium	
Grass	Low	Low	
Glass	Low	Low	

HxH= red, HxM=MxH= orange, HxL= LxH= MxM= blue, MxL= LxM= green, LxL- light green

Important to note here is that apart from the slight tilting of the ethnography section wall to minimize light into the building, the initial design of the building allowed a lot of light into the museum.

4.2.7 Contaminants

The agent of deterioration 'Contaminants' describes the risks related to substances that come into contact with an object and that either leave behind traces or react with it in a manner that changes the appearance or properties of the object undesirably. There is a difference between harmful gases, aerosols (minuscule particles or droplets in the air), liquids, and solids. These can be produced by human activities or natural processes outside the building (external sources), by activities or emissions from materials in the building (internal sources), or from the object itself (intrinsic sources). The museum's proximity to the busy Kira Road is questionable as far as the quality of the air outside the building is concerned as the road always has traffic, thus gas emissions.

They are produced by human activities or natural processes outside the building. Human activities like continuous touching of open artifacts lead to their eventual change in appearance as this facilitates chemical reactions on the object, thus darkening, among other effects.

A lot of dust settles on open artifacts and on showcases, especially during peak season when many school visits take place. Although less, dust also enters loosely fitted showcases and settles on artifacts inside.

Typical examples of risk scenarios that could occur in the UM are:

- Dust enters the building from outside and settles on objects.
- Outside pollution from traffic and industrial activity chemically interacts with objects.
- Organic acids emitted by wooden objects or display case materials chemically interact with objects.
- Handling objects cause staining of metallic surfaces.

The effect of contamination reacting with materials is staining, discoloration, corrosion, and sometimes even material loss. The settling of dust has a strong aesthetic impact on the objects on display. Dust settles into porous surfaces (soiling), making it very difficult and time-consuming to clean. Subsequent dusting and cleaning lead to mechanical damage in the form of scratches or breaking. It further absorbs harmful gases from the air, which can cause corrosion on metal objects.

Figure 158 –Damage caused by external contamination on the WWI French Canon.

Figure 159 –Poorly fitted showcase affected by dust.

In the table below, the susceptibility of the collection unit and the average damage that can be formed when exposed is qualitatively assessed by high, medium, and low.

	Susceptibility	Effect	Contaminants
Wooden objects	Medium	Medium	
Basketry	Medium	Low	
Metals	High	High	
Textiles	Medium	Low	
Paper/leather	Low	Low	
Stuffed animals	Medium	Medium	
Inorganic (stone, minerals)	Low	Low	
Skin/Feathers	Medium	Low	
Grass	Low	Low	
Glass	Low	Low	

HxH= red, HxM=MxH= orange, HxL= LxH= MxM= blue, MxL= LxM= green, LxL- light green

4.2.8 Dissociation

Dissociation describes the separation of an object from the knowledge or information about that object. With this, the object loses value due to non-material change. For example, artifacts being put in the wrong places or placed out of context when information about the object is absent. This could be caused by tags or labels falling off or detaching themselves from artifacts, unrecorded information about artifacts that reside with employees that could be lost upon retirement, resignation, or death.

Typical examples of risk scenarios that could occur in the UM are:

- Lack of documentation of the collection.
- Use of improper, chemically unstable labeling materials that fade, discolor, or delaminate.
- Lack of documentation of the knowledge that museum staff has about the collection or individual objects.

Figure 160 – A collection of artifacts with no labels or information in the science and industry section. Little is known about provenance, use, history, maker, etc.

In the table below, the susceptibility of the collection unit and the average damage that can be formed when exposed is qualitatively assessed by High, Medium, and Low.

	Susceptibility	Effect	Dissociation
Wooden objects	Medium	Medium	
Basketry	High	Medium	
Metals	Medium	Medium	
Textiles	Medium	Medium	
Paper/leather	High	Medium	
Stuffed animals	High	Medium	
Inorganic (stone, minerals)	Low	Medium	
Skin/Feathers	Low	Medium	
Grass	High	Medium	
Glass	High	Medium	

HxH= red, HxM=MxH= orange, HxL= LxH= MxM= blue, MxL= LxM= green, LxL- light gree

Results of the Risk Analysis

In combining the results for the individual agents of deterioration into one table, the results are shown in the table below.

	Physical Forces	Water	Fire	Thieves & Vandals	Pests	Radiation	Contaminants	Dissociation
Wooden objects								
Basketry								
Metals								
Textiles								
Paper/leather								
Stuffed animals								
Inorganic (stone, minerals)								
Skin/Feathers								
Grass								
Glass								

HxH= red, HxM=MxH= orange, HxL= LxH= MxM= blue, MxL= LxM= green, LxL- light green

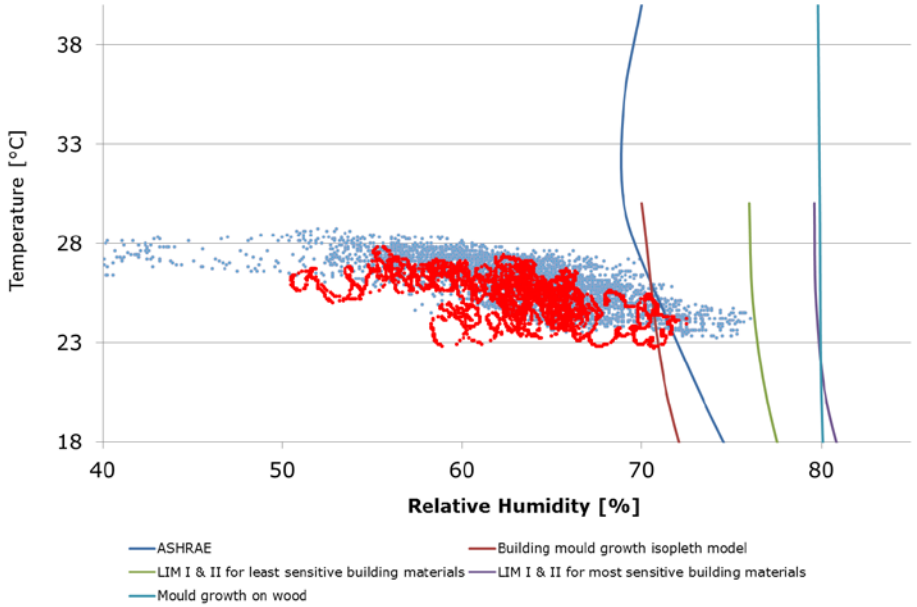
In order to assess the risk, the potential loss in value needs to be addressed. In the table above, the susceptibility and the effect are addressed. But whether or not these collection units have significance or value is not taken into account. In the next section, the values of the collection are addressed.

Risk of biological deterioration

Mold grows on substrates that contain enough moisture and nutrients. These substrates are usually organic materials but can also be inorganic materials whose surfaces contain enough dirt or grease to provide a growth medium for the microorganisms. The amount of water available on the surface. If the surface and the surrounding air have the same temperature, then the relative humidity can be used as an indicator of the chance of mold development.

Most fungal spores found in collections will only germinate and grow into mold colonies at relative humidities above 70%. Their growth rate depends strongly on the surrounding relative humidity and temperature.

The figure below shows a summary of the research done on mold growth, indicating safe and dangerous temperatures and relative humidities. The climate data for the ethnographic galley and the display case are plotted into this graph.

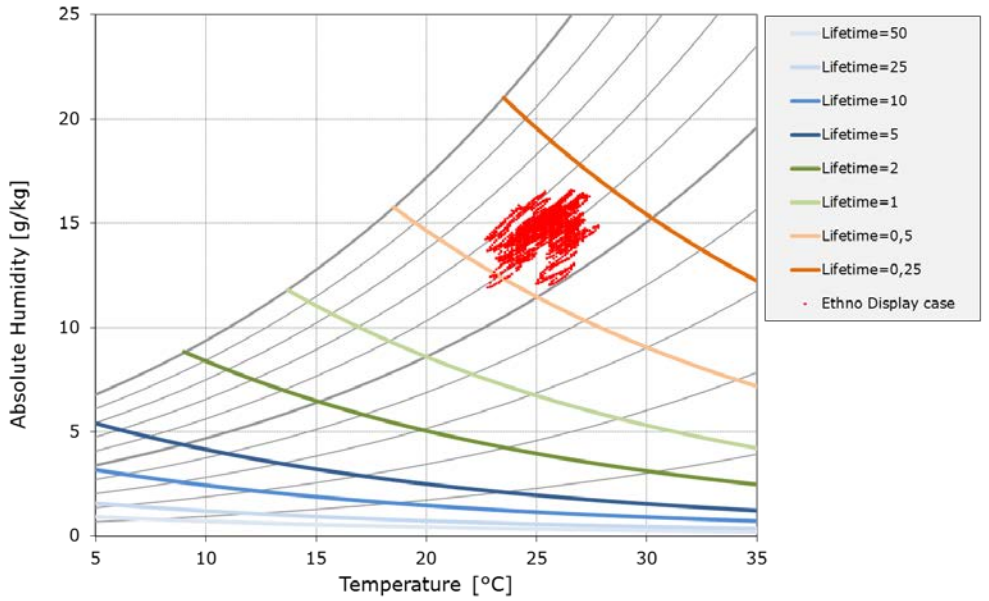


It can be readily seen that the climate in the gallery, see the blue dots in the figure, crosses the lines of known mold growth. The climate in the display case is slightly drier and only briefly enters the zone of biological decay. The risk of mold in the gallery and display case should be considered significant. Steps should be taken to prevent extensive mold growth, e.g., by regular inspection of organic objects.

Risk of chemical deterioration

Chemically unstable materials deteriorate faster than chemically stable ones. The effect of temperature and relative humidity on the lifetime of materials is presented in the figure below. This figure should be seen as an indicator rather than as fixed values for conservation purposes. Not all chemically unstable or stable objects behave exactly the same, i.e., have similar activation energies. Therefore, the graph should be used as a rough indicator.

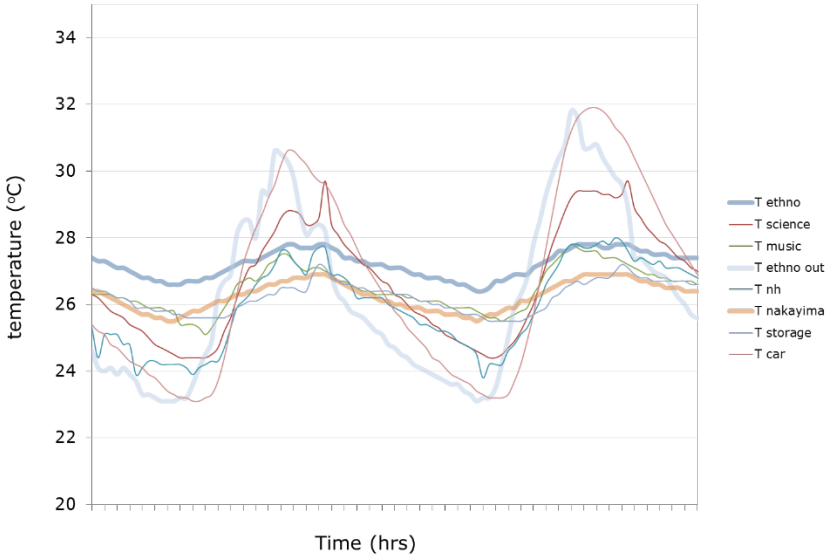
This psychrometric chart shows the grey lines of equal RH as a function of the temperature and the absolute humidity. The colored lines are the lines of equal lifetimes. These lines are relative. This means that at 50% RH and 20°C, the lifetime is arbitrarily set at one as shown by the light green line. All other lines are relative to this. If the temperature increases, the chemical deterioration increases too and the lifetime decreases. As can be seen by e.g. the light orange line that has a relative lifetime of 0,5, this indicates that the reaction rate doubles. So for an object that would last eg 100 yrs at 20°C/50%, will now last 50 years.



The climate in the display case in the ethnographic gallery is warmer and more humid than the classic museum environment (50%/20° C); this results in a higher rate of chemical decay for chemically unstable materials.

Temperature profile

From the graph, it can be readily seen that the museum galleries respond differently to outdoor climate, resulting in different temperature profiles. Outdoor temperatures, the thick light blue line in the figure, show a strong day/night cycle with temperatures of 31-32°C during the day and around 23°C at night. The most responsive gallery is the transport exhibit in the most recent developed extension in which the cars are exhibited. The temperature measured inside one of the vehicles in this gallery, see thin red line in the figure, follows the outside temperature closely, with the same maximum and minimum values. These minimum and maximum values inside the car are reached with a very slow delay of an hour after maximum, and minimum values outside are reached. The other galleries show some damping of the outside temperatures, resulting in lower maximum and higher minimum values of the temperatures inside the building. The most damped temperature can be found in the storage, thin, light blue line, and inside a display case in the Natural History exhibit, the thick orange line. Comparison of the outside temperature (thick light blue line) with those found in the Ethnographic gallery (thick dark blue line) and in the display case in the same gallery (Nakayima, thick orange line) shows that there is a significant damping effect of the inside temperatures. Indicating some insulation from the outside temperature, with a minimum night temperature of approximately 25° C and a maximum of 27-28° C. Again, there is a time delay of the maximum and minimum value when compared to the outside temperature profile of about 1 hour. The gallery is constantly 1° C warmer than the temperature inside the display case.



5 CURRENT MANAGEMENT

This portion of the CMP provides a description of the current management. It is important to understand the existing management, decision-making mechanisms, and organizational structure before proposing any changes.

Overall, the current museum management structure is functioning well. The hierarchical management structure within the museum and reporting mechanisms are well-defined. The organizational structure is described graphically in the following pages in organigrams. Included in this structure is the position of the Director-Commissioner of Museums and Monuments, whose office is physically located within the Uganda National Museum. Therefore, the director is readily and often accessible to the project managers, curators, and staff. However, the position of Director-Commissioner has dual functions; not only is this person in charge of the Uganda National Museum, but also for all museums and other sites around Uganda, including a World Heritage property. This is an enormous responsibility with other responsibilities demanding attention. Fortunately, the management structure functions. The senior staff positions are distinct and unambiguous, with good collaboration between the staff. The mid-level managers, curators, and caretakers are well-educated and informed of their roles within the organization. But, until recently, the museum did not have a dedicated Architect. While the existing staff is well versed in museum duties, they did not have the background in managing a building and its myriad of problems. Fortunately, during this project, this situation was rectified, and a position of Architect for the Uganda National Museum was created. It is also fortunate that the person in this position also has conservation training. One major drawback to this position is that this person also has dual roles and is also in demand at numerous other sites around Uganda, including a World Heritage property on the Danger List.

Sourcing financial resources is a major challenge. This is true in Uganda as well as in many other countries. The staff is adept and resourceful at identifying opportunities and taking advantage. However, the approach seems *ad hoc* as opportunities arise. There should be a dedicated grant officer to regularize the procedure, with a defined role in preparing grant applications with time set aside for this important work..

Training is also a constant struggle at the museum. There is currently only a limited plan for building capacity within the current staff. This must be rectified and a defined plan for education made available to the staff. This is included as a task within one of the main goals to strengthen management. But building capacity does include not only training but also the ability to reach outside the organization to tap expertise that is only needed for a short time. This aspect of management at the museum is functioning well in regard to temporary exhibitions or events. However, it could function more effectively in relation to the building itself. It should be made easier to hire an electrical consultant, for example.

Finally, management does not stop at the museum level but extends beyond to the parent organization, the Ministry of Tourism, Wildlife, and Antiquities. Decisions made at upper levels and related to other organizations have a big impact on the museum. Communication and cooperation can improve between the upper levels of the ministry. One example is the emerging role of the Uganda National Museum as an interpretation center for all visitors. Through a statistical analysis, it was discovered that the museum is one of the first destinations for international tourists. Thus, cooperation with the Uganda Tourism Board is essential. This level of cooperation should extend to the Uganda Wildlife Authority. This very important aspect of Uganda has its headquarters next to the museum yet is seemingly not open for visitation. This could be a good synergy between the two departments.

5.1 MANAGEMENT SWOT ANALYSIS

Strengths	**Weaknesses**
• Direct communication with decision-makers thus rapid response • Well respected in the cultural and political communities • In-depth knowledge of the building, its issues, history, potential, and respect for the modern icon status • The building architect is dedicated and living on the property • Engaged with stakeholders and respect within the community • Knowledgeable in the steps necessary for protecting the building • Responsive and well-versed in the policies of conservation • Ease of communication with international experts • There is strong support from the government ministry responsible for the Uganda National Museum to strengthen the Management System	• Few members of the staff have professional training in the disciplines of museology, curatorship, museography, and research • There is no maintenance policy or guidelines for the Uganda National Museum building • The collection and conservation policy for the artefacts and exhibits undermines the significance of the building • Insufficient number of staff for the large size of the building • There are limited resources for emergency preparedness, risk and disaster mitigations for the museum • There Is no visitor management strategy for the museum • Concern among high profile stakeholders that presently remains unfocused • Lack of environmental protections • No revolving exhibits nor space
Threats	**Opportunities**
• COVID-19 pandemic disrupting operations of the museum and impacting visitation • Climate change and disasters that effect the building causing damage • Operational, budgetary issues in the short and long terms • Unilateral actions by non-profit organizations • Previous lack of a comprehensive Conservation Management Plan • Security within the museum building • High traffic and populaton Increase causing pressure to the museum space, gallery environment, and grounds • Increased Infestation of Insects and pests In the collection	• Increasing visitation and tourism with an improved appearance and interpretation • Conservation Management Plan and increased assistance with various ongoing project • Increasing government support and favorable policies for cultural heritage protection and conservation • Increased international cooperation and training possibilities • The museum building was originally designed for expansion and improvement

5.2 MISSION STATEMENT

The first place to start when reviewing the current management is to assess the mission statement, mandate, aims, methods, and functions. Then analyze this to ensure that the CMP is in alignment.

Mission statement:

- To impart knowledge of cultural and natural heritage to the present and future generations for their enjoyment

Mandate:

- Promote, protect, and present the cultural and natural heritage of Uganda through the collection, conservation, preservation, study, and information dissemination for delectation and education.

Aims and Methods:

- The Museum seeks to portray Uganda and the activities of its people by preserving and disseminating information about it and its peoples to the visitors.

Functions:

- Conservation, preservation, and documentation of important collections
- Research about the natural and cultural heritage.
- Exhibiting and interpretation of specimens for public study and enjoyment.
- Publication of the research findings in appropriate publications
- Provide professional knowledge and information regarding the archaeology and paleontology of Uganda.

5.3 MANAGEMENT

The most significant efforts have been toward improving the management of the building and the creation of this Conservation Management Plan. A draft table of contents was shared with the management, and numerous drafts were improved throughout 2020 and 2021. Efforts were significantly slowed during the COVID-19 global pandemic, which prevented international and local travel, yet work proceeded. This Conservation Management Plan builds upon a series of policies that were devised to address immediate concerns. These policies were compiled together into a Management System, which has been in place while this plan was finalized. Some of these policies, such as the regular inspection of roofs and environmental monitoring, have been successful yet require fine-tuning and will be addressed in this plan. Another key effort over the past several years is the improved management personnel on the site. A building architect, conservator, and documentation expert were appointed. However, this continues to be a challenge given the size and scale of the building, limited resources, and ongoing challenges.

In addition to the on-site management improvements, a building management committee was formed. This committee was formed to review issues at the site and provide input and advice concerning management and conservation. Several online and in-person meetings sessions were held. One of the key challenges in the coming years is to continue to maintain the relevance of this building committee and its continued engagement. This will be addressed in the Action Plan.

5.4 STAFF AND RESOURCES

Sufficient staff and resources are necessary to manage not only the collection but also the building itself. In other museums, this is often overlooked. The Ministry of Tourism, Wildlife and Antiquities oversees the policies and implementation of policies, programs, strategies and plans for the promotion of tourism, wildlife, and cultural heritage. The museum, therefore, operates under this ministry. The structure below shows the ministerial administration relating to the Uganda National Museum. Following are the official organizational charts.

5.5 ORGANIZATIONAL CHARTS

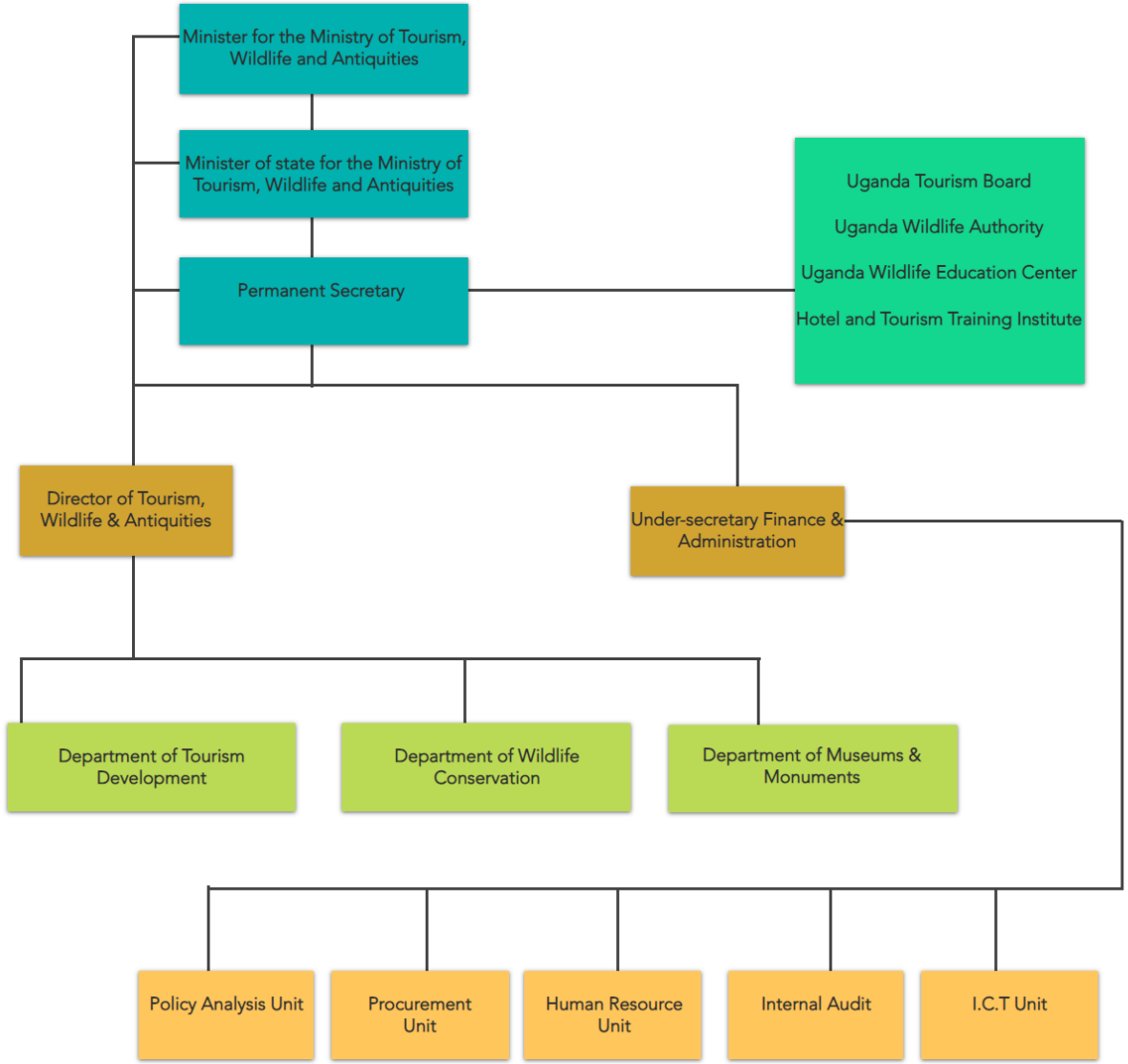


Figure 161 –Current organizational chart of the Ministry of Tourism, Wildlife and Antiquities

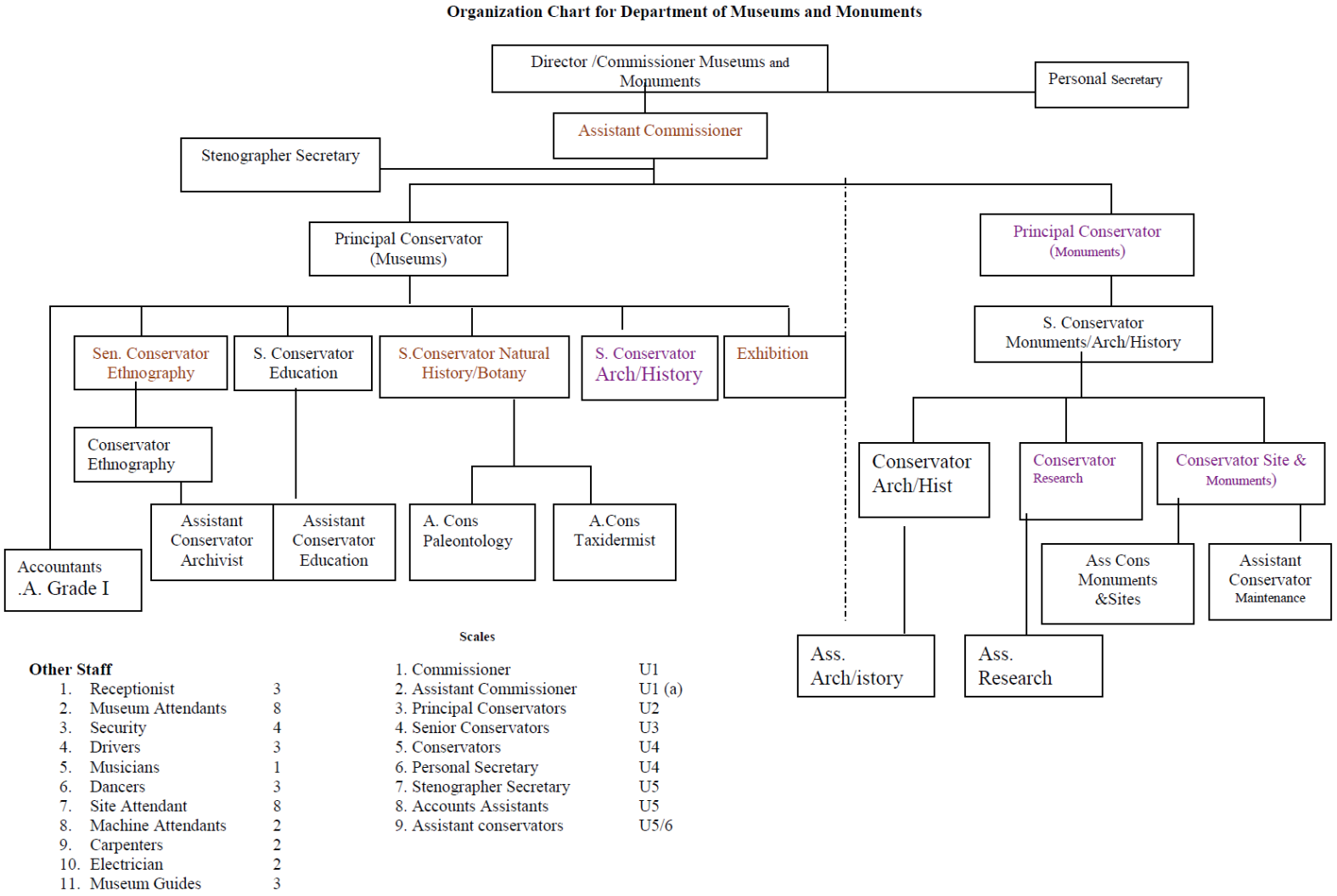


Figure 162 –Current organizational Chart for the Department of Museums and Monuments

5.6 MUSEUM BRANDING

A uniform image or brand identity for the museum was needed to guide future publications, exhibits, and announcements. A brand identity package was developed in the early stages of the Conservation Management Plan to create guidelines for graphic treatments that support clear and compelling communication for the museum. The new branding guidelines take inspiration from the existing architecture of the museum and its grounds and the original typography found in the museum's galleries to create a distinctive look and feel for the Uganda National Museum brand that is playful, flexible, and easily recognizable. This work helped direct the design of a new museum guide for visitors and the treatment of the Conservation Management Plan.

Figure 163 –Typography Inspiration and pairing

Two typefaces were selected for use in all visual communication: Brandon Grotesque and Perpetua. Brandon Grotesque is an elegant, geometric, sans serif typeface with rounded corners that lend the font a modern touch. As a modern and bold and attention-grabbing font, Brandon Grotesque will be used for titles, headers, subtitles, captions, and call-outs. Perpetua is considered a traditional serif font and is characterized by its delicate structure and classic flourishes. This typeface can be used in cases where a lot of body copy is necessary. This is the case in most printed and digital materials.

Figure 164 –Color palette

A color palette for the brand was selected that compliments the architecture of the museum and sits comfortably alongside its materials and finishes. The final color palette is bright, bold, and engaging and features signature colors found in the museum, such as eucalyptus green, a widely used wall paint color, and Jacaranda, an elegant purple found on the flowers of large Jacaranda trees in the museum gardens. All the selected colors can be used as backgrounds and should be paired with contrasting colors when text is used for legibility. The color chart above gives a guide to the frequency of use for each color in the palette. White, Black, and Gunmetal grey may be used in addition to the ten selected colors, mostly as body text and in the case of White, for wordmarks and titles against contrasting color backgrounds or photography. It is important that contrasting colors are paired to achieve good legibility.

The original Uganda Museum logo, which featured a geometric Nyero rock painting found in eastern Uganda, was reworked to include the institution's name and treated with colors to reflect the new color guidelines. This new family of colored logos allows more design flexibility in all future communications. Alongside the typography and color recommendations, the brand guidelines encourage experimentation with form, color, texture, and scale. It recommends exploring collage, duotone images, color silhouettes, and abstraction as a tool to support a playful and engaging visual identity. Photography that celebrates the museum's architectural details is highly encouraged as well. Merchandising mockups were created to visualize the graphic treatments on museum goods, including tote bags, postcards, and T-shirts.

Figure 165 –Product mock-ups

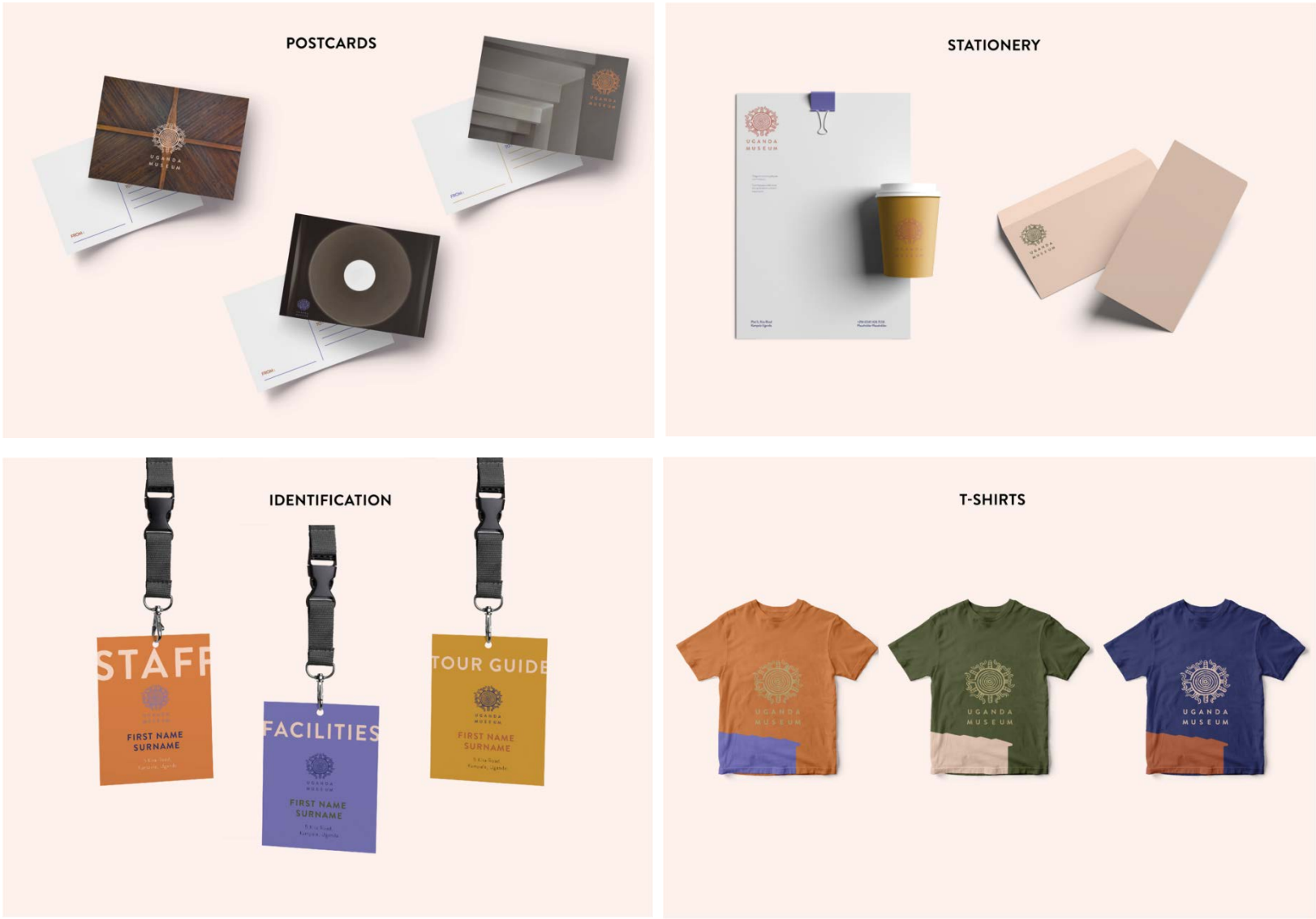


Figure 166 –Product mock-ups

PART 2 – CONSERVATION MANAGEMENT PLAN

The challenge is not only to conserve the museum building but also the collection and the historic wood display cases, concrete screened openings, and finishes. These elements form an integral part of the history of the building.

Figure 167 –Main gallery, unchanged since construction (Eppich, 2017)

"Conservation and modernism and its followers strove for universal truths, reinforced through international manifestos and key texts. Both movements share ideas of contributing to a more civil society—one through retention of a connection with the past, the other through creation of a better future environment.

As time passes, appreciation will inevitably grow for places that represent the Modern era's richness and diversity. Survivors will become more precious, and a level of comfort about conserving them will be achieved. In the meantime, important places will be lost unless we stimulate greater public support, assess significance in the context of a large number of survivors, and help people learn how to conserve this legacy.

"This is the area of conservation where future and past collide, where creator and conservator may come together, and where we have better access than ever before to firsthand knowledge of why and how places were created. But despite considerable professional interest and an admirable body of conservation knowledge, there remain many challenges..."

Susan Macdonald

6 FUTURE OF THE MUSEUM

Vision, mission, goals, objectives & tasks

Vision:

A vibrant heritage center of excellence in the World for preserving and making memories

A successful Conservation Management Plan for the Uganda National Museum cannot rely on reacting to events as they occur or responding with *ad hoc* measures. An overall vision for this modern masterpiece is needed. What will Uganda National Museum be like in 10, 20, or 50 years? Will this important symbol of modernity continue to degrade and have inappropriate additions, or will it be well conserved, visited, and loved? Will the building that houses one of the most important collections in East Africa continue to attract visitors? What will they think of the building? Can the history of the building and the story of one of the first modern buildings in Uganda also be told?

Mission:

To conserve, research, and impart knowledge of cultural, natural, and built heritage to the present and future generations. To impart knowledge of cultural and natural heritage to the present and future generations for their enjoyment, including respect for and appreciation for architectural heritage, including the historic home of the museum.

What is the vision for Uganda National Museum?

Museums such as Uganda National Museum are complicated given the complex history of colonialism, conflicting values, and multiple stakeholders. The long-term vision is also difficult given the overwhelming task of just keeping up with maintenance. A vision must also outlast those who are working today. It must be an inspiring vision and something *most* everyone can agree upon but *also not vague or obscure* - A difficult task. Fortunately, for Uganda National Museum, there is an existing solid management structure in place and pride of place that aids in forming a vision. This is a critical component of this Conservation Plan and must be explored, described, and reinforced. However, it is not enough to decide upon a vision; there must be multiple concrete steps to achieve that vision. These steps build upon one another to continuously improve and move toward the vision. Commonly called goals, objectives, strategies, and actions, they are often used interchangeably but have distinct definitions:

- A Vision is an inspiring long-term idea
- A Goal is a view toward obtaining that vision
- Objectives are in the measurable medium-term steps to achieve a strategy and must contribute toward the goals
- Tasks are short-term specific and programmatic actions on how to obtain the objectives, often redundant

It is helpful to think of these as a pyramid with the individual actions forming the foundation with the objectives and goal in the middle with the vision capstone. A contingency plan is also important; should several actions or even objectives change or falter, there should be sufficient others to ensure stability. This structure not only helps in achieving the vision it also helps align people in the present to work toward discrete, defined tasks given their diverse responsibilities. It ensures that individual initiatives contribute toward the longer-term stated goal and vision.

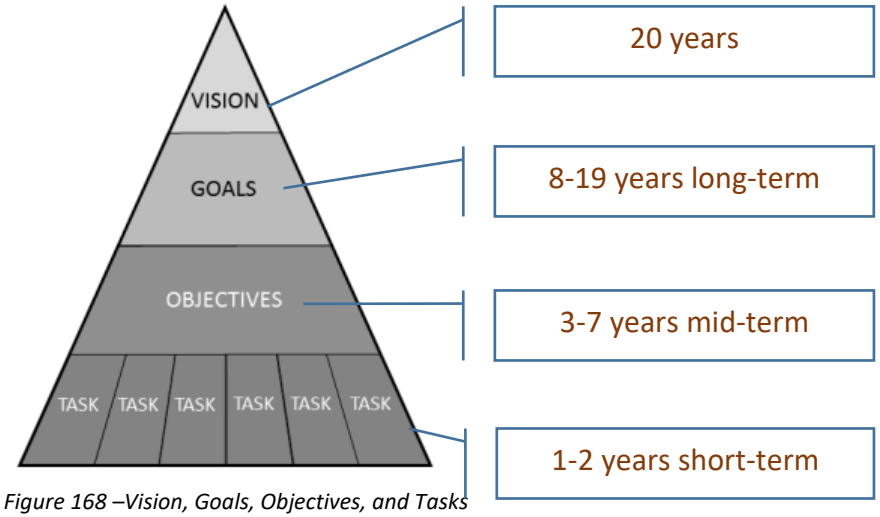


Figure 168 –Vision, Goals, Objectives, and Tasks

It is important to keep in mind guiding documents for drafting a CMP. According to UNESCO's *Operational Guidelines* [42] article 109, "the purpose of a management system is to ensure the effective protection of the nominated property of present and future generations." The *Operational Guidelines* also state that the "documented management system which must specify how the values of a property should be preserved, preferably through participatory means". Quite a broad scope for management, but nevertheless, targets the core of what a Conservation Management Plan should accomplish – ultimately protecting the carefully thought out and articulated values that make a place unique. Just as important, with the active involvement of others. This seems a laudable goal, but it is much more complex. While the values which make a place special may have been agreed upon at one point in time, how to protect them is a complex problem. Leaders may change, economic values will apply additional pressures, and the original built fabric inevitably deteriorates.

Therefore, it is necessary to outline how the CMP is designed to protect the values. Given the diversity of cultural heritage and values, CMPs are quite broad. However, the *Operational Guidelines* do offer some advice on the "common elements of an effective management system."[43]

a) Thorough shared understanding by all stakeholders
b) The cycle of planning, implementation, monitoring, and evaluation
c) Assessment of vulnerabilities – social, economic
d) Development of mechanisms for involvement and coordination of activities between partners and stakeholders
e) Allocation of resources, capacity building
f) Accountable description of how management works

To preserve the museum and its collections, while imparting knowledge of cultural heritage for promoting community relations.

The management cycle involves short, medium, and long-term actions to protect the evolution of properties over time and ensure the maintenance of values. To support the management, short, medium, and long-term cycles and, most importantly, the vision, there are four main goals, each with its own supporting objectives and tasks:

1) Strengthen Management of the Museum
2) Improve Conservation of the building and its environment
3) Prepare for disasters, mitigate risks
4) Enhance Visitation, Public Awareness, Community Involvement

Each of these goals will be described in the following sections and summarized in the Action Plan.

[43] Operational Guidelines, although not World Heritage, but provides sound guidance

6.1 GOAL 1 - STRENGTHEN MANAGEMENT

The management of the museum is currently quite strong and has improved during the preparation of this CMP in relationship to building conservation. A site architect has been employed, a professional, national, and international network have been established, and an understanding of the building and its needs has been developed. However, management can be further strengthened through a series of defined steps, and this is the first goal of the Conservation Management Plan. This section will describe how the plan proposes to strengthen management at the museum through several objectives, some of which have been mentioned in the previous sections as needs or recommendations. Each objective will be outlined with defined shorter-term tasks that are designed to support the objectives, which in turn contribute to the larger vision for the museum.

6.1.1 Update Vision and Mission Statement

Management policies are the methods, practices, and rules for how an organization operates internally and externally. They are formally agreed upon and written by the management to further a cause – in this case, to improve the operation of building housing the museum. As is the case in many other places, many of these policies are informal or not written down. Thus, this objective is to formally establish these management policies, starting with the official adoption of this Conservation Management Plan. The museum already has a solid mission, as stated earlier in this plan; however, this did not include the building. The mission did not recognize the building itself as part of the collection - one of the most important improvements for the management of the museum. This direction should be agreed upon by the top management and stakeholders of the museum concerning the preservation of the property, Its use, and maintenance. The mission bears repeating alongside the proposed revised mandate and aims and methods.

The Uganda National Museum draws its mandate from the laws and policies of Uganda aimed to:

Promote, protect, and present the cultural and natural heritage of Uganda through the collection, conservation, preservation, study, and information dissemination for delectation and education. And the conservation of the architecture that composes the museum.

Aims and Methods:

The Museum seeks to portray Uganda and the activities of its people by preserving and disseminating information about it and its peoples to the visitors.

Functions

- Collect, acquire, document, and conserve cultural, historical, artistic, natural, and scientific artifacts
- Exist as the center of a national repository for cultural heritage collections for all of Uganda
- Document/register the important collections into the national register
- Conserve and preserve national collections.
- Research and disseminate knowledge in all fields of cultural and natural heritage, including conservation of historic buildings
- Curate, communicate, and interpret the cultural and natural heritage through exhibitions and public programs
- Develop and disseminate guidelines and professional knowledge regarding cultural heritage artifacts, architecture, and museum management for all of Uganda

6.1.1.1 Update the Organizational Structure

The success of any organization to fulfill its mission is based upon accountability with a defined hierarchy. “Accountability is about delivering on a commitment. It is the responsibility of an outcome, not just a set of tasks. It is taking the initiative with thoughtful, strategic follow-through.” Yet, it is difficult to hold people accountable if they are unorganized. Therefore, improving the formal organizational chart with better-defined job descriptions is necessary, relating each employee’s work and assignments to execute the interventions described in this CMP. Therefore, the organizational structure must be revised, and the duties of the staff rewritten and updated to reflect their roles and expectations of management. This update includes incorporating the museum conservation architect into this organizational structure.

6.1.1.2 Develop Guidelines for International Cooperation

Drafting guidelines for international cooperation must be written concerning the nature and oversight of any project and should establish ethical standards, technical principles, and criteria. Proposals for cooperation should be formulated to include training, regular reporting, and supervision. This coordination includes not only the execution of the project but alignment with the vision, goals, and objectives. Over the decades, there have been numerous projects with the museum funded through internal and external cooperation. Naturally, any help or assistance was greatly welcomed with few, if any, restrictions. Exhibitions, conservation projects, and events proceeded and were helpful in the short term but required guidance to ensure such initiatives fulfill the vision for the museum.

- Formal application outlining the nature and outcomes
- Approval after discussion with the Commissioner
- Selection of projects based upon contribution to long-term vision
- Cooperation and involvement with on-site staff to build capacity
- Frequent updates, inspections, and formal reports

6.1.1.3 Update Collection Management

The Uganda National Museum Collections Management Policy is intended to document the policies that guide the development, presentation, and care of the Museum’s collections consistent with the mission and professional museum standards. This policy is a guide that gives responsibility to the staff and researchers in caring for and curating the collections that have been vested in trust at the museum. The core of the museum is the collections it holds. The goals of this policy:

I. Safeguard with responsible curation through care, storage, study, and access through specialized attention and priority
II. Digitize and build a database of the collections for research, safeguarding, and sharing knowledge with the audience
III. Build the collection to fill the gaps of the cultural, historical, artistic, and scientific materials and to contribute to the existing strengths
IV. Provide access to the collections through curating exhibitions, research, and loaning services

Through this policy, the museum will ensure that:

- Accountability for the collections by annual inventory and documented in the collections management database
- Protection of the collections for security, care, and preservation
- Acquisition, accessioning, deaccessioning, care, and loans of collections are conducted in a manner that conforms to the Museum’s mission, complies with applicable law, and reflects the highest ethical standards
- Disposal of works from the collection through sale, exchange, or other means is solely for the advancement of the museum's mission, and proceeds from the sale are used only to purchase other collections
- Access to the collections in the galleries and study rooms, access to archives and libraries, and access to collection information is permitted and appropriately regulated, and collection-related activities promote the public good rather than individual financial gain.
- Protection against both natural and human-made disasters, including armed conflicts, by developing policies to mitigate disasters

- Security of the collection and protection of the confidential information, the museum should ensure any information that is harmful to the public and the care of the collections from any threats of security must be addressed of an urgent matter. Measures of security are the utmost measures in the museum.
- Preventive conservation is undertaken to provide a conducive environment that will maintain good environmental conditions for the collections in storage and in the exhibition or educational facilities

6.1.1.4 Improve Visitor Management

The museum visitor policy will outline the rules and regulations for allowing access for different types of guests to the museum facilities. The current visitor management is about the information to guide the visitors in the galleries. The essential for the museum and the visitors' policy is to have effective general security of the site. However, there is a need to develop a broader policy of visitor management on the visitors' experiences, marketing strategies, facilities and services, the categories of visitors. How can the visitors' responses be addressed, and what are the requirements of all-inclusive visitors such as the disabled, gender, and access for all. The process of developing visitors' promotional materials, attaining standard quality assurance for the museum visitors is essential.

6.1.1.5 Enhance Information/Communication

There is a need for the Uganda National Museum to renew its identity to highlights its multiple functions: education, culture, social programs, adaptability, community engagements, and contributions. The management must communicate its activities within an integrated communication strategy - the idea of integrated communication is a strategic process to coordinate various brand communication programs, subjects, and activities that must encourage dialog and focus on the public, means of communication, and results. This strategy is the extension of the museum's mission, representing a bridge to Uganda society and international visitors.

Figure 169 –Press events and forums such as this one held for the International Workshop should become a common occurrence at the museum.

6.1.2 Increase Capacity on Built Heritage

One of the most important considerations to improving management is to build capacity. There is a gap in the conservation of built heritage skills in Uganda. Although volunteers or available staff have interest, specific training and advanced studies in architecture and conservation of the built heritage are needed. According to the UN: “Capacity-building is defined as the process of developing and strengthening the skills, instincts, abilities, processes, and resources that organizations and communities need to survive, adapt, and thrive in a fast-changing world. An essential ingredient in capacity-building is a transformation that is generated and sustained over time from within; transformation of this kind goes beyond performing tasks to changing mindsets and attitudes.” It is important to note that capacity building is not simply training in one particular topic but in numerous areas for sustained transformation over time to adapt to new situations. In addition, the vertical capacity building must also look to the future, even extending outside an organization to the universities to cultivate the next generation. It is essential that capacity building must also not be seen as simply training but extending beyond with a wider scope.

6.1.2.1 Carryout a needs assessment

To focus on any capacity building, the gaps or needs must be identified. Otherwise, the efforts may be in vain or not reach the right target audience to address the issues. Thus, a needs assessment must be carried out related to the staff and managerial capacity as well as equipment capacity. A needs assessment is a systematic process for determining and addressing gaps between the current situation and desired vision and objectives. This would consist of an evaluation of the profiles of the existing staff at the museum and compare against the issues mentioned elsewhere. This should be done in a matrix-style format allowing for easy comparison. There are numerous models that can be followed, including a model force analysis. In brief, it is a list of needs for the museum compared with staff qualifications.

6.1.2.2 Continue training

Training efforts have greatly aided in improving the capacity at Uganda National Museum over the last several years. Various training activities have been conducted, ranging in topics from documentation to materials testing. Many of the results are described earlier in the CMP. Training courses are planned in the next few years should align with the upcoming needs assessment, but preliminary ideas include collections management, environmental controls, visitor management, building management, disaster, and risk reduction. However, on-site training is insufficient given the international status of Uganda National Museum as a and the current state of condition. Some international courses have been suggested and additional efforts must be made to reinforce this need to build capacity. International courses, online or in person, must be incorporated into every project or exhibition that is executed by the museum. These courses do not necessarily need to include travel given the restricted budget of the department but can include online activities. However, staff must be given the time and recognition for pursuing education. Finally, a budget line item must be set aside for continuing training.

6.1.2.3 Add qualified staff, external experts

One overlooked method to build capacity is to add qualified staff. One of the major positive changes that occurred at the beginning of this CMP was the inclusion of a dedicated building architect with conservation knowledge. This greatly expands the possible controls on maintenance and preventive conservation. The benefits were demonstrated during the damage on the roof of the building during heavy monsoon rain. The architect and his team immediately began temporary protection measures and supervised the subsequent repairs. Adding of staff through temporary contracting of external experts is also overlooked and should be made easier. This allows the staff to expand and contracting easier to address short-term needs, particularly during disasters.

6.2 GOAL 2 – IMPROVE CONSERVATION

6.2.1 Advance Conservation Practice

Advancing conservation practice is at the center of the CMP. While management is improving, it would be insignificant if conservation does not also improve. This objective is to outline therefore a series of tasks, both parallel and inline, which are designed to raise the level of the practice of conservation. Many of these tasks have already begun based upon recommendations made during the CMP process, but they will be described in more detail and include adopting the conservation principles and enforcement while implementing a policy for preventive conservation, prioritizing interventions, and establishing a material testing procedure.

6.2.2 Develop Clear Conservation Principles

Conservation of cultural heritage is based on well-established conservation charters, declarations, and guidelines from ICOMOS, UNESCO, and ICCROM. While some of these documents were crafted for more ancient works of humanity, the Venice Charter, the Burra Charter, and the Nara Document on Authenticity are also applicable to modern structures. Conservation of modern heritage is a relatively new concept, especially in Uganda; nevertheless, there are several guiding documents that guided this CMP. The early DOCOMOMO Eindhoven Statement from 1990, the UNESCO papers on Identification and Documentation of Modern Heritage, along with the Getty Conservation Institute's work, have all contributed toward crafting conservation principles. The work of the ICOMOS International Scientific Committee on 20th Century Heritage was particularly useful. This CMP follows their conservation approaches for Twentieth-Century Architectural Heritage[44].

ADVANCE KNOWLEDGE, UNDERSTANDING, SIGNIFICANCE

Article 1. Identify and assess cultural significance

Article 2. Apply appropriate conservation planning methodology

Article 3. Research the technical aspects of twentieth-century architectural heritage

MANAGE CHANGE TO CONSERVE CULTURAL SIGNIFICANCE

Article 4. Acknowledge and manage pressures for change, which are constant

Article 5. Manage change sensitively

Article 6. Ensure a respectful approach to additions and interventions

Article 7. Respect the authenticity and integrity of the site

ENVIRONMENTAL SUSTAINABILITY

Article 8. Consider environmental sustainability

INTERPRETATION AND COMMUNICATION

Article 9. Promote and celebrate twentieth-century architectural heritage with the wider community

[44] ICOMOS Madrid Document, Approaches for the Conservation of 20th-Century heritage

In addition to the above principles, the following have also been adopted.

RESPECT FOR VALUES – Above all, the values must be protected as well as the original fabric, authenticity, and integrity. Therefore, the museum must only be touched as lightly as possible, preserving all original fabric.

MINIMAL INTERVENTION - Only undertake repairs where necessary structurally for both short- and long-term stability and visitor safety. Only key structural elements that require replacement will be touched. These must be identified, and the causes of deterioration must be studied and understood before the intervention begins.

COMPATIBLE MATERIALS & TRADITIONAL TECHNIQUES - only compatible materials will be used – the same type and size brick, stone, and mortar. The proper texture, color, and appearance of the walls, stones, and mortar will be respected. Any new mortar or plaster that is applied where a significant amount of old mortar or plaster survives will be integrated into texture and appearance, and color. New walls will not be created, and any new materials must match in properties and colors.

TESTING - All original materials will be thoroughly understanding their properties and attribute to understand what kind of new materials should be used and they are compatible. In addition, all new materials (including sand, water, mortar, brick, earth) and any proposed treatments.

DISCERNIBLE INTERVENTION & REVERSIBILITY - all interventions will be discernible from the original materials. This will be marked and documented in a subtle manner. These markings will not be obtrusive, and whenever possible new interventions should be made reversible.

KNOWLEDGE & DOCUMENTATION - Create records and documentation that can be easily followed and serve as a record of all works. This includes locating historic documents and photographs and the creation of a bibliography. All work will be communicated and shared with all stakeholders. Extensive documentation of all interventions must be conducted before, during, and after any interventions. This includes digital images, reports, video, etc.

INTERNATIONAL STANDARDS – any intervention must conform to accepted international practices, standards, and charters. All proposed work will be reviewed before, during, and after interventions.

SUSTAINABILITY - Prepare for longer-term conservation work, including a manual for maintenance, list of priority items, protection of the fragile area, etc. To enhance sustainability, a maintenance and visitation plan must be written.

CULTURAL SITE -Uganda National Museum is an important cultural site and active place of meetings.

MAINTAIN USE - monuments that are used and known are protected. Therefore, the monument will be promoted for use as a visitor destination for the faithful as a local and regional monument but with control visitation and access. This includes creating barriers to upper and inner structures, informing the public about the project and dangers in certain areas, upgrading facilities, including handicapped access and didactic signage.

INVOLVE COMMUNITY – The communities surrounding Uganda National Museum are not as involved as they could be. This principle is intended to seek out their involvement in conservation, incorporate them into decision making, and permit them to benefit socially and economically from having an in their neighborhood. Each architectural element at the museum tells a unique story. It is through this policy that conservation of these elements can be addressed.

It is through the categorization and development of a policy that will aid in this prioritization given limited resources. The implementation of this process will better guide future projects and aid in communication with international experts.

6.2.2.1 Establish Secure Facilities

One of the main aspects of the CMP is the security of the building and the collection. This aspect is critical as these unique and fragile items are within the building envelope: the exterior (outside/external) walls which house the collection were purpose-built to protect and display the collection. This includes the museum stores, which are out of sight from visitors and contain most of the collection. The security consists of the equipment/storage furniture such as cabinets with gaskets, map units, and shelving. The containers and shelving that also house the objects, such as a box, tray, or other fully enclosed receptacles, are also a part of establishing secure facilities. The packaging/wrapping materials must be of good quality and cover and support the object inside of its container/housing, such as tissue, muslin, or polyethylene foam. The immediate aspects needed for the museum are the protection requirements (physical security against damage, theft, or vandalism and, critically, fire protection). Other security considerations include environmental monitoring, equipment, housekeeping requirements, and the Integrated Pest Management (IPM) plan. Security against accidental damage or theft of artifacts is a priority and must address the display cases in the main museum and within the museum stores. While there are also security guards on-site, this policy must be reviewed and renewed. This security, including fire and other disasters, is addressed in greater detail in the analysis of disaster risk prevention.

6.2.2.2 Establish a Conservation Laboratory

While the materials used at Uganda National Museum are essential, there must still be quantifiable tests to verify the makeup of original materials and any new materials introduced during conservation to ensure compatibility. Currently, there are few if any tests for existing or new materials. Establishing a testing procedure and the eventual establishment of a materials laboratory is necessary to improve conservation. Given the size and number of monuments at Uganda National Museum, the effort and cost to establish a conservation lab are justified. Still, such a facility could also serve all the surrounding sites. The first part of this procedure can be implemented immediately with careful visual inspections before and basic field materials testing. Lab work will identify, for example, any organic impurities in the mortar, pieces of unslaked lime, or carbon in the lime or aggregate. A field test and simple kit can also verify that the materials, brick, mortar, and water are free of salts. Additional field tests include slump tests for mortar and renderings and the moisture content of materials. The more involved second part of establishing a material testing procedure is establishing a materials laboratory not only for the building but also for conservation of the collection. This work requires capacity building for the staff as well as the acquisition of equipment. A space within the administration buildings must also be set aside for this laboratory. The establishment of the lab would include the acquisition of equipment such as microscopes, cutting machines, scales, sartorius single-pan balance, measurement devices such as calipers and micrometers, USB microscope, graduated cylinders, micrometer or screw gauges, flasks, beakers, pipets, cleaning brushes, detergent, pH meter, trays, clamps, sodium sulfate decahydrate, silica gel, distilled water. Additional equipment includes micro-chemical testing, wood identification, and examination of tile glazing, stone, and mortars. In addition, the procedures for this lab would need to be established, including lab notebooks with records of examination and testing conducted and the submission of laboratory reports. It should be recognized that not all testing could be done in such a lab; thus, initial cooperation with an international university or commercial lab is necessary for the short term. The importance of establishing this laboratory cannot be overstated as there Is currently no conservation laboratory in Uganda for any museums. Such a lab would serve as a precedent for all East Africa.

6.2.3 Carryout Physical Interventions

Advancing conservation practice is important but useless without accompanying actions to protect the museum. This covers a broad spectrum of issues as identified in the rapid condition assessment. This section will briefly cover the much-needed physical improvements to the museum in order of priority.

6.2.3.1 Design roof replacement

This by far is the most important improvement that must take place. But this should not be seen as a simple task or relegated to a roofing contractor. A specific in-depth study of the roof must be conducted, and a project designed. This is due to the inadequate original roof design by Ernst May, the subsequent ad hoc repairs, the heavy monsoon rains, and the number of extensions and additions to the museum. A comprehensive roof system must be designed which is sensitive to the original design intent of May yet responsive to the climatic conditions. A design that will unify the myriad of roofing systems, protect the collection and its visitors, and direct water safely away from the building. While this is a high cost, it is absolutely required and is of the highest priority.

6.2.3.2 Increase environmental awareness

This can be incorporated into the building through the replacement of lights with appropriate LED, passive solar control, collection of rainwater for irrigation. Solar panels could also be incorporated, but they must not interfere with other values. The recent addition of a solar panel system to power a visiting temporary exhibit compromised the aesthetics of the entry canopy. Any such systems should be at the rear of the museum.

6.2.3.3 Execute electrical repairs and replacement

The electrical situation at the museum is dire; therefore, combined with the roof replacement, an entirely new electrical system must be installed to current standards and safety practices. This can be integrated with the roof replacement but must be sensitively designed and installed with thought and care for the historic finishes and display cases and reuse of historic fixtures. The existing electrical system must not only be abandoned but carefully removed and the copper wiring recycled. In addition to the wiring, new lighting must be selected that highlights the collection in the galleries, with emergency and exit lighting, toilets, and historic gardens. This includes new lighting in the unseen areas such as the museum stores, offices, labs, and education areas.

Figure 170 –Physical interventions will conserve this special place (Proctor, 2018)

6.2.3.4 Repair fenestration

Next in importance is the holistic approach to conserving, restoring, and appropriate replacement of doors and windows. While the rapid condition assessment identified several problems and short-term repairs were carried out, a detailed schedule of all openings must be made and a solution for the whole museum designed. This is needed given the heavy use of the museum, the need to protect the collection, and controlled climatic conditions. The replacement windows must also contain protection against ultraviolet light.

6.2.3.5 Improve climate control

It must not be forgotten that the building exists to showcase and conserve the collection. So, a climate control system must also be designed and installed. This, too, can be combined with the roof replacement. A qualified and experienced museum collections environmental specialist must be engaged to select the right combination of temperature, humidity, and comfort controls while providing an energy-efficient and sustainable system. Such a system must also include regular automatic monitoring of the climate and light. This is important given that most of the collection is of organic materials and is highly susceptible to climate change.

6.2.3.6 Preserve museum cases

The museum cases, particularly in the original portions of the museum, are as much a part of the architecture as the building itself. These must be retained as they are a significant part of the history of the museum. The displays within must also be retained. Therefore, a special dedicated project to addresses these cases and displays must be conducted to conserve them while simultaneously bringing them up to modern standards. This can also include the new designs that draw inspiration from the historical cases in newer areas and replace other non-contributing display cases.

6.2.3.7 Secure museum stores

The museum stores contain an invaluable collection of artifacts that document the history and culture of Uganda. These are areas not seen by the public yet are just as important as the objects displayed in the galleries. These areas are relatively well organized but require additional protections, including window replacement, new appropriate lighting, climate control, new or additional storage shelves, installation of security measures including CCTV monitoring, and locks for all the stores.

6.2.3.8 Restore original finishes

Finishes must not be forgotten as this contributes greatly to the impression by visitors. The historic finishes require further study and treatment. The research on the original colors of the older parts of the museum must continue and a proposal made to return certain areas to their historic colors on the walls and ceilings. This extends to the floor. The layers upon layers of finishes over the original polished concrete floor should be removed and the floor restored to its original appearance.

6.2.3.9 Improve site experience

The site and context of the museum are in good condition. The gardens are well cared for, and the site is clean and neat. The museum grounds are well known for being a calm oasis in the busy capital of Kampala. This does not mean that improvements are not possible. In particular, the excess cars to the east of the Car Gallery should be deaccessioned and removed. They are an unnecessary eyesore. And while the public-facing grounds are well-kept, the back of the museum houses numerous excess building materials that should be removed. Site drainage, while adequate, can always be improved. Parking must also be better managed to the northeast of the site with defined boundaries and restrictions for vehicles to the rear of the site. Finally, a program for planting improvements must be established. Substantial research was done to understand the original garden design intent, and this can be a guideline for future plantings.

6.2.3.10 Implement landscape conservation standards

Standards and Guidelines for the conservation of the museum's landscape have been explored and must be implemented.

A. Conserve the heritage value of the historic landscape. Do not remove, replace, move, or significantly alter its intact or repairable character-defining landscape elements.
B. Conserve, preserve and protect the changes to the historic landscape, which, over time, have become character-defining features. Later additions which have failed to become character-defining and undermine the qualities of the original landscape are to be removed.
C. Conserve the landscape heritage value through adopting an approach calling for minimal intervention. Intervention to be employed on the original portions of the museum landscape and limited to restoring the original character-defining elements.
D. Identify each fundamental element at the Museum grounds as a potential record of its period, place, and usage. Do not create a false sense of historical development by adding elements from other historical places or other properties or by combining features of the same property that never coexisted. Not applicable.
E. The selected character-defining fundamentals of the Landscape should not be affected by proposed usages. The Landscape should be restored to its original concept as the Author envisioned.
F. Protect and, if necessary, stabilize the historic landscape until any subsequent intervention is undertaken. Where there is potential for the disorder of the original elements in place, take mitigation measures to limit damage and loss of information. Not applicable if the original elements are in use and being well-maintained.
G. Assess the existing condition of character-defining fundamentals to determine the appropriate intervention needed. Carefully apply the appropriate means possible for any intervention. Respect the Museum Landscape heritage value when intervening. No existent landscape character-defining fundamentals to be affected. Original elements around the Museum should be retained and restored where necessary.
H. Preserve character-defining fundamentals on a constant basis. Restore the landscape character-defining fundamentals by placing emphasis on their values whilst using the standard conservation approaches.
I. Make any required intervention to preserve character-defining fundamentals physically and visually compatible with the museum landscape historic place and recognizable upon inspection. Document any intervention for future reference.

6.2.4 Adopt a Preventive Conservation Approach

Preventive Conservation is not just another word for maintenance. It is a change in thinking from a reactive response to proactive action. It is a move away from a narrow focus on cleaning or repairs to a more holistic and integrated approach. “Over recent years, the emphasis in conservation has turned increasingly from remedial conservation (putting right what has gone wrong in the past) to preventive conservation (making sure that things do not go wrong in the future). This shift in emphasis has been evident in both objects conservation and site conservation” (Heritage et al., 2009). Preventive Conservation encompasses management, monitoring, capacity building, risk assessment, and mitigation. To further elaborate, Preventive Conservation means all indirect actions aimed at increasing the life expectancy of objects and collections (Document of Vantaa, 2000), as opposed to the direct treatment of individual objects (remedial conservation). Preventive conservation requires the assessment of objects, deterioration agents, and the environmental context (surveys and investigations), as well as long-term judicious management and forward planning. Preventive Conservation aims to keep an object or group of objects in a preferred state where minimum damage and deterioration occurs, as well as addressing the assessment and management of potential risks to objects and collections and the formulation of emergency response strategies (Padfied, 2005). Della Torre and van Balen have outlined three levels of prevention:

1. Primary prevention relates to means and measures that aim at avoiding the causes of the unwanted effect (loss of heritage values or damage)

2. Secondary prevention relates to means and measures of monitoring that allow early detection of the symptoms of the unwanted effects (loss of heritage values or damage);

3. Tertiary prevention relates to means and measures that allow avoiding the further spread of the unwanted effect (loss of values or damage) or the generation of new unwanted effects (loss of values). Della Torre and Van Balen "scientific knowledge should be available to understand causes, to understand the socio-economic context." And to be able to implement such programs, their efficacy and benefits must be understood.

Community involvement – as mentioned earlier, one of the primary benefits is community involvement "Planned conservation practices should introduce a systemic approach to decision-making and values appraisal, giving the utmost importance to the involvement of people and opportunities for education and capacity building" (Della Torre).

Retention of historic materials - Authenticity and integrity are better preserved slowly with the introduction of less drastic interventions, and more of the original built fabric will be preserved.

Cost benefits – Perhaps one of the greatest benefits of adopting the Preventive Conservation approach is that there are significant cost savings. It has long been acknowledged that Preventive Conservation is more cost-effective than major repairs or large conservation projects. Small incremental inspections, repairs over time cost substantially less than a major conservation project.

Crafts and sources of materials are better retained – The long cycles between conservation projects can often be 20-30 years or a generation. This large gap can result in the loss of traditional crafts. With a Preventive Conservation approach, repairs, and small interventions over a longer period can retain and support these crafts and those involved. Thus, one major task to advance conservation practice is to change the thinking from reactive maintenance to proactive Preventive Conservation.

6.2.5 Establish and Implement a Documentation System

To coordinate all the documentation efforts, there should be an established and implemented clear documentation system and protocol enabling systematic recording of important detached architectural elements, which can be followed up by a dedicated staff under the supervision of the building architect. A clear code (numbering) system, original location, current location (storage information), date of recording, weight, size, and brief description with reference to scientific information (if available) are necessary as a minimum requirement. Measures should be taken to keep an up-to-date duplicate of various inventories, and documentation should be ensured in another location to save the data. Baseline documentation for monuments and regular monitoring

6.2.5.1 Create On-site Documentation Center

An essential part of the documentation system is the creation of a Documentation Center at Uganda National Museum. There is currently space in the management building for an on-site documentation center storing documentation, inventories, archives relating to the building and collection. However, a staff member must be appointed to manage it with a dedicated yet modest budget. The Documentation Center can serve both the staff, researchers, the media, and even visitors. Such a documentation center will facilitate scholarly research as well as document the building while aiding in monitoring with the baseline photography conducted to create the Conservation Management Plan. Such a center can also house documentation equipment such as an image scanner and computer, and other equipment including a drone to inspect roofs, a professional camera, and infrared camera to detect heat, moisture meters, and collection documentation equipment described later. It should also be prepared to properly store the historic images found on site as well as copies from the Ministry. The documentation center will also have shelves to house the record books, drawings, construction documents found on-site during the archival research to create the CMP. Ideally, the Documentation Center can be adjacent to or even in the same space as the Conservation Laboratory.

6.2.5.2 Digitize Historic Material

Digitize historic photographs and text as part of the documentation system would be incredibly useful to digitize old photographs and historical archives with the establishment of a formal documentation center. Such work would contribute greatly to enrich the reflection on the restoration plan and to judge the relevance of interventions. Plan and implement the collection and digitization of old records, photos, and historic archives concerning monuments of the Uganda National Museum and, if possible, make them available online or in the documentation center for use by site management and researchers, as deemed appropriate.

6.2.5.3 Create Systematic Monitoring

To understand the needs of the site and the conditions of the museum and its collection, a comprehensive inventory must be undertaken. However, this is not sufficient as the monuments need constant attention, and the conditions change seasonally. Therefore, there needs to be systematic monitoring. This systematic monitoring requires a log of each principal monument with a date, ideally monthly with date, general observations, and rapid condition inspection. This requires close inspection of fragile components and recording of any noted changes from baseline photographs. This will be accomplished by the building architect monthly with a walkabout, but with variations of the schedule as needed.

6.2.5.4 Improve Implementation

For any intervention to be successful, there must be a process of continual improvement. This is accomplished through oversight, a prioritization of efforts, well-defined targets, and after any implementation, a system for evaluation. Naturally, this includes conservation interventions and maintenance. It also includes management tasks mentioned earlier: capacity building and enacting policies. It must also include a plan to prepare for disaster and risk management plan, development documentation plan, and enhance visitation.

6.2.5.5 Conduct monitoring, evaluation, and testing

Management of Uganda National Museum can only be successful if measured then improved through the identification, adoption, and implementation of indicators decided upon, standardized, and collected over time. In addition, good management practice can only be described, verified, and transferred if properly documented. Documentation of management attributes aids in establishing priorities for transformation, transference, and implementation of verifiable good practice internally and between cultural heritage places. These indicators must share:

- Consistency and comparability - indicators should be consistent over time and [compatible] between tasks to enable comparison [and sharing of good practice]
- Clarity - Indicators are simple, well-defined, and easily understood by management, employees, and decision-makers
- Controllability - Aspects of performance over which there is control by the management should be measured
- Limited - The organization should always concentrate on a limited number of performance indicators that give the most valuable management information
- Feasible - indicators that can be measured easily

Research has revealed that organizations that do use indicators tend to focus on the quantifiable, and this is understandable. Numbers are easier to collect, compare, and associated with facts. However, qualifiable indicators should not be forgotten. Often visitor surveys reveal positive phrases and relate experience summaries that are just as powerful and easier to relate. These two types of indicators must be balanced. An important aspect of indicators is their multidimensionality. An example indicator is the number of visitors. This is an extremely useful figure over time but is relatively flat. A multidimensional indicator not only includes the number of visitors over time but also how long they stay if they leave, knowing more than when they arrived, where they come from – local vs. international, etc. This multidimensional aspect is much more powerful but

must be reasonable and provide an appropriate cost-benefit. Finally, ratios of indicators are also important as they provide and reveal interesting comparisons. One example is a ratio of local community use vs. international visitors. These indicators must also meet the needs of the museum while aligning with its mission, goals, and objectives. Therefore, indicators must be well thought out and clearly stated as to how the indicators will assist in achieving these targets. It is of crucial importance to clearly define the goal and expected deliverables that cultural indicators were supposed to measure. Indicators for management can be categorized.

- Management - personnel, reporting, organizational goals
- Financial - revenue, income, expenditures, willingness to pay
- Conservation - maintenance, priorities, long term plans, risks
- Projects - number of projects or exhibitions, events, or publications. Work beyond the standard daily tasks
- Visitors - public engagement, number of visitors, local or international, digital engagement, interviews, and education, engagement, number of visitors, local or international, digital engagement, interviews, and education

6.2.6 Develop a dedicated conservation budget

To successfully accomplish the goals, objectives, and tasks established in this Conservation Management Plan, a dedicated, reasonable, and predictable budget must be established for the Uganda National Museum. Predictability is of critical importance to plan for all the elements as outlined in the Action Plan to occur in a timely fashion and in sequence. Within the Action Plan, there are several tasks and objectives that lie on a critical path, and some cannot proceed without first accomplishing others. In addition, the budget cannot be reactionary or of an *ad hoc* nature. Finally, a separate budget is being established for maintenance. This is apart from the regular operating or collection conservation budget and the establishment of a regular budget for Uganda National Museum, with the building architect having financial authority.

Within the Action Plan matrix are estimated budget amounts for each task. These must be placed into a formal budget within the Department of Antiquities and held in a reserve trust without any possibility of diverting funds to other heritage projects or to other departmental needs. Controls over this budget and thresholds should also be established. A minimum threshold should be set at the discretion of the building architect to resolve smaller, more immediate issues, such as the purchase of additional waste bins or adding workers to clean the rubbish. Other more important elements are at the discretion of the Commissioner while approval for studies or research should be reviewed and endorsed by the building committee. Controls such as accounting reviews and audit trails should also be established. Other issues that are related to the Uganda National Museum budget include regular monitoring and establishing actual position, comparing actual with a planned budget, calculation of variances, and taking action to exert control over the budget.

6.2.7 Prioritize Interventions

Given the current size and status of the Uganda National Museum, and with all the different states of conservation, it is necessary to formalize a policy regarding prioritizing interventions. The rapid condition assessment and inspections by certified engineers established a long list of needed works by priority. But this must be a more formal and continual process of revising the list and executing interventions based upon the short, medium, and long-term goals. The proposed policy has three major points:

Adopt a guiding conservation policy for all interventions from minor repairs to major projects, from single repairs to site-wide planning, including preventive conservation maintenance. This includes an independent review of all decisions and plans before the intervention, inspections, and frequent review during the intervention, and formal evaluation upon completion.

Successful conservation is balanced between three elements: significance, including authenticity and integrity, with conservation needs against the available resources, both human and financial. This is especially important as resources are stretched thin at Uganda National Museum, given its important collection and other locations.

Ensuring stakeholders are aligned and informed with proposed conservation interventions. This includes local, regional, and international stakeholders from all sectors, including government, civil society, concerned experts, academia, and institutions.

6.3 GOAL 3 – PREPARE FOR DISASTERS, MITIGATE RISKS

During the heavy storm season of 2020 and 2021, the Uganda National Museum building was damaged by large falling branches of an adjacent tree. The roof was ruptured, and water streamed into a section of the educational building, north annex. Fortunately, the damage was not near the collection, and the staff was on hand to mitigate any short-term negative impacts. Following this incident, in May 2021, another storm damaged the windows of the Natural History Gallery and flooded the space. These events highlight that the museum must prepare for disasters and mitigate risks. This section provides an overview of the current risk assessment and proposes a plan to prepare for disasters and mitigate risks. This section also incorporates the improvement of safety and security as there have been instances in the past regarding unauthorized access, minor graffiti, and one recent instance of vandalism.

6.3.1 Develop Risk and Disaster Plan

1. Acknowledgment that a single disaster at the museum can have a significant negative impact and may be worse than the longer-term deterioration caused by progressive decay. A single tremor or heavy storm may lead to the destruction of the museum building, including its collections. Therefore, disaster management is an indivisible part of any comprehensive Conservation Management Plan. Disaster risk management constitutes one of the most urgent priorities that the building architect must address. Uganda National Museum is prone to various types of natural and man-made disasters. Therefore, the CMP must have due consideration of the possible disasters.

2. Importance of disaster risk consideration is explained stipulated in the Operational Guideline defining the provisions of the *Convention Concerning the Protection of the World Cultural and Natural Heritage* adopted by the 17th Session of the General Conference of UNESCO on 16th November 1972. For a property to be considered, it should not only be of exceptional heritage value but also be a well-protected property of exceptional heritage value. Therefore, sufficient attention to the protection of the Uganda National Museum and its values against disasters must also be at the core of this Conservation Management Plan. The approach to analyze and recommends measures is reflected in this section and is guided by the *UNESCO Strategy for Risk Reduction at Properties* (Document WHC-06/30.COM/7.2), endorsed by the World Heritage Committee. The strategy requires a two-fold approach of (a) assisting State Parties to the Convention to integrate heritage concerns into national disaster reduction policies and (b) to incorporate concern for disaster reduction within the CMP. It clearly defines five objectives:

- Strengthen support within relevant national and local institutions
- Use knowledge/education to build a culture of disaster prevention
- Identify, assess, and monitor disaster risk
- Reduce underlying risk factors
- Strengthen preparedness for effective response at all levels

Building disaster resilience is also the primary purpose of the *Sendai Framework for Disaster Risk Reduction 2015-2030*[45]. The prevention of new and reduction of existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, cultural, educational, environmental, and institutional measures reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.

[45] https://www.unisdr.org/we/coordinate/sendai-framework

6.3.2 Analyse Disaster Risk Prevention

This section provides a preliminary analysis to begin the development of a Disaster Risk Prevention strategy (DRP). This includes (a) creating a risk profile, (b) reviewing current approaches, and (c) SWOT analysis of the institutional capacities. The section describes preliminary recommendations on how to strengthen disaster risk management at the museum based on the approach defined in the *UNESCO Strategy for Risk Reduction*. After analysis of the disaster risk profile at Uganda National Museum, it is important that a Disaster Risk Prevention (DRP) must be formally drafted. This includes:

Storms & Floods: Seasonal storms are a serious risk to the museum, as demonstrated during the damage caused by a nearby tree and falling glasses. Unfortunately, the storm seasons are unpredictable, and measures must be taken. Flooding is caused by heavy rains should not be underestimated. They are the leading cause of damage to buildings in Uganda. While the museum sits on a well-drained slope, there have been instances of flooding as the water must pass around the building. What is most troublesome is that the collection is housed in the basement. The museum was also constructed like many other modern buildings, with a flat roof and insufficient rain protection. Therefore, there must be continuous monitoring and frequent repairs.

Earthquakes: Areas around the Lake Victoria Basin, which includes Kampala, remain a seismically active area, and it has experienced many earthquakes, including the most recent one, which occurred on 10th September 2016. There are also other tremors that have frequently occurred which has caused some destabilization of artifacts in the showcases and shelves in the stores.

Fire: This is the greatest danger to the museum. There have been no widespread large fires in Kampala, even given its dry environment between monsoons. However, there have been a large number of smaller fire incidents that occurred in urban areas nearby. In urban areas, mostly industrial and commercial installations pose a risk. On average, in Kampala, 3-4 major fire incidents take place every day.[46] On annual, major buildings of historical importance such as the Ivory tower of Makerere University burned in 2020, the Kasubi Tombs in 2010, Budo primary and secondary burnt in 2008 and 2021, respectively, Uganda Registration Board, Ministry of Health Archives are some key examples to signify the dangers of fire disaster in Kampala. There are over 12,000 industrial units in Kampala, but the arrangement for the prevention and tackling of fire incidents is poor. Recently the paint factory burnt in the nearby residential area of Makindye. The availability of fire brigade/firefighting equipment even in major urban centers like Kampala is not adequate. The main risks of fires at Uganda National Museum are uncontrolled fires which could be sparked from people smoking or from residential or industrial activities nearby.

Environmental Degradation: Overall, as Kampala grows, there has been a recent reduction of vegetation cover. Fortunately, this has not negatively impacted the museum, given its location In the city center. However, there have been other issues of environmental degradation, such as Increased vehicle movement on the busy city streets, and this has brought about an increase in vibration, heat, air pollution, dust, and noise. There is not much that can be done about this but to maintain the green belt around the museum and continue planting to serve as a buffer to this urban heat and noise. Any future expansion to the museum must take this green belt and buffer into account.

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Safety and Security Risks at Uganda National Museum

Risk			Likelihood	Impact	Comments
Causes	***Risk Description***	***Consequences***			
Heavy rains and Flooding	Uncontrolled drainage, erosion at the top of the building roof,	Significant damage, undermining of shallow foundations, Blown iron sheets exposing roof ceiling and collapses of ceilings. Complete broken glasses.	high	high	While drainage has improved in past years a comprehensive drainage plan is needed. This is complicated by the fact that the Uganada museum building roof was a flat and has been ad hoc repaired and the roof is in most cases being blown off.
	Standing water near base of the museum building	Rising dampness, rapid peeling off of the wall exterior and interior paints, increasing growth of algea and moulds which are dangersous to human life and the stored orgnanic artefacts causing rotting or deteriorating of the collections.	high	High	there is need to open surface install impevious dump proof layer with a wall acting as a cavity and also Micro drainage channels must be sensitively installed
	flooding at the bottom of the slopes	Too much storm water running to the neihbouring school and residents	high	High	museum management must work with the Kampala Capital City Authority to address drainage beyond the site
	Uncontrolled water leads to risk of mosquito breeding	Malaria becomes high risk in Museum premises and the niegbourhood in rainy and post rainy seasons. This leads to staining and frass.	high	Medium	Small areas of standing water must be eliminated and spraying for mosquitos. Museum management must work with Health Department of Kampala capital city Authority.
Epidemics	Staff can contract disease	Essential maintenance, monitoring, and ongoing conservation projects may cease	medium	medium	Museum management and staff must receive vaccines, ensure their drinking water is boiled and clean, eliminate standing pockets of water, spray known pest areas and work with the Ministry of Health
	Surrounding communities can contract disease	decrease in the visitation of the museum	medium	low	The Museum Management must adopt to new ways of engaging its communities
Earthquakes	Vibration cause distablisation of	falling and breaking of museum artefacts	low	high	The likelihood of an earthquake is low; however, should one occur the impact would be highgiven the precarious construction of the

	collections in the showcases and storage shelves				structures and their condition. The impact to the domed canopies would be severe as many are already at risk as well as destruction of the museum collections
Fire	fires from uncontrolled cookouts and electric circuits	This can cause human death as well as destruction of the precious collection kept at the museum.	high	HIGH	Museum management must clearly develop policies on events and social gatherings hosted at the site as well as revamp the electrical wiring system both internally and externally.
	Fires from the devoted cooking on site	Cooking fires can lead to brush fires	medium	low	There has been a ban on cooking on site, however, this is occasionally difficult to enforce. Over time this ban has become known and
	Electrical fires could occur	This would cause an outage in electricity and may cause brush fires	low	low	Electrical installations on site for lighting are inadequate and improperly installed. These must be upgraded and protected from electrical shorts by circuit breakers and metal conduit. In addition, brush must be kept clear of all areas of electrical junctions and outlets

Figure 171 –Risks to Uganda National Museum

6.3.3 Conduct a SWOT Analysis, Capacity to Address Disasters

Strengths	Weaknesses
In-depth knowledge of the site, its issues, and vulnerabilities extensive Knowledge amongst the surrounding communities about the past disasters Constant Engagement with stakeholders and respect within the community with a genuine concern for the impact of disasters Knowledgeable in the steps necessary for protecting the VALUES pre-disaster and well versed in the policies in relation to disasters. Ease of communication with experts (no evidence to this regard) national policy on disaster and risk management, which can easily be co-adopted. The site is in a less congested (Fairly planned) area that can help to ease the management. Enough space for disaster response	Lack of a disaster and risk management plan Inadequate financial backing for disaster management inadequate staff capacity for executing disaster mitigation – current focus is on active conservation and maintenance Inadequate firefighting equipment (Fire alarm system, detectors, protective gears, blankets, carbon dioxide) Limited awareness to the staff and visitors Lack of defined fire assembly point and smoking zones Lack of capacity to rapidly assess the site before and after disasters Inadequate monitoring and preventive strategies against disasters and risks Uninformed policy decisions concerning historic resources and disasters Operational, budgetary issues in the short and long terms
Threats	**Opportunities**
Terrorist/arsonists activities Electrical circuit and sagging wires Delayed response from mandated fire fighter due to uncertain conditions to include heavy traffic and no fire trucks available	They are using the site as a place of relief and staging operations during times of disaster. Some facilities on-site could store water, food, equipment, and first-aid supplies. Enough land for evacuation of people and collections Train and serve the community Museum management and staff would be eager to know more and participate in increased capacity-building efforts and assist in times of disaster Develop and implement new disaster and risk management policies

6.3.4 Establish a Risk Preparedness Strategy

However, this plan does state that training, education, and awareness are of critical importance. Therefore, there must be a connection with the management of the Uganda National Museum and engagement between the property. Such a partnership would help establish a formal risk preparedness strategy and emergency response plan that encompasses both the preservation of monuments and the safety and security of visitors in case of human-made or natural disasters and train staff in the specific procedures. The risk preparedness strategy will take into consideration a comprehensive assessment of risks and disasters in a matrix form of analysis to establish the magnitude of threats and impacts. This analysis will take a short-, medium- and long-term actions.

6.3.4.1 Draft emergency response procedures

In cooperation with the national authorities, the management of the Uganda National Museum must draft an emergency response procedure. This lincludes lighting, improved surveillance and security and the purchase and installment of emergency response equipment.

6.3.4.2 Provide appropriate lighting

It is well known that additional lighting is a deterrent to prevent graffiti, theft, or other issues associated with security. Over 30 years ago, light standards along the main access road within site were installed. It is unknown when these stopped working, but recently, these lights have been reconditioned in Groups B and C. These are in operation every night except the evenings with load shedding. The renewal of the existing light standards is a short-term solution as the lights are not adequate or appropriate to today's standards. Thus, a long-term solution must be found and studied in a lighting plan. This would remove the visual obstruction of the light standards and provide lighting lower along the path and roadways. Additionally, some monuments can be externally lit to enhance the visitor experience at night. But this must be carefully studied, designed, and sensitively implemented.

6.3.4.3 Improve surveillance

Given the physical size of the Uganda National Museum, the distances between the galleries, and limited human resources, management must install an electronic surveillance system. Given recent advances in technology, a wireless surveillance system could cost less cost. A test could be conducted at the museum and consist of digital cameras connected to the cellular telephone wireless internet network. Such cameras must be small and sensitively placed yet high enough to protect the cameras. Importantly small signs announcing this surveillance system should also be mounted. Given the success of such a test, this system could be expanded to other galleries. This wireless surveillance system is in progress, including the addition of a wireless communication system. This surveillance must include the gardens and the museum stores.

6.3.5 Install Emergency Response Equipment

It is not sufficient to plan for emergencies, but action must be taken. This action includes installing smoke alarms and fire-fighting equipment such as fire-extinguishers and other automatic systems within the museum and museum stores. However, this effort must extend beyond only equipment as training for the management and staff to use this equipment is required. Notably, efforts must extend beyond the museum to working with the local fire-fighting teams of Kampala. Regular meetings with the firefighting teams must be held every quarter, and they must be sensitized to the unique firefighting needs of the museum. Undoubtedly, they need specialized training and must be given support in obtaining additional special equipment for use In the museum and a fire-fighting truck in the nearest station. This effort follows upon the three disastrous fires at cultural heritage sites in Kampala - at Makerere University's main building in September 2020 and twice at the World Heritage property of the Kasubi

Tombs in 2020 and earlier in 2010. The latter of which contributed to placing the tombs on the Lost of World Heritage in Danger.

6.4 GOAL 4 – ENHANCE VISITATION & COMMUNITY INVOLVEMENT

The Uganda National Museum exists to be visited; it houses a priceless collection of artifacts. Therefore, one of the essential goals is to welcome visitors. This welcoming aspect was a theme that frequently reoccurred during discussions concerning management. The Conservation Management Plan must respect that Uganda National Museum is a living site and part of the surrounding communities. However, it is insufficient to permit only use, but visitation must be encouraged and managed. This plan recognizes that there must be a balance between use and conservation. Thus, the CMP considers a balanced visitation strategy divided into three portions, first for school visits/study/educational, and secondly for leisure and business visitors. Understanding how and when all groups arrive at the site and how they use the place is essential to crafting a visitation strategy that assists in management. Also fundamental to better visitor management is a campaign of public awareness and knowledge of sustainable tourism practice.

Figure 172 –rear pavilion of the museum (Eppich, 2018)

6.4.1 Visitor Development Strategy

Because of the museum's strategic position in the center of Uganda's capital, it has enormous potential to attract many more visitors. Given the analysis of data, not all visitors are the same and want a variety of experiences and strategies to cater to the needs and forms of attracting new visitors, transforming non-visitors into visitors, and ensuring that those who visit always do return for more visits. It is clear and undeniable that museums are competing for visitors in a relatively static market. The task for museums and galleries today is to find appropriate ways to enable most people to benefit from the resources they are privileged to hold. Museums today are inescapably part of the leisure industry. This was not the case some years ago when the leisure industry was itself young and undeveloped. Museums occupy a particular niche in the leisure industry that is open on the one side to leisure, fun, and entertainment but which is firmly joined to the educational world on the other. It must not be forgotten that in recent years, education itself has become closer to leisure. The progressive educational theory has always maintained that we learn while we are involved, committed, and enjoying ourselves. Fun is only possible in an atmosphere where people feel welcome, comfortable, at home, and appropriate. A range of frameworks should support and sustain visitors to allow them the freedom to explore, experiment, talk, and make sense of their own reactions to the museum.

6.4.1.1 Upgrade signage and directional map of the museum:

The museum signage is currently lacking both inside and outside the site hence a need to upgrade to give a visitor comfort and peace while moving around the place.

6.4.1.2 Guarantee Safety of visitors and their property:

Provide visitor safety guidelines and security for both their lives/property.

6.4.1.3 Organize temporary and touring exhibitions:

Reaching out to new audience/publics because they will always feel and see something new besides the permanent displays. Collections are the reason why museums exist, but they are useless if they don't engage and communicate to the audience.

6.4.1.4 Digitize collections and archives:

The museum must digitize and provide access to the collections that are not on display to the visitors. There is a need to develop aggressive online conversations with the public regarding visitor needs and information. In the digital era, the museum needs to profile its collections in such a way that they are given value—for example, sharing information about the Ford car (Time used in Uganda, company, and model).

6.4.1.5 Harness new technology:

The museum can also develop an APP where technology is commonly used by the young audience. As the world is changing, even the way things are done is changing, which leaves the museum with no or limited options but to adapt and move with the trend its visitors are taking. Re-making the museum by the use of 3D – printing and object panels gives an innovative way of enhancing the visitor's experience with the object.

6.4.1.6 Carryout museum visitor surveys

The present visitor's statistics is quantitative; it does not clearly capture the visitor's issues/satisfaction in relation to services of the museum. There is a need to regularly carry out visitor surveys to ensure that all this information is considered. It does not capture the group of returning visitors and people who come for events, workshops, and conferences which is the biggest group. It is essential to know everyone who comes to the museum and why to see the best way of turning the non-gallery visitors into visitors.

6.4.1.7 Train museum personnel

The world is also changing the country is changing, due to increased competition from shopping malls with children play areas, private sites, and change in the mode of business (school trips are now managed by tour operators unlike days when schools handled their own study trips), museum staff needs to be kept refreshed in customer care and handling, museum management to ensure that they are relevant today.

6.4.1.8 Welcome visitors to all areas of the museum

The museum, besides its unique modernist architectural style, is only welcoming at the main entrance with an ambiance of public benches, trees giving shade, whereas other parts such as the cultural village are downplayed. If at all it is boosted with a coffee shop, kids play area, art works like sculptures, walls of fame, etc., it would make it more welcoming and appealing given its outdoor space that is always used for hosting events and public functions.

6.4.1.9 Form collaborations and partnerships

The largest group of visitors to the museum is school children or students. Before COVID-19, most school tours were organized by tour companies where certain groups of children are diverted and taken to other amusement centers other than the museum. The museum needs to reach out to schools as well as develop kids' programs to cater to their learning. The museum can also sign a memorandum of understanding with tour companies and encourage them to bring their regional and local visitors.

6.4.1.10 Develop anecdotes about real incidences

Real Art experiments, taxidermy works, celebrity talks, special dinners, architectural talks, health history talks are all ideas to enhance the experience of visiting the museum. These should be included In the future visitor development strategy.

6.4.2 Improve Visitor Infrastructure

6.4.2.1 Continue to maintain the property

Continue to maintain the site to make the environment suitable for its long-term preservation, access, and enjoyment of visitors. Maintenance Is an ongoing challenge given the heavy use of the site and its growing popularity with day trip visitors from Kampala.

6.4.2.2 Develop consistent signage

Develop consistent signage for interpretation and elements for wayfinding for visitors. Signage needs to include general information on the location of facilities, availability and, directions to crucial museum site elements

6.4.2.3 Promote rubbish disposal policy

Inform visitors of available rubbish receptacles and their obligation to contribute to the tidiness of the site. Litter collection - Carry out regular trash removal on-site by the museum staff or outsourcing services. This is currently being conducted along with the removal of rubbish blown in from off the museum, separation (Organic and inorganic) as well as hazardous waste and disposal.

6.4.2.4 Develop public health and safety for visitors and staff

The recent pandemic affected the visitors' confidence in public places. In response, the Government created Standard Operating Procedures. The museum is implementing the Health Protocol must be included in the CMP.

1. Include in the CMP designs for health and safety
2. Maintain visitors record
3. Install hand sanitizers at specific points
4. Keep and advise of social distancing between visitors
5. Train guides in managing visitors during and post-covid
6. Install hand washing equipment
7. Built confidence with visitors through all of the above.

7 ACTION PLAN

7.1 Implementation & Monitoring

This Conservation Management Plan is useful in implementing and monitoring actions suggested for conservation, development, research, disaster and risk preparedness, climate/environmental change analysis, increasing visitation and visitor's experience, as well as managing change.

The CMP also sets short-, medium- and long-term actions that are measurable and achievable to be implemented with results.

The management of the Uganda National Museum should fully implement the proposed actions in the CMP. They should ensure that strong collaboration is strengthened with the KCCA to adopt the CMP as a conservation and management tool that must be followed by evaluation and readjustment. This was one of the key criticisms in the past that actions were often executed rapidly in an *ad hoc* manner or incrementally. Many policies have been well-thought-out, written, and implemented successfully, but without communication. While other actions which took considerable resources and time, such as the border wall and removal of the encroachments, have taken the time yet the process is not always clear or explained to the numerous missions by ICOMOS or UNESCO. Yet other actions identified earlier, such as the creation of a documentation center, have no clear direction or steps. Also, many of these actions seem uncoordinated, misaligned, or worse, counter to one another. Therefore, this section presents a long-term Vision for Uganda National Museum under which are the supporting goals, objectives, and tasks. These are described with recommendations for pragmatic implementation. These address issues from stakeholder outreach and outlines partnerships and responsibilities that are necessary.

This is followed by Monitoring and Periodic Review to ensure that the objectives are being targeted. The section continues with a Prioritized Action Plan and finally a ten-year budget. The process of implementation is built upon smaller tasks that support objectives which in turn target larger goals to fulfill the larger, inspiring vision. Without this hierarchy, the long-term vision or goals would seem unobtainable and possibly frustrating, and certainly miscommunicated. But by dividing the work into manageable, achievable discrete portions, it will be possible to obtain the goals and overall vision. This subchapter will begin in this order, starting vision, then goals, objectives, and tasks. The Action Plan below is divided into four main goals, as per the previous section, and is intended to support the overall long-term vision for Uganda National Museum:

1) Strengthen Management
2) Improve Conservation
3) Prepare for Disasters, Mitigate Risks & Improve Safety
4) Enhance Visitation & Community Involvement

Within each goal, in vertical columns are objectives that are designed to support the goal. Each of these objectives has specific actions or tasks. To better understand the task, there is a result and indicator to indicate success. The matrix is completed with an entity responsible, a deadline, and resources needed. The tasks closely follow the recommendations of the stakeholders and site inspections and are designed to be realistic and feasible to execute. The indicated budget amounts are approximate and require further study closer to the time of implementation to determine the actual costs. Although the period of this Conservation Management Plan 2021 – 2026 covers a five-year period (with time for adoption and implementation), several of these tasks will take longer to complete. Within the Action Plan, the tasks which have already begun or are in process are also listed and identified.

7.2 Action Plan Matrix

GOAL 1 - STRENGTHEN MANAGEMENT						
OBJECTIVES	#	TASKS (Actions)	RESULT/Indicator	RESPONSIBLE	TIMELINE	RESOURCES
Enact Policies/ update mission	6.1.1	Update vision and mission statement for the Museum	Vision and mission disseminated to policy makers and the public	Director, approval by ministry	12/2022	Personnel time, experts
	6.1.1.1	Update organizational structure	Ministry approval	Director	12/2022	Personnel time, director time
	6.1.1.2	Develop guidelines for international cooperation	Ministry approval	Director	12/2022	Personnel time, director time
	6.1.1.3	Update collections management policy	Updated collection management policy uploaded on line and circulated to staff	Director, approval by ministry	01/2022	Personnel time, director time
	6.1.1.4	Improve Visitor Management Policy	Visitor management policy developed on agreed upon by director and ministry	Director, approval by ministry	04/2022	Tourism hospitality expert, staff time, approx. 2k USD
	6.1.1.5	Enhance Information/communication Policy	Visitor management policy developd on agreed upon by director and ministry	Director, approval by ministry	04/2022	Personnel time only
Build Capacity	6.1.2.1	Carry out a needs assessment	A matrix of museum needs and current staff capabilities	Senior staff members	03/2022	Personnel time only
	6.1.2.2	Continue on-site training, establish dedicated budget for staff education. Encourage staff to pursue further studies on-line	4 executed trainings, 3 papers presented at int'l conferences, 3 on-line courses	Senior staff members	12/2022	Staff time to identify opportunities, dedicated budget to pay tuition, conference fees, travel, and board. Approx. 12,000 USD
	6.1.2.3	Add qualified staff, list of approved external experts or consultants	List of approved external experts, rates, part-time staff to fill identified needs	Senior staff members	12/2022	External experts and part-time staff identified, create budget line for external staff. Approx. 10,000 USD

GOAL 2 – IMPROVE CONSERVATION						
OBJECTIVES	#	TASKS (Actions)	RESULT/Indicator	RESPONSIBLE	TIMELINE	RESOURCES
Advance Conservation Practice	6.2.1	Advance Conservation Practice	Adopted CMP with conservation principles incorporated into policy	Senior staff	06/2023	Staff time, approval by Director, Museum Board
Develop Conservation Principles	6.2.2.1	Establish Secure Facilities	Secure cases, stores	Director	06/2023	Security plan, project. 23k USD
	6.2.2.2	Establish conservation laboratory	Equipped & staffed lab, procedures, testing	Director	01/2024	External expert, staff time, board approval approx. 15k USD
Carryout Interventions	6.2.3.1	Design roof replacement	New sympathetic roof over entire existing museum	Museum Board, Int'l committee	06/2023	External design firm, implementation Approx. 190k USD
	6.2.3.2	Increase environmental awareness	LED, solar, rainwater system	Staff member	06/2023	Implementation 18k USD
	6.2.3.3	Execute electrical replacement	New electrical system	External eng.	06/2023	Engineers, approx. 45k USD
	6.2.3.4	Repair fenestration	New glazing	External eng.	09/2023	Approx. 18k USD
	6.2.3.5	Improve climate controls	Monitoring equipment	External eng.	02/2023	Approx. 32k USD
	6.2.3.6	Preserve museum cases/stores	Main gallery cases preserved	External eng.	02/2023	Approx. 24k USD
	6.2.3.7	Restore original finishes	All walls in public spaces	External eng.	06/2025	Approx 12k USD
	6.2.3.8	Improve site experience	Increased visitation	External eng.	01/2023	Staff time, improved paths
	6.2.3.9	Implement landscape standards	Improved site landscaping	External eng.	01/2022	Staff time, some add'l plantings
Adopt a Preventive Conservation	6.2.4.0	Written guidelines for monitoring, reporting of needed repairs, maintenance policy	Approved PC plan	Senior staff member, staff architect	06/2023	Staff architect, senior staff input, director approval
Establish and Implement a Documentation System	6.2.5.1	Create documentation center	Equipment purchase, space	Senior staff	06/2023	Staff time, space, approx. 16k USD
	6.2.5.2	Digitize historic material	1000 digitized elements	Assigned staff	06/2023	Cameras, scanners, personnel time
	6.2.5.3	Create systematic monitoring	Quarterly report on state	Staff architect	quarterly	Staff architect time
	6.2.5.4	Improve implementation	Quarterly report on state	Staff architect	quarterly	Staff architect time
	6.2.5.5	Conduct monitoring, evaluation	Quarterly report on state	Staff architect	quarterly	Staff time
Develop budget	6.2.6.0	For all activities a dedicated budget	Approved budget by board	Board, Director	01/2022	Staff time, external expert
Prioritize interventions	6.2.7.0	Create long list with detailed budgets and list of possible donors	Approved prioritized list of interventions with budget	Museum Board, Int'l committee	01/2022	Staff time

GOAL 3 – PREPARE FOR DISASTERS, MITIGATE RISKS & IMPROVE SAFETY						
OBJECTIVES	#	TASKS (Actions)	RESULT/Indicator	RESPONSIBLE	TIMELINE	RESOURCES
Develop a rationale and approach	6.3.1.0	Establish a risk preparedness strategy	written and approved strategy	Senior staff	06/2022	Staff time, possible external expert
	6.3.3,2	Draft emergency response procedures	written and approved strategy	Senior staff	06/2022	Staff time, possible external expert
Analyse Disaster Risk Prevention	6.3.2.0	Execute an analysis with long list of implementation items	Understanding at the Museum Board and management levels the risks involved and implementations	Director, Senior staff assigned	06/2022	Staff time, possible external expert, approx. 8k USD
Conduct a SWOT Analysis and Capacity to Address Disasters	6.3.3.0	Execute an analysis with long list of implementation items	Understanding at the Museum Board and management levels the risks involved and implementations	Director, Senior staff assigned	06/2022	Staff time, possible external expert, pro bono
Establish a Risk Preparedness Strategy	6.3.4.1	Draft emergency response procedures	Written and approved emergency response	Senior staff assigned	01/2022	Staff time, pro bono external expert
	6.3.4.2	Provide appropriate lighting	New lighting installed inside and outside	Senior staff assigned	06/2023	Lighting consultant, lighting equipment, Approx. 23k USD
	6.3.4.3	Improve surveillance, security	Installed CCTV cameras, alarms, signs, monitors	Senior staff assigned, Staff architect	01/2024	Security consultant, staff architect, monitoring equipment, installation, Approx. 35k USD
Install Emergency Response Equipment		Install disaster and risk equipment to address emergencies, most importantly including fire	Procure and install fire-fighting equipment, smoke alarms, recruit fire system technicians, work with governement to aquire fire truck	Senior staff	01/2024	Approx. 100k USD Disaster, fire, and risk expert, electrician

GOAL 4 – ENHANCE VISITATION & COMMUNITY ENGAGEMENT						
OBJECTIVES	#	TASKS (Actions)	RESULT/Indicator	RESPONSIBLE	TIMELINE	RESOURCES
Develop a Visitor Strategy	6.4.1.1	Upgrade signage	New signage inside and outside the museum in alignment with branding	Assigned senior staff member	12/2022	Design, management, content development. Approx. 25k USD
	6.4.1.2	Guarantee safety of visitors	1 safety plan	Senior staff	12/2024	Staff time
	6.4.1.3	Organize temporary and touring exhibitions	4 special exhibits in 2 years	Museum curator	12/2024	Designer, staff curator, external expert, 24k USD
	6.4.1.4	Digitize collections and archives	20% of collection digitized, online database developed	Senior curator	12/2023	External expert, staff time, equipment, approx. 14k USD
	6.4.1.5	Harness new technology	New website, smartphone app, electronic guide	Senior curator	12.2023	External expert, staff time, equipment, approx. 14k USD
	6.4.1.6	Carryout museum visitor surveys	Completed visitor survey	Senior staff	06/2022	Staff time, external expert review
	6.4.1.7	Train museum personnel	5 staff training exercises	Senior staff	12/2022	Staff time for training, approx. 15k
	6.4.1.8	Welcome visitors to all areas of the museum currently underserved	30% of all visitors visit less visited galleries	Curator	12/2022	Staff time
	6.4.1.9	Form collaborations and partnerships int'l and domestic	3 int'l agreements MOUs signed	Director	12/2024	Director's time
	6.4.1.10	Develop anecdotes about real incidents	1 new program with publication	Assigned senior staff member	05/2023	Staff time
Improve Visitor Infrastructure	6.4.2.1	Continue to maintain the property		Staff	Continuously	Staff maintenance time
	6.4.2.2	Develop consistent signage for interpretation	New didactics in 4 galleries			External expert, senior curator, researcher, approx. 12k USD
	6.4.2.3	Promote rubbish disposal policy	written policy, zero tolerance for site rubbish, 20 new bins deployed	Assigned staff member to manage	12/2021	Staff time to study location, selection of bins, write policy, approx. 4k USD
	6.4.2.4	Develop public health and safety for visitors and staff	5 sanitation stations, 10 announcement signs, new policy	Assigned staff member to manage	12/2021	Staff time, write policy, approval, location, selection of sanitation stations, signs. approx. 2k USD
Improve Visitor Information Sharing	6.4.3	Design brochures, booklets, guide books/maps and other information	Prepare 500 copies of multi-lingual version, seek funding for printing, prepare post cards	Assigned staff member to manage	2022	Approx. 15k, staff time, external designer

7.3 Partners

To accomplish the ambitious vision and the previously mentioned Action Plan, the Uganda National Museum must have several partners. This section will describe the partners and their scale of involvement. The establishment of a conservation management team is the first major step. The management team will have defined roles and responsibilities to implement the actions stipulated in the CMP. The protection of historical sites such as the museum with its values while attempting to promote social and economic development are complex undertakings that require the coordination of multiple players over a wide variety of activities.

Many levels of government, civil society, businesses, and numerous stakeholders need to be involved. Often each organization has their agenda and desired level of involvement and require coordination to contribute effectively. This section will suggest partnerships that are required to execute the vision, their responsibilities, and how they should or can be managed.

The partners' involvement is useful to share ideas, knowledge, and experiences in regard to the conservation and development of museum buildings and their collections while addressing critical issues. Partnerships provide effective networking and shared responsibilities to implement actions. It is important to recognize that there is a spectrum of involvement ranging from organizations that simply wish to be informed and give consent to others that want to express their ideas to government agencies and those who must be fully engaged. It is also important to mention that the level of engagement change over time.

International partners – Within this spectrum are the international stakeholders – These include the Getty Foundation, the Getty Conservation Institute, ICOM (International Council of Museums), UNESCO, ICOMOS, and possibly Docomomo. Additional international partners can include the United States Embassy through the Ambassadors Fund for Cultural Preservation and the neighbor of the Museum, the British Council.

Diaspora, Experts, and Visitors – Another international group that is often ignored are the diaspora from Uganda living in other parts of the World. These ex-pat communities are an important and untapped resource for visitors, contributions, and expert advice. Given the museum´s status as an important repository of Ugandan culture, it can expect a certain level of interest from this group. While it is difficult to identify and coordinate these groups nevertheless, they are a powerful force.

Development Banks – The final critical international partner includes development and funding institutions such as the World Bank. This partner has been an important force in Uganda, and there are other heritage projects and can be counted on for more than just financing. Their expertise in social and economic development from across the hemisphere can be focused on Uganda National Museum. These stakeholders as potential partners can aid, to various extents and, depending on their capabilities, the execution of tasks and objectives to aim for the vision. This Conservation Management Plan is the first step in outlining the vision with a concrete action plan and presenting it to these international groups.

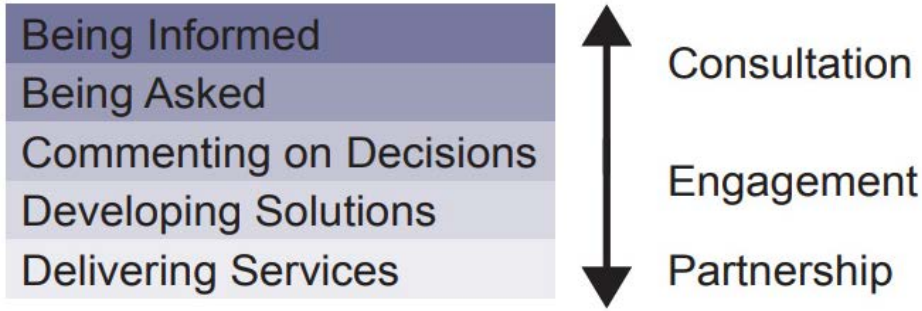

Figure 173 –Scale of involvement

7.4 Budget

A five-year budget has been proposed to address the four main goals and contributing objectives and for the implementation of the various actions necessary as per the Action Plan. The costs are divided into semi-annual periods, and this serves as a timeline. The budget, while based on local prices, is approximate and only intended as a guide for management decision making and aiding in the allocation and search for funding. Finally, some tasks in the Action Plan do not depend on the availability of financial resources but personnel resources - many aspects can be executed with available talent. These tasks are represented by a 0 figure. All costs are in United States dollars. Subtotals are listed for each task and goal before a final overall cost for implementation of the entire Conservation Management Plan.

Uganda National Museum
Conservation Management Plan

Proposed Budget/Gantt Chart	bi-annual	2/2 2021	1/2 2022	2/2 2022	1/2 2023	2/2 2023	1/2 2024	2/2 2024	1/2 2025	2/2 2025	1/2 2026	2/2 2026
(all figures are USD)												
GOAL 1 - STRENGTHEN MANAGEMENT												
Enact policies/update mission												
Mission statement		0										
Organizational structure		0										
Protocols for oversight			0									
External cooperation			0									
Build Capacity												
Needs assessment			0									
on-site training			1000		1000		1000		1000		1000	
off-site training				2000		2000		2000				
add staff, part-time					2000	3000	4000					
add external experts				4000	2000	1000						
SUBTOTAL Goal 1		$0	$1,000	$6,000	$5,000	$6,000	$5,000	$2,000	$1,000	$0	$1,000	$0
GOAL 2 - IMPROVE CONSERVATION												
Advance conservation		0										
Conservation principles												
Secure facilities					2300	2300	2300	2300				
Conservation lab							15000					
Interventions												
Roof replacement						190000						
Environmental awarness							6000	6000				
Electrical system replacement				45000								
Repair fenistration					8000	8000						
Climate controls							12000	12000				
Museum case preservation									6000	5000		
Museum stores									6000	5000		
Restore finishes											4000	4000
Improve site experience			3000									
Landscape standards		0										
Preventive Conservation												
Written guidelines			0									
Documentation system												
Create documentation center			5000	5000								
Digitize historic materials					1000	1000	1000	1000				
Systematic monitoring		0	0	0	0	0	0	0	0	0	0	0
improve implementation				0								
conduct monitoring evaluaton			0	0	7-175 0	0	0	0	0	0	0	0
Develop budget												
Prioritize interventions												
SUBTOTAL Goal 2		$0	$8,000	$50,000	$11,300	$201,300	$36,300	$21,300	$12,000	$10,000	$4,000	$4,000

GOAL 3 - PREPARE FOR DISASTERS, MITIGATE RISKS, IMPROVE SAFETY														
Develop rationale														
Risk preparedness strategy			0											
Emergency response procedures			4000											
Analyze Disaster Risk Prevention														
Execute analysis				4000		4000								
SWOT analysis capacity needs			0	0	0									
Risk Preparedness Strategy														
Emergency response procedures														
Improved lighting				3000	3000	3000								
improved surveillance, security			1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
SUBTOTAL Goal 3		$0	$5,000	$8,000	$4,000	$8,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
GOAL 4 - ENHANCE VISITATION & COMMUNITY ENGAGEMENT														
Visitor Strategy														
upgrade signage				5000	5000									
Visitor safety			0											
Temporary, touring exhibitions										4000	4000	4000		
digitize collections and archives		500	500	500	500	500	500	500						
Harness new technology				1000	1000	1000								
Visitor surveys			300	300	300									
Train museum personnel				1000		1000		1000		1000			1000	
Open up promote unvisited portions														
Form collaborations and partnerships		0												
develop anecdotes			2000											
Visitor infrastructure														
Maintain museum		1000	1000	1000	1000	1000	1000							
consistent interpretation							6000	6000						
Rubbish disposal policy			500	500	500	500								
Public health and safety		1000	1000											
SUBTOTAL Goal 4		$2,500	$5,300	$9,300	$8,300	$4,000	$7,500	$7,500	$4,000	$5,000	$4,000	$1,000		
TOTAL all goals by quarter		$2,500	$19,300	$73,300	$28,600	$219,300	$49,800	$31,800	$18,000	$16,000	$10,000	$6,000		
GRAND TOTAL	over time period of the CMP	$474,600												

APPENDIX

MAPS

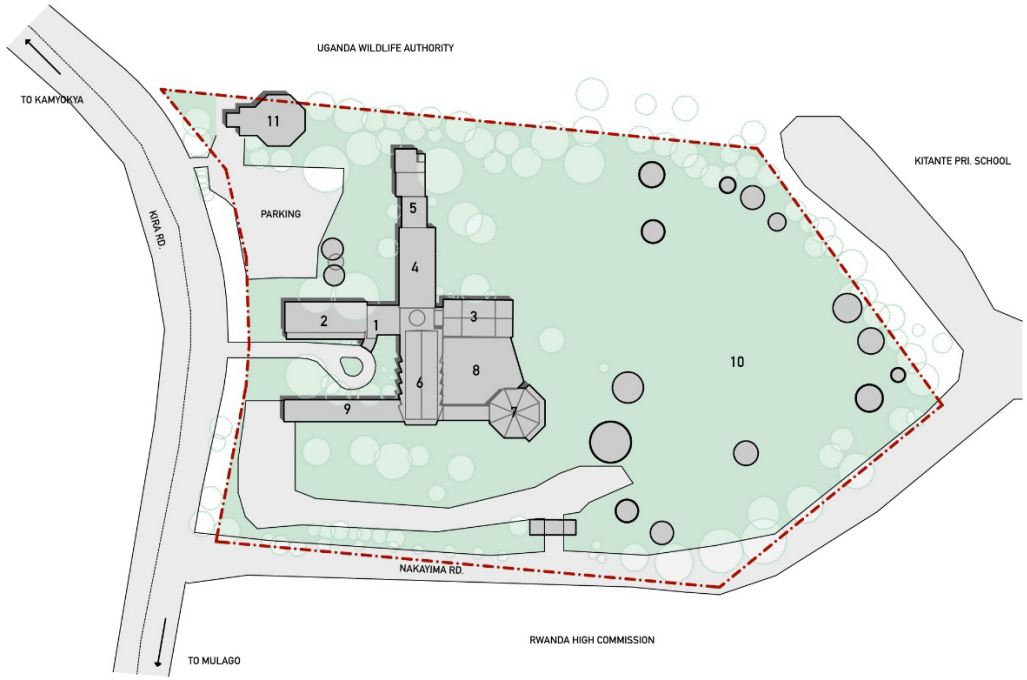

Figure 175 – Site plan of the Uganda National Museum

Figure 176 – Simplified sketch map of Kampala showing the proposed location of the museum (c. 1950)

Figure 177 – Satellite image of Uganda National Museum _____ 1km (Maxar Technologies, 2020)

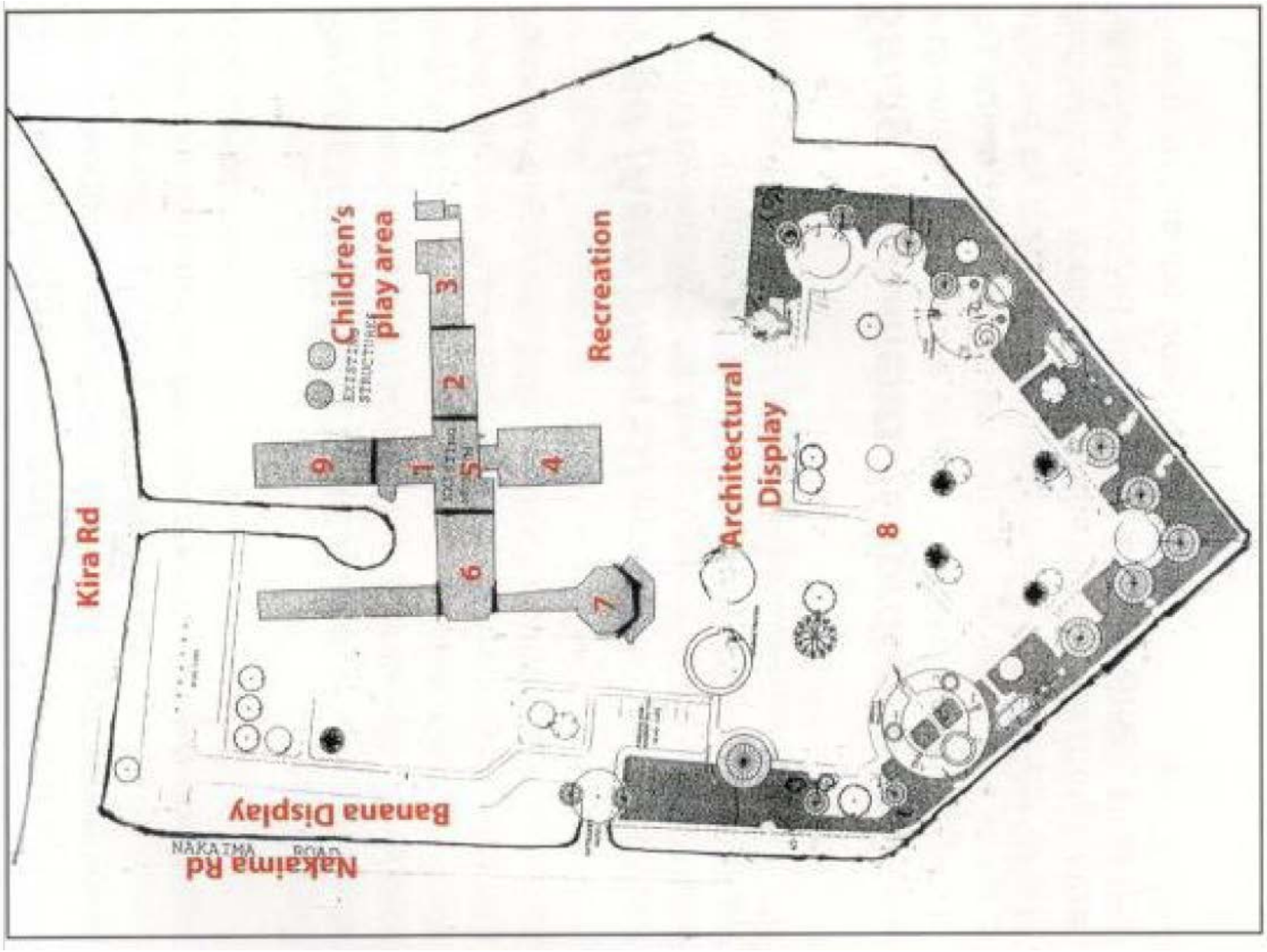

Figure 178 – Early map of the site (unknown)

Detailed Materials Analysis

Building parts	Original components	Alterations over time (the full report with Images Is available as a separate document)
Part 1 (1954) Original building	The original building includes several distinguishable parts, most of them still form the core of the museum. Most of it is still largely intact.	The original structure has been changed in a number of occasions, mostly anticipating: - The accommodation of extensions of the museums, connections to new parts over time. - On failures in some of the detailing of the original design (most prominently rain water discharge) - Conflicts between the architectural appearance and (changed) functionality of spaces The alternations will be presented in detail in the text below.
Part 1a – Entry and dome	**General description** This part includes the entrance porch, the reception area, the sanitary area and the dome, that forms both a central node in the audience traffic and a space for discussions and events.	
	Elevations	
	Wall surfaces (brickwork / plaster, etc)	
	The entrance area used to be embraced with a rough stone wall, that formed the face of the building towards the entrance gate. The entrance door still is marked by a canopy carried by elegant posts. The wall surface of the rear side used to be fully built up with ventilating concrete elements, just like the small wall surface above the lower roof at the entrance area.	The rough stone wall is still in place, but due to the positioning of the education wing is not forming the face of the entrance anymore. The education wing introduced some changes, like the opening of the wall towards the gallery along the education wing, as well as the introduction of windows to allow for daylight in the 2nd floor of the education wings. The wall is further altered to make the extended roof over the office floor also covering the rough stone wall at the east side, most likely to overcome leakages, after 1980 (not yet altered in the pictures of Rivard). The 'inside' of that wall is plastered and not fair faced finish anymore. The ventilating wall on the south side has been altered to allow for the connection to the Science and industry wing (196..).
	Windows, doors, gates, entry points	
	The west elevation of the reception area used to have a glazed wall existing of steel window profiles from top to bottom and fitted with sash windows in front of round columns carrying the roof, with a curved wall guiding the visitors towards the entrance doors in the glass wall. At the east elevation a window strip built up with steel window profiles is positioned at a higher level to allow for daylight in the sanitary areas and at the original reception area. Heavy doors were providing entrance to the rear side of the museum, the garden.	The bottom section of the glazed wall has been closed with brick work or concrete blocks in which joints have been suggested. This must have happened after 1980 (in the pictures of Rivard it is still fully glazed). Recommendation: Find out what motives were, bring the original glazing back and try to address eventual problems in a way that respects the original design better. While originally the glazed wall was spanning the full width of the elevation, including the entrance door, currently the glazed façade is closed around the entrance as well. Recommendation: Find out what motives were, bring the original glazing back and try to address eventual problems in a way that respects the original design better. The other windows on the East elevations are still in place (but glass pane broken, to be repaired).
	Exterior elements (decoration, sunshading, etc)	

	A modest canopy in curved shape marks the entrance of the building. The thin concrete slap is protruding between the rough stone and the curved wall and carried by slender steel columns that are placed in 2 pairs under an angle.	The columns are still in place, the thin concrete slab is visually affected by an additional metal roof edge, most likely to overcome rain water nuisance. Recommendation: Adapt the roof edge detail to bring back the slenderness, while solving the rain water challenges.
	Paintwork / finishes	
	The stone walls obviously are fair faced and not painted. The steel window frames are painted white, it is not clear if this is the original color, but images show a light color, perhaps white. Historical color analysis will give more information on this. Concrete or bricked parts are painted white as well.	The historical color analysis will lead to more information on this. See ….
	Various	
		Over time, a lot of features have been added to the building, like camera's and cables for security installations, additional lights, solar panels, etc. This has not been integrated in the building in a balanced way, respecting the original design. Recommendation: Make an inventory of all these features and develop an approach for a better integrated way of working, less visible and less interruptive.
	Roof	
	Roof structure / construction	
	The roof structure over this part of the building is a reinforced concrete slab, flat.	The slab still is in place, but the lower part is covered with a corrugated metal roof sheet over a substructure. The higher part that also includes the dome is still in place.
	Roof membrane	
	The original roof membrane as described in the drawings was supposed to be fitted with an aluminium foil membrane.	As mentioned in early reports, from the start the roof was leaking. Several actions, already from early on, have been trying to solve the problems. It is not clear if the aluminium membrane is still in place. It is obvious that the original roof membrane was not functioning well. The current roof setup is functioning better, but is impacting the architectural appearance of the building. See below.
	Rainwater gutters and pipes	
	In this part of the building there were not gutters or rainwater pipes installed, the rain water was supposed to flow over the edge of the concrete roof slab.	On the flat roofs (at dome level and the canopy) the edges have been fitted with metal profiles and overflows leading to rain water pipes to channel the water flows and avoid unguided water sprawl, which is leading to higher maintenance pressure. Recommendation: Develop a detail that also limits the unguided water sprawl, but respects the slender roof edges. On the roof over the entrance area a sloped corrugated metal roof has been fitted, the concrete roof, also sloping, most likely was leaking as well. The additional roof structure is blocking the concrete grills above the beams, which is limiting cross ventilation and also impacting the architectural integrity. Recommendation:

		Try to find a solution that on the one hand secures the water tightness of the roof and wall connections, on the other limits the blockage of the concrete grills.
	Roof lights	
	The roof light is one of the eye catching features of the building, realised in the shape of a dome topped with a spherical glass sheet.	The original roof light is still in place.
	Interior	
	Load bearing structure	
	The roof over the high part of this section is carried by concrete beams, carried by load bearing walls and columns, placed in the south elevation and at the side of the entrance area. The roof of the entrance area is supported by the rough stone wall, which most likely includes a concrete structure (the drawings that we have been able to achieve do not give information on this). On the side of the glazed façade, the roof is carried by concrete columns.	The structure is still in place and does not show any structural problem, the condition is good.
	Internal walls	
	The internal walls include the walls behind the reception desk, separating the sanitary section from the entrance areas.	The walls of the sanitary sections still seem to be in the same place, while the cloak area has been split to extend the toilet areas for both female and male. A wall built up out of timber, serving as back wall for the reception, blocks the direct view into the sanitary section. It is not clear to us yet when this wooden wall, on the view side cladded hexagonal sections with lacquer finish, has been realised. It adds to the historical layering of the museum.
	Stairs / bridges	
	n.a.	
	Wood work	
	n.a.	
	Finishes	
	Ceilings and walls were plastered and painted. In the original drawings the floor finish was indicated as The floor finish was indicated as Marley Tiles. However, underneath the current floor finish, a concrete screed has been found, in which a tile pattern has been marked with grooves, which is said to be the original floor finish. There are no details known about the finishes at the sanitary section.	The finishing of ceilings and walls is still more or less unchanged, apart from the color (see separate section). The floor finish has been changed, most recently with vinyl tiles. Recommendation: Remove the later added floor finishes and either restore the original floor below, or if in bad condition and if not appropriate, find a floor finish that matches the original effect, and following the original design that includes the same floor finish for all areas at the entrance floor level

	Installations	
	The sanitary section was consisting of a ladies and men's section, to be reached from a centrally placed cloak area.	The sanitary section has been refitted, with a slightly different layout. There is no reason to recommend changes here on the basis of historical or architectural reasons, unless there are functional motives for alterations.
	Furnishings	
	Next to the sanitary section a counter was placed, where the attendant in service was located.	The counter is still in place, although details may be changed. It is currently used as museum shop.
	Various	
	n.a.	
	Exterior	
	Accessibility	
	The original drawings indicate multiple steps towards the entrance door. However, in reality the amount of steps are limited and the apron around the entrance seems unchanged.	In the historical photos that we found, it is not clear if changes have been made. Recommendation Review access for disabled people, find solution that respects the original design.
	Pavement	
	See above	See above
	Vegetation / trees	
	See separate chapter	
	-	
Part 1b – East wing	**General description** This part includes at ground floor level the (original) temporal exhibition space, the butterfly exhibition space and auxiliary spaces, on the floor above the museum offices are placed.	
	Elevations	
	Wall surfaces (brickwork / plaster, etc)	
	At the ground floor level the rough stone wall from the entrance area continues and is folded around the building up to a glazed façade on the South side. Horizontal window surfaces are placed in this surface to provide daylight in the interior. The closed surfaces of the slightly protruding first floor are build up by brickwork on a concrete slab. The brickwork is painted white. Stretched horizontal window bays are placed over the full length of the first floor. The brickwork façade is dropping to the	There have not been considerable changes in the walls and surfaces, apart from the closure of a door in the north elevation at the former temporal exhibition space.

	ground floor on the other side of the glass façade on the south elevation.	
	Windows, doors, gates, entry points	
	The windows in the north elevation on the ground floor were indicated as steel industrial sash windows, the rest of the windows are indicated as adjustable glazed louvre systems (AGCO Louvres, documentation cannot be found on the internet, but similar systems still available) fitted between concrete mullions. At the south side, a large glazed façade is opening up the temporal exhibition space to the garden and the view on Kampala. The glass is fitted in steel window profiles and includes a single sliding door for access. To the north a flush door was placed underneath the stairs to the first floor.	Most of the windows and doors are still in its original shape as far as could be identified. The blocked door on the north side is an exception. It must have been closed between the 80's and now, since it was still showing on the photos of Rivard (1980). The glazed façade on the south elevation also still seems original, although burglar bars have been fitted at the bottom section. Recommendation: Remove burglar bars, find a more suitable solution to bring back the transparency of the original setup. On the top floor the louvre windows are mostly intact, apart from a section at the documentation service (as indicated in the original drawings). Recommendation: All window sections need to be checked on functionality and omissions. The stretched sash window bay at the ground floor on the north side has been blinded, for the purpose of a better exhibition environment. Recommendation: Look for a better solution to control the light and restore the appearance of this window bay.
	Exterior elements (decoration, sunshading, etc)	
	na	
	Paintwork / finishes	
	The stone walls obviously are fair faced and not painted. The steel window frames are painted white, it is not clear if this is the original color, but images show a light color, perhaps white. Historical color analysis will give more information on this. Concrete or bricked parts are painted white as well.	The historical color analysis will lead to more information on this. See ….
	Various	
		Over time, a lot of features have been added to the building, like camera's and cables for security installations, additional lights, solar panels, etc. This has not been integrated in the building in a balanced way, respecting the original design. Recommendation: Make an inventory of all these features and develop an approach for a better integrated way of working, less visible and less interruptive.
	Roof	
	Roof structure / construction	
	The roof used to be built up with a lattice rafter, carrying woodcrete slabs (most likely panels made out of pressed wood fibres bound with cement)	The roof has been changed, although it needs further research to look into the alterations. It seems that the roof overhang has been enlarged, and the roof is fitted with corrugated iron sheets for a

	with a thin cemented screed on top. Also this roof was finished with a aluminium foil as finish. The roof was having a minimal slope and towards the dome section it was running against the fair faced stone wall. Along the elevations the roof overhang was ventilated via slots between timber battens.	more water tight construction. The roof is 'pulled' over the rough stone wall on the west side, by breaking down part of this wall to make this possible. Recommendation: Look into the current roof construction, check functionality and eventual omissions. The original roof failed at several fronts, but it may be possible to reach a similar elegance with a more water tight construction.
	Roof membrane	
	The original roof membrane as described in the drawings was supposed to be fitted with an aluminium foil membrane.	As mentioned above the roof is now covered with a corrugated iron roofing sheet. Recommendation: The roof needs to be checked on leakages.
	Rainwater gutters and pipes	
	No gutters nor rain water pipes were fitted in this part, water was flowing off the roof edge.	There has been no change in this, the roof is not fitted with gutters. Recommendation: It may be worth looking into ways to include internal gutters in the roof structure, by which water flow from roof edges can be reduced, water collection can be introduced and erosion can be controlled better. However, this should not come at the expense of a more bulky roof edge.
	Roof lights	
	n.a.	
	Interior	
	Load bearing structure	
	The main structure is existing of a reinforced concrete framework of columns on the ground floor, carrying a reinforced concrete slab for the first floor. The roof is supported by lattice rafters reaching from north to south facades and also supported by the internal corridor walls. The facades on the first floor are existing of brick work and a framework existing of concrete elements that carry the roof structure.	The structure is still in place and does not show any structural problem, the condition is good.
	Internal walls	
	On the ground floor the internal walls are load bearing and thick, separating a specific exhibition section and auxiliary functions from the temporal exhibition space. On the first floor light separation walls are used between the corridor and work spaces located along the facades, and between the various functional and office spaces. The walls between	The changes to the original situation are minimal. On the ground floor the access from the temporal exhibition space has been made, while the door from the original mounting room to the yard (nowadays temporal exhibition space) has been blocked. On the top floor the only change that has been made is restricted to a new layout for the sanitary section. Also the louvres in the internal corridor have been removed, perhaps by changes in the ceiling. Recommendation: Review the current setup. The cross ventilation that is stimulated by the louvres may improve the internal climate.

	office spaces and corridor are fitted with louvre windows at the top section, to allow for cross ventilation.	
	Stairs / bridges	
	The main stairs leading to the first floor are located in the public space, with direct access from the 'dome' space. The concrete stairs are covered with a wooden finish, with a landing half way. The balustrade is made of a steel frame and handrail. There are second (steep) stairs and a 'hand lift' located in the auxiliary spaces (mounting room). Materialisation and functioning is not known by author, spaces were not visited while the original drawings give little information on this.	The main stairs are still unchanged, apart from the paintwork of the handrail, that in historical pictures show as dark and currently are light colored. The status of the staff stairs and hand lift is unknown.
	Wood work	
	n.a.	
	Finishes	
	Ceiling and wall on the ground floor were plastered and painted. For original colors see the color analysis. On the drawings was indicated that the floor finish was done with Marley tiles (imported from the UK). However it has been mentioned that below the current tiles a screed was found with grooves in a pattern of tiles. In historical pictures a dark floor is shown, it is not possible to determine what it is on the pictures.	The finishing of ceilings and walls is still more or less unchanged, apart from the color (see separate section). The floor finish has been changed, most recently with vinyl tiles. Recommendation: Remove the later added floor finishes and either restore the original floor below, or if in bad condition and if not appropriate, find a floor finish that matches the original effect, and following the original design that includes the same floor finish for all areas at the entrance floor level
	Installations	
	The staff sanitary section is still located at the same place, but refitted. The hand lift is still in place, functioning is unclear to us.	The sanitary section has been refitted, with a slightly different layout. There is no reason to recommend changes here on the basis of historical or architectural reasons, unless there are functional motives for alterations.
	Furnishings	
	n.a.	n.a.
	Various	
	The pond	
	A water stream with a pond around a structural column in the exhibition space was located at the	The stream must have been taken away when the Science and Industry wing was realised. In pictures around that time the pond is still showing, but without water. It is not visible anymore. Recommendation:

	glazed façade, the stream extending into the garden below the glazed façade.	It may be interesting to make reference to this artefact by marking the location of the pond and stream with a distinctive finish.
	Exterior	
	Accessibility	
	The glass façade gives access to the gardens at equal level.	This has not changed. Recommendation: Accessibility for disabled could be improved by providing a (semi) hardened path leading to other parts of the museum, also 'bridges' over gutters need to be provided.
	Path	
	On the original drawings there is mentioning of a path around the building.	There still is a path in place, in reasonably good condition. The original drawings do not indicate a gutter parallel to it, but it seems logical that this was provided as well. Otherwise it might have been realised later, when problems with rain water discharge became apparent. Recommendation The gutters are not always in great condition and need maintenance / repair.
	Vegetation / trees	
	See separate chapter	
Part 1c – West Wing	The West wing of the original building includes the main exhibition hall, that is accessible from the central hall with dome rooflight at equal floor level. By making use of the profile of the landscape, an extra floor level is included below the main exhibition hall, to be reached via the stairs at the end of the hall. We do not have a floor plan of this area, but in the sections it is mentioned that the floor is existing of murrum / earth. The sections and elevations show a partly open façade, which is also shown in the pictures during construction. However, in a drawing for internal changes from May 1961 there is a suggestion that the floor is already enclosed, although the drawing is limited to a small fragment (see image). Trying to find traces of an opened façade at basement level is not easy. The brickwork is lightly interrupted, but the vertical window bays do seem to be placed at once. We did not have a chance to visit the basement internally, which limits our insight. It may be that during or shortly after construction this change has been made.	As described, it is not entirely sure what the original situation is regarding the basement level. The exhibition hall however is still mostly untouched. The exhibition displays has been developed in the early years, perhaps even from the start. The raised floor level has been installed before the connection to the Natural History wing, as a historical images shows. The part that is reaching over the connection to that wing was not yet constructed in this image.
	Elevations	

	Wall surfaces (brickwork / plaster, etc)	
	The closed wall sections have been realised with red clay brickwork, painted with 'snowcem'. Snowcem is a brand name that also supplies a masonry paint. The masonry walls carry a concrete beam that follows the saw shaped profile of the wall. The concrete is finished with wall paint as well.	The paint over the brick work was a serious constraint in the early years. The paint was weathering very quickly, as can be seen in the images. After 2 years it was advised to replace the Snowcem by plaster. However it seems that it was painted again with a better suited paint. Some alterations to the original openings have been made, see below.
	Windows, doors, gates, entry points	
	The north and south elevations are existing of a series of walls placed under angle alternated by vertical window strips with industrial sash frames. On both sides the windows are facing eastwards, while the closed walls are oriented westwards. The entrance zone of the exhibition is defined by a parallel north and south elevation. In those walls, 4 rows of 2 square sash windows were placed. The elevation facing west was not having any windows. On the original drawings the vertical window strops run to ground floor level, in reality they run to the basement level on the south side. As mentioned above it is not clear if this has been changed during construction, or if this was a later change.	Ernest May underestimated the power of the equatorial sun, so the windows of the exhibition section were fitted with venetian blinds to reduce the heat. As mentioned earlier, it is not clear of the vertical window strips on the south side were running to the basement level from the start or if this was a later alteration. According to the above mentioned drawing with alterations in 1961, a door was added to the south elevation at the bottom of the stairs on the west side of the building, as well as a window on the west elevation. From the 4 rows of square windows in the entrance zone, 1 row was bricked up, perhaps out of safety reasons. The 4 rows were still shown on the pictures of Rivard, so this must have been an intervention from after the 1980's. Most of these windows are blocked, probably to darken the exhibition hall. The exhibition panels are partly covering these windows.
	Exterior elements (decoration, sunshading, etc)	
	N.a.	
	Paintwork / finishes	
	The brickwork walls and concrete elements in the elevations (beams) are all painted white (Snowcem). The steel window frames are painted white, it is not clear if this is the original color, but images show a light color, perhaps white. Historical color analysis will give more information on this.	The historical color analysis will lead to more information on this. See ….
	Various	
		Over time, a lot of features have been added to the building, like camera's and cables for security installations, additional lights, solar panels, etc. This has not been integrated in the building in a balanced way, respecting the original design. Recommendation:

		Make an inventory of all these features and develop an approach for a better integrated way of working, less visible and less interruptive.
	Roof	
	Roof structure / construction	
	The roof structure over this part of the building is a reinforced concrete slab, with a slight slope to the north and south elevation, the ridge in the centre. The roof edge follows that saw shaped outline of the building.	The slab still is in place, but the centre zone of the roof is covered with a hipped corrugated roof structure. Leakages were reported from the start and an extra layer over the existing roof was realised to stop the leakages. Recommendation: Check the condition of the additional roof layer and improve if necessary. It seems that the added roof is not visible from ground level, which makes it acceptable.
	Roof membrane	
	The original roof membrane as described in the drawings was supposed to be fitted with an aluminium foil membrane.	As mentioned in early reports, from the start the roof was leaking. Several actions, already from early on, have been trying to solve the problems. It is not clear if the aluminium membrane is still in place. It is obvious that the original roof membrane was not functioning well. The current roof setup is functioning better, but is impacting the architectural appearance of the building. See below.
	Rainwater gutters and pipes	
	No gutters or rainwater pipes were installed, the rain water was supposed to flow over the edge of the concrete roof slab. A gutter was included in the slab around the building, to catch the water and discharge.	The edges of the flat roof have been fitted with metal profiles and overflows leading to rain water pipes to channel the water flows and avoid unguided water sprawl, which is leading to higher maintenance pressure. Recommendation: Develop a detail that also limits the unguided water sprawl, but respects the slender roof edges. The rain water pipes do have a strong impact on the elevation, there may be a better solution that respects the original appearance of the facade better.
	Roof lights	
	n.a.	The original roof light is still in place.
	Interior	
	Load bearing structure	
	The roof is carried by concrete beams, cast over the external brickwork walls, and beams running from south to north elevation at every kink in the wall. The floor is also a reinforced concrete structure cast over beams in similar shape. The brick work columns and wall panes are supported by a foundation on concrete trance.	The structure is still in place and does not show any structural problem, the condition is good.
	Internal walls	

	This part doesn't include any internal partitioning walls, apart from a wall with openings at the basement level.	The wall openings have been closed in 1961.
	Stairs / bridges	
	At the western end of this part of the building, a concrete stairs is connecting the exhibition level with the basement level.	The stairs have not been altered over time, but it is understood that initially the stairs were public, but in 1961 they were closed off and were from then on only used for staff, leading to the depots of the museum.
	Wood work	
	n.a.	
	Finishes	
	Ceilings and walls were plastered and painted. In the original drawings the floor finish was indicated as The floor finish was indicated as Marley Tiles. However, underneath the current floor finish, a concrete screed has been found, in which a tile pattern has been marked with grooves, which is said to be the original floor finish.	The finishing of ceilings and walls is still more or less unchanged, apart from the color (see separate section). The floor finish has been changed, and is covered with vinyl tiles. Recommendation: Remove the later added floor finishes and either restore the original floor below, or if in bad condition and if not appropriate, find a floor finish that matches the original effect, and following the original design that includes the same floor finish for all areas at the entrance floor level
	Installations	
	n.a.	
	Furnishings / displays	
	Original exhibition layout not known.	The historical images show the same exhibition elements as today, with a slight difference at / above the entrance of the Natural History Wing. It is not clear if these displays are purpose designed by Ernest May. Remarkable is the raised level that is introduced, leading in 2 steps to a floor level realised above the connection to the Natural History Wing. Recommendation: The different floor levels in the hall do restrict the accessibility of the spaces for disabled. Also to a certain extend it interferes with the structure, layout and concept of the exhibition space. It may be reviewed.
	Various	
	n.a.	
	Exterior	
	Accessibility	
	This part of the museum doesn't have an external entry, apart from a staff entrance at the south elevation leading to the staff stairs and an additional door leading from the Transportation Gallery to the depots.	
	Pavement	

	On the north and south side a concrete rain water channel was planned for collection of water falling of the roof edge.	The channel as indicated in the drawings is not in place at present, on the south side there is a channel placed but it seems to be an alteration or a newly constructed channel around the recently erected Transportation Gallery. Recommendation: Review channels and rainwater collection, consider collection in underground tanks.
	Vegetation / trees	
	See separate chapter	
Part 1d – temporal exhibition space	The current temporal exhibition hall was indicated in the original drawings as 'yard', accessible from the museum building via a door in the mounting room and giving connection to an assembly shop. In the same block there was also space for lockers for staff, a wash room and toilet. The drawings do not give a clear indication if a roof was placed over the yard from the start. The scan of the longitudinal section is not of great quality and leaves us uncertain about this. It could be that during construction it has been decided to place a roof over it.	In 1961 an application was done for changes in this part of the building: • Change the 'yard' and assembly shop into a temporal exhibition space • Make the spaces accessible from public space in the museum (the previous temporal exhibition space, now music gallery). • Interconnect the two spaces to create a larger temporal exhibition space. In case the yard was still uncovered, this must have been the period in which the roof was placed of the yard. At the same time the building was extended eastwards with an additional yard and garage. Recommendation: It is interesting to know if the roof was originally in place, this may become clear by further research in the museum archive or by opening up the roof structure. Recommendation: Although this part of the building was integral part of the original structure, its value seems less prominent, since it was housing auxiliary functions and its appearance is not as prominent as the rest of the building, maybe with the exception of the façade with the open grills.
	Elevations	
	Wall surfaces (brickwork / plaster, etc)	
	Is part of the building was realised with an rough stone wall on all sides, while at the south elevation an open section was realised constructed with concrete grills with window frames in between.	The walls have not been changed, although the original east elevation has become an internal wall of the space that has become of the yard that was planned in 1961. The window openings in that wall are still visible, although blinded.
	Windows, doors, gates, entry points	
	A double door, most likely metal (aluminium) as indicated in the drawings, was placed at the north side, giving access to the yard. Industrial sash windows provided daylight in the locker and wash spaces for the staff. On the east elevation a row of industrial sash windows was placed providing daylight into the assembly shop.	After the conversion of the section to temporal exhibition space initially most of the external doors and windows remained unchanged. The double doors in the north elevation might have been replaced by timber doors with separate top and bottom parts, as this is the shown in the image from the 1960s, while it is not indicated in the original drawings. The current doors do not have this separation anymore. An image that most likely have been taken in the early 1960's show the south elevation from the inside, still along the lines of the drawings. In 1980s one of the images of Rivard is showing an unchanged situation on the south elevation, with a wooden door in the bay that is

	In the south elevation a section existing of a structure of concrete grills filled with windows from top to bottom over the full length of the 'yard' could be found.	located most eastwards. This door is not shown on the drawings, but it may have been a revision during the construction period. In the period between the 1980s and now the bottom section of the windows has been closed with a concrete panel, as is shown in the picture taken in 2020. The wooden door has also been replaced by a closed panel. The window facing east has been blocked.
	Exterior elements (decoration, sunshading, etc)	
	N.a.	
	Paintwork / finishes	
	The walls are executed as fair faced rough stone walls. Doors and windows were painted, also the concrete framework between the windows in the south elevation seem to have been finished with paint.	The historical color analysis will lead to more information on this. See ….
	Various	
	n.a.	
	Roof	
	Roof structure / construction	
	As mentioned above, it is not known if the roof over the current temporal exhibition hall is original. Also the construction is not known. This corrugated iron sheeting roof is sloping down towards the south elevation, while the roof over the other part of the building is sloping down towards the east. The internal construction has not been checked, but the span in the larger section requires support by timber rafters, the roof over the assembly shop most likely was also supported by rafters and had a large overhang.	This structure most likely has not been changed. The overhang has been taken away to make space for a roof over a later extension.
	Roof membrane	
	As described above, both roofs are covered with corrugated iron sheets, which most likely is the original state.	The state of the roof and especially the connected flashing against the walls is in bad shape and needs attention, see the rapid assessement report.
	Rainwater gutters and pipes	
	No gutters or rainwater pipes were installed in this part of the building, the water was collected via the gutters around the building.	This situation is still unchanged.
	Roof lights	
	n.a.	
	Interior	

	Load bearing structure	
	The roof is carried by the walls, apart from the south elevation, where the precast concrete structure is carrying the roof. A concrete beam is carrying the roof above the windows between the yard and the assembly shop.	The conversion from auxiliary spaces to temporary exhibition space has not have any implications to the load bearing structure.
	Internal walls	
	A wall with window frames was located between the yard and the assembly shop. From the main building access was provided via an internal door placed in the mounting room.	The partitioning wall was removed during the conversion into temporary gallery. At a later date the small room extension in the previous assembly shop was closed off with a separation wall, including a door.
	Stairs / bridges	
	n.a.	
	Wood work	
	n.a.	
	Finishes	
	Wall finished were not indicated on the drawings. The first pictures of the space that we have found are from the 1960s, showing a rough stone wall on the side of the main building. Other walls are plastered and painted white or a light color (B/W pictures). The ceiling seems to be finished with plaster- or soft board.	The fair faced rough stone wall has been plastered, as the current pictures show. It is not known when this has been applied. The ceiling has been replaced, as at the moment it is a figurative gypsum board.
	Installations	
	A toilet and wash room for staff was installed	These spaces have not been visited, it is unclear if the use is still unchanged and what the status is.
	Furnishings / displays	
	The original furnishing is not knows, as it was a part of the building that was used in another way than at the moment. There are no images found so far that give insight in this.	The temporary exhibition space offers a free floor that can be divided in a flexible way by means of temporal partitioning. It is not known if there was a specific system used from the outset.
	Various	
	n.a.	
	Exterior	
	Accessibility	
	Access to the original 'yard' was provided through a double door / gate at the north side. It may be that the single door in the south façade that was shown in the picture of Rivard has been realised during	The double doors are still in place, while the single door on the south side has been removed. The access that is provided by the double doors is for staff and not for public.

	construction period. At both sides of the building there is mentioning of a path along the façade, but no particular path leading to the doors/gate.	
	Pavement	
	Around the building a path was indicated.	The path is still in place and a channel to collect rain water has been placed as well. The path on the east side of the building has been removed as the building was extended when it was converted into temporary exhibition space. Recommendation: Review channels and rainwater collection, consider collection in underground tanks.
	Vegetation / trees	
	See separate chapter	
Part 2 – extensions 1961 Design Deans & Partners)	When the temporal exhibition space was realised in the former yard and assembly shop, the building was extended eastwards with an open space and a garage.	At a later stage the yard has been closed off with a roof. Also a separate sanitary block has been realised behind the garage. This was not shown on the drawings of 1961 but is shown on a picture of Rivard. Recommendation: These extensions do not reflect the architectural and technical quality of the main building. This part of the building is not considered of historic importance for the museum.
	Elevations	
	Wall surfaces (brickwork / plaster, etc)	
	The garage walls are built with concrete blocks, plastered. The wall around the yard is executed with precast concrete blocks in 'honeycomb' structure, also plastered.	The walls are not changed. The wall around the court has been raised to carry the roof that is placed over the yard. The surfaces over the raised part are finished with rough plaster, in contrast with the smooth plaster of the rest of the surfaces.
	Windows, doors, gates, entry points	

	The access to the yard is arranged through a metal gate, the garage access is through a timber door opened with a harmonica system. Both side elevations of the garage are fitted with windows.	No changes have been made over time.
	Exterior elements (decoration, sunshading, etc)	
	N.a.	
	Paintwork / finishes	
	The pasterwork of the walls have been painted, gates and windows as well.	The historical color analysis will lead to more information on this. See ….
	Various	
	n.a.	
	Roof	
	Roof structure / construction	
	The roof of the garage was planned as sloping eastwards, carried by beams supported by the walls. The roofing system is indicated on the drawing but not readable.	The slope has been changed and is now turned inwards. The new roof seems added on top of the original roof, in improvised way.
	Roof membrane	
	It is not known what roofing system originally was used over the garage.	The original roof has been covered or replaced by corrugated iron sheets, also covering the former open yard.
	Rainwater gutters and pipes	
	Roofs originally were discharging rain water from the roof edge. A channel was included in the floor of the yard.	The current roof is sloping towards a valley gutter that collects water from both the roof over the former assembly shop and the roof over garage and yard. The gutter discharges via a rain water pipe on the south side.

	Roof lights	
	n.a.	
	Interior	
	Load bearing structure	
	The roof beams of the garage are supported by concrete block walls.	The current roof structure is not entirely clear but makes an improvised impression.
	Internal walls	
	N.a.	
	Stairs / bridges	
	n.a.	
	Wood work	
	n.a.	
	Finishes	
	Interior finishes not known, floor finish concrete floor.	Not known
	Installations	
	N.a.	A sanitation block was added between 1961 and 1980's, with a separate septic tank.
	Furnishings / displays	
	N.a.	N.a.
	Various	
	n.a.	
	Exterior	
	Accessibility	
	Both gates are reachable from the surrounding terrain.	The current paved road is not directly connected with the garage doors and gate anymore.
	Pavement	
	Around the garage block a concrete slab was planned.	The slab still seems in place.
	Vegetation / trees	
	See separate chapter	
Part 2 (1962) Science & Industry	This extension was designed by Deans & Partners, and the realisation was connected to the independence of Uganda. It is opened at	Over time the building has been changed on various details. See below.

	Independence Day (8 October 1962) by the first president of Uganda and therefore it has a monumental status. The building is designed in a different way than the main building designed by Ernest May, as it is topped with a timber cross hipped roof structure in contrast with the flat concrete slabs that were covering the original parts of the building. The closed wall surfaces are however finished with painted brick work, just like a majority of the walls of the main building.	
	Elevations	
	Wall surfaces (brickwork / plaster, etc)	
	Fair faced brick work coated with white wall paint, just like the main building.	Finishes of the walls are still the same. Part of the original window bays have been closed over time, the new surfaces are finished in the same way. The changes have been made after 1980, since the Rivard pictures still show an unchanged building. The window façades at the basement level have been fitted with a parapet, most likely concrete or concrete blocks with a plaster finish, added with a window sill underneath the windows. Doors and windows still seem original.
	Windows, doors, gates, entry points	
	The access to the wing is provided via the opening in the breathing wall in the central hall. On the drawing is available the interconnecting corridor only is fitted with a single external door on the west side, but on a historical picture a double flush door at the east elevation is also shown. It is likely that this has been in place since construction. There is another external door located at basement level (half a level down), reachable via stairs from the main level. The original design was based upon a clear cut between closed surfaces and a timber structure including the roof and window frames for daylight. Above the window bays timber louvres were fitted for ventilation purposes. In the basement level window bays facing south secure daylight in the laboratory and office that are located there.	The surfaces with louvres already seem to be covered before 1980, since that is what the pictures of Rivard show. The window frames on the south side are currently completely blocked, while both at the east and west elevation the window bays have been reduced in size. On the outside the brickwork is continued, on the inside plasterwork is applied. Recommendation The clear cut between closed surface of painted brickwork and the timber top structure gives a strong architectural appearance. The closure of openings is disturbing this. It is recommended to restore the original design, but address the issues for which it was decided to change the structure. In the 1980 report of Rivard, it was mentioned that the windows were letting in too much light, so that needs to be kept in mind. On the south elevation – as described above – the paraped is closed and plastered, the bottom section of the façade is closed. Recommendation: Look into the changes that have been made to the facades and find out what lead to these changes. If possible, revert to the original design with a façade reaching from floor to ceiling.
	Exterior elements (decoration, sunshading, etc)	

	Above the door and windows of laboratory and office at basement level a concrete canopy is placed.	This detail is unchanged.
	Paintwork / finishes	
	The brickwork and concrete elements have been painted with wall paint. The windows at basement level are finished with a covering paint (window frames painted white, filling of parapet and closed surface green, based upon color pictures Rivard 1980). The window frames at roof level are painted with clear lacquer.	The historical color analysis will lead to more information on this. See ….
	Various	
	n.a.	
	Roof	
	Roof structure / construction	
	A timber structure with ridges in the shape of 2 crosses and a supporting triangle shaped structure along the facades leads to hyperbolic paraboloid roof surfaces.	The roof structure is still in place, untouched.
	Roof membrane	
	The original drawings indicate a finish with a copper roof. It is not clear if this has been applied. Destructive inspection needs to be undertaken to find out if a copper roof was installed originally.	The current roof is finished with another membrane, possibly EPDM. Recommendation: The current membrane has been discolored. When out of maintenance reasons a new membrane has to be applied, a color better suitable with the ensemble needs to be specified.
	Rainwater gutters and pipes	
	No rain water pipes were applied, the curved roof surfaces form valley gutters that were supposed to discharge in channels at ground level, as indicated in the original drawings.	Most likely the water was not guided in a concentrated way, so at a later stage the roof edges were equipped with roof edges that lead the water to the lowest sections of the roof edge, in an effort to concentrate the rain water and lead it more securely into the channels. Recommendation: The edges may lead to better handling of the rain water, however the edges are damaged and seem damaged. An improved detail will do more respect to the original design.
	Roof lights	
	n.a.	
	Interior	
	Load bearing structure	
	The roof as described above is carried by the closed brickwork elevations. The roof shape allows for a	The load bearing structure is still in place, no damages have been noted.

	relatively large span for a timber construction roof. The outbound forces are captured by brickwork piers. Steel rods also assist in breaking the outbound forces. The south side of the hall has been designed as split level, allowing for auxiliary spaces at basement level. The floor of this raised level is executed in reinforced concrete. The canopy is an extension of this concrete structure.	
	Internal walls	
	The wing is designed as an open area, with the exception of the laboratory and the office at the basement.	No changes have been made to the internal walls.
	Stairs / bridges	
	The split level stairs lead to the auxiliary rooms downstairs and the raised exhibition space upstairs. The stairs are executed in reinforced concrete with a pvc tile finish.	No changes have been made
	Wood work	
	n.a.	
	Finishes	
	Interior wall finishes: plasterwork, painted. Floor finish: pvc tiles applied on screed Ceiling: timber laths (t&g), coated with clear lacquer finish, also timber roof structure finished with a clear lacquer.	This is largely unchanged, apart from color schemes perhaps.
	Installations	
	The laboratory was planned with sinks and a work top. The room has not been inspected, so this is not confirmed.	The laboratory is not inspected, so the current situation cannot be described.
	Furnishings / displays	
	The original design also included moveable screens for exhibitions.	Part of the screens are still in use. A fixed exhibition on the oil industry has been placed in the hall. Recommendation: Reconsider restoring and rebuilding the moveable screens. Consider to take away / relocate the fixed exhibition, since its design and layout is not in line and neglecting the architecture of the hall.
	Various	
	n.a.	
	Exterior	
	Accessibility	

	The main access to the wing is internally, but a side door in the connecting corridor on the west side was planned for circulation of visitors. The other access (east and south side) were escape routes and for staff.	The connecting door to the current car gallery is allowing for a visitors circuit. This route includes stairs, which makes the circuit problematic for disabled visitors. Disabled visitors have good connection to this wing via the main entrance hall. The raised exhibition space is not reachable for disabled.
	Pavement	
	Around the building an apron of precast concrete was applied, the channels for rainwater discharge were included.	The apron is still in place, although in bad condition.
	Vegetation / trees	
	See separate chapter	
Part 3a (1964) Education	The building was designed by Deans & Partners. The construction of the building was supported by a grant from the Ford Foundation. The two-storied building consists of two parts: the double-height lecture hall to the north and the two-storied section rooming the Uganda Society Library on the ground floor and reading/ study rooms and offices on the first floor. The lecture hall covers 142m2 and has the capacity to seat approximately 200 people. The library covers 84m2.19Both parts are accessed through a joint lobby.	Original drawings are missing and historical pictures are very limited, so there is little insight in the historical development of the building part.
	Elevations	
	Wall surfaces (brickwork / plaster, etc)	
	The main structure of the building is existing of a concrete structure, the closed walls are existing of brickwork in cross pattern. The closed walls (brickwork and concrete) were painted white with a wall paint. In the brickwork surfaces, openings are made for windows and ventilation openings. The building is placed against the rough stone wall around the entrance section. The wall is still fair faced externally and internally. Windows have been placed in that wall to allow for daylight in the office spaces on the first floor of the wing, above the library.	No changes are known, apart from some ventilation units being placed in the auditorium, not shown on original images and the images of Rivard, but now in place.

	Windows, doors, gates, entry points	
	The building is not directly interconnected with the museum and has a separate entrance, that leads to a lobby with on the right the Uganda Society Library and the left the auditorium. The auditorium has 2 double doors on the north side directly opening to the outside, as escape ways. The north elevation is completely closed. The east and west elevations have a window strip just below the roof, at truss level. They provide daylight in the offices at the first floor. For the auditorium daylight is disturbing, but most likely originally this was the idea. The original drawings will provide information on this. Currently they are hidden above the ceiling in the hall. The east and west façade further have a window strip where the Uganda Society Library is placed. On the east side some of these windows are fitted with 2 glass panes in different positions, to allow for ventilation. Above the main entrance, a balcony is placed, with a glass façade towards an office / projector space for the auditorium. The auditorium is fitted with ventilation grills at the bottom section of over the full length of auditorium at the east and west elevations. Two windows have been placed in the rough stone wall on the side of the museum, to add more daylight in the offices at the first floor.	Some changes may have been made, but with the information at hand, it is not possible to identify this in detail. An added element are the ventilators with their grills placed on the walls. The placing of the ventilators is not adjusted to the partitioning of the elevation by the concrete structure. Recommendation The window strip at the top is partly not functional at the moment. It is advised to review the set up, to make these windows more functional. For instance cross ventilation above the ceiling of the auditorium could be achieved, which would improve the interior climate seriously. Also the daylight / ventilation situation in the offices need review, since the interior climate is not good for working and the artifacts that are stored here. The original design drawings are required to find out what intentions were and how eventual changes can be proposed with respect to the original design. For security reasons the main entrance has been fitted with security grills and a folding gate. This was already executed before 1980 (see also Rivard pictures) Recommendation: There are more elegant ways to create a burglar proof situation, with more respect to the original design. This needs to be studied.
	Exterior elements (decoration, sunshading, etc)	
	Along the west façade a canopy is placed, providing sunshade. The original structure was designed in a light manner, with thin bent tubes and a corrugated metal (or other) sheet. The sheet was kept lose from the wall to let air flow around it to avoid heat building up (but rain would go through).	On early pictures the covering material seems to be light colored. On the picture of Rivard it shows as asbestos sheets, while the current structure seems to be corrugated metal sheets with a timber substructure. Recommendation: The canopy as designed is more elegant than the current setup. However, the original structure probably lead to nuisance and perhaps damages due to water discharge against the façade. Further research may lead to a proposal that respects the original design better. The name of the museum is indicated with façade letters at the closed north façade, facing the road and entrance gate. This was not originally the case.
	Paintwork / finishes	
	All surfaces were painted.	The historical color analysis will lead to more information on this. See ….

	Various	
		Over time, a lot of features have been added to the building, like camera's and cables for security installations, additional lights, solar panels, etc. This has not been integrated in the building in a balanced way, respecting the original design. Recommendation: Make an inventory of all these features and develop an approach for a better integrated way of working, less visible and less interruptive.
	Roof	
	Roof structure / construction	
	Steel trusses spanning from east to west elevations carry – according to the information of the roof renovation project in 1983 – 6 inch hollow asbestos cement decking. These are covered with felt and bitumen roof. The minimal slope towards east and west elevations lead to a gutter running along both length facades.	The roof structure is still unchanged.
	Roof membrane	
	Originally the membrane was most likely felt and bitumen as mentioned in the roof repair analysis (1983).	Roof repairs have been taking place in 1980s, following the report. It is not clear if after that additional repairs have taken place. Recommendation: The roofing material is beyond its life span, and details need to be reviewed.
	Rainwater gutters and pipes	
	Both long sides of the elevations have rain gutters to catch the water discharge. At both sides two rain water pipes are placed.	As mentioned above, repairs have been done, but not always in the correct way. The capacity of the gutter, especially in relation to the limited slope of the roof, might be to small. Recommendation: The roofing and rain water discharge situation to be reviewed and detailed, with respect to the original design.
	Roof lights	
	n.a.	
	Interior	
	Load bearing structure	
	The building exists of a concrete frame, with on the side of the museum building an extra floor, formed by reinforced concrete and supported by heavy concrete beams spanning the full width of the building.	The load bearing structure is unchanged.
	Internal walls	
	The wing has a fairly basic layout, with the auditorium on one end occupying the full width of the building, on the other side there is the Uganda	There is no information available of changes over time, apart from the placing of a kiosk at the lobby, where refreshments and museum related merchandise is being sold. Most likely the staircase

	Society Library planned as an open space as well. The lobby at the entrance does not give direct access to the staircase, one need to go via the auditorium to reach the top floor. A toilet is located in the staircase. The top floor distinguishes the museum library, two office spaces, storage space and a toilet. The walls are (most likely) existing of blockwork and are plastered and painted.	used to be reachable directly from the entrance. Because of the positioning of the shop, the first floor can only be reached via the auditorium or the Uganda Society Library. Recommendation It may be considered to relocate the kiosk and find another location; the kiosk is blocking direct access for the first floor offices. This is not only an access, but most likely is also designed as a fire escape route, which is now blocked.
	Stairs / bridges	
	The first floor is reachable via the stairs, placed behind the lobby. The stairs are constructed in reinforced cast concrete.	No changes have been made.
	Wood work	
	n.a.	
	Finishes	
	It is not known what the original finished were, the original drawings and specifications are missing (so far). The current finished can be described as follows: • Ceilings: In the auditorium a suspended ceiling has been fitted. Most likely this was not originally the case. It may have been fitted to reduce heat radiation from the roof, or for acoustic reasons and for obscuring daylight during presentations. In the offices no suspended ceiling is fitted. • Walls: Most walls are plastered and painted, apart from the former exterior wall from the entrance section of the museum, which is a rough stone wall finish. This appears in the Uganda Society Library and the library and office spaces on the first floor. • Floors: The floor in the auditorium is finished with a screed, without further finish. The floor in the Uganda Library seems finished with a floor paint. The finishes of the stairs and top floor are currently not known.	Recommendations: The ceiling in the auditorium is in bad shape. It probably addresses some of the issues it has been installed for, but it also interferes with the architecture and building features. A solution may be found to make better use of the row of windows at truss level, for ventilation and daylight (to be controlled). It is also advisable to improve the climate control of the spaces upstairs. The climate in these spaces, where sometimes museum artefacts and also the library is located, is not good for the pieces, and certainly it does not provide a good working condition for museum staff.
	Installations	
	At the ground floor and first floor, a toilet is fitted in the staircase. Ventilation grilles are fitted in east and west elevations at low level.	Mechanical ventilation units have been added to the auditorium, three at each side. Recommendation: Climate control needs to be looked at in an integrated way; passive measures will help to reduce the heat, topped up with eventual additional active measures.

	Furnishings / displays	
	The original furniture of the auditorium is not known. Further research (design drawings but also old pictures) may lead to some information on this. It may be that in the administration of the Uganda Society Library information can be found about the status of the furniture. The furniture and lay out could be original. The light fittings seem original.	Recommendation: Further research is needed, in general an update is needed.
	Various	
	n.a.	
	Exterior	
	Accessibility	
	On the side of the main access, a covered gallery is running along the full elevation, with level access to the auditorium and USL. The apron is slightly raised from the entrance way surface.	Accessibility of the public spaces in this wing is good, with both spaces at the ground floor and minimal thresholds.
	Pavement	
	The apron is constructed of a concrete floor covered with a screed, polished.	The apron is in reasonably good condition.
	Vegetation / trees	
	See separate chapter	
Part 3b (1964) Natural History	It is a double-story structure consisting of two parts; a gallery and a high octagonal exhibition hall. Additional exhibition space entered from the hall and stores are located on the ground floor. The hall is linked with the core-building through a gallery which is currently used for exhibitions. It is not known whether this was the intention. Below descriptions are based upon observations only, since there are not drawings or specifications from the original building available, nor from other interventions, apart from a report on roof repairs from 1983. On the location of the wing, Ernest May originally designed an open air gallery, to be reached via the stairs from the Ethnography Gallery. This has never been realised, shows a remark on a foundation drawing.	The windows running across the western wall of the gallery have been covered up which suggests that the light and possibly heat they provided made it hard to enjoy the expositions located in this space. The gallery has air-vents inserted in the upper part of the walls on both sides. More alterations have been done overtime, becomes clear when inspecting the building. Most of the alterations seem to address the troublesome passive climate control of the building, especially the stretched corridor from main building to the octagonal hall at the end of it. The orientation of this building is problematic, since it is catching the full blast of the morning and afternoon sun. Recommendation: To review the structure and add / improve the passive climate control measures to optimise the internal climate for the collection and visitors.

	Elevations	
	Wall surfaces (brickwork / plaster, etc)	
	The main structure of the building is existing of a concrete structure, the closed walls are existing of fair faced brickwork in cross pattern. In contrast to all building parts realised earlier, the exterior walls of this part have not been painted. Doors at the ground floor give access to auxiliary spaces, in the octagonal structure windows have been placed to provide daylight.	Obviously one has tried to solve the heat problems inside of the building. It is assumed that the gallery originally was designed with a window façade facing west from floor to ceiling. A brickwork parapet and columns have been introduced to reduce the solar radiation impact. Likewise have brickwork surfaces been introduced at window openings in the octagonal hall, again facing west. Recommendation: Completely review passive climate control measures, including the haphazard brickwork infills. It has not been checked how structurally stable the infills are.
	Windows, doors, gates, entry points	
	The gallery on the first floor, accessible from the Ethnographic gallery, has most likely been fitted with a window façade from one end to the other. The stores at the ground floor have been fitted with timber grilled windows for ventilation. Timber doors give access to the stores, service areas and workshops on the ground floor. Some of the windows are fitted with shutters. The large hall on the first floor of the octagonal part is fitted with a large window on the east and west side, including ventilation grills. A circular and rectangular metal ventilation opening is placed on the east and west elevation on the ground floor of the octagonal building. Just underneath the roofing structure, ventilation slots have been fitted for discharge of heat all around the octagonal building part.	The current situation gives insight in a constant struggle to deal with the problematic climate control in the exhibition areas. All windows have been blinded and parts have been blocked with brickwork infills. The orientation of the windows in both gallery and the octagonal hall cannot be worse. The gallery has been fitted with aluminium windows. It is not sure if this a later intervention or existing from the start. Recommendation: (see above) integral review of passive climate control measures.
	Exterior elements (decoration, sunshading, etc)	
	A canopy has been placed over the ventilation window frames on the ground floor along the west elevation, in reinforced cast concrete. Above the other ventilation openings in the gallery at the first floor as well as ground and first floor along the east elevation, corrugated metal sheeting canopies have been placed, most likely at later date to reduce water ingress during heavy downpour.	The condition of the concrete canopy is not great, needs further assessment and repairs. Recommendation: Integral review of passive climate control
	Paintwork / finishes	
	Doors and windows are painted.	The historical color analysis will lead to more information on this.
	Various	

	n.a.	Over time, a lot of features have been added to the building, like camera's and cables for security installations, additional lights, solar panels, etc. This has not been integrated in the building in a balanced way, respecting the original design. On this building part an artist has been applying the basis for a not completed artwork on the brickwork (south façade). Also an air conditioning unit has been fitted at the same façade. Recommendation: Make an inventory of all these features and develop an approach for a better integrated way of working, less visible and less interruptive.
	Roof	Building has been closed in 1977 due to severe leakages of the roof (report Rivard).
	Roof structure / construction	
	The roof structure of the gallery is not known. It may have been a concrete slab with a sloped roof, or otherwise. Further assessment is needed to find out the current situation. The roof of the octagonal building part has been consisting of a steel substructure, supporting a roof existing of hollow asbestos cement elements, just like the education wing, according to the 1983 roofing report.	The roof structure is still the same, although the roof was in a very bad condition in the 1970s, leading to the closure of this part of the building for several years. Improvements have been made in the 1980s. What exactly has been done is not clear at the moment. It may have been limited to the application of new membranes, or eventually additional roofing structures may have been applied. Recommendation: Integral review of passive climate control, since the roofing structure also has large impact.
	Roof membrane	
	According to the roofing repair report from 1983, a felt and bitumen membrane was applied, which was leaking badly.	In the 80s the roof has been improved, see above.
	Rainwater gutters and pipes	
	This building part has not been fitted with gutters and rain water pipes. Water is discharged on the concrete apron on the west elevation and in a channel between the transportation gallery and the building on the east elevation.	No changes have been made.
	Roof lights	
	n.a.	
	Interior	
	Load bearing structure	
	The structure of the building exists of a reinforced concrete frame, including columns and concrete floor.	The load bearing structure is unchanged.
	Internal walls	
	The internal walls are limited to a separation wall in the stores and walls separating the visitors area from the displays at the ground floor of the octagonal building. The separation walls are most	Not information of changes over time available.

	likely realised in blockwork, finished with plaster and paint.	
	Stairs / bridges	
	Stairs from the main hall on the first floor in the octagonal building lead to the exhibition spaces on the ground floor. Concrete stairs lead from an external landing to the Transportation Gallery on the east side of the building. It is not sure if this has been constructed recently or if this was already existing from the outset.	
	Wood work	
	n.a.	
	Finishes	
	The original situation is not known. The current finished can be described as follows: • Ceilings: The gallery has a plastered and painted ceiling. The octagonal hall has no ceiling, the hollow asbestos cement elements and its supporting steel structure are in view. The visitors section of the ground floor is applied with a plastered and painted ceiling. As far as can be traced back, this is also the case for the storage spaces. • Walls: All walls are plastered and painted. • Floors: The floors in the visitors sections are finished with vinyl tiles. The floor finish in the storage sections is not known.	
	Installations	
	n.a. / not known	
	Furnishings / displays	
	The original displays have been severely damaged by the leakages in the 1970s. It is not sure if the displays have been repaired or replaced.	Recommendation: Further research is needed, in general an update is needed.
	Various	
	n.a.	
	Exterior	
	Accessibility	
	On the side of the west elevation, a covered gallery is running along the full elevation, with level access to the stores.	The visitors circuit is running from the octagonal hall from the first floor via the stairs into the Transportation Gallery. This is a major obstacle for disabled visitors. Recommendation:

	The visitors circuit is running from the octagonal hall from the first floor via the stairs into the Transportation Gallery. This is a major obstacle for disabled visitors.	Disabled access to be reviewed
	Pavement	
	The apron is constructed with precast concrete elements, with a concrete channel running along for rainwater discharge.	The apron is in reasonably good condition, perhaps needing some repairs. However, especially on the west side, there is debris located on the apron that needs to be removed. Also the 'storage' on the other side of the gallery, where the channel is located, needs to be removed.
	Vegetation / trees	
	See separate chapter	
Part 4 (1972) Stores	The stores are added in 1972 and are consisting of a single layer extension towards the north, in line with the Natural History Gallery. It is only accessible from the core part of the building, and has large metal doors at the north end of the west elevation for delivery.	There is no information on the original documents of this part of the building. The roofing repair report from 1983 gives some information or the original roof.
	Elevations	
	Wall surfaces (brickwork / plaster, etc)	
	The main structure of the building is existing of a concrete structure, the closed walls are existing of fair faced brickwork in wild pattern. Just like the Natural History Gallery, the exterior walls of this part have not been painted. On the north side of the building, the sloping terrain gives room for a large expedition door / bay. The wall below ground floor level and the closed north façade are finished with a rough stone wall. The east elevation, facing a retaining wall, is also mostly existing of brick work surface between the concrete columns.	Between the concrete canopy and the roof on the west and east elevations, a plastered wall surface is visible. From the report on the roof leakages it can be concluded that this has been added at a later date, to solve leakage problems of a flat concrete roof slab without a slope. This wall most likely consists of concrete blocks and is plastered.
	Windows, doors, gates, entry points	
	Over almost the full length of the building a row of windows has been placed to allow for daylight. The window frames have a diverse filling, ranging from glass, to ventilation grills, to blocked panes. At the expedition bay large metal doors are placed. The wall surface below the roof also includes open frames for ventilation purposes, provided with mesh to keep birds out.	There is no information on changes. Recommendation: Due to the orientation of the building, it is likely that climate control for the stored artifacts is problematic. It is recommended also to develop proposals for passive climate control for this part of the building.
	Exterior elements (decoration, sunshading, etc)	

	A canopy has been placed over the window frames on the ground floor along the west elevation, in reinforced cast concrete. Also on the east elevation a concrete structure has been placed.	Recommendation: Integral review of passive climate control
	Paintwork / finishes	
	Doors and windows are painted, as well as the plastered surface between concrete canopy and sloped roof.	The historical color analysis will lead to more information on this. See ….
	Various	
	n.a.	
	Roof	
	Roof structure / construction	
	According to the roof repairs report from 1983, the roof structure was to be designed as a sloped concrete roof structure, but in reality flat with problematic water discharge.	Although no documentation has been found, most likely the report led to the realisation of a sloped roof with a surface of corrugated metal sheeting, by erecting an additional block wall on the concrete slab, with a timber structure spanning between the two walls. This additional roof layer will have improved the passive climate control seriously.
	Roof membrane	
	According to the roofing repair report from 1983, a felt and bitumen membrane was applied, which was leaking badly.	The additional roof is existing of a corrugated metal roof.
	Rainwater gutters and pipes	
	This building part has not been fitted with gutters and rain water pipes. Water is discharged on the concrete apron on the west elevation and in a channel between the retaining wall and the building on the east elevation.	No changes have been made.
	Roof lights	
	n.a.	
	Interior	
	Load bearing structure	
	The structure of the building exists of a reinforced concrete frame, including columns and the (initial) roof slab.	The load bearing structure is unchanged, but topped up with a structure to carry the additional roof.
	Internal walls	
	The internal walls are limited to a separation wall in the stores. These spaces have not been visited. The separation walls are most likely realised in blockwork, finished with plaster and paint.	Not information of changes over time available.
	Stairs / bridges	
	n.a.	
	Wood work	
	n.a.	

	Finishes	
	The original situation is not known. The stores have not been visited, so finishes are not known.	
	Installations	
	n.a. / not known	
	Furnishings / displays	
	n.a.	
	Various	
	n.a.	
	Exterior	
	Accessibility	
	There are no external doors, apart from the expedition doors at the north west end, facing west. This wing is only housing auxiliary spaces, public access is not relevant.	It is not known if the expedition doors are still in function. The bay does not seem reachable for larger transport vehicles. Recommendation If delivery with larger trucks is still relevant for the museum, this expedition access should be taken into account. If not used anymore, its function can be reviewed.
	Pavement	
	An apron along the west façade is constructed with precast concrete elements, with a concrete channel running along for rainwater discharge. On the east side, between the retaining wall and the building, a rain water channel is located.	The apron is in reasonably good condition, perhaps needing some repairs.
	Vegetation / trees	
	See separate chapter	
Part 5 (2016?) Transport gallery	This building part has only recently been constructed, and is existing mainly of a larger roof, placed in between the main building, the Science and Industry and Natural History Wings. The sides towards the other building parts are kept open, while a large wall on the south side is closing the part off. Despite of the recent realization, there are no drawings or specifications available.	Recommendation: Although painful due to the recent realization of this building part, it is recommended to dismantle the structure and find an alternative location and design a fitting structure for this part of the collection. The gallery, as it is designed, is disrespecting the original main building, as well as the other building parts, and having a negative impact on the internal climatic conditions of the building parts around it. Also, the conditions in the gallery itself are damaging for the collection and do not make it a pleasant space for visitors. The material (steel structure, roofing sheets) can be reused.
	Elevations	
	Wall surfaces (brickwork/plaster, etc.)	
	The south elevation is the only closed wall surface. It is a concrete block structure, plastered both in- and exterior and painted.	During a recent exhibition, artists have been asked to apply murals on the exterior façade.

	Windows, doors, gates, entry points	
	The south elevation is fitted with a large steel door, providing access to the gallery with cars. The visitors gain access to the gallery via the stairs coming down from the first floor of the Natural History gallery; the route continues via stairs leading to the Science and Industry wing.	
	Exterior elements (decoration, sun shading, etc.)	
	n.a.	
	Paintwork/finishes	
	The elevation is painted, mostly covered with a mural.	The historical color analysis will lead to more information on this. See ….
	Various	
	n.a.	
	Roof	
	Roof structure / construction	
	The roof is carried by a steel structure, spanning the former full-court between the main building and two wings of the museum.	
	Roof membrane	
	The roof is existing of corrugated metal roofing sheets, with strips of translucent panes to allow for daylight	
	Rainwater gutters and pipes	
	The roof edge has been fitted with a gutter, leading to downpipes that discharge in the channels between the buildings.	
	Roof lights	
	There are strips of translucent roofing sheets included in the roof plan.	
	Interior	
	Load bearing structure	
	Steel structure	The steel structure is very industrial without any elegance, no match with especially the main building.
	Internal walls	
	There are no internal walls. The original retaining wall (1954) is still in place. It creates an extra level in the space.	
	Stairs/bridges	

	Stairs lead to the Natural History Gallery and the Science and Industry Gallery (see the respective descriptions)	
	n.a.	
	Woodwork	
	n.a.	
	Finishes	
	The supporting steel structure is painted, the concrete floor is finished with a screed, painted in a reddish color. The retaining wall, originally a rough stone wall just like elsewhere in the buildings, has been smoothly plastered and painted.	
	Installations	
	n.a.	
	Furnishings / displays	
	A steel balustrade has been placed at the edge of the internal terrace formed by the former retaining wall.	
	Various	
	n.a.	
	Exterior	
	Accessibility	
	The large metal doors give access to the space from the outside.	
	Pavement	
	n.a.	
	Vegetation / trees	
	See separate chapter	

General:
- Asbestos inventory
- Maintenance programme

Team Members

Rose Nkaale Mwanja, PROJECT SUPERVISION, Museum Management – Responsible for ensuring the project meets objectives in alignment with goals of the museum, quality control, and interface with VIPs in Civil Society and the Government –reports to Minister of Tourism, Wildlife, and Antiquities and the Building Committee.

Joseph Ssebunya is the project manager for the Uganda National Museum Conservation Management Plan. He holds a bachelor's degree in Business Administration (2016) from Nkumba University, a diploma in Business Studies (2008) from Makerere Business Institute, along with other studies in museum and heritage practice. My 14 years of experience in Museum Education explores more on community outreach and engagement, fostering conversations around the great value of museum collections, promotion, heritage studies, and conservation with a unique ability to understand the trends using exceptional communication skills, devising and delivering creative and imaginative learning sessions, Developing and sustaining professional relationships through excellent communication. Joseph is the Education officer with the Uganda National Museum and the Treasurer of the ICOM-Uganda National committee, as well as the project Coordinator for the Getty Foundation's Keeping it Modern project for preparing a conservation management plan for the Uganda Museum Building. He has had numerous other training including Seminar on cultural conservation and tourism development for English speaking African countries 2020, China – Beijing 2020, Essential digital skills for museum professionals, Museum Sector Alliance, 2019; Education Module II, Getty East African Program, 2014; Defensive driving, Ministry of tourism wildlife and antiquities, 2014; Education module I, Getty east African Program, 2013; Basic museum and heritage concepts, department of museums and monuments; World heritage volunteer camp, Kasubi Tombs, UVDA. 2012; Hardware and software maintenance, Uganda industrial research institute, 2008; Networking, Uganda industrial research institute, 2008; Statistical analysis using SPSS, Uganda industrial research institute, 2008; Computer applications, Uganda industrial research institute, 2008

Rand Eppich, Ph.D. MBA - Rand is a conservation architect who believes that the protection of our built historic environment is essential because it has a profound impact on the quality of life and shapes our identities. He has spent the last 30 years working toward its protection throughout the world on projects ranging from the creation of architectural drawings and specifications to management and economic development. His latest assignments have been in Tajikistan, Albania, and Zanzibar for the World Bank, in Georgia with BlueShield on the Getty Foundation's Keeping it Modern initiative, in Suriname for management planning for IDB, and in Cyprus for the UNDP. Rand holds a Bachelor's in Architecture (historic preservation focus), a Master´s in Urban Design + Architecture from the University of California Los Angeles, an MBA from UCLA, and a Ph.D. from ESTA, Universidad Politécnica de Madrid on social, economic development utilizing cultural heritage. Rand spent 13 years at the Getty Conservation Institute as Senior Project Manager and has lectured at the British Museum, KU Leuven, Penn, Pratt, UCLA, METU, Athabasca, and most recently at the University of Navarra. He is a member of ICOMOS and Europa Nostra. He has worked in Uganda on a variety of projects and enjoyed the collaboration with Joseph, the museum staff and other team members.

Abiti Adebo Nelson is a conservator for the Uganda National Museum. He is responsible for the conservation of the material objects in the museum. For this project, he was focused on the historic paint finishes and other original finishes, such as the floor.

Bart Ankersmit is active as a museum climate consultant in the Netherlands. Based at the Cultural Heritage Agency of the Netherlands, which is part of the Ministry of Culture, allowed him to work with many small and large museums throughout the country. As a researcher, Bart combines the academic world with the daily practice of collection managers. He actively researches the impact of an incorrect indoor climate on collections and coordinated several Ph.D. projects to study options to implement sustainability strategies in museums. In his work, he applies risk-based decision-making, which forces him to maintain a wide view of preservation and risk mitigation strategies. Risk management methodologies lie at the heart of his consultancy. Bart produced several

publications on indoor climate studies. In 2017 the book 'Managing Indoor Climate Risks'(Springer) was published. As a trainer, Bart has successfully organized several internal workshops on the theme of managing the indoor climate in museums. He holds a Ph.D. in Inorganic Chemistry.

African Architecture Matters is a not-for-profit consultancy working in the fields of heritage, planning, research and education. Active since 2010 we work on projects that support inclusive, sustainable and culturally sensitive development as well as projects that are concerned with the dissemination of knowledge on the historical and contemporary African built environment. Our approach is integrated, multidisciplinary and emphasizes an open and continuous dialogue with the stakeholders. We always work in association with local partners and seek to contribute to knowledge exchange and capacity building by involving communities, scholars, governmental parties and the private sector. We deliver outputs that are based on research and expert analysis and consider the physical, historical, social and policy context in which the work is conducted.

Iga Perzyna is an architectural historian working in the fields of heritage conservation, architecture, and planning. Together with African Architecture Matters, she has been working on multiple projects related to the African urban environment since 2015, including publications, exhibitions, and urban design and planning projects. Iga is the co-editor of the *Ng'ambo Atlas. Historic Urban Landscape of Zanzibar Town's 'Other Side'* presenting the findings of the research project underpinning the local area plan for the new city center of Zanzibar Town and the co-editor of the publication *The Beeker Method: Planning and Working on the Redevelopment of the African City*. Recently she has been involved in the work on the *Blueprints for Majestic Cinema* project in Zanzibar concerned with the adaptive re-use of the last, unaltered, purpose-built cinema in Stone Town. Iga is based in Poland, where she works with a local NGO concerned with the revitalization of urban spaces. She is the vice-chairman of the Inicjatywa Miasto Foundation and the current director of African Architecture Matters.

Berend van der Lans (1966) has been working as an architect in Europe and Africa since 1992, active in the fields of conservation, adaptive reuse, newly built, and urban planning. In 2001, he co-founded the ArchiAfrika foundation, aiming to put African architecture and urbanism on the world map by making knowledge available, connecting people, and enhancing the architectural debate on the continent. Berend facilitated the transformation of the foundation to an international organization with its base in Accra, Ghana, since 2012. In 2010, Berend and Antoni Folkers started African Architecture Matters. He has been involved in many of the projects, including consultancies on historical property management and the role of architecture, culture, and heritage in the African urban environment, student workshops, and community involvement. Until recently, he served as the director of AAmatters and was responsible for office management and communication. He currently holds the position of associate. Berend has published articles, contributed to publications, and given lectures on various topics on architecture and urbanism in Africa. As an architect, Berend van der Lans has been undertaking a wide range of projects, from rural hospitals in Africa to high-level restoration of state monuments in the Netherlands. Since 2007 he runs Architecture Plus, offering architecture and project management services from his base in Amsterdam.

Denis Lukwago is an Architect with a lively passion for heritage conservation – He strongly acknowledges that with a genuine past, there should be a meaningful future for the coming generations to cherish, embrace and enable effecting constructive directions!] with a strong drive in heritage preservation, conservation, protection and promotion as mandated primary functions, for my generation, to ensure passing on the greater good that contains a pure and crystal clear Heritage treasure to the coming generations. Denis has worked for the last six years preserving, conserving and protecting, Heritage for Cultural Institution(s) (Buganda Kingdom), National and International Heritage Sites from the core perspective of providing Heritage conservation technical advice, documentation through the generation of drawings, details, direct supervision of stabilization and restoration works, evaluation of suitable Architectural consultants and Contractors to execute the stabilization and restoration projects, and supervision of procured Architectural consultants and Contractors working on the stabilization and restoration projects. The conservation assignments include Buganda Kingdom Projects: - Natural sacred sites; Bugunga Mpigi

district, Jinja Mawuuno - Wakiso District, Bugunga - Mpigi District, Jumba - Mukono District, Katwe - Kampala City, Lwadda – Wakiso District, Matugga - Wakiso District. Mulungu Palace at Munyonyo; Design of the Royal Boat race arena. National projects:- Traditional Housing Project at the Uganda Museum Cultural Village – Kampala City, Fort Thurston Monument – Mayuge district, Mugaba Palace Project – Mbarara City, Uganda Museum Expansion, the Clock - Tower Monument relocation Project – Kampala City, Nyero Rock Art site Information Centre – Kumi district, Pakwach Tourism Information Centre – Pakwach district and UNESCO Projects: - Research about Ganda Architecture, in addition to the formation of the International Illustration Guide for construction of the Ordinary Ganda Housing Structures, Kasubi Stabilization, and Restoration Projects, Kasubi Master-plan Project, Kasubi Disaster Risk Management Plan. Other Projects include Philip Omondi Stadium for Kampala Capital City Authority Football Club – Kampala Capital City, Busia Border Market – Busia district, Soroti Value Addition Market – Soroti district. Kitalya National Prison – Mityana district, Ever-Brown Bakery – Wakiso district, Multi-purpose Hall at Our Lady of Good Counsel Gayaza – Wakiso District, The Church of Jesus Christ of Latter-Day Saints, Kabowa Addition – Kampala City, Mbarara Model Market – Mbarara City, Agricultural Processing Industry at Bobi sub-county in Gulu District. He is a Conservator of Sites and Monuments in the Department of Museums and Monuments under the Ministry of Tourism, Wildlife, and Antiquities, as well as the Site Manager of the Tombs of Buganda Kings at Kasubi World Heritage Property in Kampala district. He is a graduate member of the Uganda Society of Architects. Denis holds a Diploma in Architecture and draughtsmanship, a Bachelor in Architecture, a certificate of participation in the Third and Fourth World Heritage Site Managers` Forum at Baku, Azerbaijan (2019) and Fuzhou Peoples Republic of China (2021), respectively. Also attended the Anglophone World Heritage Site Managers` Workshop for the Third Cycle of Periodic Reporting at Nairobi, Kenya (2020).

Catherine Ajiambo is a sociologist and Research Officer at Uganda National Museum, where she coordinates research activities in the museum and protection of cultural heritage resources through documentation, develops and creates research guidelines for both national and international researchers. She has worked with Uganda National Council for Science and Technology (UNCST) to streamline research in cultural heritage at the department, and she is part of the team spearheading the establishment of a scientific review board. She is also an avid activist of built heritage conservation, exploring policy frameworks to enhance their conservation, working together with Cross-Cultural Foundation Uganda in the campaign to protect historical buildings in Uganda. She won a Getty grant to attend the IIC Congress Edinburgh 2020 “Practices and Challenges in Built Heritage Conservation.” Catherine is currently part of the team developing a conservation management plan for the Uganda National Museum building working alongside the Architectural historian to explore archival materials in Kampala. She is also the project coordinator of the “Museum Futures” Africa project funded by the Goethe Institute for the Uganda National Museum.

Eunice Ngangeyu, a researcher currently pursuing her Masters in Environment and Natural Resource Management at Makerere University (MUK), is a post-graduate of Museums and Heritage Studies that she attained from the University of Western Cape (UWC) – South Africa. She has certificates in Administrative Law and Computer Software Applications. She did a Bachelors in Public Administration and Management at Uganda Christian University (UCU) before joining the heritage sector through Uganda National Museum, where she has now worked for nine years since 2013, still counting. After her heritage course, she became so passionate about heritage. In relation, she curated an exhibition, ‘Mandela’s children at Nelson Mandela Gateway (NMG) that run from Dec to Jan 2016/2017, and later wrote an illustrated Museum comic book for children to identify with the Uganda Museum easily. She is currently the Secretary-General of ICOM – Uganda.

Adengo Architecture Practice / Our practice is grounded in research and multidisciplinary collaboration. Our work is focused on communicating the value of design in African cities. In a context where non-designers often build their own homes and other structures, we believe that it’s critical to make the case that architects and urban planners can improve people’s everyday lives, helping cities develop sustainably. Adengo Architecture’s work ranges from the design of

buildings and furniture to research and advocacy focusing on the urban and regional scales. We work with our clients and collaborators to develop innovative solutions that are both sustainable and affordable.

Doreen Adengo is a registered architect in the United States and Uganda. After completing her undergraduate and graduate studies at the Catholic University and Yale, respectively, she worked for design firms in London, Washington DC, and New York. Now based in Kampala, she founded Adengo Architecture in 2015. Doreen's research and advocacy work has included exhibits and workshops exploring Ugandan urbanism and design at the Goethe-Zentrum Kampala, The British Council Uganda, and the Architecture Museum of the Technical University Munich. She co-curated the 'African Modernism: Architecture of Independence, Kampala workshop' with Manuel Herz at the Makerere Art Gallery in Kampala. She has taught at The New School, and Pratt Institute in New York, the University of Johannesburg's Graduate School of Architecture and is currently a sessional lecturer at Uganda Martyrs University.

Franklin L. Kasumba is a graduate architect working with Adengo Architecture in Kampala, Uganda. He believes that architecture has the potential to provide solutions that address how people live and interact with their spaces with respect to context, lifestyle, culture, and climate. He is also passionate about architectural photography and has contributed to the Dar es Salaam Centre for Architectural Heritage's permanent exhibition, as well as the Anza Magazine, a magazine that covers architecture in East Africa. He has practiced architecture at different scales on various projects in Tanzania from 2014 before moving back to Uganda in 2018. He holds a Bachelor of Architecture degree from Ardhi University (Tanzania) and is a member of the Uganda Society of Architects.

William Samuel Byangwa is a graduate architect with Adengo Architecture (Uganda). He started his internship in 2014, getting exposed to the different facets of the practice in building design, research, urban design while working at Eco-Shelter & Environmental Consultants in Uganda. He was involved in an urban design project of five (5) towns in the oil region of Hoima District. He participated in a feasibility study to curb the housing shortage in Uganda through a pilot project of producing 500 affordable housing units in Greater Kampala Metropolitan. William is passionate about research and architectural documentation, exemplified in the successful documentation of four (4) iconic buildings and public open space in Dar es Salaam from different periods. William has attended workshops in Dubai, and Kenya received training in solar development for sustainability, green building certification, PPPs, and project management. These workshops fostered a strong interest in sustainable architecture. He holds a Bachelor of Architecture from Ardhi University (Tanzania) and membership of the Uganda Society of Architects.

STAKEHOLDERS

Numerous stakeholders are concerned for the future of the Uganda National Museum and have participated at the 1st Uganda National Museum International Conference, various meetings organized by the management. There are also international stakeholders in those who have visited from UNESCO and ICOMOS as well as professionals. These stakeholders have been contacted at various times for their input into this Conservation Management Plan and are listed below.

Professional Stakeholders, Architects, and Engineers

Representatives from the architects, engineers, building professionals, and others concerned with the property. The chamber of Architects and Engineers of Kampala and ICOMOS Uganda.

International Academic Stakeholders

International stakeholders were also contacted, including representatives from the Centre of UNESCO, ICOMOS, and others.

Government Stakeholders

Representatives from the various Ministries, including the Directorates, are all important government stakeholders. As the work at the Uganda National Museum involves cross-ministry collaboration, including housing and tourism, it was important to contact these stakeholders.

Uganda National Museum

UGANDA NATIONAL MUSEUM VISITOR SURVEY

The following survey was developed to understand the motivations of visitors to the Uganda National Museum and their impressions of the site. It was developed, discussed but has not been tested or implemented yet. This must be addressed later to obtain better information on the visitor to the museum.

Would you be willing to take a survey to help Uganda National Museum provide a better visitor experience? We are interested in your opinion of your visit. We wish suggestions for how we might improve the visit for everyone who comes to enjoy this important cultural, historical, and natural site.

This will only take a few minutes, and **all answers are anonymous**. Thank you!

☐ Male ☐ Female

1. Is this your first visit to Uganda National Museum? ☐ yes ☐ no
   a. If this is not your visit, how many times have you been here? _____
   b. When were you last here? _____
   c. Was your impression better or worse than the last time? ☐ Better ☐ Worse
2. What City are you from? _____
3. How did you arrive?
   ☐ Private car ☐ Special tour ☐ Taxi ☐ Bus
4. How long was your visit? ☐ 1hr ☐ 1.5hrs ☐ 2hrs ☐ 2.5hrs ☐ 3 or more hrs
5. Was the visit ☐ too long? ☐ too short?
6. What was your general impression of the site?
   ☐ Excellent ☐ Good ☐ Neutral ☐ Poor ☐ Horrible
7. How did you feel about each of the following?

   Site appearance (clean) ☐ Excellent ☐ Good ☐ Neutral ☐ Poor ☐ Horrible
   Access to the site ☐ Excellent ☐ Good ☐ Neutral ☐ Poor ☐ Horrible

Views	☐ Excellent	☐ Good	☐ Neutral	☐ Poor	☐ Horrible
Natural Environment	☐ Excellent	☐ Good	☐ Neutral	☐ Poor	☐ Horrible
Staff	☐ Excellent	☐ Good	☐ Neutral	☐ Poor	☐ Horrible
Ticket Price	☐ Excellent	☐ Good	☐ Neutral	☐ Poor	☐ Horrible
Restrooms	☐ Excellent	☐ Good	☐ Neutral	☐ Poor	☐ Horrible
Gift shop	☐ Excellent	☐ Good	☐ Neutral	☐ Poor	☐ Horrible

8. What was your favorite experience at the museum? _____

9. What would make your experience better? _____

10. Why did you come to Uganda National Museum? _____

11. Did you learn more about Uganda National Museum from your visit? _____

12. How did you learn about Uganda National Museum?

☐ Newspaper ☐ Website ☐ Social media ☐ Friends ☐ School

13. Did you know about Uganda National Museum before your visit?

☐ Yes ☐ No

14. Do you think it is important to preserve Uganda National Museum?

☐ Yes ☐ No

15. Did you know that your ticket purchase price helped preserve Uganda National Museum?

☐ Yes ☐ No

a. Would you be willing to pay more and how much?

☐ 200 ☐ 150 ☐ 100 ☐ 50 ☐ 10

16. Would you be willing to pay more if you had a special guided tour of the tombs?

☐ Yes ☐ No

a. How much? ☐ 200 ☐ 150 ☐ 100 ☐ 50 ☐ 10

17. Would you be willing to buy tickets in advance?

☐ Yes ☐ No

Thank you for your time. We hope you enjoy your visit. Your answers will help us in improving the experience at Uganda National Museum. If you have any more to share, please use the space below.

BIBLIOGRAPHY

This list of references has been used extensively in preparing this Conservation Management Plan and is a combination of the authors´ own investigations, previous bibliographical material collected by the authors of the previous State of Conservation reports, Management System, and other materials from the archives. It is by no means comprehensive but sufficient to understand the situation in Uganda National Museum and write this plan. Any omissions are unintentional, and should there be missing references, please bring this to the attention of the authors.

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The Uganda Museum Reports cover the year 1939 and the period from 1949 to 1963. The reports are in the holdings of the Museum and can be consulted on site. They are an invaluable resource on various affairs related to the developments of the Uganda Museum in its early years and, as such, are themselves an important part of its history.

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Figure 179 School children line up to enter the Uganda National Museum (Eppich, 2018)

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