

# 05

## REVITALISATION OF AL-GHAZALI WALK & COURTYARD DESIGN

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### ABSTRACT

The ultimate goal of the project is to propose a design for the revitalization of Al-Ghazali Walk (Road) for the IIUM Community. The project involves designing a façade of a building, flood mitigation, and Sultan Haji Ahmad Shah's (SHAS) Mosque's lower courtyard. The concept of the 'Glimpse-of-Heaven', using water and vegetation, refers to the design that will relate to the users' journey to paradise based on Imam Al-Ghazali's teaching. Architecture and Landscape architecture students played an important role in providing the design for the space that enhances users' quality of life and helps them to improve their day-to-day activities. Applied Art and Design students contributed to the design by choosing suitable materials to make the design sustainable. Quantity Surveying students assist in the costing of the design to find the most affordable price for the project. In the context of IIUM, to relate the users to a journey to paradise is to create designs that could emanate a spiritual experience. The issue of flooding along the Al-Ghazali road affects the campus society in that the local community no longer has any sense of attachment to the buildings within the road's vicinity. This project, therefore, aims to restore a sense of place within the community using a design that is manifested by the road's name – the Al Ghazali Walk.

**Keyword:** Revitalisation, Al-Ghazali Walk, Courtyard, Design, Quality of Life

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### PROJECT INTRODUCTION

The proposed project site is the Al-Ghazali Road which is located centrally in the International Islamic University Malaysia (IIUM) Campus, Gombak. The road is situated adjacent to the main rectory building of IIUM. The project area comprises the Al-Ghazali road in between the two boom gates starting from the Automated Teller Machine (ATM) area to the Human Sciences (HS) café area. The site includes the lower courtyard in front of Sultan Haji Ahmad Shah (SHAS) Mosque and the parking area in front of the SMART Centre. The ultimate goal of the project is to renovate and revitalize the space to strengthen the IIUM community as a community's place.

### CONCEPTUAL PROCESS, PROCEDURE AND SCHEMATIC



Figure 1: Views of the site, left- the flooded Al Ghazali Walk and on the right- the mosque courtyard

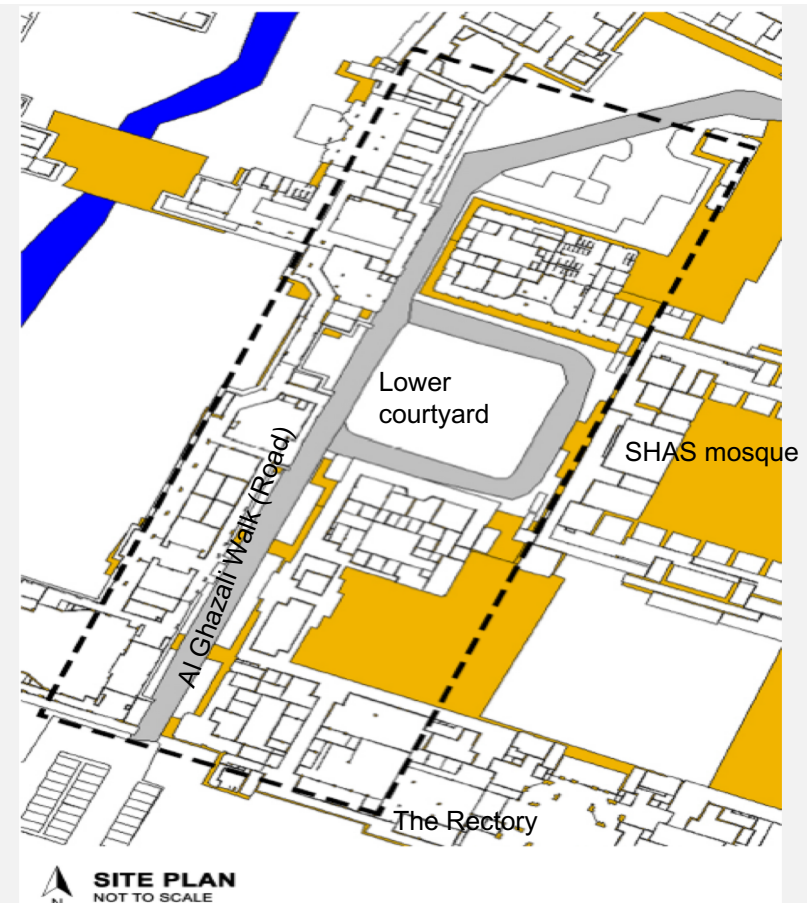


Figure 2 : Site Plan of the Ghazali Walk in IIUM Campus

## LITERATURE REVIEW

The biography of Al Ghazali is the main source of reference in this context.

### AL-GHAZALI

- Abu Hamid Muhammad b Muhammad
- Born in Khurasan
- Known as the Proof of Islam, the Ornament of Religion, the Guide of the True Faith (Sullivan, 1994)
- In the aspect of social utility, he distinguished the
  1. Necessities
  2. Comfort
  3. Luxuries



Figure 3: Iman Al Ghazali

### The Inception of Design Ideas and Concept

According to IIUM Seven Mission Goals, Siita Office pledges to inspire change and reform through design that strengthens the community of IIUM in developing bonds of good character and nurturing relationships among students, peers, and staff in striving to achieve the best holistic experience. The Integration of spaces and functions, along with Islamization and Internationalization of the learning process, is key to understanding the Scholars inspired by this project.

### Green Spaces in Relation to Health and Mental Well-Being

Green space has been commonly seen as a quality of institutional settings that promotes well-being, and it has been attributed to mental health benefits such as mental exhaustion recovery and stress reduction, particularly through experimental environmental psychology work.

After screening for a wide variety of confounding factors, higher levels of public green space were correlated with massively lower levels of symptoms of depression, anxiety, and stress. The findings indicate that "greening" might have been a possible mental health enhancement technique for the community.

These data suggest that maximizing exposure to green space in the community may be a cost-effective strategy to enhance health and minimize health inequalities, as lower socio-economic status groups have a more restricted capacity to move outside, resulting in increased reliance on its environments for healthier lifestyles and accessibility.

Green space can have immediate protective effects against health risks associated with air pollution, excessive heat, and noise pollution, increased behaviors promoting health such as physical activity, and has been correlated with greater levels of social support and group. Also, it correlates with mental health benefits such as stress reduction, buffering between stressors and health outcomes and attention restoration that reduces mental fatigue. Previous research has also suggested that greenspace could be associated with lower levels of anxiety, depression and stress.



Figure 4: Drake University, Des Moines Iowa



Figure 5: University of Birmingham, England

### TRANSFORMING SINKING CITY TO FLOOD-PROOF PARK

A system with 3 key components :

#### 1. The green roof

With its rainwater tanks and museum underneath, this is the largest green roof in Thailand. The accumulated rain can be used to water the park for up to a month in the dry season.

#### 2. The wetland

With the native water plants, the runoff from the green roof then falls into the wetland to help filter and clean the water.

#### 3. The retention pond

The pond collects all of the water at the end. The pond also has water bikes so that people can paddle and help clean the water. Their exercise is an active part of the park water system.

### Centenary Park

Bangkok is a town with 15 million residents and workers on the top of a muddy river delta. It sinks more than a centimeter per year which is four times faster than the expected increase in sea level and may be below sea level by 2030. Bangkok is a flat area, so by inclining the entire park to catch every drop of rain, the construction specialist teams engineered the power of gravity. From the highest point, the gravity force brings down the runoff to its lowest point. Centenary Park offers people room and space for water, which is just what the city of Bangkok needs. As it can carry and store a million gallons of water, this is an amphibious design, and not a single drop of rain is wasted in this park.

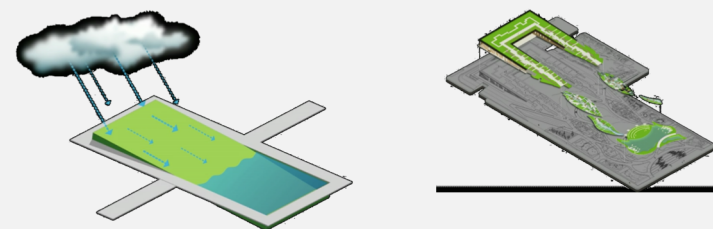
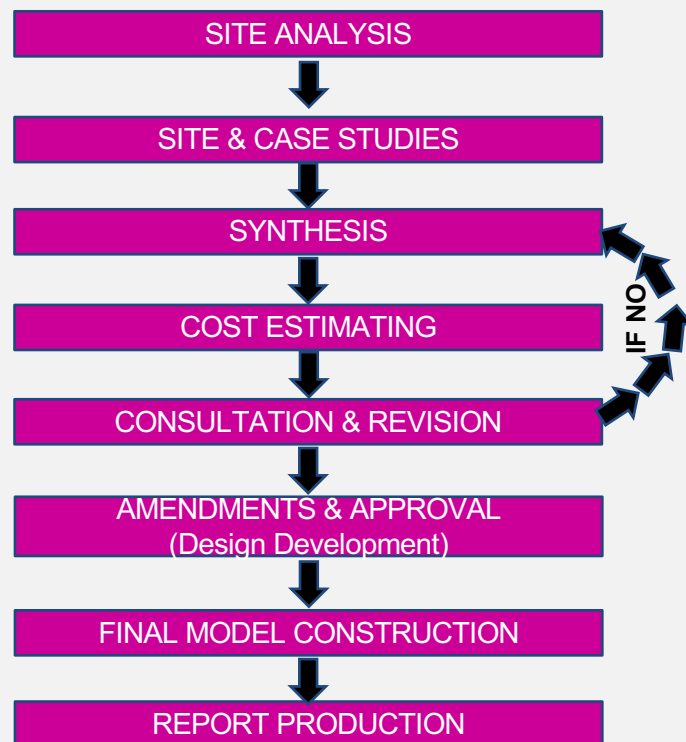


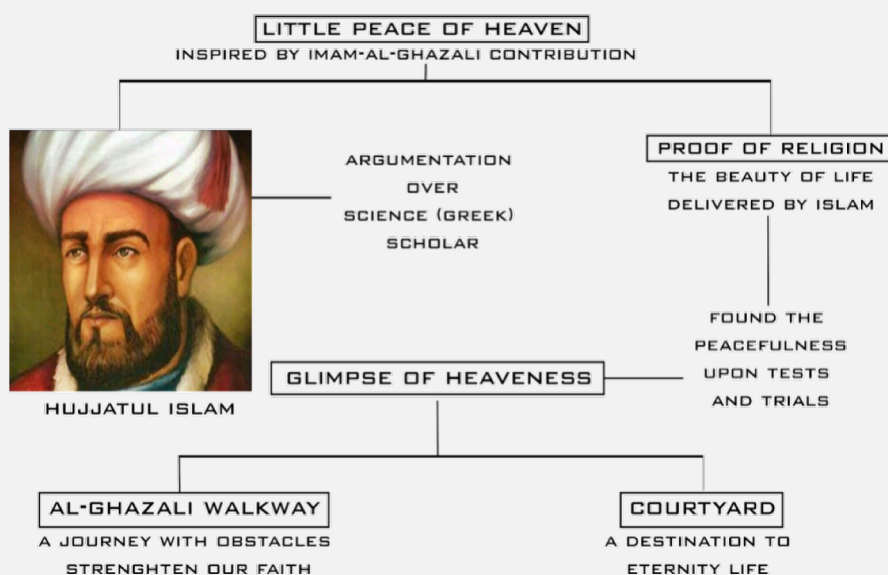
Figure 6: Bangkok Centenary Park and Conceptual Ideas

## METHOD / PROCEDURE



## CONCEPT DEVELOPMENT

The inspiration for the concept is derived from the Philosophies of Imam Al Ghazali. As the site name is after one of the Greatest Islamic Scholars, it is only fitting to tribute to the Imam by spreading awareness of his works; especially Hujjatul Islam. This shares the beauty of life delivered by Islam. The beauty of life is captured by the cascading stream, luscious vegetation, and green shady trees. The soundscapes of trickling water, chirps of birds, and buzzing bees along with the visual attractiveness remind one of the bountiful blessings of life on Earth and remember God.



## DESIGN DEVELOPMENT

This section shows the phase of design development implement after the methodology adopted (as shown in Figure 7, 8 & 9 referring to Development 1 to 3).

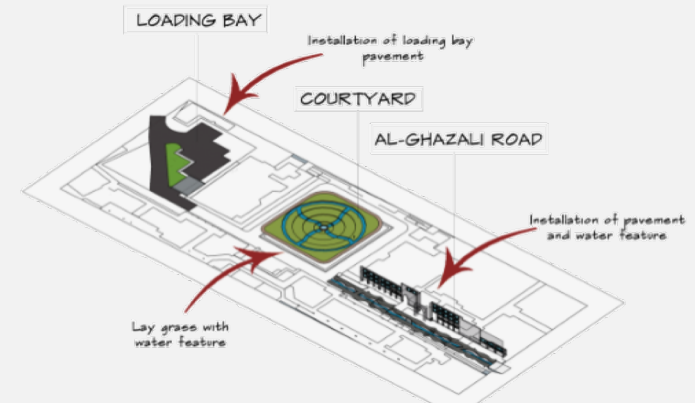


Figure 7: Development 1

Allocate spaces and their functions

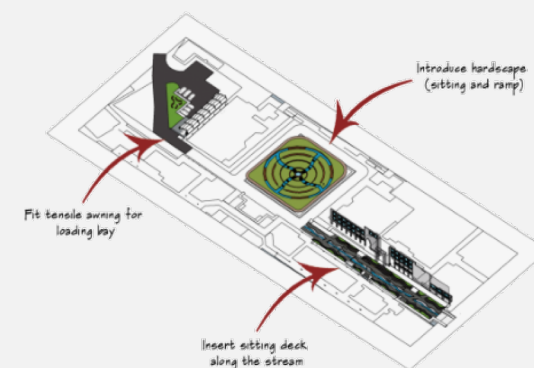


Figure 8: Development 2

Designate hardscapes according to uses

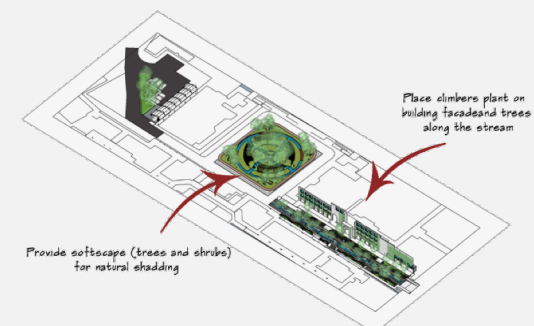


Figure 9: Development 3

Introduce softscapes to achieve passive design strategies such as cooling and shading

## DESIGN COMPONENT

### i) WALKWAY



Water feature that flow along Al-Ghazali walk and acts as cooling system



The layering ground and amphitheatre seating wall that increase seating area



Green facades or living wall act as facade of the Al-Ghazali walk



Walkway that allows students to exercise

Figure 10: Walkway Design Component

### ii) LOADING AREA

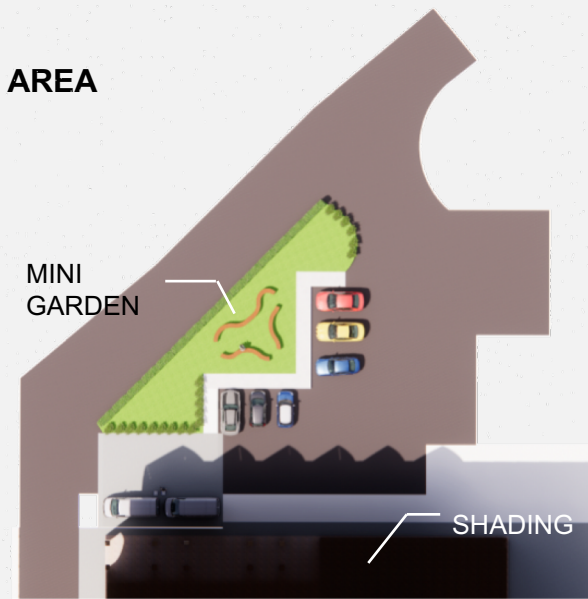


Figure 11: Loading Area

#### TENSILE MEMBRANE STRUCTURE

- Provide shades and withstand severe weather condition
- Lightweight and extremely strong material



Figure 12: Loading Area Ideas

#### TROLLEY LANE

- Increase functional space at the back area
- Privacy and security achieved of loading area from public
- Appropriate circulation

#### SPEED TABLE

- Trapezoid (long raised flat top road with ramps at both sides)
- Reduce the traffic speed by raising the entire wheelbase of a vehicle.



Figure 13: Mini Garden

#### MINI GARDEN

The mini garden provides shades from the tree and seating for waiting or relaxing purposes.

### iii) COURTYARD

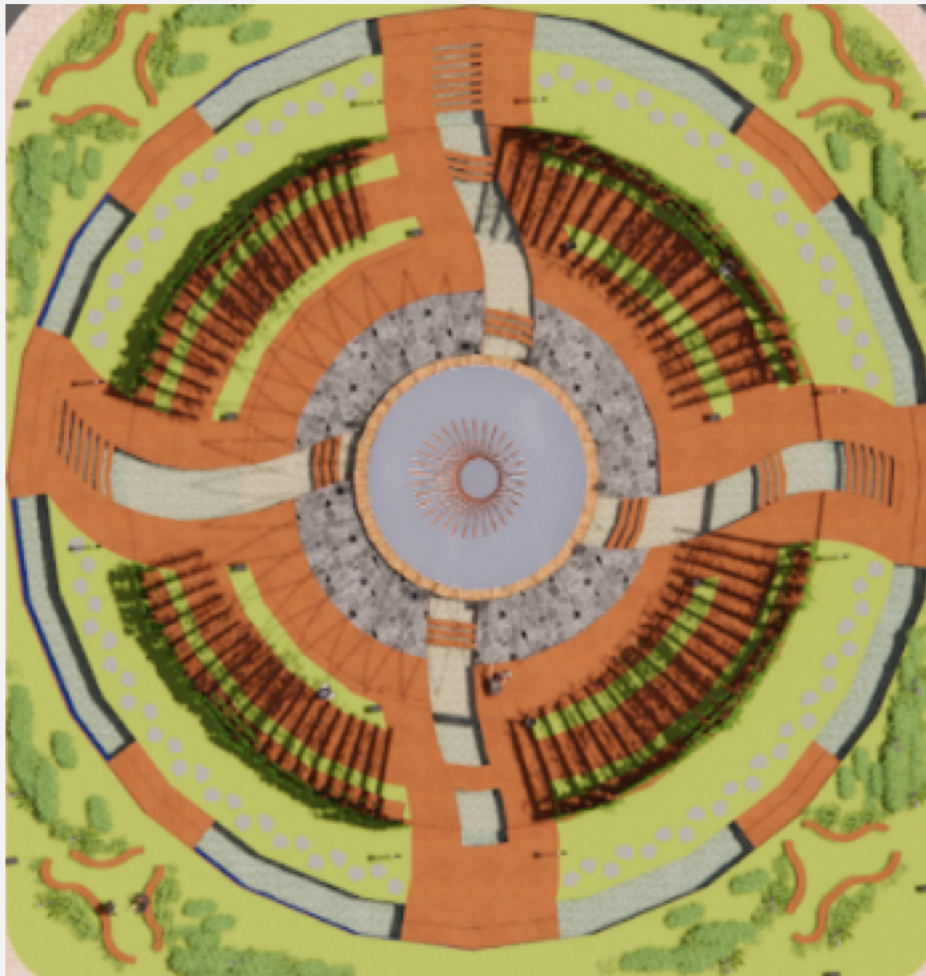


Figure 14: Courtyard

The courtyard is made the central focus of the site by highlighting it with vibrant trees and a flower column. Users in the surrounding buildings will be drawn to the crown of the flower and will have spectacular garden views instead of empty court space. The seating spaces in the courtyard are designed to be in a hierarchy with cascading steps of the stream reaching the central well. The symmetrical balance in the design brings a sense of stability to the users within the court as they would not lose their sense of direction in a simple layout of 4 sections of a circle. The green and revitalised courtyard livens up the space and breaks the monotonous sandblasted façade that spans the horizon. The ambience will provide users with an outlet to distress and re-energize before carrying off with their day.

### SWOT

#### STRENGTHS

-Central location

#### WEAKNESS

- Flash flooding  
-No aesthetic appeal

#### OPPORTUNITIES

-Artificial lightings  
-Vegetation  
-Community space

#### THREATS

-Water-borne disease  
-Moving vehicles



Figure 15: Seating Area

#### SEATING AREA

- Hierarchy: The seats in different level.
- Symmetrical balance.

#### PERGOLA

- Give beautiful shaded area.
- It is not designed to completely block the sun, but to provide relief from direct sunlight, while allowing air to circulate freely.

#### TREES

- Provide shade in the surrounding environment due to its spreading canopy and crown.

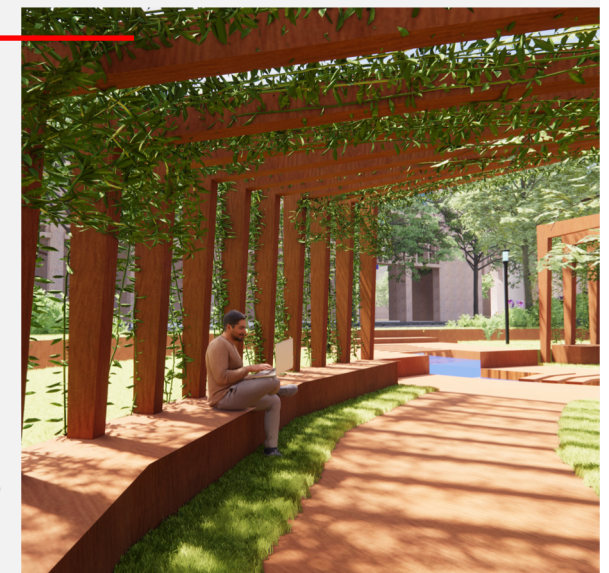


Figure 16: Pergolas

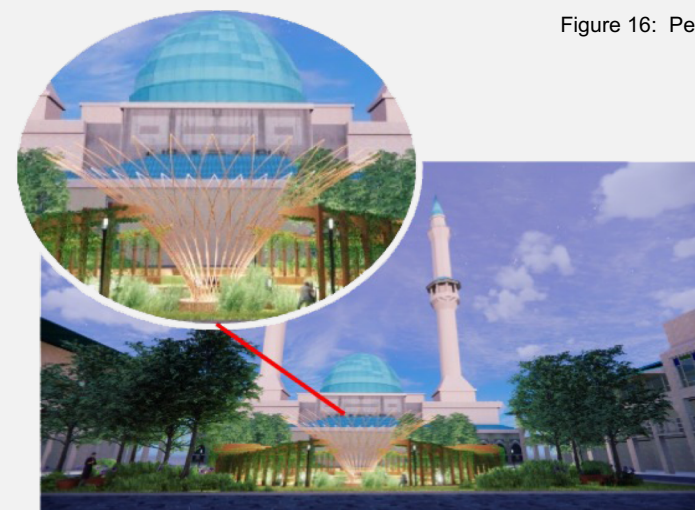


Figure 17: Flower Column

#### FLOWER COLUMN

- Innovative lighting during the night
- The design of flower column highlights the mosque by "holding the mosque"
- Central Destination
- Sense of paradise

## SPECIAL STUDIES

### ERGONOMIC

Ergonomics is the process of designing or arranging workplaces, products, and systems so that they fit the people who use them. Ergonomics are important in understanding human movement and cognitive functioning. Hence, its aspects also be considered in all spaces like Al Ghazali Road, courtyard, and parking area design since the target users included all society, for example, PWD, elderly, and children. The ergonomic element is implemented in the hardscape furniture on the site.

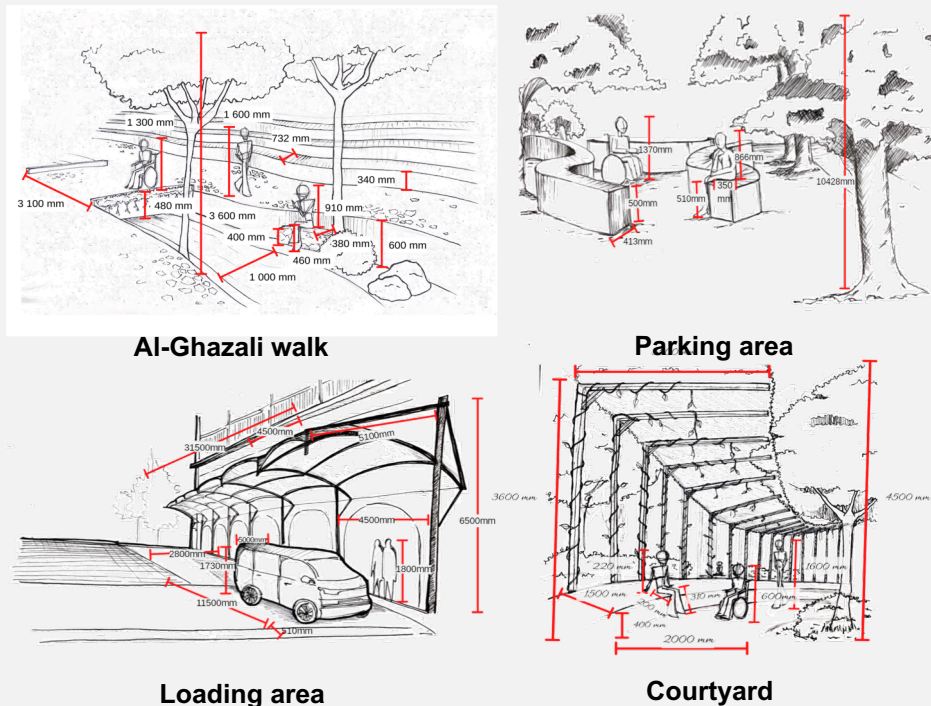


Figure 18: Ergonomic Studies

### RAINWATER HARVESTING

A rainwater harvesting system as a sustainable approaches in this design collects, stores and recycles the rainwater runoff. For this facility, two underground water harvesting tanks along with additional 20 storm drains with filtration systems and submersible pumps are used to distribute water to the water feature.

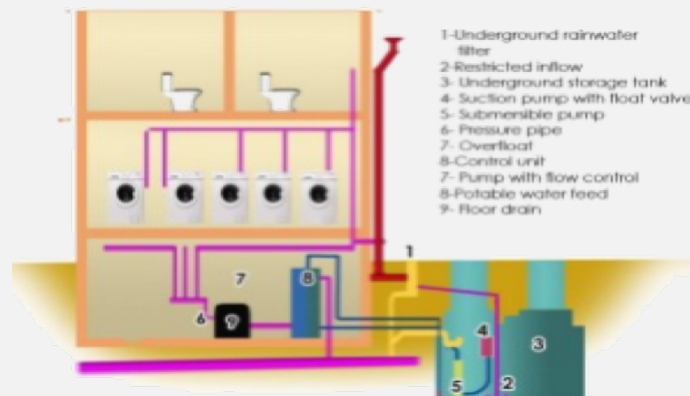


Figure 19: Rainwater Harvesting

## MATERIALS

A sustainable and attainable material used in this design to give benefit to the space and users. Timber has been used in this design as it is naturally anti-corrosive. It is also versatile and visually appealing. Glass wall is also used since it is durable and not affected by weathering from heavy/acid rain. LCD screens were provided to eliminate the use of printing papers for temporary.

### Al-Ghazali walk



Figure 20: Materials

## SEED OF PARADISE

The seed of paradise refers to the natural elements such as vegetation and waters mentioned in the Qur'an. There is a water sculpture provided along the Al-Ghazali as the water elements while for the softscape, trees that can eat, give shade, and also as an antidote to any type of disease. All plants that are being proposed for the designated site are plants that resemble those in the Al Quran but are suitable for Malaysia's tropical climate.



Figure 21: Seed of Paradise

## CONCLUSION

This concept brings about a journey that begins with the twists and turns of a stream walkway to remind us that the flow of life comes with ups and downs; and leads us to a central “piece of Paradise” in IIUM which is related to the main IIUM concept of development - “the garden of knowledge and virtue”. Every path we take will come to a resolution, and when we reach that end goal is where we can reflect upon our journey. The understanding of special spaces to the needs of the facility users is thoroughly explored along with the care for flora and fauna. The elements of design that strengthen the ambiance of the existing space and strive to achieve a passive solution to current issues are observed and reflected in the final proposal. By enhancing the potential use of the courtyard, it will give students, staff, and guests of IIUM a special place to develop connections with the surrounding nature, socialize and create new bonds, as well as a space to unwind and relax. Finally, the concept and organization of the design hopes to successfully translate and truly reflect upon the Al-Ghazali inspiration of the space; thus being an educational guide to the site explorers.

## ACKNOWLEDGEMENT

This project has been an enlightening experience for the members of Group 6, Sitta Office, and this research will put forth knowledge which have gained and connections formed for optimum outcomes in future projects. Special thanks to all lecturers in charge of AQS 1301 Multi-disciplinary Project 2, 2019/2020, Kulliyah of Architecture and Environmental Design (KAED), IIUM, and all related parties, and institutions that had contributed to the success of this project.

## BIBLIOGRAPHY

Ansglobal. (2019, May 07). University of Leicester. Retrieved September 29, 2020, from <https://www.ansgroupglobal.com/living-wall/case-studies/university-leicester>

Abdulkareem, H.A. Thermal Comfort through the Microclimates of the Courtyard. A Critical Review of the Middle-eastern Courtyard House as a Climatic Response. *Procedia Soc Behav Sci.* 2016, 216, 662–674,

Landezine Newsletter. (2020, May 06). University of Toronto Scarborough Valley Land Trail. Retrieved September 29, 2020, from <http://landezine.com/index.php/2020/05/university-of-toronto-scarborough-valley-land-trail-by-schollen-and-company/>

Why is lighting important for parks and public spaces? Retrieved from <https://www.altitudeservices.co.uk/news-and-articles/2019/february/why-is-lighting-important-for-parks-and-public-spaces/>

[http://www.feng.unimas.my/JCEST/images/article/volume8issue12017/JCEST\\_812\\_WW\\_galleyproof.pdf](http://www.feng.unimas.my/JCEST/images/article/volume8issue12017/JCEST_812_WW_galleyproof.pdf)

<https://www.water.gov.my/jps/resources/auto%20download%20images/5840fdbcde36e.pdf>