

REINTEGRATION OF KARACHI PORT THROUGH SUSTAINABLE ADAPTIVE REUSE OF ABANDONED AND UNDERUSED INDUSTRIAL BUILDINGS

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ABSTRACT. The economic capital and one of Pakistan's most important cities gain popularity due to the reputable Karachi port. Karachi was referred to as Korokala and Debal in ancient times; a city conquered by famous conquerors, including Alexander the Great and Muhammad bin Qasim due to its seaport importance. However, most of the port's tangible and material heritage were built by the British during the 19th–20th century. The Britishers conquered the city and started developing Karachi port because of the seaport. Due to the port, the area of Karachi grew from a small fishermen's village to a bustling metropolitan city. During the second industrial revolution in the late 19th century, the Britishers developed Indian industries so that they depended on British capital goods. To transport the goods, the British empire constructed railways and maritime routes in the mid and late nineteenth century, The port of Karachi was one of them.

Karachi port remains the hub of Pakistan's main logistic transportation, but some of its heritage buildings have been neglected on this site. After the 9/11 tragedy in the US, due to security reasons, Karachi port trust restricted the port to the public. Now, the security situation is better, and the port can be reintegrated and made accessible to the public through sustainable adaptive reuse of abandoned or underused buildings. Karachi is a congested city with few places for recreation; reintegrating this site can open opportunities for tourism while showcasing the city's industrial heritage.

This paper wants to articulate the potential of industrial heritage. But the latter in Pakistan is not yet recognized as part of a heritage discourse. The port offers a rich case study due to its layered history and various typologies of buildings on site.

KEYWORDS: Industrial heritage, reintegration, adaptive reuse, seaport.

1. INTRODUCTION

Seaports are always associated with the development and history of port cities. They play a vital role in the urbanization and social setup of the cities. Similar circumstances have occurred in Karachi. Different monarchs ruled it at different times and gave it different names, so Karachi has a variety of tangible and intangible heritage. Karachi can be associated with different ancient empires but the most important one that developed the seaport into one of the busiest ports of the 19th and 20th century in Asia and shaped the city of Karachi was the British empire. They conquered the city for developing trade routes with eastern and western countries. Due to its central strategic location between east and west, the Karachi port was the nucleus of the development during British interventions in Karachi. They constructed the roads and railway tracks originating or directing towards the port to keep smooth flow of trade from land to sea and sea to land routes. In the process, they constructed several important buildings on and around the port. Due to the port activities, people started migrating from different parts of British India resulting in the abrupt growth of the city. After the partition of the

Indian subcontinent, the seaport remained an important site for the city and the state of Pakistan and saw growth and expansion in the early few decades of the newly build Pakistan. The seaport is still an important site but some of the buildings on the site of heritage value are neglected and are not taken care of besides its rich historical background and a high potential for adaptive reuse and regeneration of the port in terms of tourism. Some buildings on the port site can be reused for new functions to open the site for the public which has a rich history and social value in Karachi. Currently, the port is restricted for the public after the security protocols changed due to the 9/11 world trade center tragedy which resulted in the invasion of Afghanistan. But now the security situation is good, and the abandoned/underused buildings can be reused to reintegrate the site of Karachi port in the locality in terms of tourism and urban revival.

In this perspective, the paper will shed light on the historical background of the port through a timeline and will investigate the present condition of British time buildings on and around the port to see its potential in the urban uplift of the locality through the strategy of sustainable adaptive reuse of the abandoned or underused buildings.

2. ARCHIVAL DATA COLLECTION AND LITERATURE REVIEW

The paper is a part of broader PhD research on industrial heritage and its adaptive reuse potential in Pakistan. The site of Karachi port is not only associated with the industrial revolution in British India but also with current-day Pakistan. During the British Raj, the port of Karachi acted as an important node for the trade between India and eastern and western countries. A literature review was done to have a historical overview, based on which a research visit was done by the first author to the city of Karachi to collect the archival data, related to the Karachi port site and to interact with the port authorities, and users through semi-structured interviews.

During the visit, the first author visited different archives departments. Ancient maps of Karachi port, old photographs, drawings, and published reports were collected from Sindh archives, Karachi port trust archives, and NED Heritage cell archives. Besides this, a site survey was also done to map the present situation of the Karachi port, during which different buildings were marked which were abandoned or underused at the port. Also, some informal interaction was done with port authorities and the persons working on the port, through semi-structured interviews and photographs to gain insight into the port's history.

The buildings that were currently not in use for any function were considered abandoned like Berth 16-17A (Figure 1) whereas the buildings which were temporarily used for some other functions and had the potential to be used more beneficially were considered underused like Berth 15A which is used as praying area by the workers.

Internationally, abandoned or underused industrial sites are reused in a way that benefits the locality and preserves the heritage value of the site. The concept of adaptive reuse is widely in practice in relation to industrial heritage. Adaptive reuse is the process in which an existing building that lives longer than its function is made suitable for another function with clever alteration and interventions [1–5]. Numerous sites of industrial character are regenerated and reused internationally, which are attraction points for the local, national and even international communities now [3, 6–8]. According to the “Nizhny Tagil Charter” the Industrial heritage consists of all the infrastructure and buildings that are associated with production and transportation including mills factories, housing on-site, religious buildings, bridges, aqueducts, seaports, storage areas, machinery [9].

After the initial literature review, it was clear that some of Karachi port buildings have heritage value but are not given attention as compared to other cultural heritage in Pakistan. In general, the industrial buildings in Pakistan are not considered or recognized as heritage besides their historical value. They are covered in the same cultural heritage category, and no specific sections or clauses are mentioned in Pakistan's



FIGURE 1. 16–17A Berth east wharf Karachi.

national heritage legislation. The situation is the same with the Karachi port and its British-time buildings.

3. HISTORICAL OVERVIEW OF KARACHI AND ITS PORT

Over a period of only one hundred- and fifty years, Karachi has grown from a small town of fifteen thousand people to Pakistan's largest metropolitan city of more than sixteen million inhabitants [10, 11]. The history of the city dates to the 3rd century BC and is linked to the arrival of Alexander the Great when the city was known by the name of Krokala. And the 7th century AD association with the Muslim conqueror Muhammad bin Qasim by the name of Debal. [10]. Although the identification of Karachi with these two ancient cities are under considerable debate since the 19th century, however modern Karachi gain popularity during the late 18th century and later due to the interest of the East India Company and the British government in the seaport in the area.

The relationship between the Indian subcontinent and Europe dates to ancient times when Alexander the Great established the Greco-Indian empire, now called Punjab. Alexander was interested in establishing permanent links with the region for political and commercial reasons. For this purpose, he planned two ports with naval dockyards, one of which was probably the current-day Karachi, on the westernmost mouth of the Indus. While some believe that Morontobara, a station on the return expedition of Alexander's navy, was probably near the location of today's Karachi Harbour. [12]. The Cretan Admiral Nearchus, a close friend of Alexander, sailed down the mighty river Indus and arrived at the site of new Alexandria (probably at 326 BC) called “Crocola” or “Krokala”, which was an important centre for food supplies for the onward voyage. [13].

The Romans also had maritime trade with India's coastline from their ports in Egypt. In the 2nd century AD. The Greco-Egyptian cartographer, Claudius Ptolemy, developed a map of India which showed the



FIGURE 2. Boat Basin, Passenger Wharf Karachi port.

different ports visited by Roman mariners.

The second ancient city with which Karachi is associated is Debal, a port of the great empire of “Rai Chach”. The arrival and conquest of the Kingdom of mighty Dahar on the shores of Sindh in 711 AD by Muhammad bin Qasim also marked the entry of the religion of Islam into the Indian subcontinent. The conquest happened at the port of Debal, which is believed to be the location of Karachi Harbour. [14].

British interest in the Indian subcontinent started in the early 17th century during the Mughal empire. The first East Indian Company started at Surat in 1612 in a house partly hired and partly gifted by the Mughal emperor Jahangir. [15]. It was until the early 18th century that the British government got interested in Karachi. Henry Pottinger, a political agent in Sindh and a key player in the game, analyzed Karachi harbour and its importance. He noted that Karachi, situated in the south-eastern extremity of Sindh, known for the principal Bundar or seaport known by the name of Khor Alee (Harbour of Ali) could be used by fair-sized vessels. [16]. Due to the value and location of the Karachi Harbour, the Britishers took over Karachi in 1839 and started developing the port. Due to the port, the Population of Karachi started to rise, and in 1873 the Manora breakwater was also completed, which resulted in increased trade activities at the port. People from different parts of British India started to migrate to Karachi for work. The Britishers constructed different organizational, residential, monumental buildings and infrastructure on the port site over the next 100 years since overtaking the port and city in 1839. The important infrastructure and buildings that were built at that time are East wharf, Karachi Port Trust head office, Berth 15–17A, Native jetty bridge, Mule’s mansion, Boat wharf gate, Manora lighthouse, St. Pauls Church, Boat Basin Karachi port (see Figure 2) among many. After the partition of the Indian subcontinent in 1947, Karachi became the capital of Pakistan, and the sea-

port remained the backbone of Pakistan’s economy and trade. New berths and terminals were constructed after the partition for the rising trade and commercial activities on the seaport. The buildings constructed by the Britishers are mostly still in use, with some of them being left abandoned.

The port of Karachi became an attraction point and remained open for national and international tourists along with port employees until the 9/11 world trade centre tragedy in 2001. After that incident, the US invaded Afghanistan, and Pakistan was an ally in the process. Due to security reasons, sites like seaports, airports, and dams were made restricted for the public. The security situation in Pakistan is better now, and the Karachi port, which has a rich history and high tourism potential, can be reopened for the public by reusing abandoned and underused buildings on site.

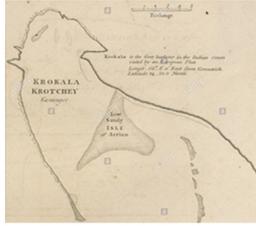
4. THE PORT OF KARACHI: FIELD VISITS AND DATA COLLECTED

Karachi harbour is one of the most important sites in Karachi, both historically and economically. The port of Karachi is known as the golden gateway to Pakistan [17]. It is one of the largest ports in Asia. The intangible and immaterial heritage of the site is quite vast, whereas tangible and material heritage and most of the modern port buildings are related to the British colonial time, which is located on the east wharf along with other infrastructure (see Figure 3 last image of the timeline). Most of the city roads and railway lines originate from Harbour to establish a smooth flow of trade through the sea route (see Figure 4). The population of Karachi grew abruptly due to the activities and trade at the port.

Until 1914 the East Wharf was constructed on the port, which consisted of Berths, godowns, and cranes. Karachi port trust building which is one of the most iconic buildings of Karachi, was also built in the early 20th century by the British Raj (see Figure 5).



356-323 BC
Alexander the great *Krokala*



First harbour in Indian ocean
Image from alamy.com



A sketch of Alexander's naval fleet
Image from dawn.com



711 AD
Muhammad bin qasim *Daybul*



Muslim conquest of India
Image from wikipedia



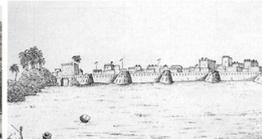
Sketch of Muhammad Bin Qasim
Image from dawn.com



1773-1775
East India company in Indian subcontinent



East India company Surat India
1680, Image from history.com



Old fort Karachi harbour Sketch
image from wikiwand.com



1800-1838
British interest in Karachi Harbour



Karachi Harbour 1838, Sindh
archives map edited by author



Karachi Harbour sketch by C. Masson
1830, Image from historickarachi.weebly



1839-1880
Development of Karachi port during *British Raj*



Karachi Harbour breakwater
1874 image from KPT archives



Karachi bundar Erisken wharf
image from KPT archives



Karachi Harbour 1873, Sindh
archives map edited by author



Karachi harbour 1860
image from historickarachi.weebly



1880-1940
Development of Karachi port under *British Raj*



Karachi Harbour 1914, Sindh
archives map edited by author



Boat Wharf and KPT headoffice
Photos by author



1950
Karachi harbour after the partition



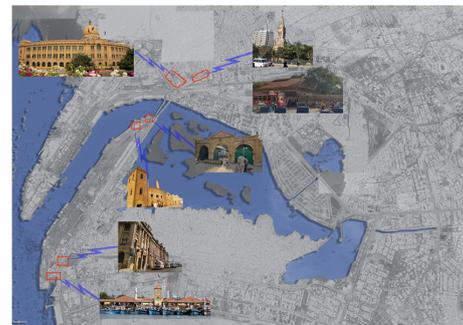
Karachi Harbour 1950, Sindh
archives map edited by author



Karachi Harbour, image from
newsline magazine.com



2021
Karachi harbour industrial heritage



Karachi Harbour 2021 image
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FIGURE 3. Historical timeline of Karachi port.

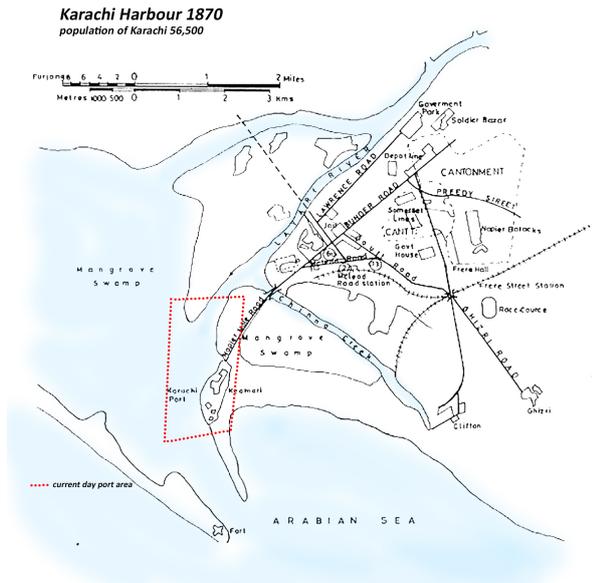


FIGURE 4. Karachi harbour 1870 map.

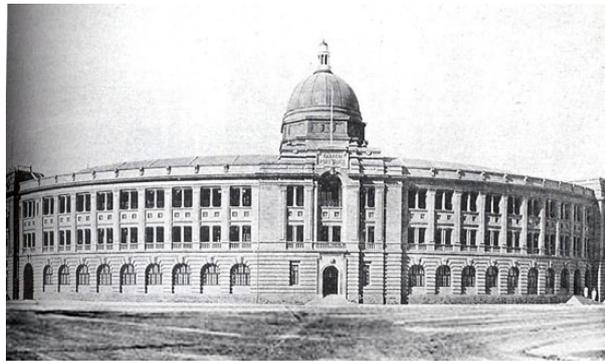


FIGURE 5. Karachi port trust KPT building.

After the partition, Karachi port was still the main route for trade for both Pakistan and the landlocked country Afghanistan; that's why due to the cargo ships traffic, the Pakistan government added a west wharf to the port, thus extending its capacity. Until 2001 the port was open for the public to visit and see the hustle and bustle of the site and the people working over there on the port. Most of the people in Karachi have a relationship with the port in one way or another. The urban setup of the city of Karachi originates from the port. People take pride in talking about the port and the memories related to it in terms of work, travelling and trade. In the immediate vicinity of the west wharf, there is the squatter settlement in Kemarhi, and this settlement has mostly families of the people working or used to work on the seaport. In the squatter settlement, you see an informal community now with congested bazaars and negligible public amenities, and green areas (see Figure 6).

After a change in security protocols in Pakistan, the Karachi seaport was also restricted, and the public or the tourist couldn't enter most of the sites at the port. Figure 7 shows the private areas in red, which

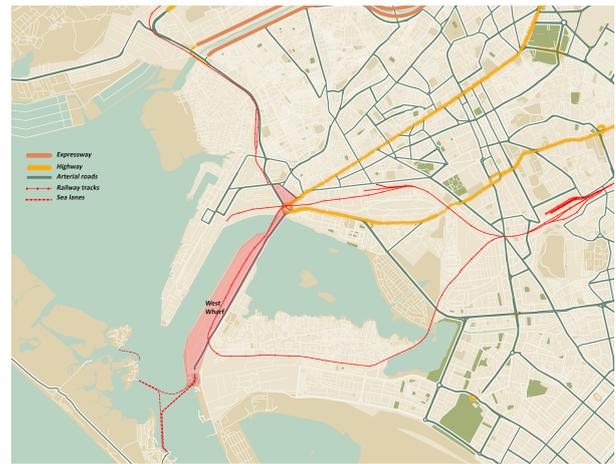


FIGURE 6. Connection of the port in Urban setup.

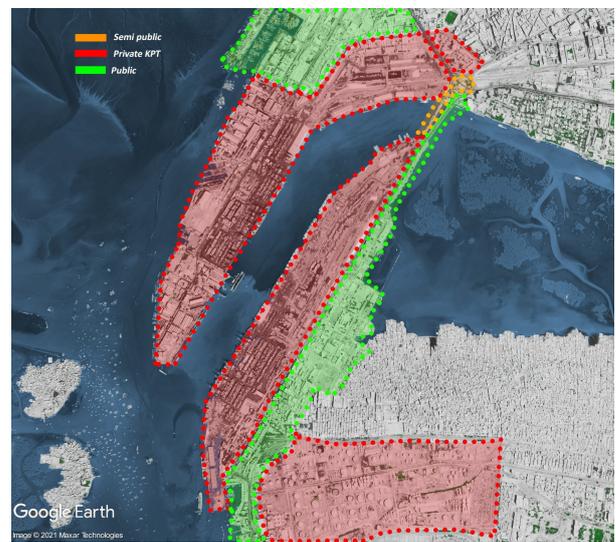


FIGURE 7. Restricted, Public and semi-public areas on Karachi port.

are not accessible by the public except the employees, semiprivate regions of orange, which are only accessible by appointment, while the areas in green can be visited by everyone (Figure 7). During the interviews with some of the employees of the Port of Karachi, they also mentioned that the port was accessible to all and was not segregated into different zones. But it all happened after the 9/11 incident in the US. Presently the situation in Karachi is better now, and the port can be reintegrated into the locality more efficiently than before by reusing the abandoned or underused buildings on site as the security situation is back to normal now in Karachi.

5. RESULT AND DISCUSSION

Karachi is the economic capital and largest city of Pakistan in terms of population. The city of Karachi is overly populated, with little to no recreational areas in most of the neighbourhoods. The port of Karachi, which was once part of the locality, can play a vital role in the urban regeneration of the area. The

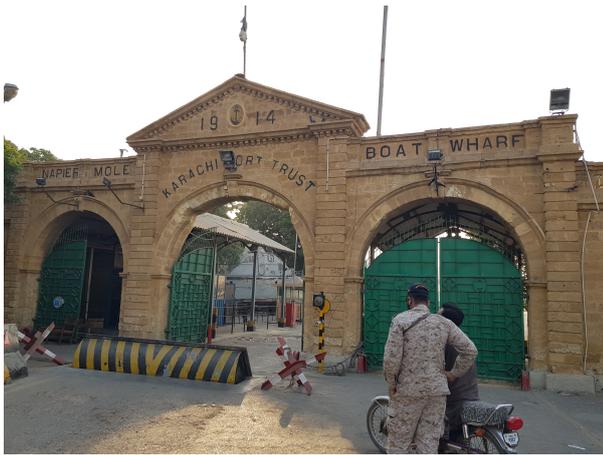


FIGURE 8. Karachi port Boat wharf entry gate.



FIGURE 9. Mules mansion near Karachi port.

abandoned/underused buildings on the site (see Figures 8, 1 and 9) can be reused in a way to preserve and display the industrial heritage of the city, along with opening things up for the public to create space for tourism. The reintegration of the port and allowing the public can be planned by taking into consideration the traffic on the port; Figure 10 was developed after visiting the site along with a port employee, and it shows the areas in green that have minimum traffic of the seaport and can be open up for the public. The area which is used by ships loading and unloading and parking trucks was considered high traffic area and is shown in light red in Figure 10; the map also shows the buildings with heritage status under “The Sindh cultural heritage (preservation) act of 1994” and infrastructure on the port site in red. Abandoned industrial buildings are reused and reintegrated into the urban setting around the world, especially in Western countries, which is a sustainable way to preserve the embodied energy and heritage value of the place instead of just demolishing or leaving it for decay. There are several underused and abandoned buildings on and in the vicinity of the port which can be reused in a way to preserve the heritage value at the same time taking advantage of its potential. Passing the early 20th-century entry gate (Figure 8) Berth 15–17A at the east wharf (Figure 1), which once was a storage building, and a lighthouse is lying abandoned, and it’s in the green area (Figure 10) in low traffic zone. Another multi-story residential building that is associated with the port is the Mules mansion (Figure 9) is also lying abandoned in the green zone mentioned in Figure 10.

One of the reasons behind the negligence of these buildings at the port is also the heritage laws, which gave them the heritage status but did not separate them or specify their category. These laws are more related to commercial, residential, or landscape sites but do not say anything regarding the areas which have industrial values [18].



FIGURE 10. Traffic on the port to show the potential in opening areas for the public in low traffic zones, image by the first author.

6. CONCLUSION

Industrial heritage is a new addition to the heritage realm compared to cultural and natural heritage and is recognized separately in most of the world. But in South Asian countries, including Pakistan, this area of heritage is under-focused and is mostly neglected [19]. Based on the international precedent literature review and the study of the seaport of Karachi, there are many buildings with historic and industrial values which are a heritage of the city. These buildings have played a significant role not only in the economic development but also in the social, cultural, and urban development of Karachi in the past. Through the survey of the port, documenting and presenting the present condition of buildings, it becomes clear these sites have a potential for adaptive reuse and can become part of sustainable redevelopment and urban regeneration.

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