

# Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

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## Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners ([Examencommissie-BK@tudelft.nl](mailto:Examencommissie-BK@tudelft.nl)), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

<b>Personal information</b>	
Name	Luísa Ferreira Martins
Student number	5500273

<b>Studio</b>		
Name / Theme	City of the Future	
Main mentor	Alper Alkan	[Academic field involved]
Second mentor	Heidi Sohn	[Academic field involved]
Argumentation of choice of the studio	I value the interdisciplinary approach and I found the opportunity of working alongside students from other tracks interesting for the theme of my research. Additionally, I cherish the opportunity of choosing my own site, topic and the autonomy and student-driven program in this specific studio.	

<b>Graduation project</b>	
Title of the graduation project	On the verge: ecologies in transformation (provisional)
<b>Goal</b>	
Location:	Cubatão, São Paulo, Brazil

<p>The posed problem,</p>	<p>Extractive and productive landscapes are the backbone to contemporary urban life. However, they are commonly overlooked by the fields of spatial studies and practices. One amongst many, Cubatão's petrochemical hub reveals the systematic ecological degradation resulting from resource-intensive commodified politics, couched in the widely diffused rhetoric of development and progress, and distinctly linked to events of the Global North. Impending global shifts, such as the retreat of fossil fuels and the increase in renewable energy sources, raise questions on the vulnerability of these places and on their abilities to evolve spatially, ecologically, and socially. Through a critical review of what has been conducted so far in terms of design, planning and policies and a reflection on the agency of Architecture, the research speculates over new forms of space production that engages with the complex spatial conditions and the diversity of actors on site.</p>
<p>research questions and</p>	<p>MAIN RQ: How can architecture and design create and set in place structures for new forms of inhabitation in a post-oil future in Cubatão?</p> <p>Supporting questions:</p> <p>What are the discontinuities in developmentalist discourse and how do they manifest on site?</p> <p>What sort of Architectural structures can aid Cubatão towards establishing a self-evolving narrative, evading the constraints of a core-periphery relationship?</p> <p>How can the 'whole' be transformed through localized interventions?</p>

<p>design assignment in which these result.</p>	<p>An inhabitable breakwater</p> <p>The design should be seen as a part of a large-scale strategy. I have chosen a site which I consider critical to ground the design intervention, but I reflect on how it can be applied elsewhere and how it can reflect on the large-scale strategy.</p> <p>The design follows a protocol of ‘containing toxicity’ and forming new relations between people, water and its biotic and abiotic agents.</p>
<p>Process</p>	
<p>Method description</p>	

To respond to the posed research questions, the first exercise consisted of building a flowchart time analysis, comprising past, present and future developments in the locality. An analysis of the site's elapsed history is useful to understand how Cubatão is an embodiment of discontinuous geographies and discourses – it was created as such, and one can argue that the same logic which founded it, is still in place. On the other end, 2050 is seen as a tipping point – from this year on petroleum should no longer be commercialized. Based on this assumption, the flowchart speculates on how the existing ecologies (natural, cultural, and technocratic) will shift and adapt in order to bounce back or to regain stability after the disruptive event. Such analysis provides enlightenment of the fragilities and potentials within the existing systems and indicates *when, where and how* Architecture can intervene, incrementing and reconfiguring space, connections, and networks in order to prescribe a sounder future for this locality and its agents.

A second exercise consisted of a mapping of objects or artifacts encountered on site. Such survey is conducted virtually, using available imagery and Google Maps, but should be complemented after the site visit (happening after P2). The exercise focuses on identifying material implications of the practices identified in the territory – whether they belong to the logic of the industries, to cultural practices described by the population, or to the natural aspects which are so significant in this locality – and classifying them into micro, mezzo and macro scales. The mapping helped with indicating opportunities for the design intervention.

The combination of both the exercises described above supported the selection of an intervention site for the design. While the research acknowledges the multiscale nature of the site, dwelling over the multitude of networks and entanglements encountered – from global market operations to micro ecologies in the mangrove ecosystem – my intention is to carry out the design phase within the micro-mezzo scale, engaging with objects encountered on site, informed by and responding to the multiscale conditions elucidated through research.

## Literature and general practical preference

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Brenner, N., & Katsikis, N. (2020). Operational Landscapes: Hinterlands of the Capitalocene. *Architectural Design*, 90(1), 22–31. <https://doi.org/10.1002/ad.2521>

Bryant, L. R. (2014). *Onto-cartography : an ontology of machines and media*. Edinburgh University Press.

De La Cadena, M. (2019). Uncommoning Nature: Stories from the Anthro-Not-Seen. In P. Harvey, C. Krohn-Hansen, & K. G. Nustad (Eds.), *Anthropos and the Material*. Duke University Press.

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Escobar, A. (2018). *Designs for the pluriverse : radical interdependence, autonomy, and the making of worlds (Ser. New ecologies for the twenty-first century)*. Duke University Press. Retrieved September 28, 2022, from [https://tudelft.on.worldcat.org/search/detail/1015243964?](https://tudelft.on.worldcat.org/search/detail/1015243964?queryString=arturo%20escobar&clusterResults=true&groupVariantRecords=false&author=Escobar%20Arturo&changedFacet=author)

[queryString=arturo%20escobar&clusterResults=true&groupVariantRecords=false&author=Escobar%20Arturo&changedFacet=author](https://tudelft.on.worldcat.org/search/detail/1015243964?queryString=arturo%20escobar&clusterResults=true&groupVariantRecords=false&author=Escobar%20Arturo&changedFacet=author)

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Guattari, F. (2000). *The three ecologies*. Athlone Press.

Moe, K. (2014). The Nonmodern Struggle for Maximum Entropy. *New Geographies 6: Grounding Metabolism*. pp. 174–83.

Moe, K. (2021). *UNLESS : the seagram building construction ecology*. Actar.

## Reflection

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

The site I have selected for the project has been spatially and socially transformed through the intersection between economy, environmental exploration and infrastructure development. It is a complex entanglement of multiple disciplines within networks of many scales, and I believe it requires an interdisciplinary approach, both to assess and to intervene upon it. This interdisciplinary and multiscale approach is something promoted within the studio. However, there is a lack of Architectural discussion towards this specific place, perhaps because it does require this unconventional approach which is not common in the discipline. Therefore, I see the graduation project as a great opportunity to deal with it while also questioning common-sense architectural practices and frameworks and engaging with less familiar forms of working.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

Hopefully both the research and design exercise will shed light on new paths of doing Architecture, in ways more mindful to the human and non-human actors who are often overlooked in the quest for progress and development as we transition into the future. Additionally, I hope to deconstruct, in both my individual and in the collective dimension, the underlying aspects of an enduring colonial framework that limits and constrains possibilities in the way we study and practice Architecture. I have chosen to work with the Latin American context firstly because it is where I come from, but because throughout my education path I have seen disparities between the Euro/North American centered resources I have been provided and the challenges and potentials encountered in my continent. Academic production and voices speaking from the Global South still do not have the projection they should, even though they engage with the built environment and Architecture through a multitude of approaches which should integrate global discussions. With that, I am trying to diversify my theoretical framework, prioritizing voices that speak from contexts other than the European/North American bodies of knowledge.

But foremost, I believe this graduation project is an opportunity to inquire on new ways of practicing Architecture, first individually but in hopes that I can expand this contribution to the field. I see that Architectural education yields one with a valuable and plural set of skills, a designerly way of thinking and acting upon the world that surpasses the limits of a design-focused practice, which will most likely end up constrained or driven by clients and/or financial interests and I wish to break free from that. I recognize the agency in Architecture and its ability to prescribe material and immaterial structures for inhabitation responsive to issues that we know of and issues still to arise, and I think the great challenge for me, both in this graduation project and in my future career, is to translate that into practice itself.

