

Reflection

Master of Science Architecture, Urbanism & Building Sciences

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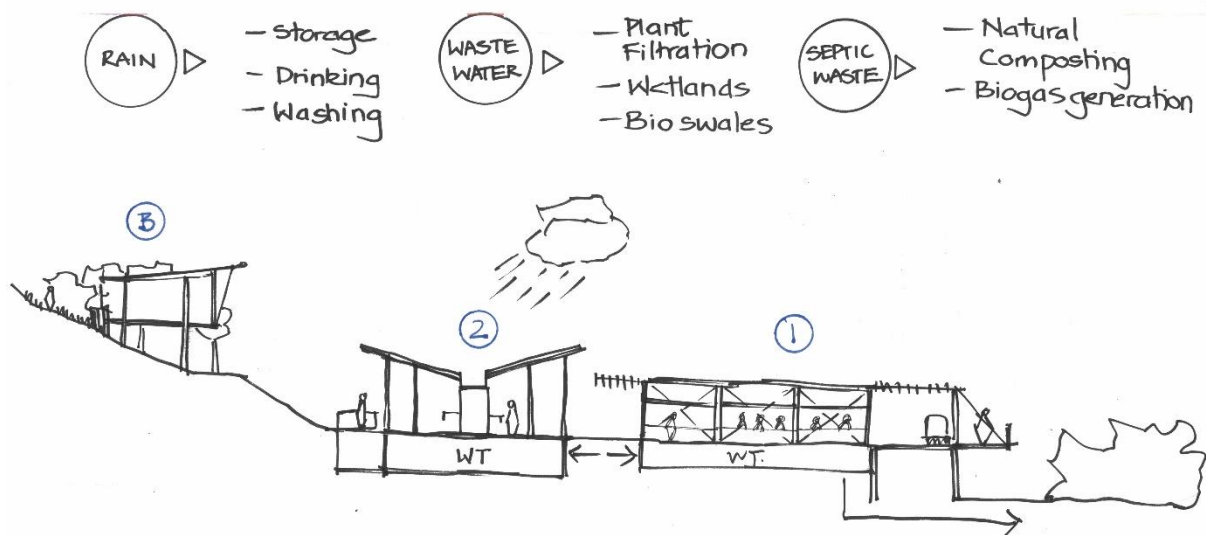


I. What is the relation between your graduation project topic, your master track (A, U, BT, LA, MBE), and your master programme (MSc AUBS)?

The graduation project topic 'The Contemporary Pilgrimage—The Case of Elephanta Island' aims to investigate how architecture can help develop a complex heritage site while maintaining its integrity. The proposal is part of a broader thematic master plan for the site, which integrates the research themes.

The architectural design resulted in a system of small, modular infrastructural interventions. Each intervention has a function derived from the research, but is tied together by the ecological approach of the overall proposal. While the project falls under the architecture track, it includes urbanism and building technology aspects, such as site management, crowd control, blue-green infrastructure, and hybrid bamboo-steel structures.

The proposal also relates to the MSc AUBS by integrating spatial design, ecological, and socio-economic systems. The proposed structures are all part of a closed waste and water loop that promotes resilience for the site.

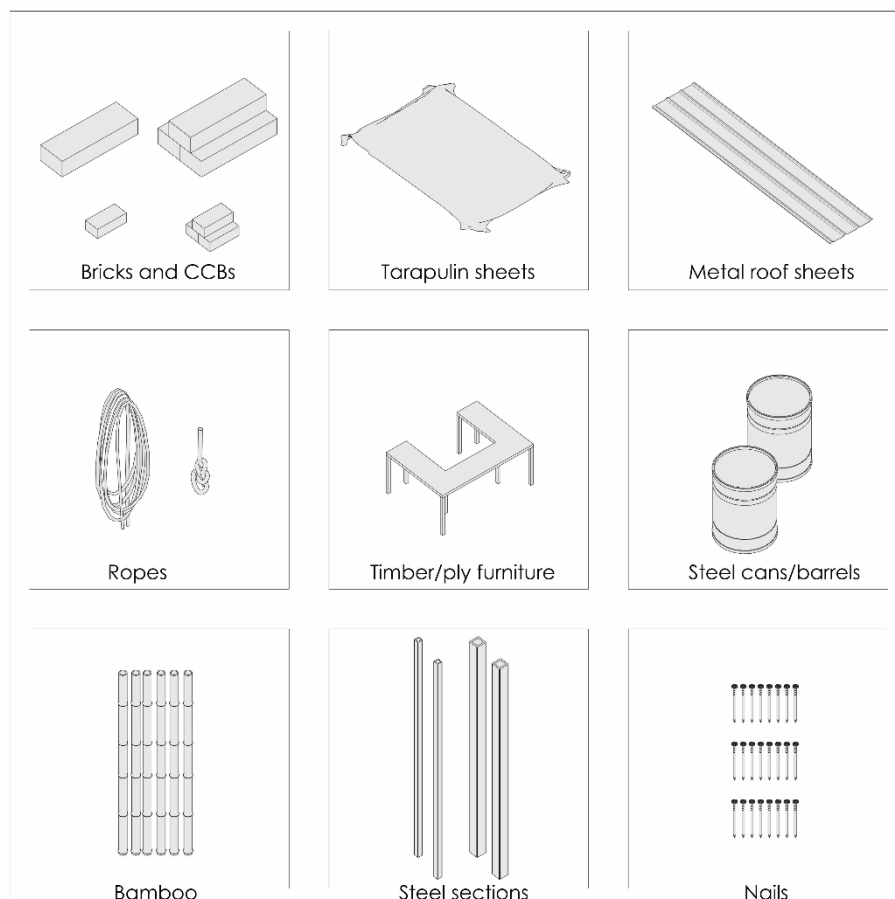


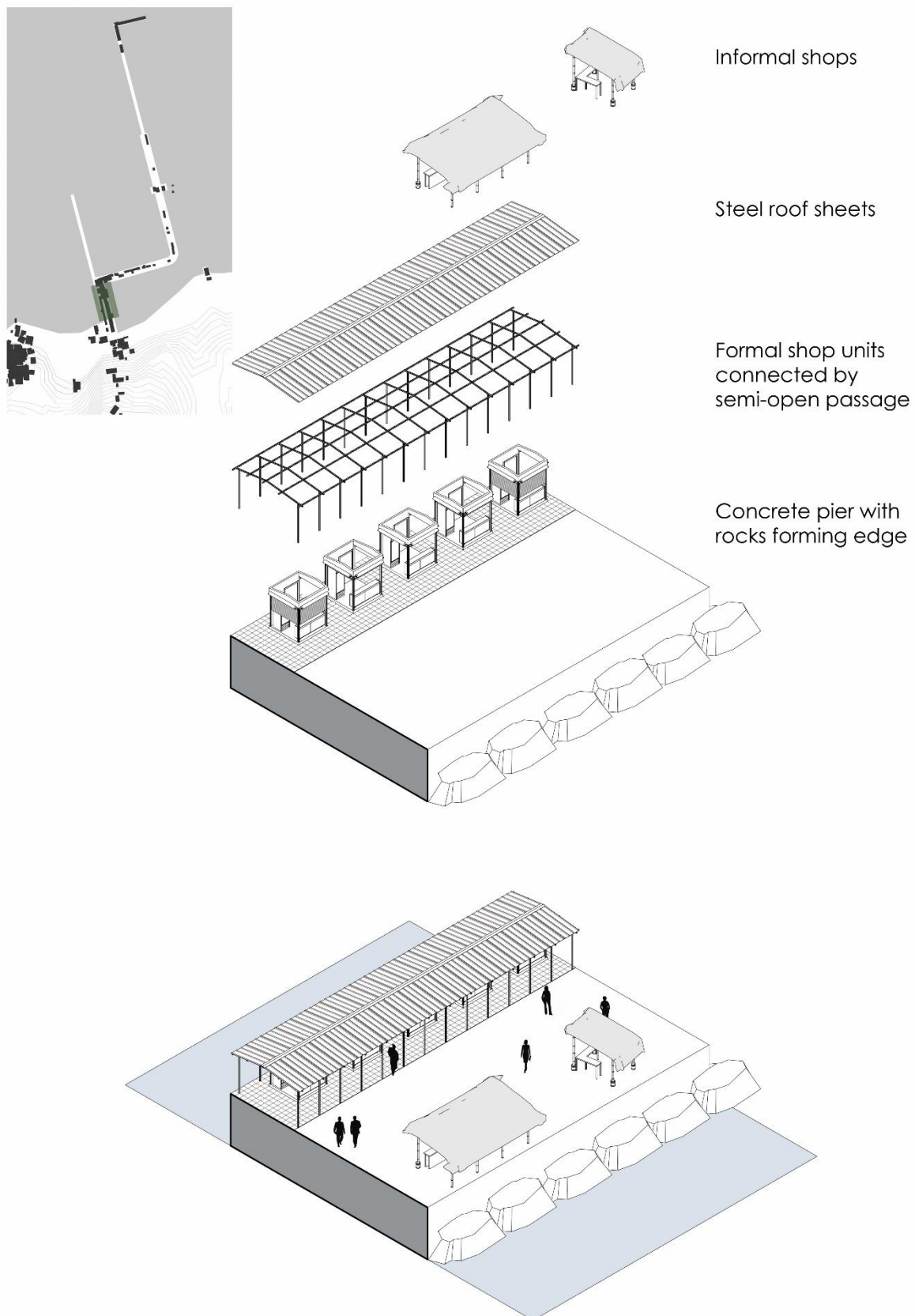
2. How did your research influence your design/recommendations, and how did the design/recommendations influence your research?

The research relied on a detailed historical and site analysis, addressing the site's shifting identity from sacred space to a tourist commodity. The existing circulation system on the Island and the needs of locals were used to determine a suitable programmatic overlay for the master plan. This influenced the design by selecting the spatial rhythm and zoning for the interventions. The decision to densify the pier, leaving the heritage steps untouched, emerges directly from the site study.

The architectural interventions by locals on the Island and the material palette that had been employed. Case studies of visitor centers in sensitive heritage sites informed the programmatic requirements. Further research into case studies and books, particularly *Hathigaon in India* by RMA Architects and *Temporary Flows & Ephemeral Cities* by Vera, F., & Mehrotra, R. (2015), heavily influenced my approach to dealing with the architecture as a series of parts that have to be assembled on site. Using these precedents, my design proposal implemented nature-based systems for rainwater capture and use, biogas generation, and educational farming modules.

Design experiments using the documented materials to develop hybrid structures prompted further research into engineered bamboo and tensile steel structures. Design iterations of massing, positioning, and volumetric study also pushed me to research further the site's climatic conditions, like seasonal mapping.





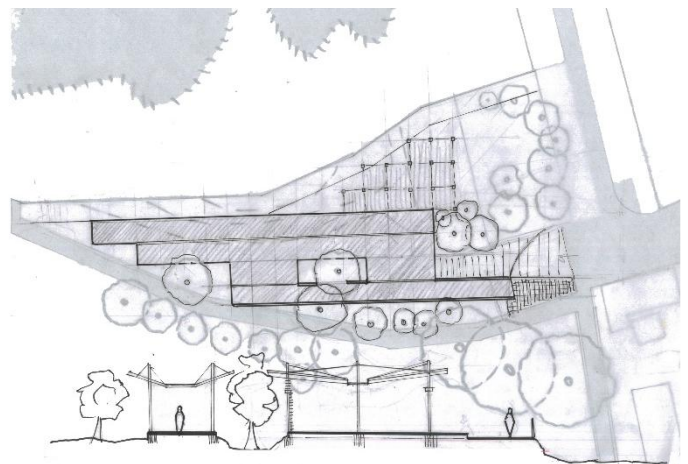
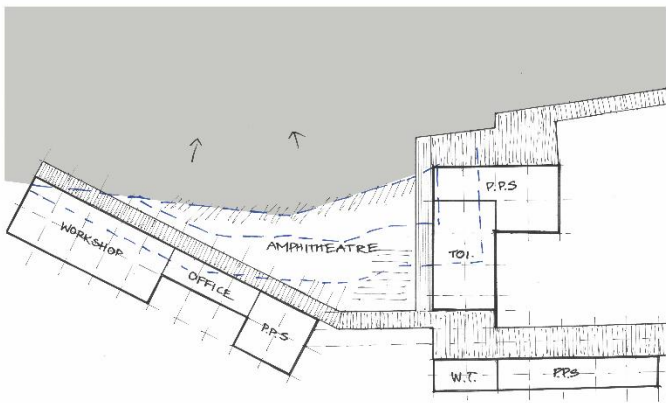
Materials (left) are collected from site studies along the existing pier (above).

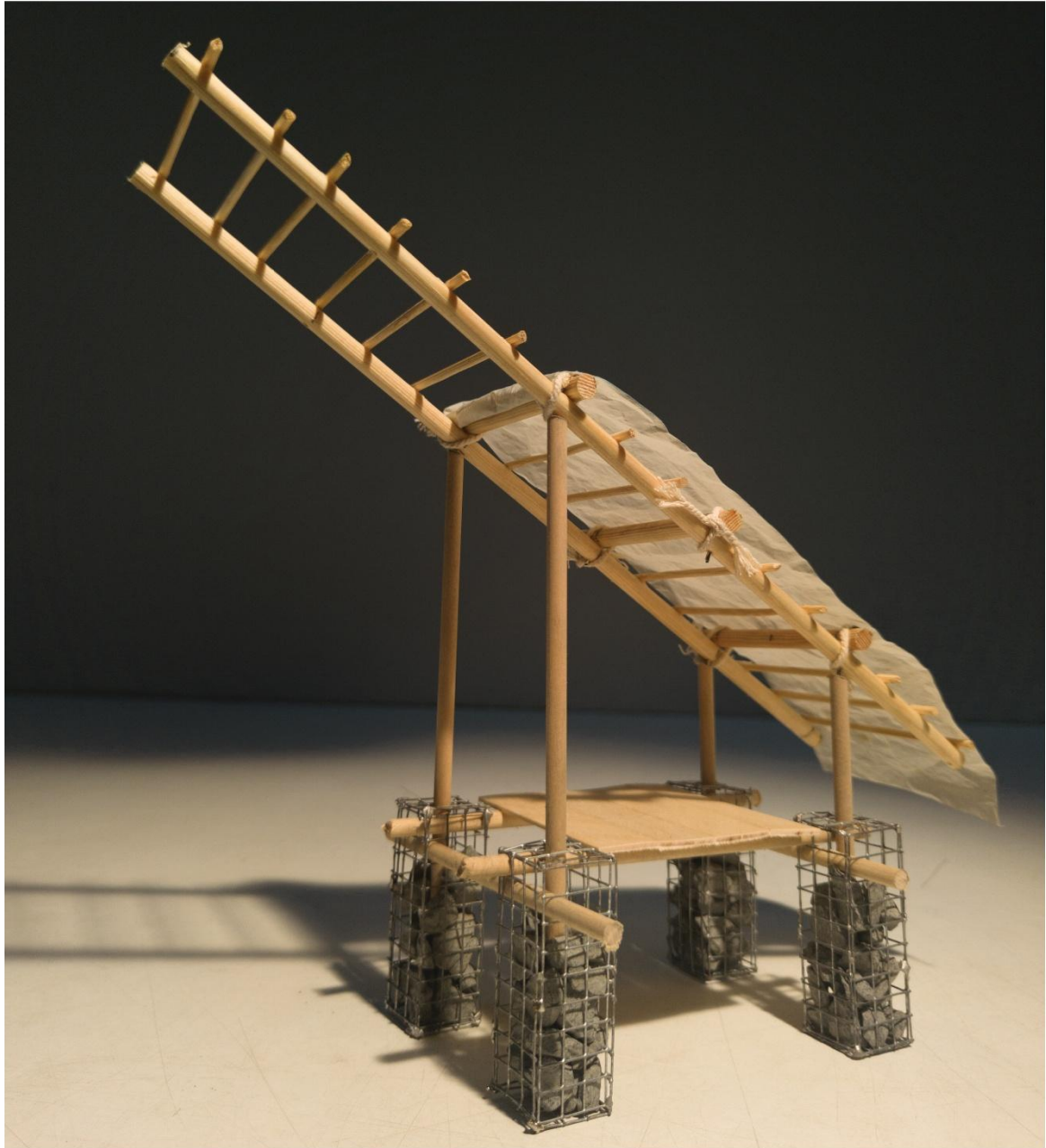
3. How do you assess the value of your way of working (your approach, your used methods, your methodology)?

The primary research methods, which included historical and analytical site studies, provided a clear understanding of the site. This also led to the three major themes: Heritage, Tourism, and Informal economy. Detailed analysis of the existing site conditions aided in determining the position and program for an architectural intervention using a familiar material palette. This back-and-forth process between iterative design and research helped me in grounding the tectonic qualities of the proposal.

While the case studies helped determine the program and scale for the intervention, they had to be carefully adapted to meet the needs of Elephanta Island. Two significant gaps in the methods employed include a lack of ecological grounding for the project and participatory design with the locals. While I have addressed the environmental thread tying together the research and design, the lack of local participation in design still requires addressing.

Mentor feedback was crucial in establishing a strong position in the site's development. Iterative designs along the pier, along with critiques on visitor circulation and its effect on the sacred axis, led to multiple iterations to rationalize the placement of the structures. This also allowed for more clarity on the exact objective of the design—slowing down visitors on their journey.





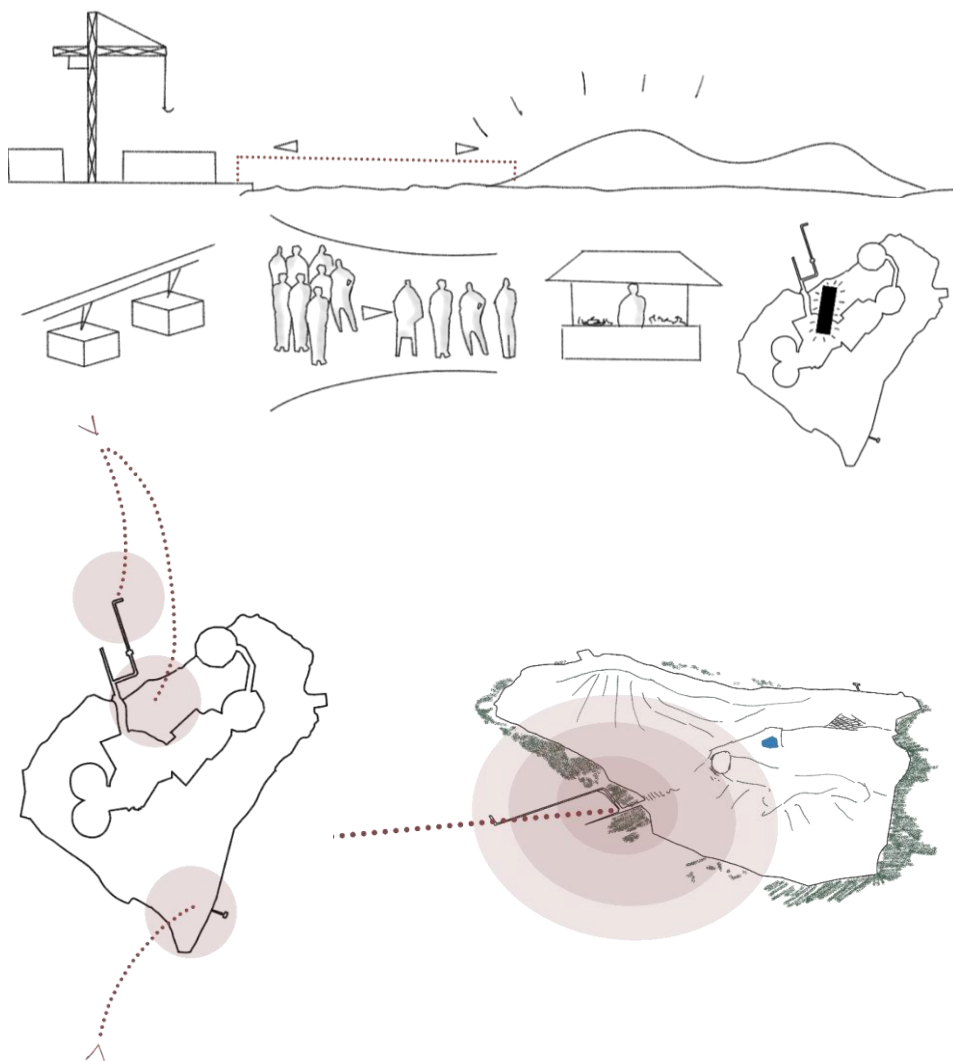
Design iterative processes and model creation utilizing materials determined from research.

4. How do you assess your graduation project's academic and societal value, scope and implication, including ethical aspects?

The graduation project's academic and societal value is a position in the more considerable debate of managing heritage sites, particularly in low-income nations. Emphasizing an ecology-first approach, the proposal prioritizes cultural sensitivity, community inclusion, and responsible resource use, taking a clear academic and societal position in the larger conversation on critical regionalism and heritage tourism.

The bottom-up approach promotes a decentralized model for growth, where local economies exist and are mapped and integrated. Building the ropeway could be argued to be an act of environmental disruption, and the residents of the Island have more pressing needs, such as a regular water supply and medical facilities. More minor aspects of the design could also have consequential effects on the wages of locals who depend on the tourist economy. Notwithstanding the potential ethical issues in the research, I argue that the proposed intervention remains relevant to the Island irrespective of a modal transport shift.

The project aims to reposition architecture as more than an intervention but a mediator between the complex themes that run parallel in a site like Elephant Island.

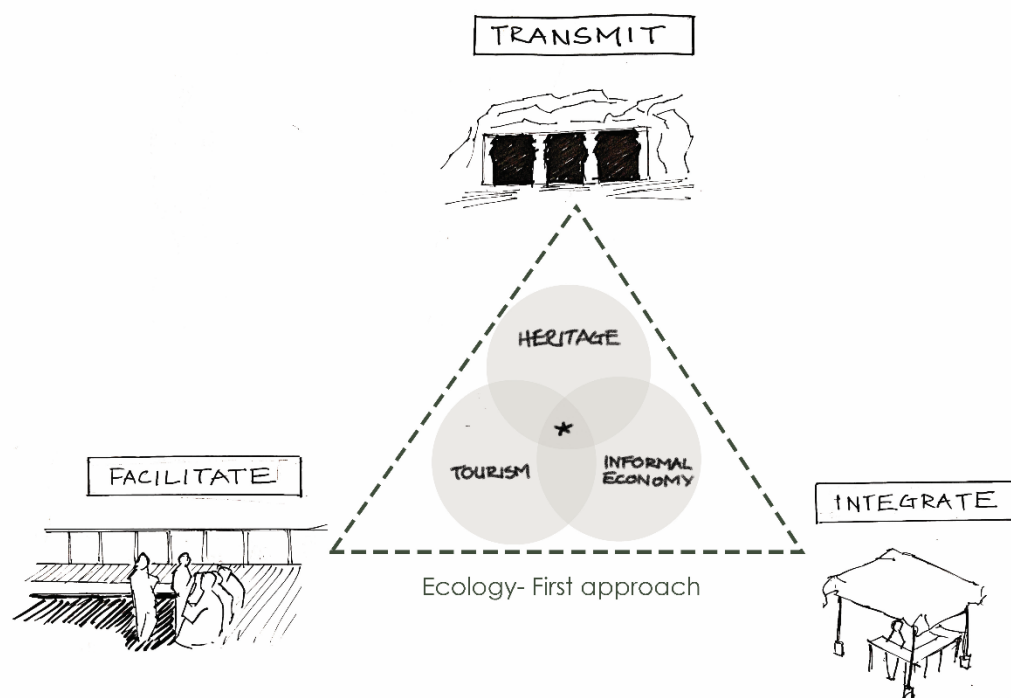


5. How do you assess the value of the transferability of your project results?

The proposal has some key aspects across different scales that can be valuable in other heritage sites in India.

At a thematic level, the proposals' strategies include the transmission of heritage, facilitation of tourism, and Integration of the informal economy. These are relevant approaches to several heritage sites in India that share characteristics similar to those of Elephant Island. The integration of the local economy while managing large visitor streams can be viably transferred to similar sites

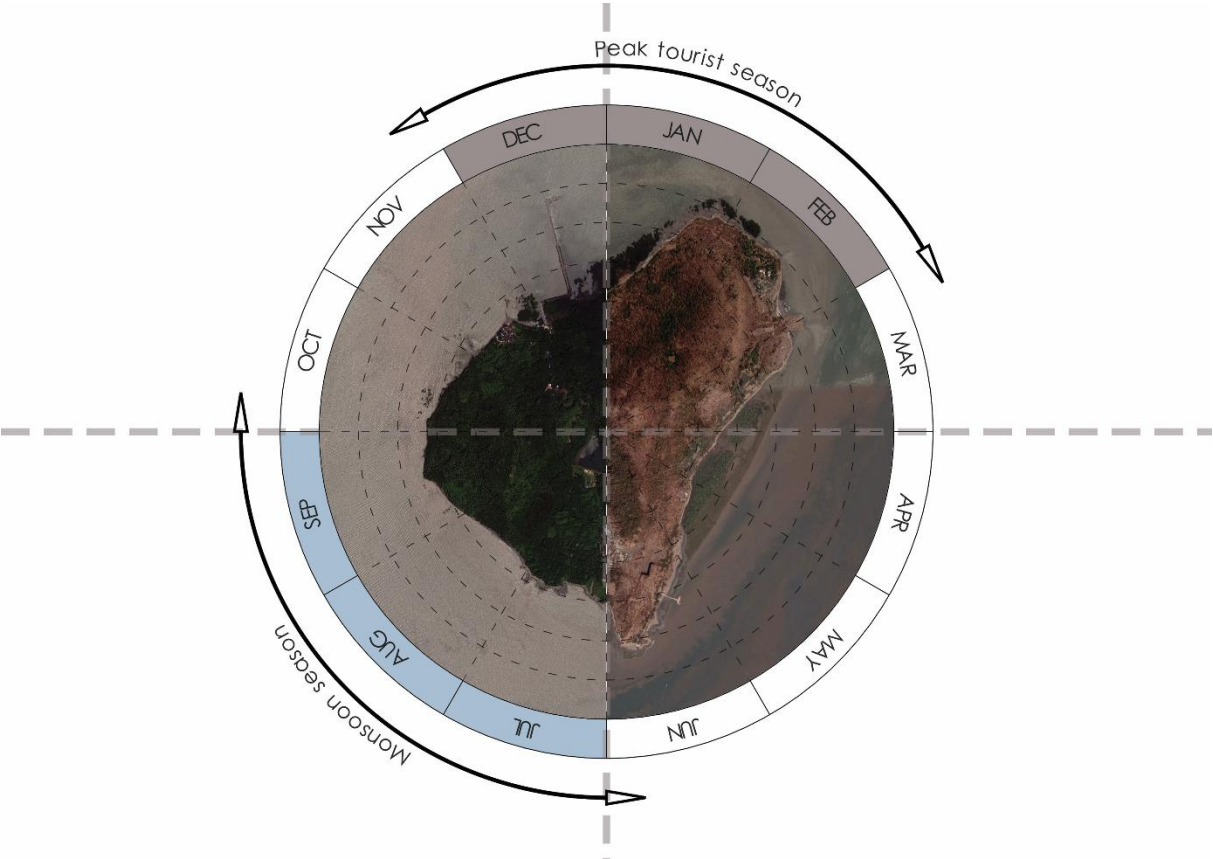
At the architectural scale, the incremental modular construction logic and closed-loop waste and water systems are transferable to other sacred sites. The construction method employs bamboo and repurposes steel components, focusing on sensitive resource use. These methods may also be transferable to the existing structures on the Island, which may change.




Key research themes and design strategies

6. Why is the underlying ecological thread essential to the project?

The ecological thread tying the structures in the proposal is an apparent reaction to the Island's current threats. Dwindling groundwater and a lack of municipal water supply necessitate the overlay of blue-green infrastructure. Rainwater harvesting, composting, sewage treatment, and phytoremediation, while employing nature-based treatment methods, create a sensitive intervention where the architecture supports the existing rhythms of the site. Using resilient ecological practices on the island that are visible to visitors highlights the site's sensitivity. Defining a maximum footprint for growth on the pier takes a clear position on preserving the ‘sacred’ space.

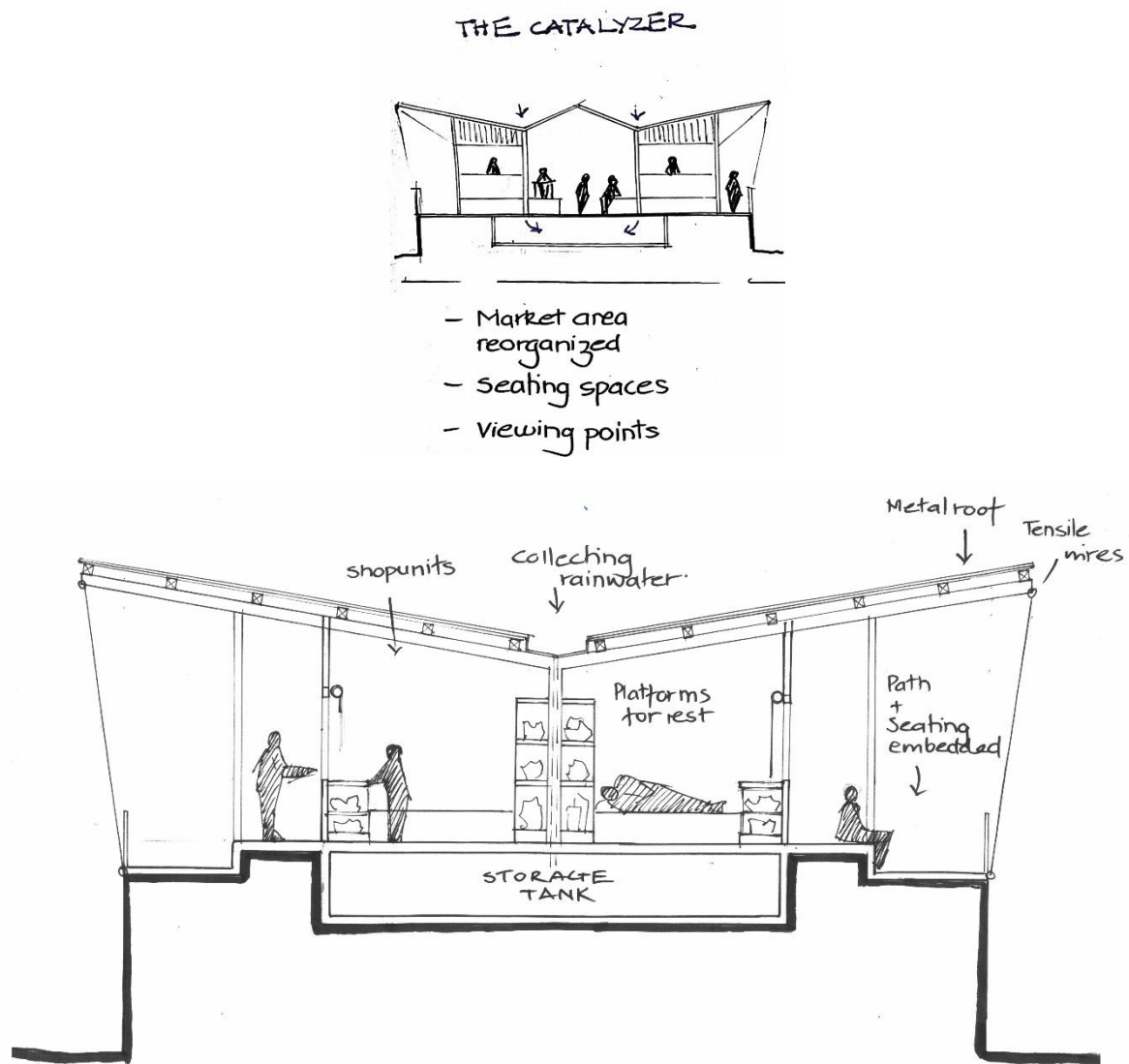


Native Vegetation									Proposed Vegetation				
Avicennia marina	Sonneratia apetala	Sonneratia caseolaris	Acanthus ilicifolius	Azadirachta indica	Bambusa (calceola and comata)	Tamarindus indica	Pongamia pinnata	Acacia marmelos	Cania indica	Phragmites australis	Chrysopogon zizanioides	Ricinus communis	Colocasia esculenta
													
Common mangrove tree, salt tolerant, grows in brackish water	Mangrove tree, salt tolerant, grows in brackish water, coastal vegetation	Mangrove tree, salt tolerant, grows in brackish water, coastal vegetation	Large mangrove tree, salt tolerant, grows in brackish water, coastal vegetation	Tree, salt tolerant, grows in brackish water, coastal vegetation	Shrub, salt tolerant, grows in brackish water, coastal vegetation	Tree, salt tolerant, grows in brackish water, coastal vegetation	Tree, salt tolerant, grows in brackish water, coastal vegetation	Tree, salt tolerant, grows in brackish water, coastal vegetation	Commonly found in coastal areas, salt tolerant, grows in brackish water	Seed bank, salt tolerant, grows in brackish water, coastal vegetation	Shrub, salt tolerant, grows in brackish water, coastal vegetation	Shrub, salt tolerant, grows in brackish water, coastal vegetation	Tree, salt tolerant, grows in brackish water, coastal vegetation
2000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.	5000 sq. ft.
4-5 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years	5-6 Years
Water Purification									Soil Remediation				
Require monitoring and management									Require monitoring and management				

Seasonal and ecological mappings of the Island between P3 and P4

7. How does the proposal deal with integrating the informal economy and its challenges?

The unorganized market that thrives at Elephanta and several other sites in India is threatened with over-formalization. Understanding the unique buyer-seller relationship in the region is crucial to ensure that the proposal doesn't destroy the uniqueness of Indian bazaars. Therefore, the proposal must balance the locals' current practices with contemporary needs. Shared infrastructure, waste sorting, and composting stations for vendor use are some design decisions that bridge this gap.



Sketches of the catalyzer- the main market place which can adapt to visitor demands

8. What are the next steps for the final phase of the graduation period?

The final phase of the graduation period will focus on strengthening the buildings' tectonic and spatial qualities. To strengthen the proposal, atmospheric perspectives and renderings, along with a detailed (1:20) model, will be added. Smaller components like the pivotable shutters will be modeled and detailed to provide further tectonic clarity.

