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REDEFINE: CAT ADOPTION RECREATIONAL PARK AND DISCOVERY CENTRE

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ABSTRACT

The alarming rise in stray cats documented by the Department of Local Government (Jabatan Kerajaan Tempatan) with a near 18% increase in captures from 2021 to 2022 (57,000 to 70,000), highlights the urgent need for innovative solutions to shelter overpopulation. The overpopulation crisis in cat shelters presents a multifaceted challenge, impacting feline welfare and community well-being. The research identifies three key contributing factors to shelter overpopulation: misconceptions about shelters, limited interaction opportunities, and inadequate ventilation creating unpleasant environments. To address these factors, the thesis proposes a prototype for cat adoption centre integrated with a recreational discovery park. This innovative design not only aims to provide recreational enjoyment but also functions as a powerful tool for social change. Integrated educational programmes and interactive exhibits will dispel public misconceptions about shelters, fostering understanding and empathy for the plight of felines in need. Ample spaces for play, bonding, and observation will transcend traditional adoption processes, allowing humans and cats to forge genuine connections, facilitating successful adoptions and enriching lives. Finally, sustainable ventilation systems and odor-control measures will create a pleasant and healthy environment for both cats and humans, ensuring not only their physical well-being but also fostering a positive first impression that encourages adoption. In essence, this park acts as a bridge, seamlessly connecting the public with the needs of shelter cats, transforming the adoption process into a mutually rewarding experience for all involved. This project contributes to the field of animal welfare architecture by proposing a prototype that leverages the power of recreation and discovery to improve cat welfare, increase adoption rates, and foster positive human-animal relationships. The research findings are valuable to architects, animal welfare organisations, and communities seeking to redefine cat adoption and address the shelter overpopulation crisis through innovative design solutions.

Keywords: *Stray cat, animal shelter, overpopulated, welfare, adoption*

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INTRODUCTION

Stray animals are unowned domestic animals, particularly pets, such as cats and dogs (Sandoe et al., 2019). A concerning upward trend is observed in the prevalence of abandoned pet animals, posing a significant challenge in numerous countries across the globe. While comprehensive and consistent data regarding the precise population proportion of stray dogs and cats remains scarce, compelling evidence, drawn from diverse sources, paints a worrying picture of unrelenting population growth within these stray animal populations (World Organization of Animal Health, 2022). They overpopulate the environment, breed erratically, live primarily on their own, and frequently cause nuisances as well as pose a threat to public health and environmental safety worldwide.

Stray animal overpopulation has become one of the most serious global problems with many negative impacts on the community, environment, and public health (Abdulkarim et al., 2021). Whether roaming the streets as strays or residing in overcrowded shelters, countless feline lives hang in the balance, their welfare intricately linked to the choices and actions of human societies.

Annually, an estimated 7.6 million companion animals transition into stray populations, with felines comprising a substantial portion of this figure at approximately 3.4 million individuals. Of this staggering number, cats constitute approximately 44.7% of the annual influx into stray populations (Statistics - National Kitten Coalition, 2020)

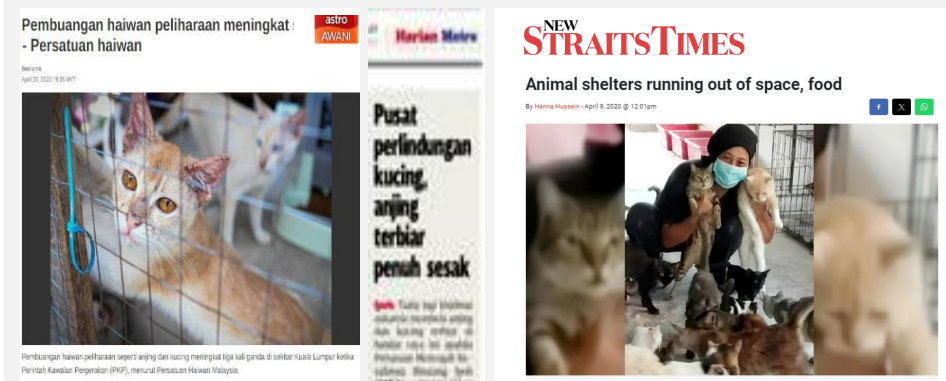


Figure 1: Compilation of news on overpopulation animal shelter in Malaysia (Source: Astro Awani (2020), Harian Metro (2013), New Straits Times (2020))

Addressing this global challenge necessitates a collaborative and multifaceted approach. This project aims to contribute to a more humane and sustainable future for cats and communities by analysing existing interventions like adoption programme, exploring innovative solutions that leverage technology and community engagement through spaces, and advocating for responsible pet ownership practices. Through rigorous research, data analysis, and stakeholder collaboration, this work seeks to illuminate pathways towards a world where the needs of feline populations are met with compassion and responsible action.



Figure 2: News that urge decision-makers to implement humane solution for the issue (Source: The Star newspaper, 2022)

ISSUES AND PROBLEMS

Across the globe, cat shelters face a multitude of challenges that impact not only their ability to function effectively but also the well-being of the feline occupants that affecting the visitors to come. This project delves into three key issues plaguing shelters: overpopulation, lack of space and features, and inadequate air ventilation systems. Each issue, while distinct, possesses the power to exacerbate the others, creating a complex and interconnected web of challenges. Figure 3 shows the diagrammatic research issue of the research.



Figure 3: Diagrammatic research issues (Source: Author, 2024)

1. Overpopulation crisis in cat shelter

Overpopulation of cats in shelters is a widespread and escalating crisis with detrimental consequences for both individual animals and the broader community. This issue stems from a complex interplay of factors, including irresponsible pet ownership practices, such as failing to spay or neuter cats, reluctance to microchip pets, and impulsive pet acquisition without long-term commitment. Additionally, societal factors like limited access to affordable veterinary care, inadequate public education regarding responsible pet ownership, and cultural norms surrounding stray cats contribute to the overpopulation issue.



Figure 4: Diagrammatic infographic on statistic of animals in shelters (Source: People For The Ethical Treatment Of Animals, 2013)

The ramifications of this crisis are multifaceted and profound. Overcrowded shelters struggle to provide adequate care for cats, leading to increased stress, disease transmission, and even euthanasia in some cases. Furthermore, the overpopulation problem can exacerbate concerns related to zoonotic disease transmission and negatively impact community well-being.

Addressing this multifaceted issue requires a comprehensive approach that tackles the root causes and mitigates the negative consequences. Implementing mandatory spay/neuter programs, expanding access to affordable veterinary care and promoting responsible pet ownership practices. Fostering collaboration between shelters, animal welfare organizations, and community stakeholders is also essential to develop effective adoption and foster programs that ensure loving homes for every cat.

2. Lack of space and feature

Despite cat shelters' noble intention of rescuing and rehoming felines, often face the crucial challenge of limited space. This constraint extends beyond housing and impacts the ability to provide dedicated areas for meaningful interaction between cats and potential adopters. The deficit in these interaction spaces poses a significant threat to successful adoptions, potentially hindering the very mission of shelters.

Several factors contribute to this issue. Shelters are often overwhelmed with influxes of abandoned cats, leading to overcrowding and limited resources dedicated to creating dedicated interaction areas. The lack of such spaces hinders potential adopters from forming crucial bonds and emotional connections with cats, which are vital for successful adoptions.

The consequences of this limited interaction space are manifold. Cats housed in confined environments with restricted human contact can develop behavioural issues, making them appear less adoptable (Figure 4). Potential adopters might be dissuaded due to the inability to observe individual personalities and assess compatibility effectively. Consequently, adoption rates may decline, leading to increased lengths of stay for cats in shelters, further straining resources and potentially impacting their mental and physical well-being.



Figure 4: Cats housed in confined environments in PAWS Shelter, Petaling Jaya (Source: Author)

3. Poor airflow ventilation system

Cat shelters, despite their commendable efforts in animal rescue and rehoming, can sometimes struggle with air quality issues due to inadequate ventilation systems. This, often coupled with minimal architectural considerations for odor control, leads to the unfortunate consequence of persistent cat odor. This complex issue presents significant challenges for both the well-being of sheltered cats and the overall shelter environment.

Several factors contribute to this problem. Outdated or poorly designed ventilation systems within shelters may lack the capacity to effectively remove odor and airborne contaminants. Additionally, minimal architectural considerations during shelter construction, such as insufficient exhaust fans, lack of negative pressure rooms, or inadequate separation between litter boxes and living areas, can exacerbate the issue. These combined factors lead to the buildup of ammonia from cat urine, a primary source of the distinctive and unpleasant odor associated with shelters.

The lingering odor creates an unpleasant experience for staff, volunteers, and potential adopters, potentially dissuading visits and hindering potential adoptions. Furthermore, the odor can contribute to the spread of airborne pathogens, creating potential health risks for both humans and animals.

Addressing this issue demands a multi-pronged approach. Upgrading ventilation systems with increased capacity and proper filtration is crucial. Implementing architectural modifications, such as optimising airflow patterns, and ensuring proper litter box placement, can significantly reduce odor sources and improve air quality. Additionally, utilising odor-neutralising technologies and regular deep cleaning protocols can further enhance the environment for both cats and humans.

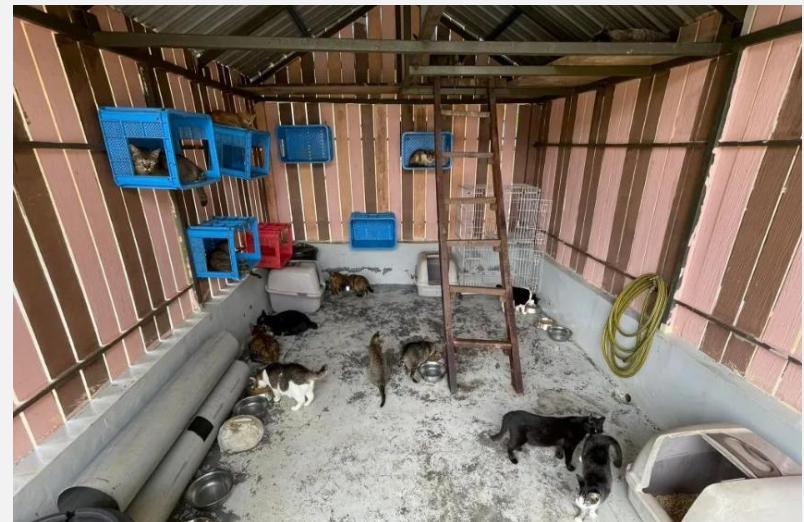


Figure 5: Minimal opening to allow airflow ventilation in Cherishlife Shelter, Negeri Sembilan (Source: <https://thegracecat.com/pet-adoption-in-malaysia-cat-dog/>)

AIM

This project aims to create an architectural integration in developing awareness to improve overcrowding issue in shelter. This project proposes to identify opportunities for change in redefining cat shelter fostering human-feline relationships through a new typology of cat adoption centre integrated with recreational discovery park by providing educational and entertaining insight as recreational park.

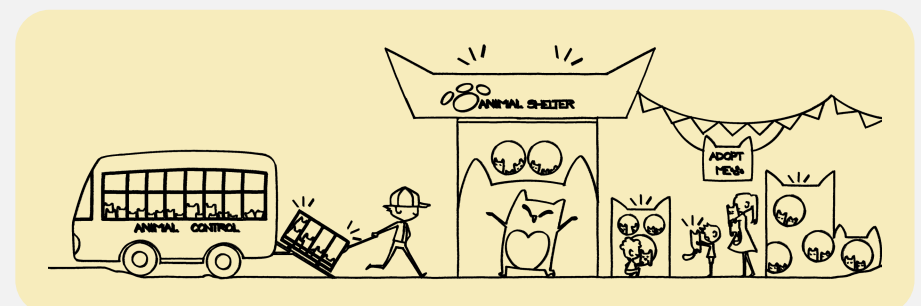


Figure 6: Sketch idea of situation based on aim of the study showing a situation of comprehensive flow of cat shelter (Source: Author)

RESEARCH OBJECTIVES

- 1) To develop a place that can change the stigma of current animal shelter by engaging cats socially with the potential adopter by providing innovative design space.
- 2) To introduce interactive experiential programmes in engaging community and cats in the shelter.
- 3) To improve natural ventilation design strategy in allowing fresh air to flow through.

THEORETICAL FRAMEWORK

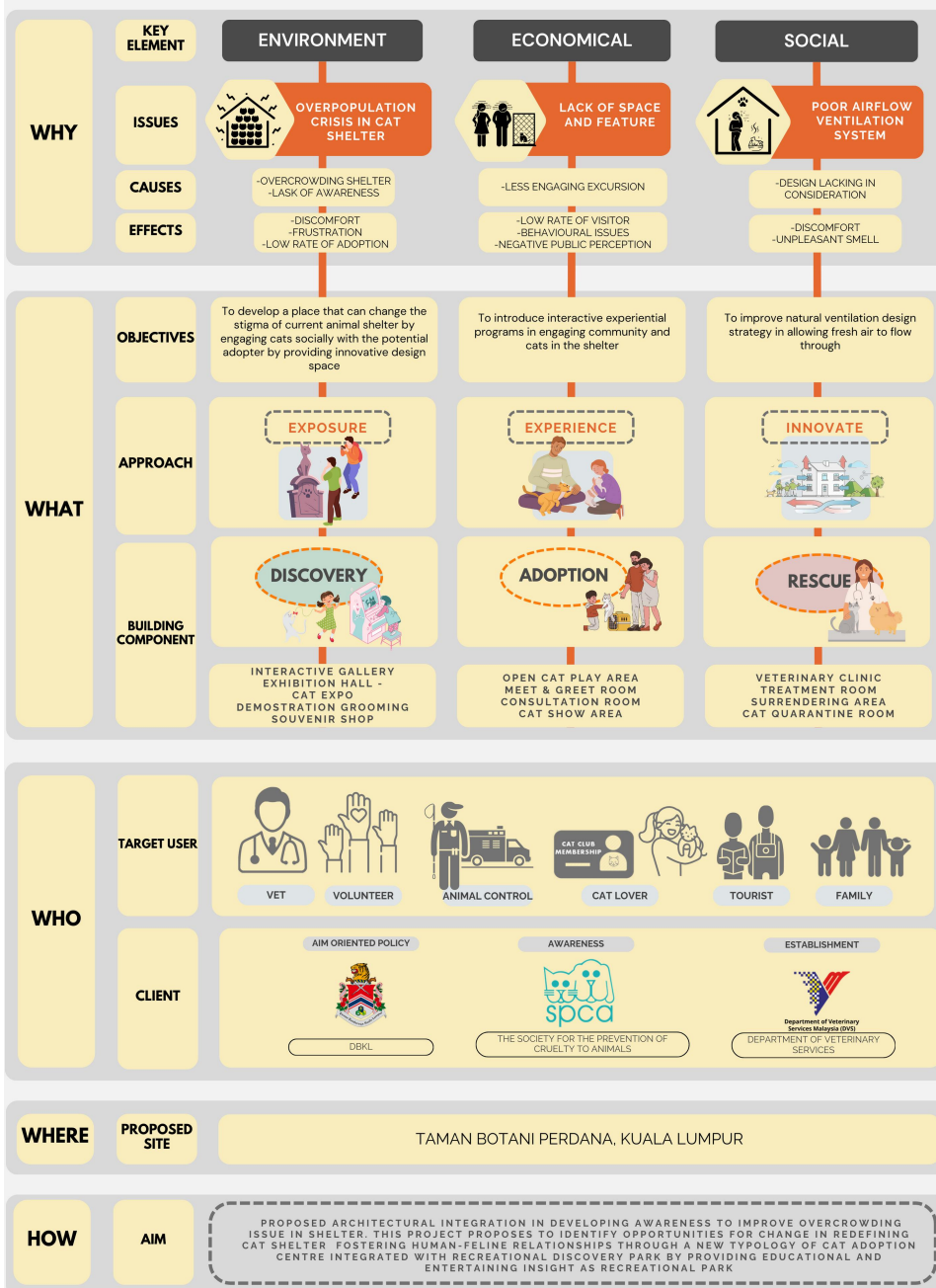


Figure 7: Graphical diagram of the theoretical framework
(Source: Author)

METHODOLOGY

This project endeavors to cultivate insights into the challenges faced by stray cat and cat shelter in Kuala Lumpur. Its primary objective is to propose a resolution by conceptualising a new typology of cat adoption centre integrated with recreational discovery park by providing educational and entertaining insight as recreational park. The data necessary for this endeavor will be acquired through a qualitative approach, encompassing the collection of both primary and secondary data sources.

- Primary Data: On-site surveys and volunteering for related event are essential for conducting observations, experiences and investigating the pertinent issues.
- Secondary Data: Information collected from literature review, news or journal article.

WHAT IS THE DIFFERENCE BETWEEN ANIMAL SHELTER AND POUND?

While often used interchangeably, animal shelter and council pound convey distinct nuances related to their ownership, core focus, and approach to animal care. Delineating these differences is crucial for understanding the diverse of animal welfare organisations and their contributions to responsible pet ownership and community well-being.

Animal shelters, primarily non-profit or privately owned entities, dedicate their efforts to rescuing, caring for, and facilitating the permanent rehoming of stray, abandoned, or unwanted animals (Animals Asia and the Humane Society International, 2010). Adoption constitutes their core priority, and they may offer additional services like spay and neuter programs, educational initiatives, and community outreach to support responsible pet ownership and reduce animal overpopulation. Funding for these endeavors typically stems from donations, fundraising, and grants, highlighting their reliance on community support.

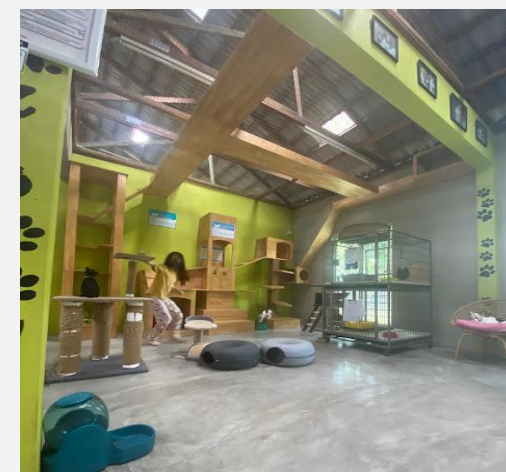


Figure 8: Cat area for adoption in SPCA Animal Shelter, Ampang
(Source: Author)

In contrast, council pounds, operated by local governments, hold primary responsibility for impounding stray animals within their jurisdiction (The National Animal Control Association, 2024). Pound is a facility established by local ordinance in which stray, abandoned, lost, or donated animals are held and impounded for some period, where owners can claim lost pets (National Research Council, 2010). Their focus revolves around holding animals for a predetermined period, permitting owners to reclaim them. While adoption opportunities may exist, they often hold secondary importance compared to owner reclamation (Figure 9). Furthermore, their funding originates from tax dollars, reflecting their integration within the governmental structure.

Several key distinctions emerge from this comparative analysis. Ownership differentiates the entities, with shelters operating independent of government control. Their core focus diverges, with shelters prioritizing adoption and pounds emphasizing owner reclamation. Funding sources also present a clear difference, with shelters relying on private support and pounds receiving government funding. Additionally, shelters often extend their efforts beyond animal care, actively engaging in community outreach and educational initiatives.

Despite these distinctions, both shelters and pounds play a vital role in animal welfare by providing care for stray and abandoned animals. They often face similar challenges, such as overcrowding and limited resources. Recognizing their individual strengths and collaborative potential is crucial for enhancing animal welfare outcomes and promoting responsible pet ownership within communities.



Figure 9: Animal control cage at pound in DBKL Pest Control Center (Source: MyMetro, 2018)

SITE SELECTION

The designated site for this project is situated in Taman Botani Perdana, Kuala Lumpur. It was chosen due to its alignment with the predefined criteria established for site selection. These criteria have been derived from a comprehensive background study, encompassing the following factors:

i. Macro Site Selection:

- The highest rate of overpopulated animal shelter occupancy
- The highest frequency of innovation cat event and expo related to cat

ii. Micro Site Selection:

- image of the city consists of different districts, the Botani Enclave act as continuous organism where each node is closely related to the others which are the animals park
- Good accessibility with existing shuttle tram and KL Hop-On-Hop-Off double decker bus pit stop

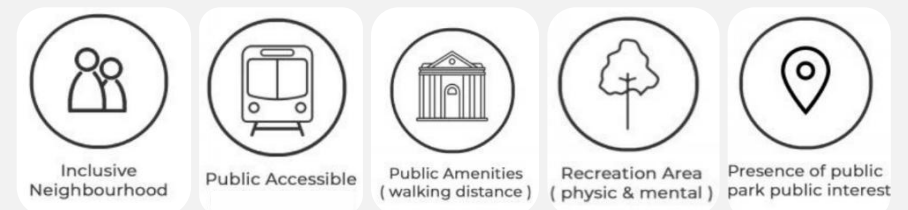


Figure 10: Site selection criteria (Source: Author)

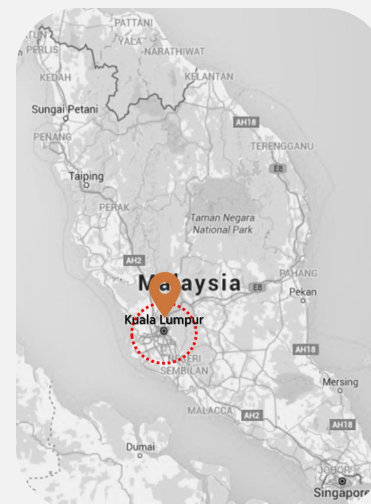


Figure 11: Key Plan (Source: Author)

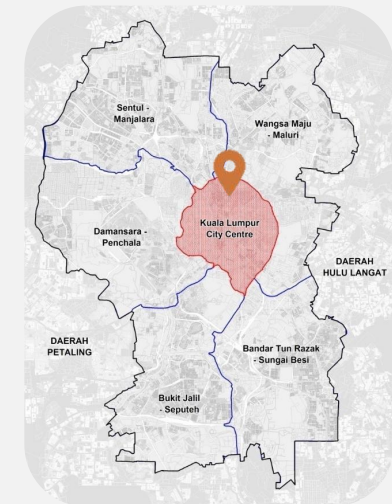


Figure 12: Location Plan (Source: Author)

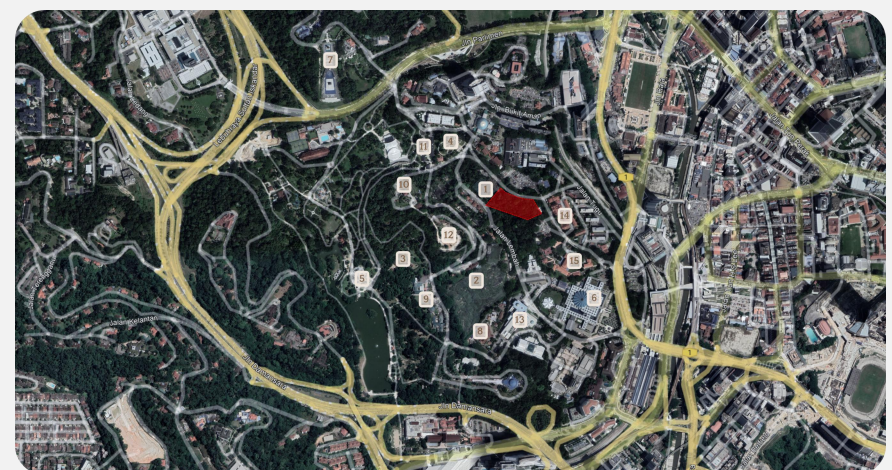


Figure 13: Proposed site in Taman Botani Perdana (Source: Author)

SITE IMAGES

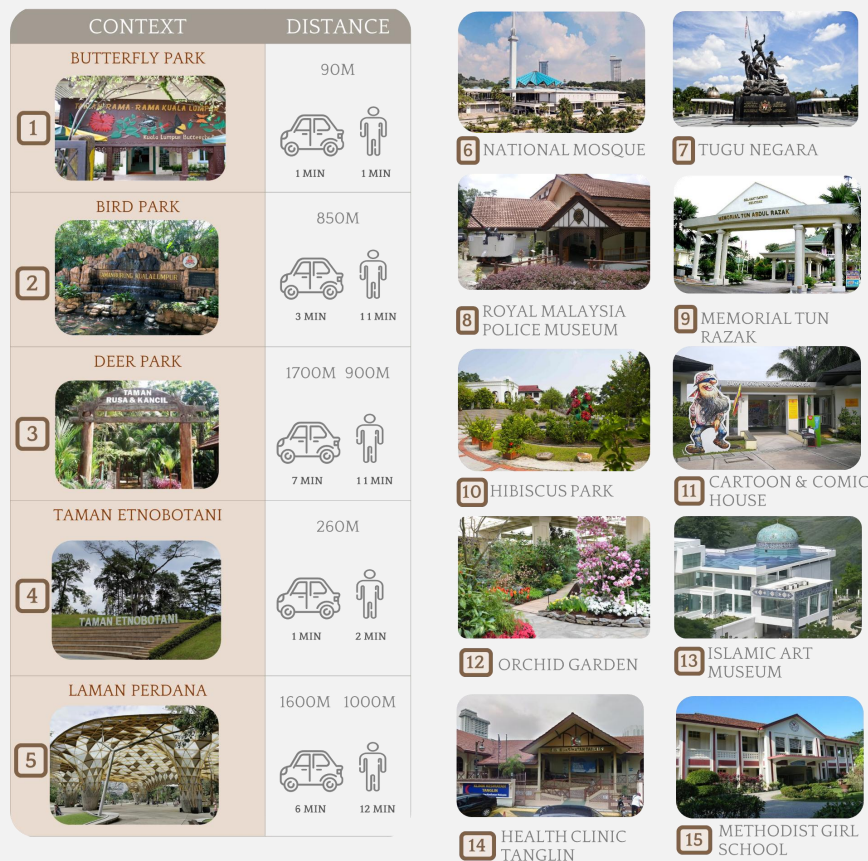


Figure 14: Neighborhood context referring to legend shown in masterplan in Figure 13 (Source: Author)

LAND USE AND ZONING

The land status of the site is an institutional. The site is surrounded by mostly recreational park, public open space and institutional. The recreational park is focusing on the masterplan stated in Jabatan Perancangan Fizikal DBKL (2014) to be Tourism Destination City by increasing the value-added activities of the recreational and tourism sector. The closest neighbourhood context is Butterfly Park which located beside the proposed site, while Kuala Lumpur Bird Park is located behind the proposed site.

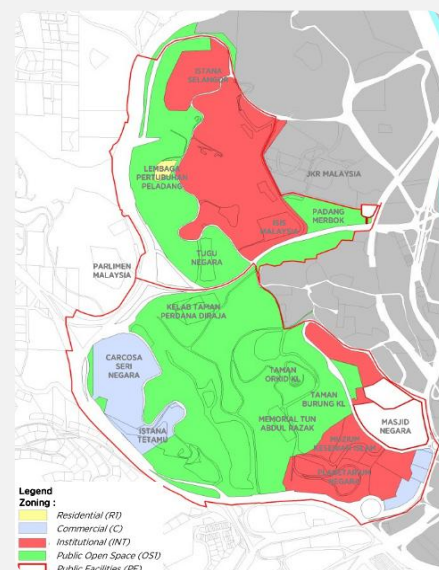


Figure 15: Land use and zoning (Source: Urban Design Guidelines, 2020)

DESIGN BRIEF

This project aims to create an architectural integration in developing awareness to improve overcrowding issue in shelter. The formation of any human-feline dyadic relationship is not a unidirectional process. Cat individuality certainly interacts with the human social environment and may feed back to it (Kotrshal and Wedl, 2013). This project proposes to identify opportunities for change in redefining cat shelter fostering human-feline relationships through a new typology of cat adoption centre integrated with recreational discovery park by providing educational and entertaining insight as recreational park as education and awareness play an important role in fostering empathy towards animals (Previde, Ricci, Colombo, 2022). Figure 16 shows the design brief formulation based on background studies of the research.

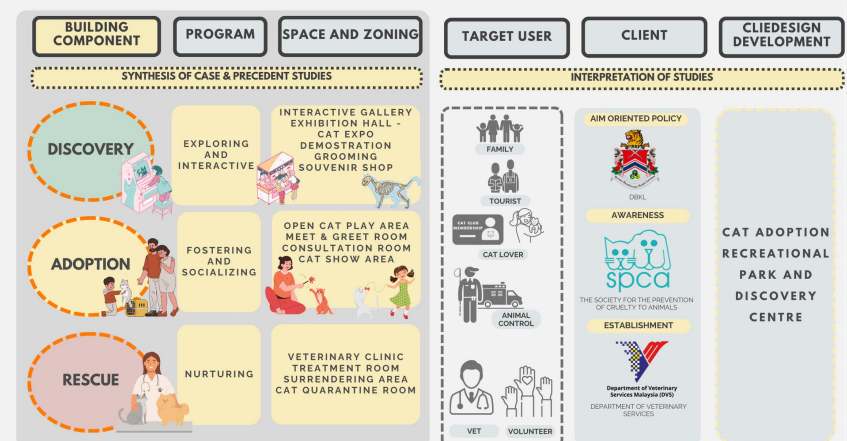
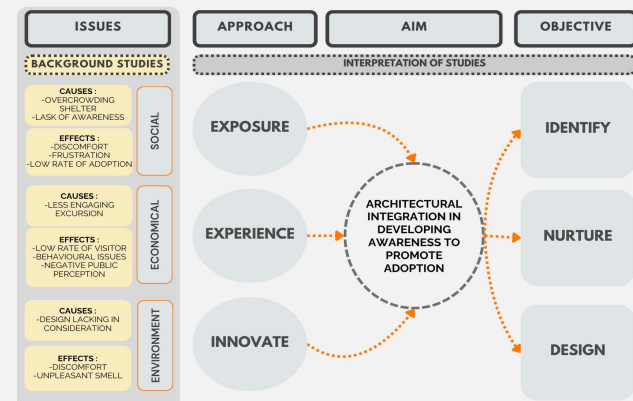
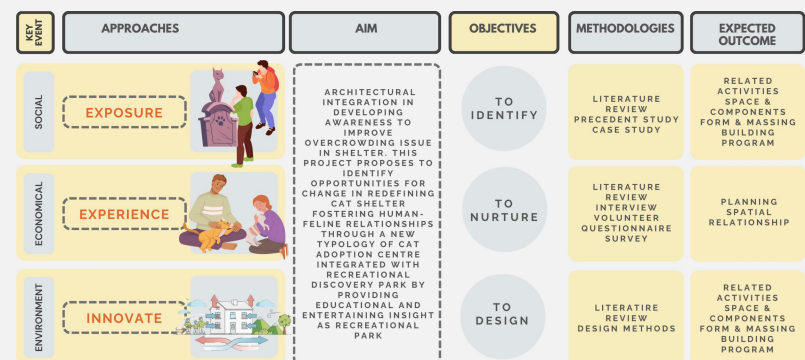


Figure 16: Design Thesis Brief Formulation (Source: Author)

DESIGN CONCEPT AND ASPIRATION

Despite the wealth of research exploring the individual benefits of human-animal interactions, animal-environment relationships, and human-environment connections, a critical gap exists in understanding their combined influence within the unique context of animal shelters. This thesis concept aims to bridge this gap by pursuing three interconnected objectives: (1) elucidating the intricate interplay between these three links within the shelter setting, (2) identifying shared concepts that act as bridges between them, and (3) exploring the resulting implications for innovative landscape design solutions within animal shelters. By unraveling these interconnected relationships, this study seeks to unlock the potential for holistic design approaches that enhance animal welfare, foster meaningful human-animal bonds, and cultivate positive human-environment connections within the unique context of animal shelters.

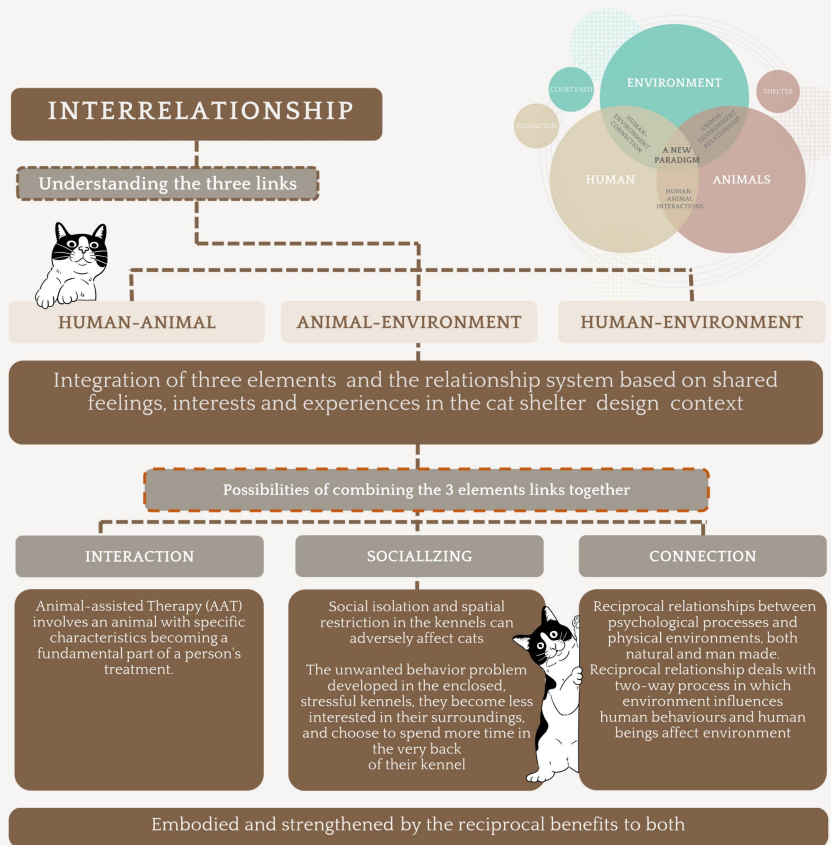


Figure 16: Design concept and aspiration (Source: Author)

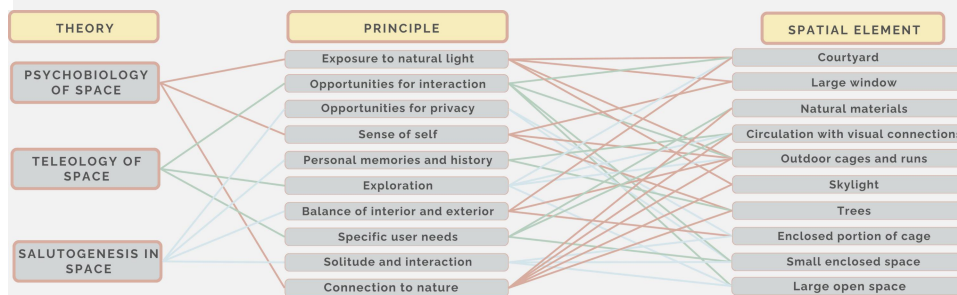


Figure 17: Diagrammatic infographic on interrelationship of the theory and spatial element (Source: Author)

DESIGN DEVELOPMENT

This design development process meticulously considered the existing site context and prevailing wind patterns to foster optimal animal welfare and user experience. Analyzing the site's topographical features, sun exposure, and existing vegetation informed the placement of structures and open spaces, maximizing natural light, ventilation, and opportunities for natural shade. Prevailing wind direction was instrumental in guiding building orientation and landscape elements, mitigating potential drafts and ensuring comfortable thermal conditions for both animals and visitors.

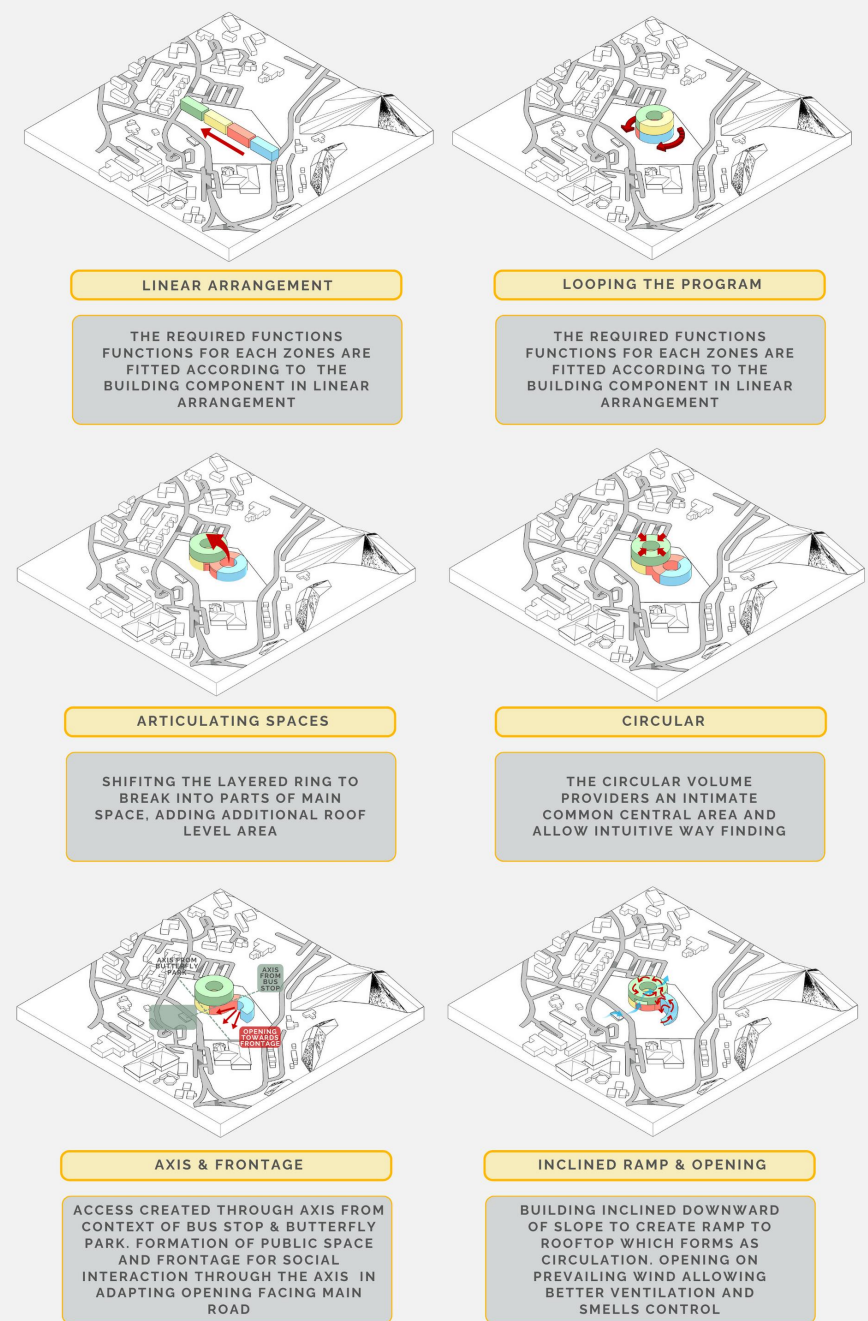


Figure 18: Design development of proposed project (Source: Author)

FINAL DESIGN SCHEME

The site plan serves as the architectural cornerstone, translating the conceptual vision into a tangible spatial organisation. It orchestrates the interplay between buildings, landscapes, and circulation, ensuring not only functional efficiency but also fostering a captivating experience. This thesis proposes a novel approach to cat adoption: an architecturally integrated design that seamlessly blends a recreational discovery park with a cat adoption center. Transgressing the confines of traditional shelter layouts, this site plan serves as the physical manifestation of this innovative concept, meticulously crafted to foster meaningful human-feline interactions and ultimately, facilitate successful adoptions.

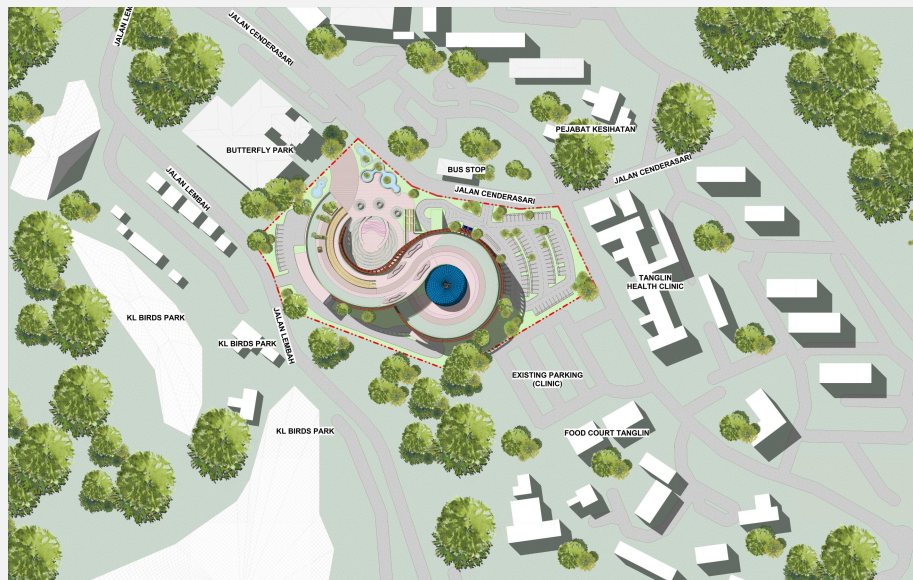


Figure 19: Site plan of the proposed building project
(Source: Author)

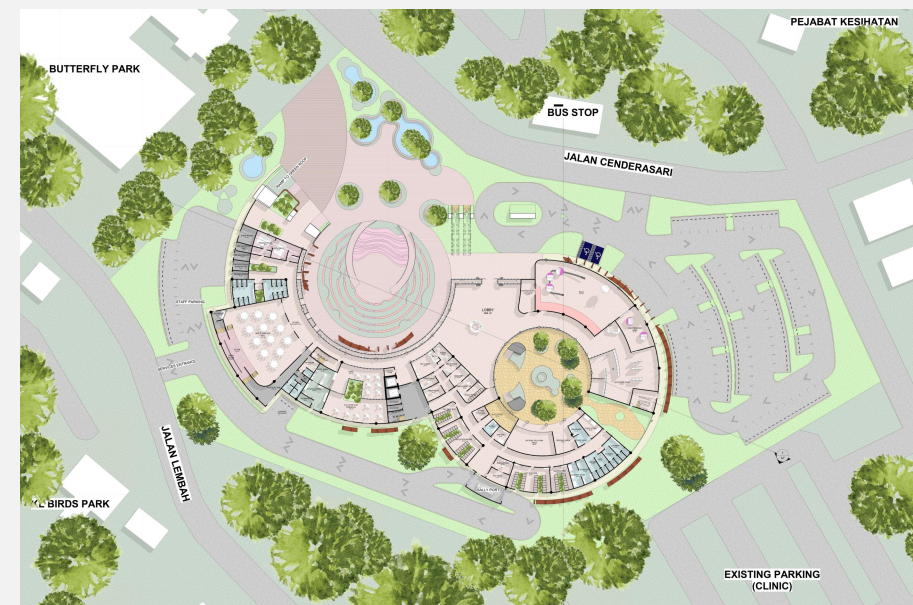


Figure 20: Ground floor plan of proposed building project
(Source: Author)

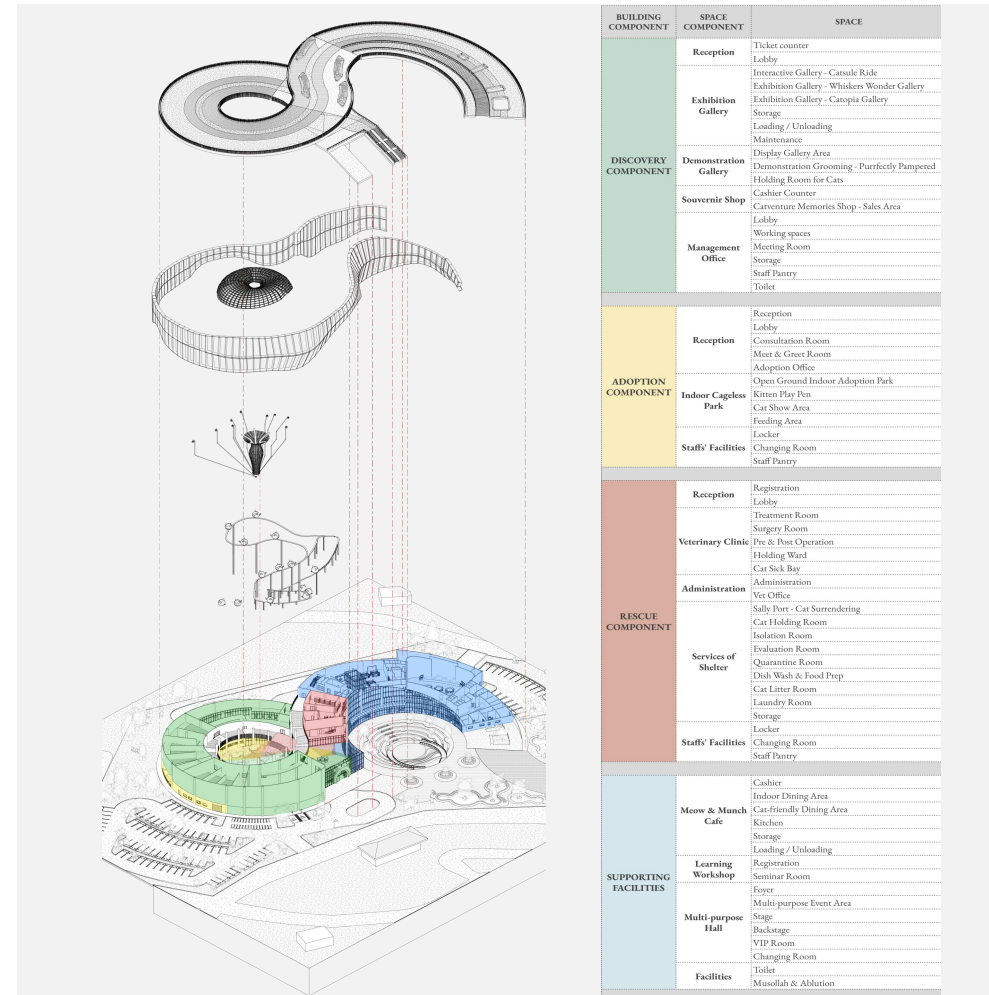


Figure 21: Exploded diagram with building component based on space of accommodation
(Source: Author)

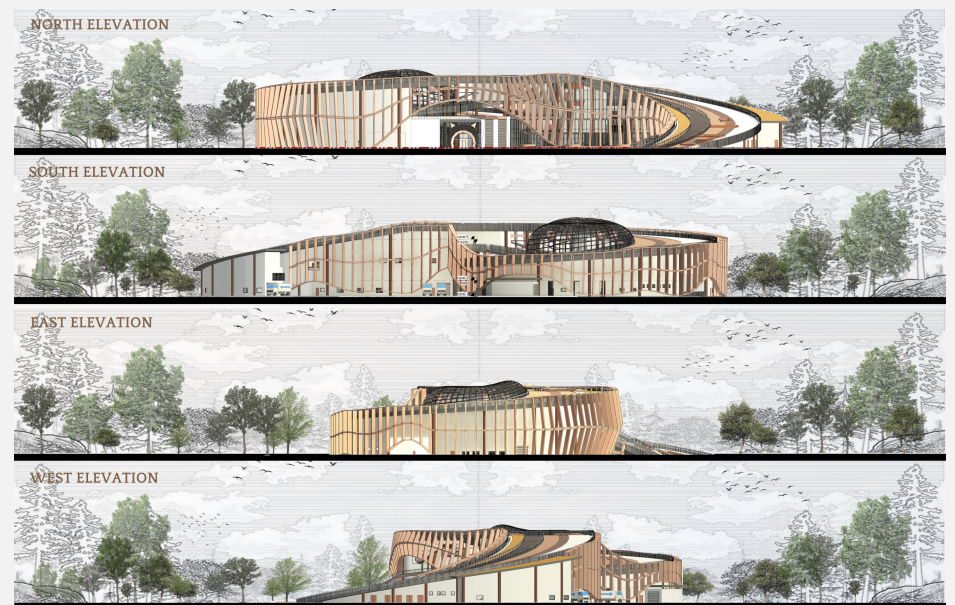


Figure 22: Elevation of the proposed building project
(Source: Author)

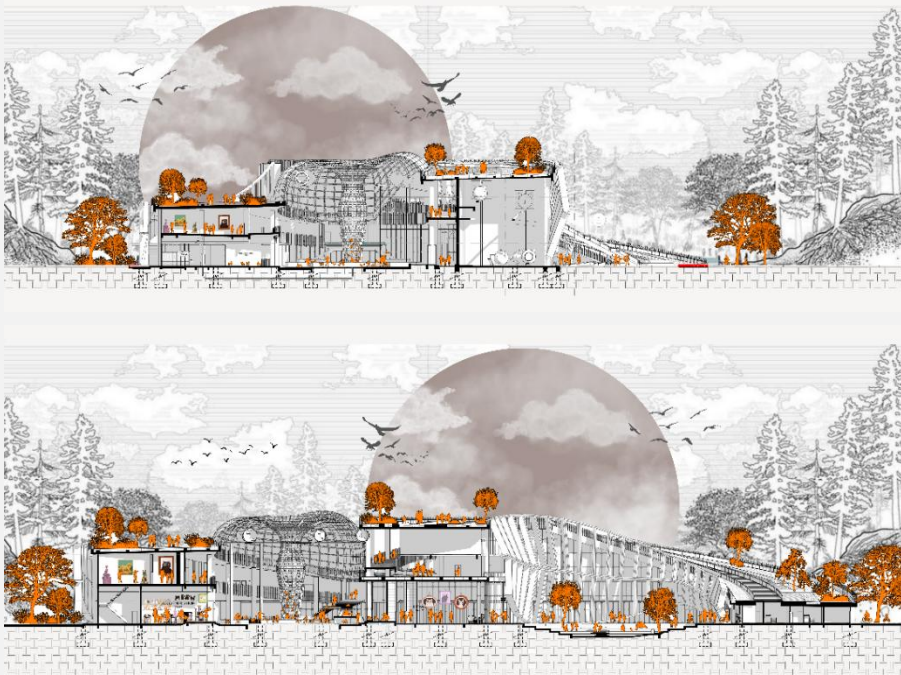


Figure 23: Section cut of the proposed building project
(Source: Author)



Figure 24: Frontage perspective of the building towards the outdoor plaza
(Source: Author)



Figure 25: Main entrance into the lobby of the building
(Source: Author)

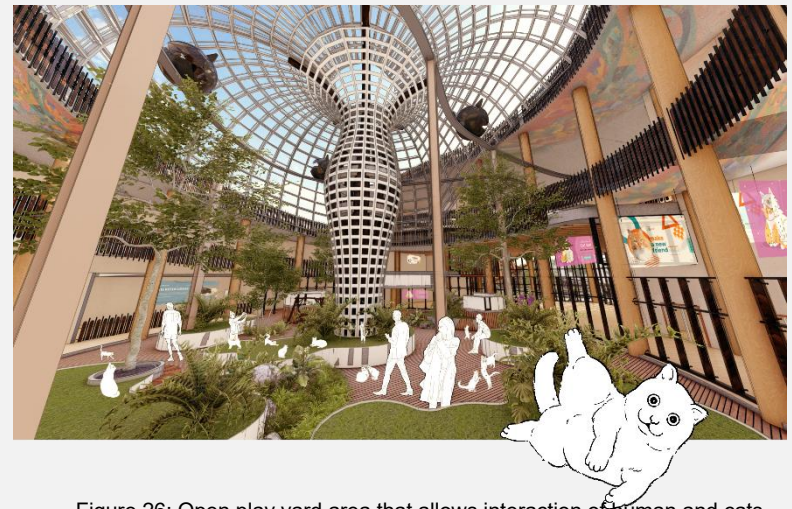


Figure 26: Open play yard area that allows interaction of human and cats
(Source: Author)

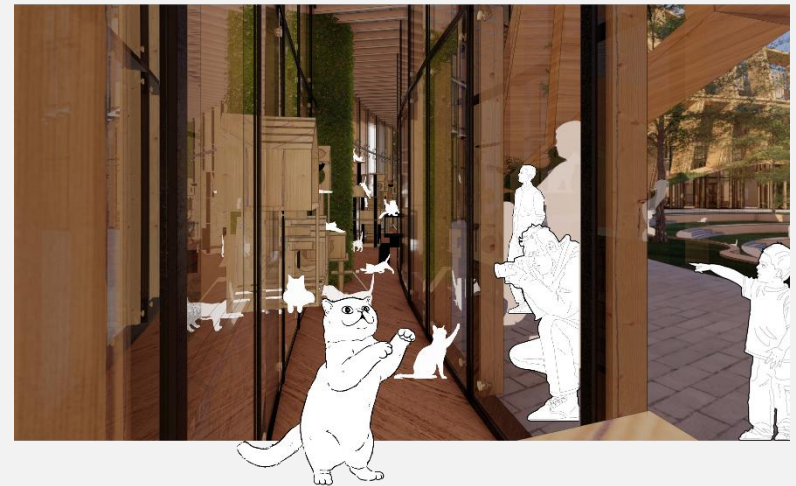


Figure 27: Double glass wall act as closure and display for cats that connected with the outdoor
(Source: Author)

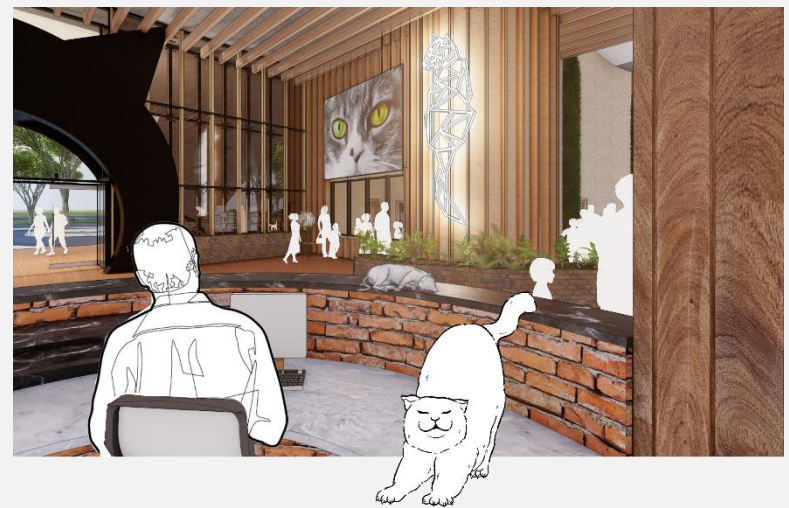


Figure 28: Information and ticket counter (Source: Author)

CONCLUSION

This project has explored the complex issue of cat shelter overpopulation and the need for innovative architectural solutions. Through the lens of architectural integration, it has proposed a novel approach: a recreational discovery park seamlessly intertwined with a cat adoption centre. This unique typology aims to go beyond traditional models, utilising the power of recreation and education to address the multifaceted problem.

By fostering engaging human-feline interactions within the recreational park, the design disrupts the perception of shelters as sterile environments. Interactive exhibits and educational programs dispel misconceptions and cultivate empathy for cats in need. Ample spaces for play, observation, and bonding transcend transactional adoptions, allowing genuine connections to blossom, potentially leading to increased adoption rates and improved feline welfare.

Furthermore, the integration with a sustainable and enjoyable park creates a mutually beneficial outcome. Community members drawn to the recreational hub gain valuable insights into responsible pet ownership and animal welfare, potentially becoming advocates for adoption. Simultaneously, the presence of cats within the park enhances the overall experience, fostering a sense of community and responsibility.

Ultimately, this project proposes a paradigm shift in cat adoption approaches. It envisions shelters not as isolated facilities, but as vibrant community hubs where education, entertainment, and feline well-being intersect. By leveraging the power of playful interaction and immersive experiences, this integrated park has the potential to redefine the cat adoption landscape, paving the way for a future where fewer felines face the challenges of overpopulation, and more humans embrace the joy of feline companionship.

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REFERENCES

- Abdulkarim, A., Goriman Khan, M. A., & Aklilu, E. (2021). Stray Animal Population Control: Methods, Public Health Concern, ethics, and Animal Welfare Issues. *World's Veterinary Journal*, 11(3), 319- 326. <https://doi.org/10.54203/scil.2021.wvj44>
- Animals Asia and the Humane Society International (2010). *Basic Management Guidelines for Dog and Cat Shelters*
- Dewan Bandaraya Kuala Lumpur (2014). *Urban Design Guidelines for Kuala Lumpur City Centre: Volume 2, Botani Enclave*
- Kotrschal, K. and Wedl, M. (2013). 'Human and cat personalities: building the bond from both sides', *The Biology of its Behaviour*
- National Research Council (US) and Institute of Medicine (US) Committee on the Use of Laboratory Animals in Biomedical and Behavioral Research (2010) *Use of laboratory animals in biomedical and behavioral research*. Lavergne, Tenn.: General Books.
- Prato-Previde, Emanuela, Elisa Basso Ricci, and Elisa Silvia Colombo. 2022. "The Complexity of the Human-Animal Bond: Empathy, Attachment and Anthropomorphism in Human-Animal Relationships and Animal Hoarding" *Animals* 12, no. 20: 2835. <https://doi.org/10.3390/ani12202835>
- Sandøe P, Jensen JBH, Jensen F, and Nielsen SS (2019). Shelters reflect but cannot solve underlying problems with relinquished and stray animals—A retrospective study of dogs and cats entering and leaving shelters in Denmark from 2004 to 2017. *Animals*, 9(10): 1-14. DOI:<https://www.doi.org/10.3390/ani9100765>
- Statistics - National Kitten Coalition (2020). Available at: <https://kittencoalition.org/news-events/statistics/>
- World Organization for Animal Health (OIE). (2022). *Stray dogs' population control*. *Terrestrial Animal Health Code*, pp. 1-12.