

PAPER • OPEN ACCESS

EXPLORING THE POSITION OF OLD SEMARANG SEA PORT: Based on Javanese City Pattern

To cite this article: R. Siti Rukayah *et al* 2018 *IOP Conf. Ser.: Earth Environ. Sci.* **116** 012036

View the [article online](#) for updates and enhancements.

Related content

- [Local Wisdom of The Native Settlement as A Main Gate in The Northern Axis of Javanese City Center In Semarang](#)
R. Siti Rukayah, Dr Dhanang Respati Puguh, Endang Sri Susilo et al.
- [Green Port / Eco Port Project - Applications and Procedures in Turkey](#)
Burak Akgul
- [Panitikrama: Achieve Perfection of Life from A Javanese Perspective](#)
Rangga Prasetia Nugraha and Munawar Hoilil



IOP | ebooks™

Bringing you innovative digital publishing with leading voices to create your essential collection of books in STEM research.

Start exploring the collection - download the first chapter of every title for free.

EXPLORING THE POSITION OF OLD SEMARANG SEA PORT: Based on Javanese City Pattern

R. Siti Rukayah ^{1*}, Endang Sri Susilo ², Muhammad Abdullah ³, & Siddhi Saputro ⁴

¹ Department of Architecture, Engineering Faculty, Diponegoro University Jl.Prof.H. Soedarto, SH, Tembalang, Semarang 50275, Indonesia

² Department of Marine Science, Faculty of Fisheries and Marine Science, Diponegoro University, Jl.Prof.H. Soedarto, SH, Tembalang, Semarang 50275, Indonesia

³ Culture Science Faculty Universitas Diponegoro Jl.Prof.H. Soedarto, SH, Tembalang, Semarang 50275, Indonesia

⁴ Department of Oceanography, Faculty of Fisheries and Marine science, Diponegoro University, Jl.Prof.H. Soedarto, SH, Tembalang, Semarang 50275, Indonesia

¹ tututrsiti@yahoo.com

Abstract. According to the world traveller that have visited the old cities on the Java Island in the 15th century, the cities have a seaport. The sea port became a place for transit and stay until grown as a coastal city, Unfortunately, some of these cities have disappeared due to the process of secretions. Semarang in the 14th century also had a sea port as a landing area in Kampung Melayu. Recently the village no longer located in the coastal but in the middle of the city. How to prove that the area was a coastal area? By tracing some architectural remains, toponymy and comparing with the Javanese urban design pattern revealed the old phenomena in the past. Architectural sketches will make a clearly information about the old coastal line of Semarang. It is estimated that the seaport directly connected to the *alun-alun* / traditional square as central government. The city founders in Java puts the center of government using the same city spatial structure as waterfront city. The architecture remaining as a landmark of coastal city should be conserved.

Keywords: old, Semarang, seaport, *alun-alun*, local wisdom

1. Introductions

Hartono stated that the understanding of urban history is very important for urban planners and designers, since most urban planning techniques depend on extrapolations from past [1]. Roosmalen stated that the planning of the oldest city in Java is the palace of Majapahit. In the Majapahit city planning, referring from its ruins, the pattern of the city is composed of a port and the center of government [2-3] Furthermore, the next urban planning in Java refered to the unwritten concept of Majapahit (1293 to 1500) [4]. The planning of the city center that has the composition of *Alun-alun*, palace, mosque [5-7]. The structure could be attributed by the dominance of the North-South axis [8-9]. The concept of urban planning from the era of Majapahit kingdom continued in the era of Islamic sultanate such as Demak, Cirebon, and Banten [10]. The north-south axis concept still preserved in the Islamic era due to the location of the city on the north coast of Java [10-12]. By the way, the north axis was the city layout to



face to the sea. So, the concept of the cities was a waterfront of the city.

From that explanation above it appears that in the 1950s the condition of *alun-alun* Semarang was full of market buildings and traders [13]. In the Dutch colonial era, *alun-alun* as old square cut off by the *grote post weg* road (1809-1811) (Pratiwo.P.Nas, 2002). In Semarang city the remaining oh the *alun-alun* after cut off by the *post weg* had a kite-shape [14]. In the 1930s the East side of *alun-alun* was covered by the new modern market building (Johar market). In the era of the 1970s the remaining *alun-alun* in west side turned into Jaik market and hotel Metro and Kanjengan office on the south side of the square turned into a shopping center [5]. The identity of traditional city and surrounding were finally lost their identity in 1970s. However, long time before the area changed due to development, the area located facing through to the sea. Now the area is no longer on the coast of Semarang. In the 14th century the location of the port of Semarang located in the area of Sleko [15-16]. The port that connects the city of Semarang with ancient Mataram kingdom. [18]. Similarly, according to geologists, the coastline of Semarang was on the north side of Semarang's central government area around Sleko area in Kampung Melayu [19]. Geologically, some cities along the north coast of Java including Semarang city undergoing sedimentation process. Due to sea sedimentation process, using satellite imagery Semarang city progressed to the north as far as 8 km since 14th century [15-17]

Based on that development process (naturally or human disaster), the identity of Semarang city was lost as a traditional city that was waterfront. This paper is aimed to reveal the position of old Semarang as waterfront city. Where was the position of coast line and seaport on the old Semarang city planning in the past?

2. Research Method

The research using qualitative method is strengthened by using the historical approach. The process of collecting old data was obtained from KITLV, newspapers and history books. Analysis of information in old data, old maps, old photographs and map in the recent condition will be re-drawn using overlapping system until easy to do interpretation. The city pattern in traditional cities in Java will use as references. The conclusion of the research is based on the city development stage (layering morphology) of the city center that has been described.

To explore the situation in the past, some of the old data of Semarang city in 1695, 1719, 1875, 1880, 1909, 1917, 1945, and the 17th century obtained from KITLV will be the basis to reveal the pattern of the waterfront city at that time. Through an old image images and old maps the researchers will do 'seeing by believing'[18]. According to Pole, 2014 pictures and maps speak more about the past than a narrative. This approach is also used to strengthen that narrative history in Indonesia is very limited [19].

The location of this research is the old city center of Semarang, especially in the old Malay kampong until the old formerly capital city Semarang in Kanjengan. That area expressed by marine historians and marine geologists as the coastline of Semarang in the past. The model of traditional city in Java prototype which has composition consisting of the city port - the central square government.

3. North Axis of the Sultanate Cities in Java

In the 13th to 15th centuries, there was a substantial increase in commerce in Southeast Asia in general and Java in particular. As a result of the progress in the field of shipping, many foreign traders come to the cities on the north coast of Java. They came from India (Jambudwipa), Cambodia, China, Vietnam (Yawana), Campa, South India, Bengali and Siam [21].

The cities on the north coast of Java became a bustling port city. Geographically the city of Java can be divided into two parts. That is the coastal city and inland city. Both coastal and inland cities at the beginning of its development had the same structure. In the later historical development that the coastal city has a different structure from the inland city. This is because the coastal city will more interact with foreigners from across as a result of progress in the field of shipping. So the inhabitants of coastal city are more hiterogin when compared with the inhabitants of inland city [21]

The sultanate cities on the coast such as Cirebon, Banten have the concept of city arrangement that can still be traced. The structure of the old city had a type of cosmic city, a hierarchical-concentric city,

and includes a planned settlement pattern, although not geometrically. In urban history, cities in the early days of their growth were usually well planned, ie, as a human effort to organize the environment in which to live for the better. The old city map of Banten and Cirebon as coastal city which can be obtained from the atlas of mutual Heritage shows the pattern of cosmic city with the composition of the square, mosque, palace and north axis toward sea area.

The concept of the sultanate city is actually regardless of cosmic thought. Nevertheless, it is suspected that the cosmic concept which originally was the view of traditional societies in Southeast Asia in general and Java-Bali based on Hinduism was continued by the founders of the imperial/ sultanate city. In Hindu terms it has two distinct views. The first is the holy-religious view and the second is 'profane-political'. Based on this view the royal capital was built. Thus, the grand design will include decisions on where religious areas as sacred place and where the political landscape as profane will be placed. The sacred space must be separated from the profane space. In the sacred space (microcosm) humans can regularly organize their activities based on cosmology and they need cosmography to make decisions. The effort to present this philosophy in their physical form is manifested in area planning and building planning following physical elements: Center (Axis Mundi & Imago Mundi), Hierarchy, Axis and Orientation.

In the core area that is considered as a sacred area lay an alun-alun / the traditional square. Alun-alun is a venue for important state, community and religious events. Religious events take place in the alun-alun with the mosque as its controller. Meanwhile, the government event took place in the alun-alun with the palace or dalem as the controlling activities. This square is very important because it is the outermost part of the palace or *dalem*. The square is a transitional area between the world outside the city and the world in the palace [9]. So the position of alun-alun and corridor as imaginary northern axis connecting to sea and palace/ *dalem*.

It can be concluded that the application of the North South axis in traditional cities with the Hindu concept is constantly on the urban governance of the Islamic Sultanate or the Islamic city center. The traditional urban design in the era of Dutch colonialism still maintains the Javanese traditional city concept which contains of local wisdom in designing the city center of government.

4. Boom area on North side of Alun-alun

There is an interesting city pattern and structure in the imperial coastal city and imperial inland city. Some cities in coastal and inland Java have ports / *booms* that are directly connected to the *alun-alun* as the center of the city. Literally the meaning of the word *boom* in Dutch equals to seaport in English or *Pelabuhan* in Indonesian.

The city of Tuban on the north coast of Java, the physical form of *boom* is the land that jutted the sea. Geographically located just a few hundred meters north of the *alun-alun* Tuban. The boom serves as a dock where the ship docked. The boom was made as a result of the silting of the coast of Tuban since the 16th century, so large ships had to be anchored in the middle of the sea. With the *boom* is expected to the large/ medium size of the ship can dock in the *boom*. [1].

The Solo City, located on the banks of the great river Bengawan Solo in the interior of Java also has a kind of port called a bandar. The city of Solo was originally formed by the coolie community (Javanese: *soroh* until its leader was called *ki-soloh* or *ki-solo* or *ki sala*) located at *bandar* Nusupan.



Figure 1. The city pattern of old city as waterfront city in Surakarta, Cirebon and Banten.

Resources: atlas mutual heritage

Similarly, with the city of Banten. As the city of sultanate and township became the center of the highest market network for mid-market centers outside the city and palace areas, as well as local markets in rural areas. The location of the city and the market is on the north side of the square. It is also in accordance with the life of the central cities of the kingdom and port cities of Islamic maritime empires in Indonesia. The central cities of the kingdom and port cities such as Samudra Pasai, Aceh, Malacca, Demak, Banten, Gresik, Jaratan, Jepara, Surabaya, Ternate, Banda, Gowa-Makasar, Banjarmasin, Palembang and so on, many visited by big traders from various foreign countries as well as from royal areas in Indonesia.

It can be concluded that as a city of sultanate or a waterfront city based on waterfront and harbor city has a boom, a kind of dock of land that is useful as a landing site. It is estimated that the founders of the city set up the concept and lay out the city with the center of the city leads to the port area. Market position, shop and commercial area become the boundary of public activity to the alun-alun and the central government or palace as the core space of the city.

Both theories above about traditional city layout patterns in Java and boom positions that directly relate to the center of government can be a new knowledge and method to track the form of a traditional city that has lost its identity due to natural or human disasters.

5. The Layur Corridor in the Old Map

The existence of the Layur corridor has appeared on maps sourced at the atlas of mutual heritage in 1719 (see Figure 2 and 3). Layur Corridor is a road in Kampung Melayu Semarang forming by two rows



Figure 2. Old Semarang Map in 1787 AD. In this photo seen the structure of the old Semarang city, Layur Corridor perpendicular to the port and the square of Semarang.



Figure 3. Old Semarang Map in 1719 AD, the blue-marked region (the end of the corridor) is a river encounter. It is supposed to be a landing place from the boats in the sea.

of China and Arabs shop houses. The row of merchant's house in that corridor served as a trade corridor. Layur Corridor location is strategic area because connecting the seaport – the center of government

Recently. Semarang city increasingly develops. Unfortunately, the attention of the local government in conservation effort does not reach this area. The area has a history as the main gate to entered Semarang as one of Asia's largest trading centers. In this village area was once the entrance to the city of Semarang. Based on the remaining of the toponym, the name of the kampung *Darat* means the place for landing from the boats. The remaining toponym *boom* lama has a meaning as seaport [20-21]. It can be concluded that from the two remaining of the toponym, the village once was the initial port of Semarang city before it was transferred to the port which is now called Tanjung Mas. In 1875 AD, the Dutch East Indies government opened a new channel as a new river line from Kampung Melayu to the seaport [20].

6. Seaport - North Axis – Capital City

The existence of Layur corridors at this time looks shabby. Many buildings are not functioning, broken and collapsed. While the straightening the

houses of Arab merchants are not working. Problems that arise today due to several factors and aspects in relation to the development of the city of Semarang. The existence of trade corridors such as the corridor Layur in Semarang has begun to fade, because it has been replaced with another commercial area such as in Johar market area, jalan Pemuda and Simpang Lima.

One of the architectural buildings indicates that this area formerly was a seaport area in the past is *Menara masjid Layur* mosque. This mosque has a tower that served as light tower at the time. The mosque has a historical value so the local government rewarded the Layur mosque as a cultural heritage building since 1992 AD.

The pictures bellow is juxtaposed of the present maps and old map in 1719 AD.



Figure 4. The Layur corridor in 1719 and recent condition

The Layur road has a function as an imaginary north axis connected seaport in *boom lama* with the *alun-alun* in Kanjengan area. This concept is similar to the Islamic sultanates along north coast Java and the sultanates that built based on waterfront city concept in Surakarta.

The urban patern of old Semarang designed by Ki Ageng Pandanaran at the beginning of the 15th century seems look similar to the concept of urban planning of the Demak Sultanate Therefore the old Semarang city had arranged based on the concept of the Demak waterfront city.

The development of the northern axis of Layur corridor has increasingly become the direction of the orientation of buildings and villages since the construction of Groote Post weg (the great mail road) in 1809-1811. The road position is on the south side Layur Corridor and splitting *alun-alun* Kanjengan. Since the construction of this road, Semarang river is no longer as the orientation and the direction all of building in Layur Corridor. The progressive sedimentation also causes the river to be no longer navigable. The condition of the land grew forward to the north and left the traces of Malay village as a coastal area.

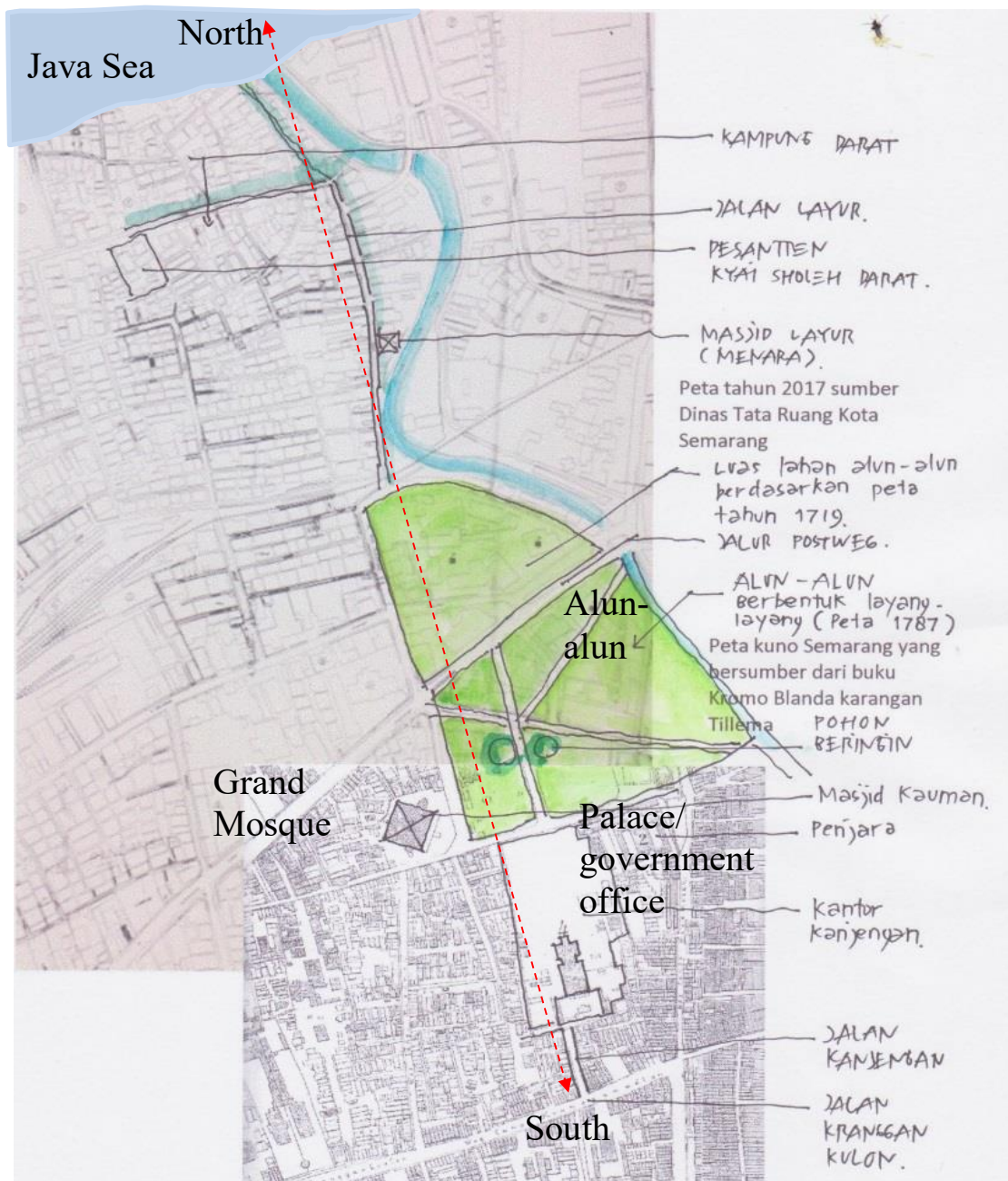


Figure 5. A simple sketch of the positions of ports and central government

Based on the compilation of the old map of Tillema's in chromo Blanda book, and the recent map is found that Layur Corridor directly connects to the city center government. The city centre of Kanjengan consists of the square/ *alun-alun*, the grand mosque and Kanjengan office. (Figure 5)

7. Conclusions

Based on the analysis of urban structures in Java where the city pattern is port- corridors- city government the position of Malay kampong was the coastal area of Semarang in the past. Based on field survey, matching with ancient Semarang maps, and historical references, the Layur corridor as northern imaginary axes to the centre of government has been lost.

The researcher suggests for the next research to be aimed to make a whole mapping of the old coastal Semarang city. For the city government, researchers suggest that the government has a serious concern for the conservation effort in old coastal area.

Acknowledgement

Thanks to the Architecture Department and Penelitian Terapan Unggulan Perguruan Tinggi that has provided funding for this research activity in 2017.

References

- [1] Hartono S 2005 Alun-Alun Dan Revitalisasi Identitas Kota Tuban. *Dimensi Teknik Arsitektur*. **33** 131–141
- [2] Noorduyn J 1978 Majapahit In The Fifteenth Century. *kitlv-journals.nl*. **134** 207-274
- [3] Kementerian Pekerjaan Umum dan Perumahan Rakyat 2015 Mengembalikan Identitas Kota Pusaka. *Buletin Ciptakarya*.
- [4] Rukayah, Siti R, Dhanang R, and Endang S 2016 Morphology of Traditional City Center in Semarang. Towards Adaptive re- use in urban heritage. *Environ Proc J*. **1109–118**
- [5] Rukayah, Siti R 2010 *Simbiosis Di Ruang Terbuka Kota Simpang Lima Di Kota Semarang*. Phd Dissertation, not published.
- [6] Rukayah, Siti R, Malik A 2012 Between Colonial, Moslem, and Post-Independence Era, Which Layer of Urban Patterns should be Conserved?. *Procedia - Social Behavior Science* **68** 775–789
- [7] Rukayah, Siti, R and Hartuti S 2013 Islamic City Structure In Sekayu Semarang (The Viewpoint of Urban Design). *Journal of Architecture, Planning and Construction* . **3** 1
- [8] Gomperts A, Haag A, and Carey P 2010 Rediscovering the royal capital of Majapahit. *Kitlv.nl*. **2** 12–23
- [9] Wessing R 1992 A Tiger In The Heart : The Javanese Rampok Macan. *Kitlv.nl*. **148** 287–308
- [10] Rukayah, Siti R 2005 *Satu Lagi Potensi Wisata Sejarah, Temuan Typologi Konsep Alun-alun di Jawa, Kreasi Muslim Cina Anak Buah Cheng Ho*. Pemenang ke 3 Lomba Penulisan Tingkat Nasional Cheng Ho dan Kaitannya dengan Indonesia, dalam rangka peringatan 600 tahun pendaratan Cheng Ho di Indonesia
- [11] Permana RCE 2004 Kajian Arkeologi Mengenai Keraton Surosowan Banten Lama , Banten. *Makara, Sos Humaniora*, **8** 112–119
- [12] Gomperts A, et al 2008 Stutterheim's enigma The mystery of his mapping of the Majapahit kraton at Trowulan. 1941. *Kitlv.nl*. **4** 411-430
- [13] Rukayah, Siti R, Bharoto 2012 Bazaar in Urban Open Space as Contain and Container Case study: Alun-alun Lama and Simpang Lima Semarang, Central Java, Indonesia. *Procedia - Social Behavior Science*, **50** 741–755
- [14] Rukayah, Siti R, Respati PD, and Endang, S 2016 Morphology of Traditional City Center in Semarang: Towards Adaptive re- use in urban heritage. *Environ Procedia Social Behaviour*. **1** 109–118
- [15] Maziyah S 2012 Kondisi Jawa Tengah Pada Abad VIII Sampai Abad XV M. *Humanika* **15** (9)
- [16] Taufik M 2004 Teknik Pendeteksian Garis Pantai Pada Delta Dengan Pendekatan Pengolahan Citra Satelit Resolusi Tinggi. *Pertemuan Ilmiah Tahun I Tek Geod - ITS*, 133–136
- [17] Sardiyatmo 2004 Kajian Perubahan Garis Pantai Semarang dengan Foto Udara dengan Pankromatik Hitam Putih. *Ilmu Kelautan* **9** 160–168
- [18] Pole CJ 2004 Seeing Is Believing ? *Studies in Qualitative Methodology* **7**

- [19] Kuntowijoyo 1994 *Metodologi Sejarah*. Tiara Wacana Yogya
- [20] Tio J 2004 *Kota Semarang dalam Kenangan*. Semarang
- [21] Joe LT 2004 *Riwayat Semarang*. Hasta Wahana