

Report for American Planning Association (APA) International Division

Understanding the decline of physical infrastructure  
and buildings in Kenya's Lamu Old Town

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## **Executive Summary**

*The Old town of Lamu, Kenya has been continuously inhabited for more than 700 years and is said to be home to some of the best preserved Swahili architecture in the world. Lamu is perhaps most notable due to its status as a World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO), a designation that supports tourism as the primary driver of the economy. However, a lack of investment in building maintenance and urban infrastructure threatens the long term viability of Lamu as both a cultural heritage and tourist attraction. Similarly, a myriad of policies govern physical construction and development in Lamu, paired with plans for the Lamu Port South Sudan Ethiopia Transport (LAPSET), can lead to contradicting desires and unfocused development efforts by government officials*

*Recognizing that Lamu is a low income economy with a declining tourism sector, and conflicting development interests around the LAPSET project, this study set out to better understand what efforts are currently taking place in Lamu to benefit residents and historic places in the old town. To do so, stakeholder interviews focused on Old town's urban fabric, economy, services, and the way forward were conducted. Interviews revealed that resident expectations are not being met, and that there are few opportunities for improving education, waste management, pedestrian mobility, transportation of goods, and industry within the existing policy, planning, and investment framework. The Lamu Museum, a historic building, was also studied in order to illustrate the history of the Old town and the importance of preservation.*

*This research makes three suggestions that may garner investment, attention, and support for more coordinated and widespread intervention in the future of Lamu: 1) a creative design and planning competition for reinventing Lamu's public infrastructure and restoring Lamu's low-income residential tenant buildings, 2) improvement in documenting Lamu's built environment, and 3) expansion of transportation networks connecting Lamu with mainland Kenya for economic growth.*

## **Part I. Introduction**

Lamu Old Town has been continuously inhabited for more than 700 years and although the town is home to some of the best preserved examples of Swahili architecture in East Africa, it is in serious decay (UNESCO 2014). Lamu's unique architecture and urban layout is a result of cultural influences that have come together over many centuries from Europe, Arabia and India (Rothman 2002). This combined with traditional Swahili construction techniques has produced a distinct aesthetic of architecture and urban design, often referred to as the Swahili vernacular. Because of this Lamu was designed as a World Heritage site by the United National Educational, Scientific and Cultural Organization (UNESCO) in 2001.

From 15-23 March 2015 I traveled to Lamu to better understand the relationship between urban and architectural heritage, and residential quality of life. I surveyed the status of buildings in the town and spoke with residents to understand their desires and choices in relation to urban amenities. I found that Lamu's historic buildings and public streets are in need of physical repair and fail to provide residents with comfortable, safe, desired spaces to live and work. The structures in old town Lamu were architectural objects with a historical significance that Lamu residents were in theory, proud of, yet the collective elements of architecture, the town, represent embarrassment and failure for those who live there. This decline of Lamu's built environment was confirmed in 2013 by the fact that Lamu was placed on the list of World Heritage Sites in Danger, and is currently at risk of losing its World Heritage Site designation. I believe that the decay of Lamu's built environment is both caused by and perpetuates a decay in Lamu's economy. The cumulative impact of this economic and physical decay is seen in the decline of young adults living in Lamu and the exodus of Lamu born residents to other regional cities for employment and education opportunities. My research in Lamu explores this relationship between architectural quality of a space and success of economic and social fabric.

## **Part II. Urban planning in Lamu old town, Kenya**

Lamu county is located on the Lamu Archipelago in North-East Kenya and has a land area of 6,270 square meters with 120,000 inhabitants. Lamu county is poorly connected to other cities in Kenya and Lamu town, the largest settlement within Lamu County, does not have infrastructure for motorized vehicles. The town is divided into the old town, or the 'Patrician', and surrounding development. At the center of Lamu Old town is the town square, the Lamu Fort and other key public buildings. Lamu town square is one of the most bustling and socially important places in Lamu town, hosting a large market every Saturday and serving as a node which connects eight primary streets in the city.



Image: Lamu town square, Saturday market, research photograph

The waterfront is another key urban space, supporting commerce and the facilitating a constant movement of people, goods and money between Lamu and the surrounding region. The Lamu waterfront does not sleep; boats enter and leave at all times of day and employees are stationed along the waterfront overnight to guard materials and goods waiting to be delivered by wheelbarrow, donkey, or

human to places throughout the city. The waterfront is lined with small shops selling a range of goods from hardware, to household goods including food, school books, construction supplies and electronics. There are four hotels located along the waterfront for both tourists and business visitors. Street hawkers selling necklaces, bracelets, refurbished phones and tourist souvenirs walk back and forth along the waterfront from morning until evening doing business. Fishing boats also enter and depart from the Lamu harbor, providing subsistence living and disposable income for many Lamu households.



Image: Lamu waterfront and harbor, research photograph 24 March 2015

Residents not involved in waterfront related commerce avoid the waterfront due to its exposure to the hot sun, especially at mid-day and its chaotic streets. Upon speaking with young females, they prefer to traverse the town on small streets in the Old Town which are completely shaded and have fewer donkey's traveling on them. Donkey's serve as the primary transportation for goods in Lamu and people travel by foot with the constant challenge of avoiding donkey poop as they move through the city. This results in high levels of donkey poop in the streets of Lamu Old Town, especially along larger commercial streets, creating a serious public health problem for Lamu residents. Similarly, grey water

from kitchens and bathrooms in Lamu Old town is drained using an open gutter in the street. Although this water does not include fecal matter or urine, it does contain food scraps and other dirty or hazardous particles, which cause the streets to smell bad. This water is often stepped in by residents as the gutters are sometimes broken and gutter networks are incomplete. Electricity in Lamu is supplied by the Kenya Electricity Generating Company from the Lamu Power Station which utilizes six diesel oil engines is not connected to the Kenyan National Power Grid (KenGen 2014). Many homes and shops in Lamu are not electrified due to the high KenGen tariffs and power outages are frequent. As a result the use of photovoltaic panels (solar pv) and private generators is common among wealthy households and hotels.



Image: wastewater gutter along street, research photograph 24 March 2015

Lamu county has no rail connections to the Kenyan interior and there is one poorly maintained highway that accesses Lamu from Mombasa in the south. The county has a total of 688 kilometers of road network, but only 6 kilometers of these are paved (M.Mwenje, personal interview). There is one airstrip in Lamu County that receives two small commercial passenger flights per day allowing wealthier residents and tourists to travel between Lamu and Nairobi by plane, carrying goods for personal use or sale (KAA 2015). Most residents use the one daily bus which travels to Mombasa, to enter and leave town. Currently there are only two motorized vehicles in Lamu town and both are owned by the

government. These vehicles can traverse along the waterfront and on four selected streets along the periphery of the old town, but they cannot drive within the Old town because the streets are not wide enough. Although they are not officially permitted, motorbikes do operate, ferrying passengers, especially elderly or disabled residents or heavy goods through the Old town.

### ***History of Lamu***

The rich political and economic history of the Lamu Archipelago underpins the traditional Swahili architecture and original street grid that is so well preserved in Lamu today. The Swahili people have a long mercantile history that dates as far back as 1000 AD at which time Lamu served as a trading settlement for goods between the Arabian Peninsula and East Africa such as Mangrove poles from the coast of Kenya, and ivory and rhinoceros horns from the interior of Africa (Horton and Middleton 2000). Officially declared a town in 1200 AD, Lamu was an important link between interior Africa and coastal empires in Asia. Trade between Lamu and Asia peaked around 1500 with gold from Great Zimbabwe and the Zimbabwean Plateau being Lamu's prime export (Horton & Middleton 2000). In this period China emerged as a trading partner along with numerous countries in the Arabian Peninsula. Beginning in 1644 the Sultanate of Oman waged war on the emerging city-states of the East Africa coast and won, establishing Lamu as Omani center of power. The Omani's established close relationships with the Swahili upper class - traders and land owners - and quickly acquired extensive land holdings on the Kenyan and Tanzanian coasts, with Lamu being the first point of settlement (Horton & Middleton 2000). The Omani's assimilated into the Swahili culture, adopting a Swahili identity over time. It was during this period, from 1600-1800, when many of the most elaborate stone houses of Lamu were built (Lamu Heritage Society 2011). When British banned the slave trade in 1870, slave-based commerce, a large sector of revenue for the Omani Sultanate declined reducing the wealth of the Omani Kingdom.

### *Contemporary Planning Context*

Lamu County's vernacular Swahili architecture and urban layout has attracted interest since British colonization (1895 – 1964). In 1974 the first thorough study of Lamu architecture was completed by Kenyan architect Usam Ghaidan in which Ghaidan catalogued building elements and construction materials, a study which served as prime evidence in 1999 when the National Museums of Kenya was invited to apply for UNESCO World Heritage designation. UNESCO defines a World Heritage site “as a place which has extraordinary and universal value to humanity, not just to a single country” (<http://whc.unesco.org/en/criteria/>). There are 1,007 UNESCO designated places in the world today and only 9 percent of these sites are located on the continent of Africa, making Lamu unique<sup>1</sup>. Places receive designation only after they are nominated by a United Nations member country and the number of nominees per year by country is unlimited. These nominations are received by the International Council on Monuments and Sites (ICOMOS), an independent panel of historic preservationists and if nominations are in the natural phenomenon category, they are also reviewed by the International Union for the Conservation of Nature (IUCN). Approval by ICOMOS or IUCN are received, and can also be overridden, by the UNESCO World Heritage Committee. There are ten primary criteria against which nominees are judged, spanning from places that are a testimony to a civilization which has disappeared to outstanding examples of traditional human settlements and significant natural habitats for conservation of biological diversity. Each year World Heritage sites must submit a Status Report to UNESCO, outlining challenges and developments over the calendar year. National governments of World Heritage sites can apply annually to The World Heritage Fund which receives compulsory contributions from UN Member States and redistributes this money to successful World Heritage site applicants. The World Heritage Fund redistributes \$4 million per year, and to date Lamu has received \$260,000 of this money for building reconstruction to-date (UNESCO WHC Nomination

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<sup>1</sup> 48 percent of all UNESCO World Heritage sites are located in Europe and Northern America. The application process for nomination is extensive and fewer applications are received from low and middle income countries, with fewer resources (UNESCO, 2011).

Documentation Lamu, 2011). Funding from UNESCO to World Heritage sites is not guaranteed and many National governments do not apply for funds on behalf of the designated site for both political and capacity related reasons.

The designation of Lamu in 2001, alongside the designation of Zanzibar Island in Tanzania and the Island of Mozambique in 2005, were drivers in UNESCO's consideration of Historic Urban Landscapes (HUL) as a designation priority. In 2011 UNESCO adopted the *Recommendation on the Historic Urban Landscapes* calling for a new international standard recognizing and guiding development of historic cities in a way that would honor inherited values imbedded in the cities spatial and social structures (UNESCO Swahili Historic Urban Landscape, 2011). These three east African World Heritage sites, in addition to others around the world, were suffering from pressures to modernize and re-develop as a result of their outdated urban infrastructure, declining non-tourist economy and increased tourism. Because these East African World Heritage sites constitute an entire urban area instead of just a single building or natural feature, and because cities are dynamic, evolving over time and continuously undergoing cultural and natural influences, these sites needed to address the difficult balance between modernization and preservation at the urban scale. UNESCO's *Historic Urban Landscape* (HUL) recommendation was an effort to help local authorities guide growth and development in historic cities like Lamu, in order to keep their designation status. Unfortunately, the condition of buildings, streets and the urban network in Lamu has continued to deteriorate and in 2013 Lamu was placed on the list of World Heritage Sites in Danger. The town is currently at risk of losing its World Heritage Site designation.

In addition to UNESCO recommendations, there are a myriad of other policies that govern physical construction and development in Lamu. Three primary documents include the *Local Government Act of*

2011, the 2006 *Planning Act of Kenya* and the *National Museums and Heritage Act of 2001*. Within the Lamu City Council, there is a National Environmental Management Authority (NEMA) certified Conservation Officer who is instructed to advise on all development issues. The *Local Governments Act of 2011* is the primary legislation governing all counties in Kenya but these laws are superseded by the *National Museums and Heritage Act* if and when individual development guidelines within the two acts conflict. In 1986 the National Museums of Kenya opened the Lamu World Heritage Site and Conservation Office which is now called the Lamu Stone Town Conservation Office. In 1991 the Lamu Planning Commission was formed to advise development and conservation issues in the town. Lamu Planning Commission which is comprised of three community members, two local government representatives, one clerical officer, and one representative from the Museum of Kenya and one architect. The same year the Planning Commission was formed, they published a *Conservation Plan* for Lamu Old Town which is used as a guide in development. In 1999 a draft management plan for Lamu was published to address issues of informal settlements, property ownership, illegal developments in the sand dune and water catchment areas, and proposed port and cruise ship berths, as well as ships for oil exploration. This plan calls for the development of a conservation fund, and interfaith ministerial relationships. Although it is not a government actor, the Lamu Tourism Association is plays an important role as an advisor in development and policy in the county.

One of the largest development issues in Lamu is the Lamu Port South Sudan Ethiopia Transport (LAPSSET) corridor development project which would bring oil and mineral resources, among other things, from the African interior to the port of Lamu for export by constructing a 1500 kilometer railway and accompanying highway along the corridor route. Critical to this project is the construction of a commercial port in Lamu with an oil refinery, oil pipeline, airport and resort city. Many of the project components would be located in Lamu County and more specifically in Lamu Town, north of the Old

town. There has not been a full Environmental and Social Impact Analysis Study for this project and my research found that opinions of the project are widespread, fueling contentious debates about future development in Lamu.

### **Part III: Summary of project accomplishments**

From 15-23 March 2015 I visited Lamu to study factors which attract residents to Lamu, from the perspective of resident stakeholders and government leaders and understand the spatial distribution of public buildings protected under UNESCO World Heritage designation, mapping buildings that have been identified for priority restoration. The following chapter presents my research results and analysis.

#### ***Accomplishment 1: Survey with key stakeholders about Lamu's current and future development***

Prior to arriving in Lamu I identified five key stakeholders to interview in order to help me understand how residents and government officials viewed buildings and services in Lamu. These stakeholders were chosen based on recommendations from colleagues at the University of Nairobi, department of Architecture and Building Services, and Columbia University Earth Institute, Center for Sustainable Urban Development (CSUD). The stakeholders represent the perspectives of the National Museum of Kenya, youth ages 15-29, the tourism sector, small scale business and local governance. As a part of each stakeholder interview a survey was conducted so that I could compare perspectives across these interest groups. In summary, respondents thought that the historic buildings in Old town Lamu should be preserved, and the preserved buildings should not be limited to public buildings and wealthy private home owners, but should also include middle and low income tenant buildings and the public streets, as well as urban facilities. Most respondents felt Lamu Old town was too crowded and should not grow in population, but that the surrounding area could increase in density. The most important sectors of the Lamu economy according to those interviewed were tourism (4) and the potential LAPSSET port

development project (3). Respondents believed these activities would provide appropriate jobs, and new jobs, to residents in need of employment. Although each respondent respected the historic nature of the urban environment, respondents shared an opinion that the streets of Lamu were difficult to navigate, especially for disabled persons, elderly and small children. Lastly, respondents felt that the town was most in need of improvements in solid waste management and education, out of all urban services. A detailed summary of the questions asked and respondent replies can be found in Annex A.

### ***Accomplishment 2: Mapping of historic public buildings in Lamu***

The UNESCO historic preservation zone includes the entire Old town Partition. Within this area there are 26 public buildings earmarked for priority restoration by UNESCO (see Annex B). Three of these buildings, the Lamu Museum, Lamu Fort and the Sultanate Palace have been restored using money from The World Heritage Fund in 2003 and 2006. In addition to the 26 public buildings, a smaller unknown number of private houses have been restored by mostly wealthy land owners. Upon visiting these restored private houses during my field visit, it was clear that the majority of the houses were owned by absentee home owners who visit Lamu only a few times per year and live either abroad or in other parts of Kenya. These houses are potentially a source of pride in the community due to their restored heritage and reconstructed architectural features, however local residents have some animosity towards these houses because the owners are often not integrated into the Lamu community and the houses sit empty most of the year. The three public buildings that have been restored using UNESCO funds are used actively as museums for regional and international tourists. During my field visit I studied the restoration of the Lamu Museum in greater detail to understand vernacular Swahili construction. The Lamu Museum was constructed in 1813 under Omani Sultanate Seyyid Said and was originally used as a Fort of the Omani empire in Lamu. When Kenya became a British Colony in 1890 the Lamu Museum was converted into a prison and then in 1984 the building was converted into a museum and community center with support of the Swedish International Development Agency (SIDA). Because of its historical

importance, the Lamu Museum was the first building identified and restored in Lamu by the UNESCO World Heritage Fund. My complete architectural documentation of the Lamu Museum building can be found in Annex A of this report.

#### ***Part IV. The Way Forward***

Stakeholder interviews iterated that the urban fabric of Lamu is falling short of expectations and desires by residents. Opportunities for education, waste management, pedestrian mobility, transportation of goods, and industry in Lamu seem to be in decline. In exploring how to shift Lamu's development from a city with decrepit amenities and declining population to a city that attracts and retains a vibrant population, this research suggests two potential design interventions, improvement in documenting Lamu's built environment and expansion of transportation networks connecting Lamu with mainland Kenya for economic growth. The first intervention could be a creative design and planning competition for reinventing Lamu's public infrastructure or buildings. At the scale of public infrastructure, residents could group together to create a vision renovating streets, electricity provision, circulation and waste management - proposing a master plan with detailed deliverables and associated budget. Money for this competition could be requested from either UNESCO, the Kenyan Ministry of Museums and Heritage or a private sector donor. Applicant teams must have Lamu residents as members of the team, but they can also include members from other parts of Kenya. The winning proposal, or perhaps the winning two proposals would be funded and a grassroots intervention with appropriate technical support, could reshape the urban environment. Seeking and supporting local ideas for urban infrastructure improvement will undoubtedly improve local ownership and pride over any physical change in the city. At the building scale a similar competition could be held, where low income residents can apply to have their homes renovated using traditional vernacular building construction methods - improving the living condition of non-government buildings in Lamu and ultimately adding to the cities heritage. The most

compelling applications would be chosen for residential reinvestment with the tenants or homeowners contributing sweat equity labor, the private sector and universities contributing technical knowledge and donated labor, and the government or multi-lateral non-governmental agencies contributing funding for construction materials. In order to move forward better documentation of the Lamu urban grid and key landmark buildings is needed. The research found a lack of historic and contemporary drawings and plan maps of the city and its heritage buildings. Student from regional universities in Kenya are often given theoretical design and planning exercises in order to learn drawing conventions. These students could easily assist the Lamu County government in mapping Lamu's urban environment as part of a studio or technical coursework. In particular, undergraduate students from the University of Nairobi in Mombasa and Kenya Polytechnic already come to Lamu every spring to study historic preservation. Assignments for these student groups could easily be coordinated with the digitization needs of the local planning office.

During the study, the most common reasons cited for residents leaving Lamu were education, commerce or to visit family. Lamu's economy would benefit from being better connected via paved road and rail, to the interior of Kenya and neighboring towns. This would increase market opportunities for natural resources and products from Lamu such as produce, mangrove wood, carved wooden furniture, doors and window frames, and fish. If credit and savings plans were offered to Lamu residents at low interest rates, residents could invest in large fishing boats for fishing off-shore, establishment of refrigerated storage facilities for keeping fish and other perishable goods cold before sale, and manufacturing space for production of wood products. Lastly, tourists are a key to Lamu's economy. Improvement in transportation connection and physical infrastructure improvements in Lamu would be foster growth in tourism and consequently provide jobs to many of Lamu's unskilled residents.

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## *Annex A: Stakeholder Survey*

### Respondent Information

#### Respondent 1

Amina Omar, Department of Land, Housing, Infrastructure and Natural Resources

#### Respondent 2

Walid Ahmed, Lamu Youth Alliance

#### Respondent 3

Anonymous Long term permanent British resident, owner of historical home and restaurant

#### Respondent 4

Employee at tourist hotel and activist in Lamu safi citizen group

#### Respondent 5

Mr. Mohammed Ali Mwenje, Museum of Kenya and Director of Lamu World Heritage Site and Conservation Office

#### Respondent 6

Nina Chauvel, manager, Lamu Tourism Association (LTA)

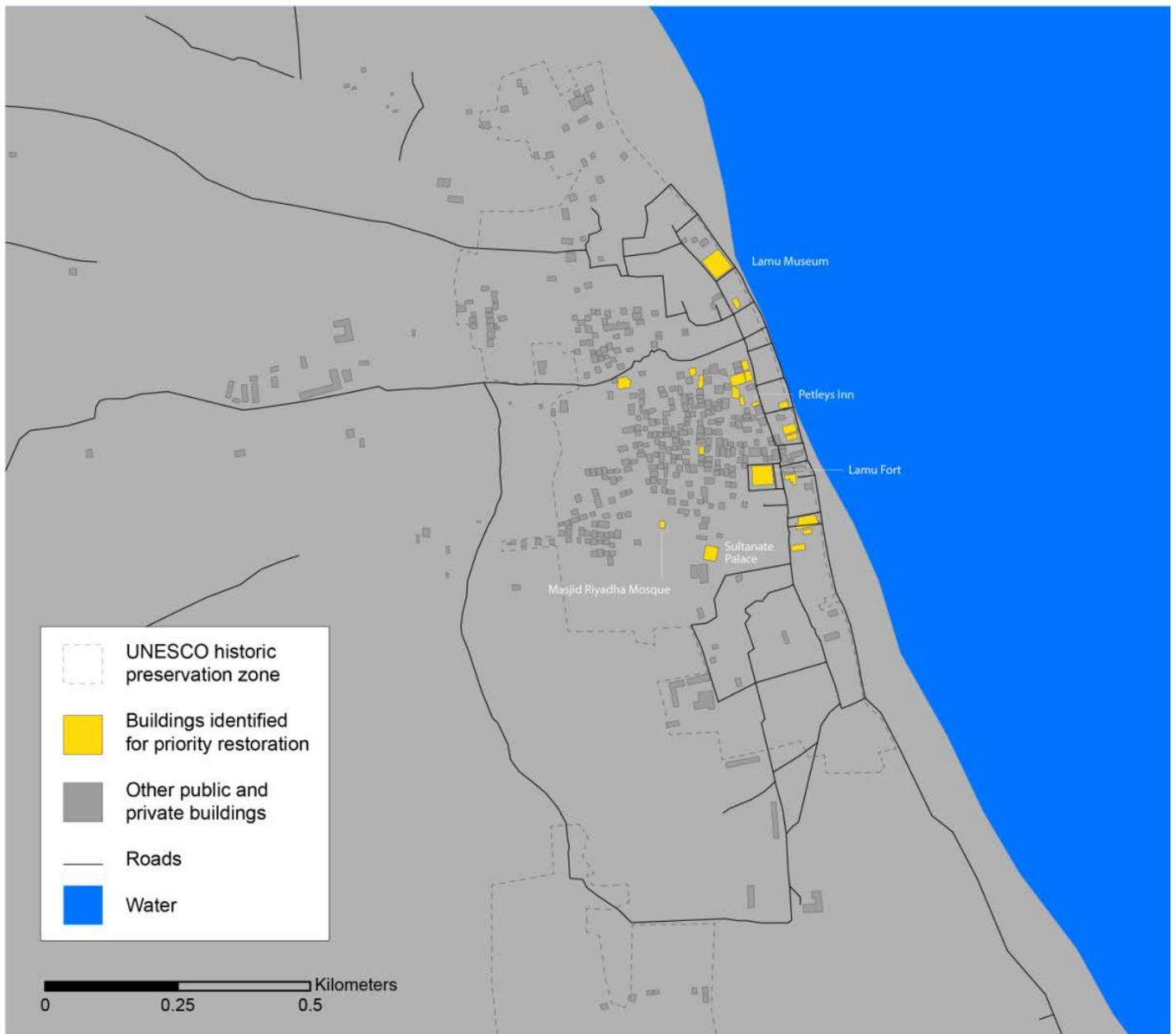
### Survey questions

1. How strongly do you think the buildings in Lamu old town should be preserved?  
(0-5 scale, 0 = should not be preserved, 5 = should be preserved)
2. Do you think the population of Lamu town should grow?  
(0-5 scale, 0=should not grow, 5=should grow)
3. What aspects of Lamu's economy today are most important for Lamu's future?
4. Are the streets of Lamu old town easy to move through - for example, for small children and old people?  
(0-5 scale, 0 = difficult to move through, 5 = easy to move through)
5. Residents need access to fresh water, electricity, wastewater (sewage) and schools, among other things, to succeed. Which of these services is in most need of investment by the government in Lamu?

## Survey Responses

	Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Total
Q1	5	2.5	5	4	5	5	4.4
Q2	4	1	1.5	2	0	0	1.4
Q3	tourism	education	some version of the port project	production, natural resource harvesting	historic sites and Lamu port	tourism	tourism (3) port (2) education (1) natural resource production (1)
Q4	3	0	1	2	4	3	2.2
Q5	disaster management (fire, ambulance)	transportation, mobility	waste management	waste management	sewerage, education	potable water	solid waste management (2) mobility sewerage potable water disaster management

**Annex B: Map of Public Buildings Earmarked for Preservation by UNESCO**



### *Annex C: Historic Architecture Study, the Lamu Museum*

The Lamu Museum is an 8,400 square foot three-story house located on the seafront in Lamu Old town. The building was initially constructed as a fort between 1813 and 1821 under the Omani Sultanate Seyyid Said and was the first building gazetted as a heritage site by the National Museum of Kenya (UNESCO 2014). Construction of the Lamu Museum was the first symbol of Sultanate Seyyid's interest and investment in the Lamu Archipelago (Horton and Middleton 2000). The Museum sits at the south east corner of Lamu Old town, positioning itself as an entrance to the labyrinth of street networks in the old town. The building was initially used as a home base for soldiers sent to East Africa by the Sultan of Oman and its protective presence encouraged construction of prominent residential buildings around the Fort. The Lamu Museum building was the first building on the Lamu Archipelago to be two stories tall, and after the British declared Kenya a British Colony in 1890 they added a third story and used the museum as a prison from 1910 until 1965. When Kenya became an independent state in 1965, the Kenyan government continued to use the Lamu Fort as a prison until 1984. At this time, the building was given to the National Museum of Kenya and with financial support from the Swedish International Development Agency, the fort was converted into a museum and community center for residents of Lamu Old Town (UNESCO 2014). Today the Lamu Museum serves as a museum hosting cultural and historic exhibitions ethnographic material from each period in Lamu's history over time. The building has community spaces that can be used for meetings, and halls that can be rented for events such as weddings or theatre shows. The materials used to construct the Lamu Museum include Mangrove timber beams, coral roof and wall insulation, lime stone as wall plaster and wooden carved apertures. These materials are sourced locally from the Lamu Archipelago and were assembled by Omani servants of the Sultanate Seyyid (Horton 23 and Middleton 2000). Similar to many other houses on the Swahili coast, the Lamu Museum was built from coral stone and designed to be an inward looking self-contained

complex, organized around a central courtyard in the building (Rothman 2002). The house is described as inward looking because the walls facing the street have no ornament with few undecorated windows, while the interior courtyard is adorned with elegantly carved mangrove wooden furniture, a wide range of plants, a fountain, tile floor patterns and geometric lime-plaster designs and wall niches. Although the type of coral stone construction with lime mortar is specific to the East African coast, similar construction has been documented in parts of Saudi Arabia indicating a potential transfer of building typology from the period of heavy trade with the Persian Gulf between in 1500 AD (Horton and Middleton 2000). In Lamu this coral is mined from coralline cliffs in nearby villages of Takwa and Luziwa. This coral can also be compressed into coral bricks which are used in contemporary Lamu construction. In the Lamu Museum the coral walls are plastered with lime as was common among prestigious houses and government buildings.