Proposal – DES302 Final Year Design Project Studio (AY2025–26)_Silvia Albano

1. Title of the Studio

"Tides of Memory: Adaptive Futures for the Tonnara Bordonaro and the Waterfront of Vergine Maria"

2. Proposers' Names and Departments, including role descriptions

- **Silvia Albano**, Department of Architecture (Primary Supervisor - 80%)

- **Dr. Na Li**, Department of Educational Studies - Academy of Future Education (Co-Supervisor, participation in key milestones in analyzing AI's effectiveness in both architecture and educational/pedagogical contexts - 10%)

- **Dr. Antonino Prestigiacomo**, External Supervisor, Historian (Co-Supervisor, participation in key milestones in supporting the site and background analysis - 10%)

3. Abstract

This proposal is designed as a research-led pedagogical experiment exploring the adaptive reuse of the **Tonnara Bordonaro di Vergine Maria in Palermo**, a historic tuna-fishing complex that expresses both architectural heritage and the cultural memory of the Sicilian coastline. Considering as starting point the local historical research (Camilliani, 1583; La Duca, 1982; Scarlata, 1993), the studio aligns with RIBA's emphasis on adaptive reuse as a sustainable design strategy — prioritising the creative transformation of existing buildings and embedding architectural practice within cultural and social contexts.

The Tonnara has been selected for its dual importance: as an architectural landmark and a memory-holder of Palermo's waterfront identity. Today it faces the risk of being converted into a B&B, a process

that would delete its social role. Instead, students will develop adaptive reuse strategies that return this heritage to its community, regenerate the Palermo coastline of Vergine Maria, and reframe architecture as a social and cultural catalyst.

This focus resonates with the ongoing regeneration project in Vergine Maria: the PNRR-funded recovery of the Tonnara's historic landing (approved 2021, ongoing)**,** which aims to reopen the shoreline to fishing and community use. By situating the studio within this active urban agenda, students' proposals can contribute to broader debates on the future of Palermo's waterfront.

AI will serve as a design partner, in line with the RDF project "*Bridging Artificial Intelligence with Professional Practice: A Digital Partner in the Design Process*," supporting analysis, visualization, and speculative design.

Outcomes will include adaptive reuse proposals, academic contributions, and potentially a presentation of selected design projects to the Comune di Palermo, strengthening the dialogue between architectural education and real civic regeneration. Students will gain both technical reuse skills and social awareness, preparing them as future architects able to work responsibly with the existing built environment and its communities.

4. Introduction and Thematic Rationale

The Tonnara Bordonaro di Vergine Maria represents both architectural heritage and urban memory. Referring to Camillo Camilliani's coastal surveys (1583) and later documented by Rosario La Duca (La cittV† perduta, 1982) and Marina Scarlata (Le tonnare in Sicilia, 1993), the site reflects centuries of coastal culture, labor, and community life.

Yet today, the Tonnara risks reduction to a private hospitality venue. This reflects a wider dilemma in heritage reuse: commercial misuse versus community regeneration. The studio challenges students to envision how adaptive reuse, as emphasised by RIBA, can reactivate Palermo's waterfront while preserving and amplifying its collective identity.

Research questions:

1. How can adaptive reuse safeguard memory while creating new forms of public value?

2. How can architects balance conservation with contemporary needs in sensitive waterfront contexts?

3. What role can AI as a digital partner play in supporting analysis, visualization, and design innovation for heritage projects?

5. Research Context and Agenda

Connection with research: The studio builds on adaptive reuse, waterfront regeneration, and ongoing research of the first two supervisors on AI-enhanced pedagogy. It is directly linked to the RDF project "*Bridging Artificial Intelligence with Professional Practice: A Digital Partner in the Design Process*," where AI supports decision-making and visualization in professional practice contexts, with a direct pedagogical application in this studio.

Research-led teaching strategy: The studio is conceived as a research-led pedagogical experiment. Students' projects will directly contribute to ongoing investigations into reuse as a social catalyst and AI as a co-designer in architectural practice. Teaching activities are structured around live research questions, ensuring that design outputs not only advance student learning but also generate new knowledge through academic publications, exhibitions, and cluster collaborations.

Anticipated research outputs:

- Academic papers and conference contributions (e.g., Conservation of Architectural Heritage (CAH), AHFE, IHFE) on adaptive resue, AI in design and pedagogy.

- Selection of student work for presentation to the Comune di Palermo, in line with the Key Waterfront Regeneration Project: Tonnara Bordonaro's Historic Landing (PNRR-funded, approved 2021, currently ongoing).

- Contributions to a research cluster on heritage reuse and social regeneration.

6. Design Objectives and Specific Learning Outcomes

The studio will train students to interact with one of the most delicate challenges in contemporary practice: working with the existing built environment in a way that respects the past while creating opportunities for the future. In line with RIBA strategies on adaptive reuse, students will develop sensitivity to heritage values, community memory, and social responsibility, while acquiring technical and methodological skills for designing within the existing.

Students will begin with historical and urban analysis, to understand the architectural and cultural significance of the site and its waterfront. From this foundation, they will propose adaptive reuse strategies that integrate conservation principles with contemporary programming, reactivating the site as a cultural and social hub. The process will involve balancing identity, memory, and public use with new functions that are economically viable and socially sustainable.

Learning outcomes include:

- Advanced skills in architectural conservation and adaptive reuse methodologies.

- A critical understanding of architecture as a social catalyst, reconnecting communities with their heritage and urban environments.

- The capacity to integrate AI-assisted tools for analysis, visualization, and speculative design exploration.

The expected outcomes will be technically strong and socially imaginative, demonstrating that adaptive reuse is not only a design methodology but also a driver of sustainability, identity, and regeneration. This directly aligns with RIBA Graduate Attributes, particularly those relating to working with the existing, contextual sensitivity, and sustainable approaches to design.

7. Innovative and Interdisciplinary Potential

This studio distinguishes itself by merging traditional heritage practices with contemporary digital innovation. While adaptive reuse has long been central to architectural education, the integration of AI as a design partner makes this project distinctive. Students will experiment with AI tools not simply as drafting or visualization devices, but as co-creators in the design process - a reflection of current debates about the evolving role of digital intelligence in architectural practice.

Through this blend of digital experimentation, historical sensitivity, and social engagement, the studio will deliver an environment that is both innovative and aligned with RIBA's emphasis on reuse, sustainability, and social responsibility.

8. External Engagement

The studio has been conceived with strong ties to external stakeholders, ensuring student work extends beyond academia. A key opportunity lies in the Comune di Palermo's ongoing regeneration agenda, which includes the PNRR-funded recovery of the Tonnara Bordonaro's historic landing (approved 2021, currently in progress). A selection of students' projects could therefore be presented to the municipality, establishing a direct line between academic research and civic planning debates.

Collaboration with local heritage associations and the community of Vergine Maria will further root the projects in lived experience, ensuring proposals are socially responsive. Archival resources from the University of Palermo and historic photographic collections will enrich the analytical phase, supported by the expertise of the historian Dr. Giovanni Prestigiacomo that will support the research group in the research and site analysis phase.

This engagement will provide students with the rare opportunity to situate their work in a real political, cultural, and professional context, where architecture becomes a means of shaping identity, memory, and collective futures. In this way, the studio fosters the development of architects capable of engaging with society through design that is both visionary and responsible.

9. Indicative Bibliography / References

Camilliani, C. (1583). Descrizione delle marine della Sicilia.

La Duca, R. (1982). La citta' perduta. Palermo: Flaccovio.

Scarlata, M. (1993). Le tonnare in Sicilia. Palermo.

Prestigiacomo, G. (1990s). Ipotesi progettuale per il recupero del Trizzanale e del Barcareccio della Tonnara Bordonaro.

Catanese, A., Corbo, C., Paci, S., & Sineri, A. (1982/83). Le sedi del lavoro in Sicilia: le tonnare dal XII al XX secolo [Unpublished thesis, Universitv† di Palermo].

Houel, J. (1782-1787). Voyage pittoresque des isles de Sicile, de Malte et de Lipari. Paris.