Graduation Plan
Master of Science Architecture, Urbanism & Building Sciences

Personal information
Name: Dion R. A. Lachman
Student number: 1511653
Private e-mail address: dion.lachman@gmail.com

Studio
Name/Theme: Explore Lab / Tropical Architecture
Teachers/Tutors:
- Ir. Robert Nottrot (Design mentor)
- Ir. Eric van den Ham (Research mentor)
- Ir. Hubert van der Meel (Technical Building Design mentor)

Argumentation of choice of the studio:
As a VWO student in Suriname I made the decision to study in the Netherlands with the ambition of improving my home country of Suriname. I chose architecture, because of my fascination with the building environment. My goal is to improve architecture in Suriname. Since there is not a trajectory to do Tropical Architecture on the TU Delft, I want to do the Explore Lab.

Graduation project
Title of the graduation project: ‘A sustainable habitat for Suriname’

Goal
Location: Lelydorp the capital city of Wanica, located in Suriname

Problem Statement:
Surinamese culture is very diverse and dynamic, and has a strong Asian and African influence. The population is mostly composed of the contribution of people from the Netherlands, Africa, China, India and Indonesia, as well as indigenous peoples who lived in the area, before the arrival of European settlers. About 90% of people established in Suriname have ancestors who come from other countries and regions. With such a large diversity in culture, the Surinamese people still form a unity, which is very unique in the world. With different cultures, come different traditions.

The younger generation people in Suriname, which are born in the independent Republic of Suriname (since 25 November 1975), are working towards a united Surinamese culture. Which is a fusion of the different cultures and traditions in Suriname. With all these different cultures, came different building traditions. So it is a necessity to create a new style of architecture for Suriname, to honor the new united Surinamese culture.

In Suriname it’s not necessary to be an architect to design a building. This ensures a lot of problems not only in the built environment, but also in the quality of the living environment. In 2010, since the regime of the new president of Suriname, Desire D. Bouterse, a plan was made to
build 18,000 social houses in Suriname. These social houses are built by building contractors. They build low budget houses, without doing research and not using the knowledge of the architect, to cut costs. These low budget houses don’t meet the requirements of a good living environment.

Research Question: Which architectural elements based on climate design can improve the built environment in Suriname for a sustainable habitat?

Research Product: Designers Manual: Climate Responsive Design for the humid tropical country of Suriname

Design Assignment: This project describes a sustainable, affordable and self-sustaining answer to the social housing demand in Suriname, taking the fundamental needs into account. The research should result in a list of requirements for the design assignment in three main topics: sustainable, affordable and self-sustaining. In order to create a sustainable type of housing in these areas it is important to understand the local circumstances of the country and the area that is built in.

Process
Method description: The thesis will be based on a strong theoretical framework that will be gained by doing intensive research and case studies. The research will consist of two parts: The first aim will be to understand vernacular and local architecture of the country. The second part will consist of understanding climate design solutions for tropical countries. Through a number of case studies, I will analyze the various architectural elements in tropical architecture and analyze various social housing projects in different countries and contexts. Culture, traditions and site analysis will also play a very important role in shaping my design strategies. As the site is based in Suriname, I will travel to the country before my P2 presentation to conduct whatever research or interviews I need. This trip will give me the opportunity to meet local inhabitants and practitioners who I intend to interview to formulate my design strategies.
Possible literature for research & design


**Reflection**

Relevance: The purpose of this project is to improve both the built and living environment for the people in Suriname. I believe the research and design project could have a life beyond pure academic work. It could eventually join the current debate about social housing in Suriname. It can also inspire politicians to make a law, that only architects can design buildings. I hope to use the time available for me at Explore Lab to come up with a viable and practical alternative of dealing with social housing in Suriname.
Time Planning

01.09.15 - 13.09.15: Framing research and design goals.
28.09.15 - 11.10.15: Graduation plan & research: Architecture elements for tropical climates & defining location.
12.10.15 - 25.10.15: **P1 Presentation:** Presenting research goal, design goal, initial research, conclusions & introduction to the site.
Research: Climate design & tropical architecture.
26.10.15 – 08.11.15
09.11.15 - 22.11.15: Case studies & research: Climate design & tropical architecture.
23.11.15 - 06.12.15: Case studies & workshop.
07.12.15 - 20.12.15: Suriname Site Visit: Data collections, interviews and photographs.
21.12.15 - 07.01.16: Suriname Site Visit: Data collections, interviews and photographs.
08.01.16 - 24.01.16: **P2 Presentation:** Drawing conclusions from research and site analysis mapping along with diagrams and initial sketches
Design exploration, and development of housing typologies.
25.01.16 - 14.02.16: Design exploration & development of design strategies.
15.02.16 - 28.02.16: Design exploration & development of design strategies. Focus on technical issues and details.
29.02.16 - 13.03.16: Design exploration & development of design strategies. Focus on technical issues and details. Finalizing Research Paper.
14.03.16 - 27.03.16: Design: Plans, sections, elevations, details, axonometric, 3D models & physical models.
28.03.16 - 10.04.16: **P3 Presentation:** Presentation of sketches, plans and sections and overall design strategies.
11.04.16 - 24.04.16: Design: Plans, sections, elevations, details, axonometric, 3D models & physical models.
25.04.16 - 08.05.16: Design: Plans, sections, elevations, details, axonometric, 3D models & physical models.
09.05.16 - 22.06.16: Design: Plans, sections, elevations, details, axonometric, 3D models & physical models.
23.05.16 - 05.06.16: **P4 Presentation:** Presentation of final design. Detailed plans, elevations, sections and details.
Finalizing material for P5 presentation.
06.06.16 - 19.06.16: **P5 Presentation:** Preparation for final presentation.