

Sustainable Living Reflective Report

Sustainable Living (ARC61704)

Assignment 2 - Sustainable City Ideas

Resilient Future Cities

(Focusing on Flood Preparedness and Recovery)

Nikhil Isaac Selvanandam

0349343

Tutor: Dr Siti Norzaini Zainal Abidin

1.0 Reflection of the Module

Throughout this entire semester in this module, the Sustainable Living module has been a transformative and enlightening experience for me. It has undoubtedly helped me in providing a comprehensive understanding of the vital role architects play in creating a sustainable built environment. This reflection report delves into key insights gained during the module, emphasising the importance of integrating sustainability principles into architectural practice.

Not only that, but this module has broadened my perspective on sustainable living beyond the conventional notions of energy efficiency and environmental conservation through exploring great infrastructures with local resources provided by governments and NGOs. It has highlighted the interconnectedness of social, economic, and environmental factors, emphasising the need for a holistic approach in architectural design. Sustainable living is not just about eco-friendly buildings but involves creating spaces that enhance the overall quality of life while minimising negative impacts on the planet.

Our lecturers also gave us great insights and life lasting advice to tackle problems other developments have created in their flaws and limitations of design. Having research about how other architects and developers tackle these problems revealed to me that theory can only take us so far. Applying tactics and strategies used in many famous structures around the world is the way we can progress to improve the sustainability and longevity of a building, site or even a whole city. From getting information about the infrastructures around the world to focusing on local aspects of a site, I think the module Sustainable Living covers every essential for any architect or future developer in order to create something environmentally friendly and for everyone to enjoy and use for its great functions and sustainability.

I couldn't have asked for more from this module, because with the short time we had learning sustainable living, all these considerations and thoughts have given me valuable knowledge to proceed into becoming a successful architect in the future.

2.0 Reflection on Assignment 1 and Assignment 2

Throughout my study this semester, sustainable living has equipped me with a repertoire of eco-centric design principles, such as passive solar design, natural ventilation, and the use of sustainable materials. These principles emphasise working with the natural environment rather than against it, ensuring that buildings harmonise with their surroundings and contribute positively to the local ecosystem. This approach challenges traditional design norms and encourages creativity in finding innovative solutions.

First things first, I learnt from my first assignment about the intricacies of local infrastructures. We as architects should gain insights into the vulnerabilities and strengths of a city's existing systems. This knowledge can enable us to design structures that seamlessly integrate with the urban fabric, utilising and enhancing pre-existing infrastructure to

maximise efficiency. Additionally, it also allows us to identify areas prone to natural disasters, ensuring that their designs are resilient in the face of potential challenges.

I also managed to find out that local resources are equally crucial, as it empowers us architects to make sustainable choices in material selection, construction methods, and energy sources. Utilising region-specific materials not only reduces environmental impact but also supports the local economy. Moreover, awareness of economic struggles within a city aids in the creation of cost-effective designs that align with the community's financial capacity, promoting accessibility and inclusivity among all stakeholders.

A crucial aspect of sustainable living in architecture is considering the entire life cycle of a building, from construction to demolition. Learning about life cycle assessment tools has been eye-opening to me during the sustainable living workshop we had in between our assignment 1 and assignment 2, prompting me to rethink material choices and construction methods. I now understand the importance of selecting materials with low environmental impact, considering their extraction, production, transportation, and disposal. This awareness will undoubtedly influence my future design decisions.

Finally, I also had the opportunity to have hands-on experience in dealing with regions susceptible to natural disasters, such as Kampung Kasipillay. We were able to arm ourselves with knowledge of local conditions and to come up with design structures or interventions that can help mitigate risks and enhance resilience within the communities we were researching about in the flood prone regions. For instance, we were taught that in flood-prone zones, our designs would have to focus and prioritise on elevated structures and permeable landscaping. This proactive approach not only safeguards lives and property but also minimises the need for extensive post-disaster reconstruction.

3.0 Reflection on How The Module Content Can Improve My Approaches Into The Future

Sustainable living extends beyond the physical aspects of a building; it encompasses the well-being of the communities it serves. The module emphasised the social aspect of sustainability, urging architects to engage with communities, understand their needs, and create spaces that foster inclusivity and a sense of belonging. This shift in perspective encourages architects like myself to become catalysts for positive social change.

We managed to have insider knowledge of the communities in Kampung Kasipillay, by having conversations and asking about their personal experiences with the floods in their neighbourhood. The information and data we received from the locals exceeded our expectations, and we were able to come up with a great analysis of the site and propose an evacuation plan for the locals that can greatly benefit them at a crucial time of need. With that being said, I realised that communication was vital in understanding the site context and how focusing communities' interests should be deemed important in creating a sustainable design and structure for them to use.

On top of that, I also figured that the design thinking process is instrumental in sustainable design by fostering a holistic and empathetic approach. It begins with **empathising** with end-users and understanding the environmental context. **Defining** the problem involves identifying sustainability challenges, leading to a focused design brief. **Ideation** encourages creative solutions, incorporating eco-friendly materials and innovative technologies. **Prototyping** allows iterative testing, refining designs for optimal sustainability. User feedback and real-world simulations inform the final implementation, ensuring practicality and effectiveness. Design thinking's emphasis on user needs, problem definition, and iterative prototyping align seamlessly with the multifaceted considerations of sustainable design, promoting thoughtful solutions that harmonise with the environment while addressing societal needs.

In conclusion, the Sustainable Living module has been a transformative journey that has redefined my role as an architecture student. It has equipped me with the knowledge, skills, and mindset necessary to approach design challenges through a sustainable lens. As I progress in my architectural education and future practice, I am committed to integrating these principles into my work, contributing to the creation of a built environment that enhances both human well-being and the health of our planet.