Students Reinventing Cities

Onrust Archaeological Museum, Jakarta

Sub District of Untung Jawa, Province of Jakarta

Onrust Archaeological Museum showcases the heritage of the group of islands on the outer edge of the Bay of Jakarta. The islands - *Onrust Island, Cipir Island, Kelor Island, and Martello Fort at Bidadari Island* - are the only museum islands in Jakarta Province.

Historical sites on the Islands include the Dutch Cemetery, Local Muslim Cemetery, Hajj Quarantine Barracks, foundations of forts, watchtowers, prisons and windmills The museum currently contains 125 collections including cannons, Dutch-made-bricks, and various war equipment.

However, by providing a unique insight into Jakarta's history, it offers the potential to be transformed into a historical tourism destination, consisting of the following:

1) Indoor exhibition hall building showcasing historical excavations in Onrust Island, Cipir Island, Kelor Island, and Bidadari Island as an indoor exhibition hall.

2) An outdoor exhibition consisting of the ruins of buildings.

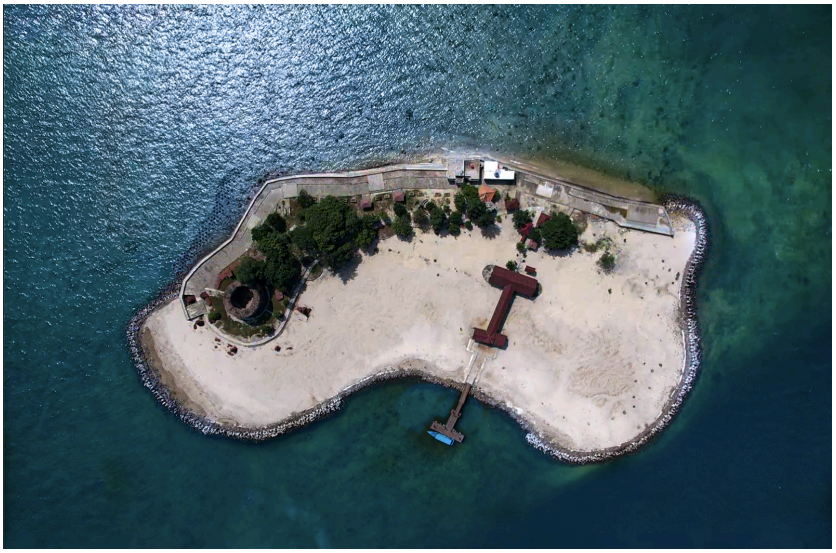

Figure 1) Satellite Image of Kelor Island, Province of Jakarta

Approx. site area
Onrust Archaeological Museum consists of three islands and one fort area. Onrust island: 8,22 ha, Cipir Island 1,66 ha, Kelor island: 0,95 ha, and 1 fort area at Bidadari Island.

Key Information

In 2023, the islands attracted 28.682 visitors. Any development on the islands must adhere to the Law of Heritage Preservation.

Priority areas & main expectations
Students should develop proposals to transform the area into an attractive historical tourism destination, considering the following priorities:

- Implement adaptation measures, such as nature-based solutions and drainage systems, to reduce the risk of flooding and erosion.
- Activate the islands to become accessible and inclusive public spaces.
- Develop facilities and supportive infrastructure for the museum, using green infrastructure and energy.
- Connect transit docks from mainland Jakarta to the islands via a new green transportation line.

Presentation of the Site and Development Expectations

Onrust Island, located in the Thousand Islands archipelago, has a rich and complex history spanning several centuries. The island's strategic location and natural resources have made it an important site for various purposes throughout the ages.

Early Dutch Colonial Period:

- **17th Century:** In 1615, the Dutch East India Company (VOC) established a shipyard and fort on the island to support its maritime operations.
- **18th Century:** The VOC expanded the fort to include defence posts, warehouses, a prison, a shipyard, and a windmill. However, the fort was later demolished and other facilities were destroyed by attacks from the British Navy in 1806 and 1810.

Dutch Colonial Period:

- **19th Century:** The Dutch East Indies government transformed Onrust Island into a naval base, constructing barracks, a floating dock, and Martello Towers for defence.
- **Early 20th Century:** The island served as a quarantine station for infectious diseases and to isolate groups of Hajj pilgrims returning from Mecca. The building materials used were leftovers from the structures demolished during previous periods, such as bricks, tiles, and stones. This quarantine station continued to operate until 1933.

Post-Colonial Period:

- In the post-colonial era, the island's strategic importance diminished, and it became a less active site. However, its historical significance and unique landscape continue to attract interest from historians, archaeologists, and tourists.



Figure 2) Images of Kelor Island, Onrust Island and Cipir Island, Province of Jakarta

In 1972, the Onrust Island, Cipir Island, Kelor Island, and Bidadari Island areas were declared protected historical sites. In 2015, the regulations regarding Cultural Heritage Sites were updated with Governor's Decree No. 2209 of 2015, which created *Onrust Archaeological Park*, including Onrust Island, Cipir Island, Kelor Island, and Bidadari Island, as a cultural heritage site. In 2022, the Onrust Archaeological Museum was established, consisting of Onrust Island, Cipir Island, Kelor Island, and the Martello Tower on Bidadari Island, based on the decision of the Head of the DKI Jakarta Provincial Culture Department No. e-0004 of 2022.

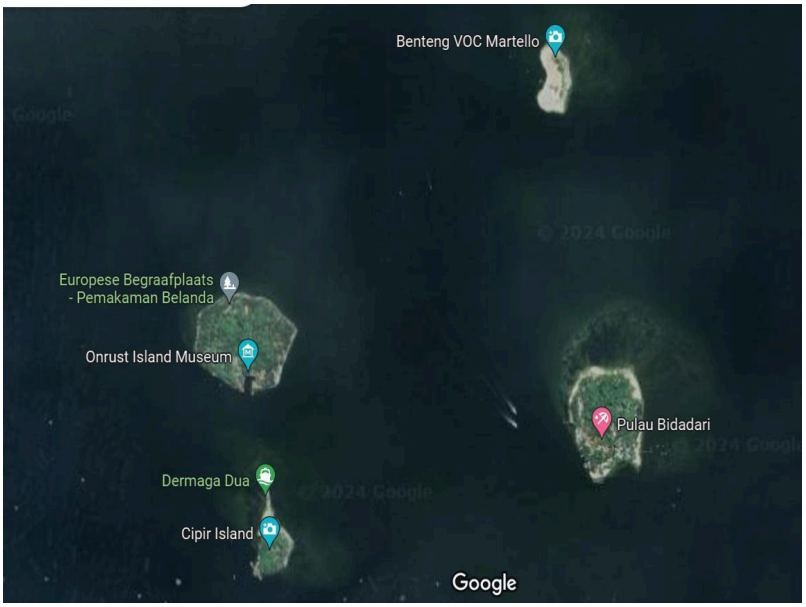

Figure 3) Satellite Image of Onrust Island, Kelor Island, Cipir Island and Bidadari Island, Google Earth

Onrust Archaeological Museum has great potential to be developed into an interesting historical tourist attraction. In addition to being a tourist destination, it can also be used as a centre for historical learning that inspires and strengthens cultural values for the wider community. To capitalise on this potential, students proposals for this site should focus on the following priorities:

1. **Infrastructure Development and Accessibility:**
- **Ongoing Maintenance of Docks:** Ensure the continued maintenance and improvement of docks on the islands to facilitate visitor access.
- **Enhanced Beach Facilities:** Collaborate with the Agency of Water Resources Management of Jakarta Provincial Government to improve beach facilities on Kelor Island.
- **Improved Transportation:** Work with the Agency of Transportation to develop new routes and improve accessibility to the islands, particularly from Kali Adem Dock.

2. **Heritage Preservation and Interpretation:**
- **Heritage Preservation:** Adhere to strict heritage preservation regulations to protect the historical and archaeological significance of the site.
- **Interpretive Signage:** Develop informative and engaging signage to interpret the site's history and cultural significance.
- **Guided Tours:** Offer guided tours conducted by knowledgeable guides to provide visitors with a deeper understanding of the site.
- **Educational Programs:** Organise educational programs for schools and the public to promote historical awareness and environmental education.

3. **Sustainable Tourism Development:**
- **Visitor Management:** Implement visitor management strategies, such as timed entry, to ensure the site's sustainability and protect its resources.
- **Eco-Friendly Practices:** Promote sustainable tourism practices, including waste reduction, energy conservation, and responsible visitor behaviour.
- **Local Community Involvement:** Engage with local communities to create opportunities for economic development and cultural exchange.

The design should avoid overwhelming the historical structures and should instead highlight the remaining parts of the Martello Fort. The landscape should be designed to tell the story of the fort's history, perhaps through interpretive signage, planting schemes, or physical elements. It's important to strike a balance between creating a visually

appealing space and preserving the site's historical integrity. By carefully considering the design and implementation of the landscape, the Onrust Archaeological Museum can become a truly unique and meaningful destination.

4. Sustainable Water Management

As a cultural heritage area located on the islands, the Onrust Archaeological Museum is vulnerable to flooding, especially during high rainfall and high tides. The islands are currently facing various environmental challenges, such as abrasion and loss of biodiversity (coral, vegetation, marine wildlife). Therefore, the following solutions should be considered:

- Using **sand backfilling** to extend the beach could be considered a strategy to preserve the islands and reduce erosion.
- To address the challenge of the availability of clean water for public facilities, a **rainwater collection** and harvesting system could be integrated to support museum operations and create added value for visitors.
- **Nature-based solutions** should be prioritised to reduce stormwater runoff on the island, such as growing coral in the backfilling area.
- Increasing **tree cover** will strengthen the bonds and will boost the islands' resilience to extreme weather events. However, trees should be carefully selected; they should not produce fruits or seeds that could be pollinated and grow uncontrollably and should coexist with the existing coastal vegetation and habitation. For example, mangroves are used in Indonesia to protect the coastal line from erosion and enhance the habitat for marine life.
- The island is also considering a **drainage system** that does not damage the historical value of the area. Students may wish to integrate using open drainage channels that mimic natural streams to collect and convey the water, infiltration wells, bioswales, and porous pavements.

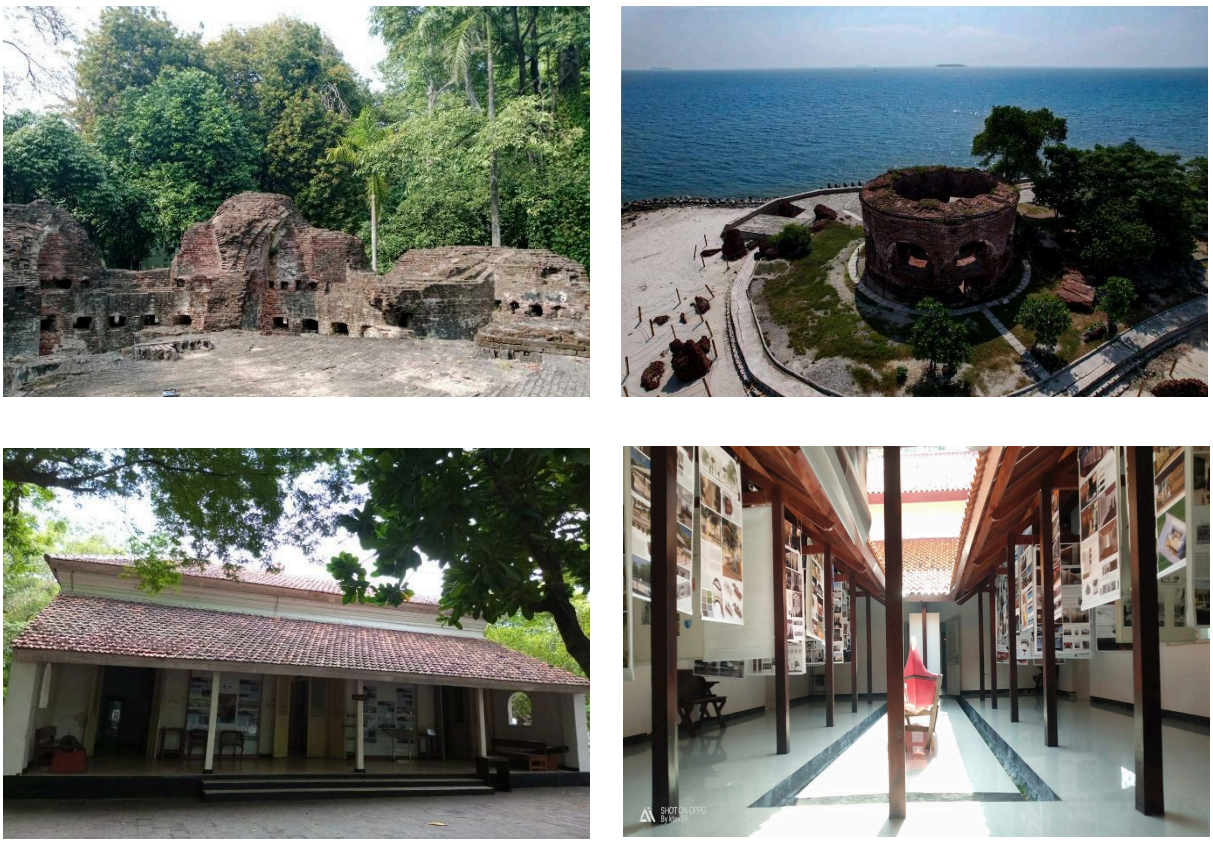

Figure 4) Onrust Archaeological Museum, Province of Jakarta

City Climate Priorities and Environmental Challenges

The Region of Kepulauan Seribu, in which the islands are located, are facing significant challenges, including:

1) **Rising Sea Level:** Threatening the islands' existence through beach erosion, saltwater intrusion into freshwater sources, and loss of residential land.
2) **Coral Ridge Degradation:** Coral Ridge is experiencing pressure from sea temperature changes, over-fishing activities, and pollution that eradicates biodiversity.
3) **Sea Pollution and Plastic Waste:** Waste dumped into the sea and water streams on the mainland is contaminating the sea, threatening marine life and damaging the area's natural beauty.
4) **Overfishing and Non-sustainable Fishing Activities:** Overfishing and harmful methods, such as using trawl nets or fish bombing, are directly damaging coral and marine habitats, as well as rapidly reducing the fish population.

As such, Jakarta has significantly intensified its efforts to mitigate environmental impacts and build resilience against climate-related disasters. In its Climate Action Plan, the city has outlined key strategies, the following of which are most relevant to this site:

1) **Adaptation Measures:** Strengthening infrastructure, using nature-based solutions, and harnessing natural resources to mitigate the impacts of rising sea levels and changing weather patterns (including frequent and intense tropical storms.
2) **Carbon Emission Mitigation:** Reducing emissions by harnessing renewable energy, integrated waste management, green transportation and expanding mangrove vegetation as a natural form of capturing carbon.
3) **Biodiversity Preservation:** Maintaining the rich marine and land ecosystem - including corals, mangrove forests, and endemic species susceptible to climate change.

Planning Rules and Regulations

To ensure the preservation of the Onrust Archaeological Museum and Martello Fort, a careful and considered approach is essential. Rigorous heritage impact assessments must be conducted to identify potential risks and implement non-destructive techniques. Sensitive interventions, such as the adaptive reuse of existing structures, can enhance the visitor experience while preserving the site's historical character. Additionally, sustainable practices, including renewable energy and water conservation, should be prioritised to minimise environmental impact. By prioritising heritage preservation, accessibility, and sustainability, this project can create a valuable cultural and historical destination for future generations. As such, students should consider the following regulations in their designs.

1) **The Protection of Heritage Sites**

- **Law No: 11 of 2010 about Heritage Preservation:** Any sites at Onrust Island, Kelor Island, and Cipir Island are registered as heritage sites, so any design interventions must follow the established principles in the law. Preservation, maintenance, and usage of heritage must be done without damaging the historical values and archaeological that exist;
- **The establishment of a heritage zone:** Classification of core zone, supportive zone, and developing zone to ensure that any kind of design does not damage any sensitive archaeological sites.

2) Spatial Planning
- **The Planning of the Regional Spatial:** The design must aligned with The Planning of Regional Spatial of DKI Jakarta and the Region of Kepulauan Seribu, including the establishment of the conservation area, strategic area, and tourism area;
- **The Planning of the Spatial Detail:** Infrastructure development must follow the Planning of the Spatial Detail that has been established for the Region of Kepulauan Seribu, especially Onrust Island, Kelor Island, and Cipir Island.

3) Environmental Regulations:
- **Environmental Impact Assessment (EIA):** Any significant development or design changes must undergo a rigorous EIA to assess potential environmental impacts, including those on marine and terrestrial ecosystems.
- **Natural Resource Conservation:** Strict measures must be implemented to protect natural resources, such as mangroves, and to ensure sustainable water and waste management practices.

4) Architectural Regulations:
- **Heritage Preservation:** All new construction and renovations must respect the historical and architectural significance of the site. This includes using appropriate materials, maintaining scale, and preserving the site's aesthetic and historical character.
- **Building Regulations:** Adherence to local building codes and regulations is essential to ensure the safety and structural integrity of any new construction or renovation projects.

5) Tourism Management Regulations:
- **Visitor Management:** Implement visitor quotas and regulated access to protect the site from overcrowding and damage.
- **Guided Tours and Education:** Provide guided tours and educational programs to enhance the visitor experience while minimising disturbance to the site.
- **Sustainable Practices:** Encourage sustainable tourism practices, such as reducing waste, minimising energy consumption, and promoting eco-friendly transportation.

5) Community Engagement:
- **Local Involvement:** Involve local communities in the planning, development, and management of the site to foster a sense of ownership and pride.
- **Economic Benefits:** Ensure that the development of the site benefits the local community through job creation and economic opportunities.
- **Cultural Preservation:** Promote the preservation of local culture and traditions through educational programs and cultural events.

Language Requirements

Proposals must be submitted in English.

City-specific Awards

The winning design will be showcased at the Onrust Festival in 2025 and will serve as input for the Onrust Island Master Plan, which will be developed in 2026.