UNIVERSITY OF NAIROBI

COLLEGE OF ARCHITECTURE AND ENGINEERING

SCHOOL OF ARTS AND DESIGN

EMOTIONAL DESIGN AND EMBU LANDSCAPES FOR AN APPEALING
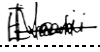INTERIOR DESIGN OF YOELIGEN HOTEL IN EMBU.

BY:

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A paper submitted to the School of the Arts and Design, University of Nairobi, in partial
fulfillment of the requirement for the Bachelor of Arts in Design degree.

14TH APRIL 2020

DECLARATION

I, Mwaniki Eva Wacuka, declare that this research paper is my original work and has not been presented for the award of a degree to any other university.

Signature ~~Mwaniki~~

Date 14TH APRIL 2020

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This research paper has been submitted to the School of the Arts and Design, University of Nairobi in partial fulfilment for the award of a Bachelor of Arts degree in Design with the approval of;

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DEDICATION

To my beloved parents, Joseph and Esther Mwaniki, I really appreciate your support.

ACKNOWLEDGEMENTS

ABSTRACT

"Guest emotions" refers to emotions that are experienced by hotel guests and evoked by hotels. The growing evidence in the strong influence of customer emotions has resulted in an increasing recognition on the importance of eliciting positive guest emotions and staging memorable experiences for hotel guests. Some researchers advocate the importance of design in achieving emotional impact for hotel stays, guest loyalty and service excellence. Another researcher states, "Innovative experience design will become a critical component of any successful hotel company's core capability." Researchers also call for a more in-depth understanding about guest emotions and guest experiences in order to inform design and decisions that bring about positive guest emotions. (LO, 2007)

This research aimed to determine ways to effectively implement emotional design in the design of hospitality spaces in; the interior architecture, furniture design, exhibition & display and landscape design. The researcher sought to achieve emotional design by using nature inspired African design in the interior design of the hotel. Further, the researcher sought to incorporate the theme of sustainability in the landscape design by the use of recycled pallet products.

The researcher reviewed relevant literature on the three philosophies; emotional design, nature based African design and Recycling wood, so as to come up with well suited solutions for the case study. The case study of this research was Yoeligen Hotel which is located in Embu town. The methodology employed in this study was qualitative case study as the researcher aimed to investigate the interior design of the hotel and its emotional value to the users. Based on the data collected on the field, the researcher made analysis of the findings and proposed recommendations towards developing emotional designed spaces.

The research is segmented into five chapters; chapter one has included the introduction, background of the study, statement of the problem, research objectives, research questions, significance, limitations and scope of the study. Chapter two has included the introduction, review of literature of three philosophies, profile of a design champion for each philosophy, design exemplars similar to design philosophy, design process and analytical review. Chapter three has delved into the research design, population, sampling method, data collection instruments, data analysis tools, and data presentation methods. Chapter four has included a qualitative and quantitative analysis of findings and presentation of findings. Finally, chapter five has given the summary of the data analysis, proposed solutions for the problems identified and suggested topics for further research as the study was not exhaustive.

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LIST OF ACRONYMS/ABBREVIATIONS

UN SDG – United Nations Sustainable Development Goals

MDF – Medium Density Fibre board

C&D – Construction & Demolition

MSW – Municipal Solid Waste

VR – Virtual Reality

OPERATIONAL DEFINITION OF TERMS

Emotional design – It is about emotional impact and value-sensitive aspects of design, that is, about the social and cultural implications, as well as the aesthetics and joy of use. (hartson et al., 2012)

Recycling – Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products. (EPA, 13)

Wood pallets – a flat wooden structure that heavy goods are put onto so that they can be moved using a fork-lift truck (a small vehicle with two strong bars of metal on the front that is used for lifting heavy goods) (Cambridge Dictionary, 2020)

1.0 INTRODUCTION TO THE STUDY

1.1 INTRODUCTION

As businesses are putting increasingly strong emphasis on creating pleasant and memorable experiences for customers, emotional design and experience design have become two progressive trends in design research. Emotional design is a design approach that emphasizes the importance of eliciting users' positive emotional responses. With this approach, design research and practice are extended beyond function, form and usability, to emotional dimensions that enrich user experience. The core belief of experience design is grounded on a human-centric paradigm that places the needs and desires of users at the center of the design process. The process often starts with discovering insights about what truly matters to users. Researchers and designers put considerable effort into understanding the richness of real-world experiences from the users' perspectives. The ultimate goal is to translate the insights into design outcomes that help users achieve optimal experiences (LO, 2007).

African design is mainly inspired by nature as well as wild animals. Drawing inspiration from nature dates back to the early days as evidenced by the Mumoye houses near Zinna in Northern Nigeria. The Mumoye built their houses to resemble the hill. The grass thatched conical roof of their huts had a peak made of plaited mat tied at the top to resemble the hill. African furniture has traditionally taken the aspects and images of what is around them on a daily basis and used them in their furniture designs. African animals and vegetation depicting scenes of hunting and images of spiritual connection between the earth and the animal are often carved into the african wooden furniture. Colours can be evocative of the sunburnt earth; deep, verdant rainforests, softly wistful savannah plains burnt orange sunsets or pinkly purple sunrises and vibrant splashes of a few hues reminscent of the crazily energetic market place of africa. Embu is a town with many natural features including Mt Kenya, hills, forests, rivers, waterfalls, birds and wild animals. The researcher will focus on drawing inspiration from these natural features.

The United Nations Sustainable Development Goals (UN SDG) number twelve is to ensure responsible consumption and production. The UN SDG aims to among other targets; to substantially reduce waste generation through prevention, reduction, recycling and reuse and achieve the sustainable management and efficient use of natural resources by 2030. (unilever, 2019) The broad use of wood generates a large amount of waste. This waste wood comes from a variety of sources and in a variety of forms. Its principal sources are two waste streams: municipal solid waste (MSW) and construction and demolition (C&D) waste. Each generates distinctly different types of wood waste, with differing degrees and levels of recyclability. Recovered wood can be

used to manufacturer value-added products such as medium density fiberboard and particleboard. Wooden pallets are perhaps one of the best successes in solid wood recycling. The large amount of waste wood available from both municipal solid waste (MSW) and construction and demolition (C&D) waste, create an opportunity for a designer to apply recycling methods and create products that are sustainable (Woolridgea et al, 2005).

This study focusses on Yoeligen Hotel. Yoeligen Hotel is located at the heart of Embu town. The researcher will investigate how Embu natural features and recycled wood can be used in the design of the hotel interior spaces. The researcher will further establish how emotional design can be used in the hotel to enhance customer satisfaction by creating appealing interior spaces.

Qualitative research is a method often adopted in response to a creative development brief (research works, 2016). The researcher will use case study qualitative designs. Qualitative samples are purposive in nature because they are designed to achieve specific outcomes. The population sample will be drawn from the managerial and working staff of the hotel and the clients of the hotel. Qualitative data collection methods will be used in this study majorly observation and interviews.

This chapter will cover the background information to the study including a brief introduction of the case study, the statement of the problem, research objectives, research questions, limitations and significance of the study.

1.2 BACKGROUND INFORMATION

In order to be successful in the market it is not sufficient to attract new customers, managers must concentrate on retaining existing customers implementing effective policies of customer satisfaction and loyalty. In hotel industry customer satisfaction is largely hooked upon quality of service. A management approach focused on customer satisfaction can improve customer loyalty, thus increasing the positive image of the touristic destination. Hence, exploring the importance for customers of hotel attributes in hotel selection is indispensable. Research on the topic of guest satisfaction, which translates into the consideration of whether or not customers will return to a hotel or advice it to other tourists, is pivotal to the success of the hospitality business. Neglecting to pay attention to those hotel attributes considered most important by guests, may lead to negative evaluation of the hotel, thus restricting the chance of repeat patronage (Guzzo et al., 2010).

Construction of Yoeligen hotel began in late 2009 and it was completed in 2013. It took six months to furnish the ground floor, first and second floor. From the third floor to the fifth floor, furnishing was completed in 2015. Business was slow for the next two years until the end of 2017. The hotel broke even after about four years and can now sustain itself even during low peak seasons.

1.3 PROBLEM STATEMENT

Yoeligen Hotel has not adequately catered for customer's satisfaction in the design of its interior spaces. The hotel has not provided any tangible or intangible offerings that would evoke positive guest emotions. The area generally requires a major upgrade in the interior architecture, furniture design, exhibition and display and landscaping. This problem was identified during the researcher's stay at the hotel. Lack of customer satisfaction can hinder hotel's guests from returning to the establishment (Guzzo et al., 2010).

1.4 MAIN OBJECTIVE

To establish how emotional design can be used in hotel interior design and propose ways through which they can be integrated with Embu natural features.

1.4.1 SPECIFIC OBJECTIVES

1. To establish the value of emotional design in hotel interior design
2. To establish how emotional design can be used to create an appealing hotel interior.
3. To investigate the interior design style used in Yoeligen hotel in Embu and its emotional appeal.
4. To propose new designs by using inspiration from Embu natural features to create an emotional hotel experience.

1.5 RESEARCH QUESTIONS

1. What is the value of emotional design in hotel interior design?
2. How can emotional design be used to create appealing hotel interiors?
3. What is the interior design style used in Yoeligen hotel in Embu?
4. How can Embu natural features inspire new designs for Yoeligen hotel in Embu?

1.6 SIGNIFICANCE OF THE STUDY

The aim of this project is to propose ways through which emotional design, user experience and Embu natural features can be applied in the interior architecture, furniture design, landscaping and exhibition and display of Yoeligen hotel in Embu.

1.7 LIMITATIONS OF THE STUDY

Inadequate time – The amount of time allocated for the research was inadequate to do an extensive study.

Financial limitations as the researcher will need to stay at the hotel so as to carry out data collection

Information gap on natural features as source of inspiration for African design was a problem.

1.8 THE SCOPE OF THE STUDY

Geographical

This research will be carried out in Embu, with an emphasis on the case study, Yoeligen Hotel.

Conceptual

The study will concentrate on the application of emotional design through the use of natural features in Embu to the four thematic areas: furniture design, interior architecture, exhibition and display, and landscape.

Contextual

This study will focus on the opportunities of applying emotional design in the hospitality sector. The researcher will consider the interior architecture, furniture design, landscaping and exhibition and display.

1.9 CONCLUSION

In this chapter the researcher has introduced the three philosophies that form the backbone of the research which are; emotional design, nature-based African design and recycling of wood. The researcher has then stated the problem, given the objectives of the study and the research questions which will guide the research process. Finally the researcher has defined the significance of carrying out the research and outlined the limitations to the study and the scope of the study.

2.0 LITERATURE REVIEW

2.1 OVERVIEW

This chapter contains a review of literature concerned with recycling of wood, Embu natural features and emotional design. The information on the aforementioned topics will be accompanied with design exemplars showing how they have been applied to an interior space. Thereafter the chapter will delve into the design process to show how the researcher will work at achieving the design philosophies.

2.2 EMOTIONAL DESIGN

Emotional design is the process of creating things that people feel empathy towards. It is associated with sustainability as a means of encouraging use and reuse over disposing things. Emotional design also has value as a product development and branding technique. Designing products and services that people feel good about is a sure way to earn loyal customers and a reputation for quality (Spacey, 2017). Emotional design is a design approach that emphasizes the importance of eliciting users' positive emotional responses. With this approach, design research and practice are extended beyond function, form and usability, to emotional dimensions that enrich user experience. The majority of research on emotional design concentrates on products and human-computer interfaces. Emotional design is an attractive and rapidly growing research area; its subjects of research range from conceptual models to measurement tools to design methods in relation to emotional responses. Major topics include pleasure, fun, enjoyment, wow, attachment etc (LO, 2007). The following are common elements of emotional design.

1. Style - The appeal of an item to the senses of vision, taste, touch and sound. Design can essentially be appreciated as art.
2. Functional value - Items that fulfill customer needs
3. Durability - Product and services that endure time and real world conditions. In some cases, a product becomes more valuable to the owner with time such as tea cups that wear in a charming way.
4. Reliability - Products and services that are available and always perform as expected. For example, a dish at a restaurant that always tastes much the same.
5. Usability - User interfaces that are pleasing to use.
6. Repair-ability & extensibility - Things that are designed to be repaired or extended with interchangeable parts. For example, a mobile device with upgradable components.
7. Experience - The end to end intangible elements of a product or service such as a restaurant with friendly and diligent staff (Spacey, 2017).

Table 2. 1 Overview of Emotional Design, Source: **(Spacey, 2017)**

TYPE	User experience design
DEFINITION	The process of creating things that people feel empathy towards.
ALSO KNOWN AS	Emotional durable design
EXAMPLES	The feeling that surrounds an old book Attachment to a reliable bicycle.
RELATED CONCEPTS	Sustainability Reuse Product development Branding guide Quality

2.2.1   USER EXPERIENCE DESIGN

User experience is a term for design that is focused on the overall emotional impressions of customers, it is often measured with satisfaction metrics that simply ask people how happy they are with an experience. User experience is a broad practice that spans the designs of user interfaces, services, products, customer services and environments such as retail shops.

The core belief of experience design is grounded on a human-centric paradigm that places the needs and desires of users at the center of the design process. The process often starts with discovering insights about what truly matters to users. Researchers and designers put considerable effort into understanding the richness of real-world experiences from the users' perspectives. The ultimate goal is to translate the insights into design outcomes that help users achieve optimal experiences. To achieve this goal, a holistic approach to design is needed. Instead of focusing on individual artifacts or the look and feel, designers are concerned with the quality of people's experiences and devise whole solutions informed by multidisciplinary insights.

These rising trends of emotion-driven and experience-driven design imply a shift of focus in design knowledge beyond the design of objects or interfaces to both tangible elements and intangible processes that make experiential impact by evoking positive emotions. Design researchers increasingly assume an integrative stance and take the initiative in synthesizing knowledge from

diverse domains, generating cross-disciplinary insight regarding people's emotions and identifying design opportunities that enhance experiences (LO, 2007).

2.3 PROFILE OF WELL KNOWN DESIGNER ADVOCATING FOR EMOTIONAL DESIGN: KATHY PUI YING LO

In order to address the need for better understanding about emotion-oriented design for hotels, Kathy proposes a three-level conceptual model that clarifies the relationships between guest emotions, hotel offerings, design emphases and guest perception. This model is underpinned by theories and knowledge in emotional design, experience design and hospitality. It is broad and general so that it applies to all possible hotel contexts. The three types of hotel offerings stated in this model correspond with levels of tourism or hospitality service product outlined by Reisinger (2001).
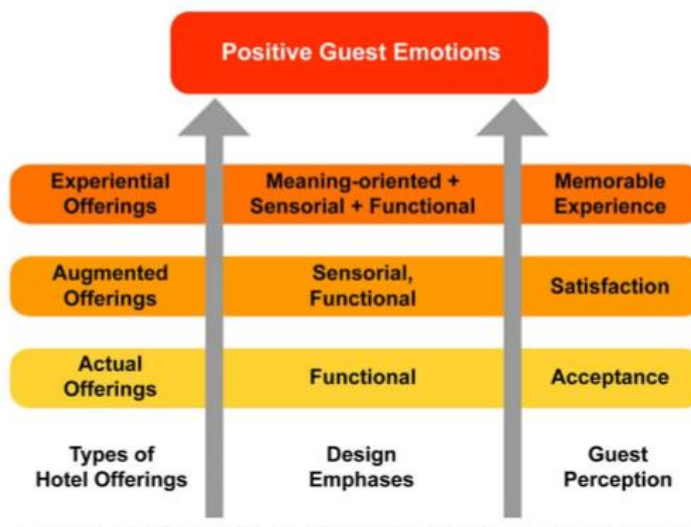
Fig. 2. 1 Types of Hotel Offerings, source: **(LO, 2007)**

2.3.1 PRIMARY LEVEL

"Actual Offerings" refer to basic service and tangible products that are provided in hotels and expected by most hotel guests. For example, a comfortable bed, adequate air-conditioning, reliable morning-call service, and clean shower and toilet facilities etc. The design emphasis of Actual Offerings is functional in nature. Design at this level mainly concerns amenities, features and services that enable hotel guests to achieve certain basic goals and provide convenience. For hoteliers and designers who want to evoke positive guest emotions and improve guest experience at this level, the key question to ask is: What tangible elements and intangible processes can be designed to offer guests more functional benefits?

Among the three types of hotel offerings, Actual Offerings have the minimum impact on evoking positive guest emotions and perception. While the presence of Actual Offerings only contributes to guests' acceptance of the hotel's adequate performance, weakness in (or absence of) Actual Offerings often produces extremely negative impact on guest emotions and perception.

As guests' needs are constantly changing and guest expectations are ever increasing, hoteliers and designers need to learn about those needs and expectations in order to provide and design amenities or services just to maintain acceptable performance and thus stay in business. For example, as Internet connection has become essential in many people's daily lives, a hotel can increase an Actual Offering by providing convenient Internet access in guestrooms. This involves the design of interface, procedures and support mechanism that enable in-room Internet access.

2.3.2 MIDDLE LEVEL

"Augmented Offerings" refer to hotel offerings that extend Actual Offerings with value-added features for the benefit of hotel guests. The benefits can be increased degree of comfort, convenience, security, service reliability etc. The list goes on as the possibilities are limitless. An existing example of Augmented Offering is Westin Hotel's "Heavenly Bed", a 10-layered luxurious bed designed for the maximum degree of comfort.

Fig. 2. 2 The Heavenly Bed, Source: **(Westin store, 2020)**

Design at this level evokes positive guest emotions and increases satisfaction mainly by exceeding guest expectations. Apart from emphasizing the functional elements, design at this level also emphasizes sensorial elements. That means design adds value not only by improving the functional aspect of hotel offerings but also by delighting one or more of the human senses (visual, auditory, olfactory, gustatory and tactile) through sights, sounds, smells, taste, or touch.

At this level, the key question to ask is: What tangible elements and intangible processes can be designed to offer guests more functional or sensorial benefits beyond the standard offerings?

Augmented Offerings have medium impact on eliciting positive guest emotions and perception among the three levels in the model. Absence of or weakness in Augmented Offerings would not lead to negative guest emotions, but the presence of or strength in Augmented Offerings usually evokes positive guest emotions and enhances guest satisfaction. Designing Augmented Offerings enables a hotel to gain a competitive edge over other hotels that offer standard products or services.

For example, following up on the in-room Internet access mentioned in the previous subsection, a hotel can upgrade this Actual Offering to an Augmented Offering by incorporating more functional benefits. This can be achieved by making in-room Internet access high-speed, free-of-charge and also by offering a wireless option and more user-friendly interfaces.

2.3.3   TOP LEVEL

"Experiential Offerings" is the topmost level in the proposed model and an integrative level of hotel offerings. This term refers to the combination of various tangible elements and intangible processes that create meaning-centered experiential impact for guests. At this level, design is a synthesis of the functional, sensorial and meaning-oriented aspects for staging memorable and meaningful guest experiences. Meanings are messages that the hotel wants to communicate to guests. Embodied in multiple tangible elements and intangible processes, these meanings are not only limited to status or identity, but include also meanings that match with guests' aspirations, such as harmony, accomplishment, individuality, well-being, social responsibility etc. Diller, Shedroff & Rhea (2006) point out that companies can address people's growing desire for meanings by intentionally designing integrative experiences based on a specific meaning and expressed cohesively through products and services. Designing for guest experience requires a deep understanding about meanings relevant to hotel guests and requires the orchestration of a wide array of tangible elements and intangible processes in order to communicate the desired meanings.

The two main questions to ask at this level are: (1) what are the meanings that the hotel wishes to convey? (2) How can the hotel integrate functional elements, sensorial elements and meanings to evoke memorable guest experiences? Hotels can create Experiential Offerings by developing hotel stay experience based on themes. According to Gilmore & Pine II (2002, p.92), a theme is "the dominant idea or organizing principle, devotion to which creates a coherent experience for guests." This implies that the design and orchestration of functional, sensorial and meaning-oriented tangible elements as well as intangible processes are of paramount importance.

Among the three levels in the model, Experiential Offerings have the maximum impact on guest emotions and perception. Since Experiential Offerings communicate meanings robustly with tangibles and processes through many functional and sensorial means, they usually evoke

memorable experiences for hotel guests. In this way, Experiential Offerings contribute to positive emotional impact and loyalty behaviors such as repeat patronage and positive word-of-mouth (Pullman & Gross, 2004). Ideally, hotels try to achieve ultimate excellence by designing unique Experiential Offerings (LO, 2007).

2.4 DESIGN EXEMPLARS
2.4.1 SIPHILELE MAGAGULA

A museum where your emotions are the main attraction. Siphilele Magagula's conceptual design asks participants to lay their prejudices bare.

Empathy is what sets the human race apart from other animal species. But, from xenophobia in South Africa to harsher immigration controls in the United States and the United Kingdom, our defining characteristic seems to be in short supply. Experience designer Siphilele Magagula used this lack of mutual understanding as a catalyst for her thesis project: a conceptual museum that puts the viewer's emotions at the center of the exhibit.

Born in the landlocked Swaziland in southern Africa and educated at an international school, Magagula was already accustomed to living among people from different walks of life when she immigrated to Florida in the United States (US) in her later years. There, she was confronted with a form of segregation reinforced by an extreme level of inequality. "Everyone sees the other person as "the other" and we don't really understand each other. A lot of the Americans I encountered hadn't experienced different cultures," she explains. "I felt like more and more of the world needs to be able to see difference as a good thing as opposed to a bad thing."

She conceptualized a museum experience that would start with the viewer's preconceived notions of the people around them before subtly, and intimately influencing their beliefs as they move through specially designed spaces. "I've always been interested in how people work. Initially, I wanted to design some kind of memorial museum to get someone to feel what it was like to be in that experience but then again, that's already been done. So I did some brainstorming with friends from different majors and came up with the idea of empathy. I basically wanted someone to feel what it's like to be someone else," she adds. I wanted to create a space in which the viewer is part of the experience. It's not a passive experience that you'd find in a normal museum.

But how does one design to influence people's reaction to a physical space in a way that also influences their reaction to one another? To answer this question, Magagula explored gestural architecture as a medium. Playing on the innate curiosity we share as people, architecture

communicates to the viewer through gesture to infer a message or an idea, encouraging the user to explore further.

"I was trying to figure out how to use architecture to evoke an emotion," she explains. "Through my research, I found that every single architectural building is a gesture. Through those gestural forms, I was able to create intimate spaces versus more public and open spaces. So throughout the design, you'll see a lot open and closed spaces. I saw that viewers don't want a place that completely closes you in. People need to be comfortable."

The museum begins with a wall of emoji as a play on the ability to see through emotions. This leads to exhibition spaces that play on different gestural forms of void and mass. Going further, participants would find themselves in spaces such as the "Exchange" restaurant which caters to experiences that foster conversation in different forms, including a round-table form called "Speedy Exchange" that promotes equity in a structured amount of time.

Fig. 2. 3 Wall of emojis, Source **(Design Indaba, 2018)**

The museum would also include a virtual reality experience called "The Shoe" in which participants would immerse themselves in the stories, pictures or music sourced from various artists around the world. "We would collaborate with artists and videographers from the areas so that it's constantly changing. We'd use those and augment them into the VR experience.

Fig. 2. 4 The Exchange Restaurant, Source: **(Design Indaba, 2018)**

Throughout these interactions, participants are required to log their view of "the other". A section titled "The Unfinished" offers a space for reflection that attempts to illustrate how every action has a reaction. Participants are given the opportunity to view all that was logged by visitors in screens throughout the museum. "I feel like it would have a mix of responses," says Magagula "People who come in with an open mind would be happy about it. I envision it having a ripple effect on the artists involved because I want it to be an interchanging space. The experience should never be the same."

While the concept is not completely figured out yet (there is a safety concern when addressing sensitive issues), Magagula hopes that it would be free so that a diverse range of people would be attracted to the experience. "I feel like we've always needed it. I feel like there's never been a time when we're all on the same page.

"You could place this anywhere in the world and it would be relevant because we're constantly not seeing eye-to-eye. It takes a small step to start the conversation of acceptance and accepting change as a people" (Design Indaba, 2018).

2.4.2   MANDARIN ORIENTAL: THE INSIGHT OF GLOBAL'S LEGENDARY BRAND

What is your inspiration to choose some hotel to stay when you're on vacation? For some traveler with a high budget, the hotel is one of those important things for the perfect trip. Not just any hotel anywhere but different hotel can also mean different experiences. Today, there are lots of hospitality brand but only some of them really have the distinguished in all elements. Both in architecture, interior and also the world-class service. One of them is Mandarin Oriental, the popular brand of Mandarin Oriental Hotel Group, a legend for a long time. A combination of

luxury, between old and modern. It's a luxury living of 21 century through a unique and beautiful design with distinctive flavors. But having the accessibility in every location, whether it's New York, Washington DC, Miami, Las Vegas, Boston, Atlanta, London, Barcelona, Geneva, Paris, Milan, Madrid, Prague, Munich, Marrakesh, Tokyo, Hong Kong, Shanghai, Taipei, Singapore, Kuala Lumpur, Jakarta and also Bangkok.

Fig. 2. 5 Mandarin Hotel guest room, Source: **(Mandarin Oriental, The Hotel Group, 2011)**

Every projects under the brand of Mandarin Oriental always have an excellent service by system of "Legendary Quality Experiences" to reach every customers expectation without any liability and create unforgettable experience for all of them. All feedbacks from customers are tracked and stored in a systematic way by technique of complex research. And that is the way they understand trends and also demand that always change.

Fig. 2. 6 Mandarin Hotel Lounge, Source: **(Mandarin Oriental, The Hotel Group, 2011)**

Mandarin Oriental Hotel Group might not be the biggest chain in the world and it is not the goal of the hotel either. The most important is the world best "Luxury Hospitality" Factors that help Mandarin Oriental getting successful and catching travelers heart is that they stand for the "Brand

Promise" or the commitment of the brand that determinate to prevail their room service and serve the customers with the best service. This standard makes Mandarin Oriental became the symbol of luxury around the world.

Fig. 2. 7 Mandarin Hotel guest room, Source: (**Mandarin Oriental, The Hotel Group, 2011**)

The obligation that was clearly announced is "Delight our guests…to make a difference every day, continually getting better to keep us the best…" or making customer being happy, delighted and pleased of doing something different to make something better and to keep the excellences as well (เหมือนมาตย์, 2017). Customer satisfaction levels are consistently tracked through a variety of sophisticated research techniques, including detailed online guest surveys and daily guest comments. Comparative studies allow the Group to determine customers' changing expectations and market trends.

Independent market research provides Mandarin Oriental with the ability to customize the design of its services and products to meet the needs of today's demanding travelers. By being open to new influences and listening closely to its customers, the Group has introduced many innovative ideas; from extraordinary dining experiences, to pampering spas and wellness centers, to sophisticated guest entertainment systems. Integrated property management technology provides a seamless service (Mandarin Oriental, The Hotel Group, 2011).

2.5 NATURE-BASED AFRICAN DESIGN
African design can be divided into the following broad categories:

1. Phenomenon inspired
2. Nature inspired
3. personality inspired
4. Iconography

5. Indigenous methods of production

Africa's decoration is primarily influenced by nature, vibrant fabrics, wild animals, and different traditional wood sculptures. African design that is inspired by nature and wildlife in print and has for a long time been seen at the catwalk and in fashion magazines around the world. The trend has now found its place in interior design too. The exotic inspired trend is a celebration of globally inspired patterns, taken home from travels, as a global association between several cultures. The expression in this global trend is characterized by a fusion of decorative prints, rich tones and raw textures, which symbolize authentic African handmade design. Light, exotic and decorative elements with an ethnic expression can be combined beautifully with modern furniture design

The African decor trend embraces the love of the nature's raw materials. Especially hand-woven baskets and bowls are of great importance in the African interior style and are often placed on walls in groups or shown visually on illustrations and images. The use of raw materials reflects Africa's tough climate, while textiles with motives of plants and animals reflect the country's natural beauty. Untreated surfaces are iconic in African design and the beauty of the handmade and imperfect is perceived as beautiful aesthetics.

Handmade design creates soul and personality and adds a lot of charm. With a focus on raw surfaces, soft shapes, solid and natural materials. Patterns, materials and fabrics all have a natural and raw feel, which makes them extremely tactile. Characterized by great bold patterns, bright colorful fabrics, wildlife print and beautiful art, the African design language is a tribute to the country and the different tribes. Vibrant colors are combined with earthy colors, with wildlife print details, that emphasize the continent's splendor.

African inspired interior design is characterized by the combination of dark and bright shades. Due to the growing trend and interest in exotic interior design, warm shades have found their place in our homes. Colors inspired by African nature and culture include beautiful reddish and brown shades, warm pink, dusty blues, shades of rust and terracotta (Bjere, 2018).

There is much to arouse one's creativity in Africa's landscapes including; the deep verdant forests of the Equatorial jungle, the azure seas of Eastern Africa, the Central savannah plains softly stretching in unfathomable distances; the ancient undulating forms of the desert dunes; rugged highland mountains; bright Namaqualand desert flowers. Natural materials abound; wood, roots, reeds, vines, pebbles and stones, clay, straw, grasses, leaves, shells, feathers, seeds, pods. It is in this area that textures can really come to the fore as they can be found in all the natural fibers and the products that are created with them like textiles, baskets, blinds, floor coverings, bed linen and

tableware and artistic creations like free-form sculptures (CONTEMPORARY AFRICAN ART, 2010).

Colors are softly subtle earth tones creating a relaxed atmosphere and a restful environment. Touches of natural greens, burnt umbers and reds or watery aqua can be added as accents to create interest or diversion in the scheme. For a more dramatic look inflect dark umbers, black, indigo or chocolate for graphic impact. Coastal blues Soft sands, textures, bleached wood and touches of china blue, aqua and teal make for delightfully soothing surrounds. Jungle greens natural foliage becomes the inspiration for a narrative African decor story that speaks volumes about the lush African forest environment. Safari/wildlife Animal prints matched with textured plains, fun elements in the room like poufs, zebra skin rugs, animal carvings, and grainy prints on the walls of Savannah landscapes to add authenticity (Olawale, 2018).

2.6 PROFILE OF WELL KNOWN DESIGNER ADVOCATING FOR AFRICAN DESIGN: PETER RICH

Fig. 2. 8 Peter Rich, Source: (**edilportale, 2011**)

South African architect Peter Rich is dedicated to the creation of authentic, contemporary African architecture. Striving to create places and spaces that are meaningful, moving and uplifting for all who occupy them, Rich has a strong focus on respecting the natural environment and local people. At the 2013 AZA Architecture Conference he speaks about some of his recent work and creating a "different world out of the earth". For Rich each project is different, demanding a bespoke solution. Working closely with clients and communities, and through sustained research into local contexts and conditions, Rich develops solutions that are unique to their context. My life has always been centered round community-based work and preserving cultural heritage, says Rich. For him architecture should be a thing that can be smelt, touched and tasted - a very different approach to contemporary commercial structures. As an example of this approach he talks through his Umudugudu project that looks at settlements in rural as a collective cluster.

Being a student in the '60s, Rich decided that instead of being a political activist he would live with different African communities before they were uprooted by Apartheid in order to understand their

rituals and what place making involved for rural South Africans. This experience resulted in a paradigm shift from Rich and sensitized him to the needs and aspirations of the people he would be designing for in the future, "this sparked my lifetime commitment to understanding what African people think of space making", he adds.

Rich further gives insight into his current work in Ethiopia, where he is trying to save a heritage site from developers and potential destruction. For the design Rich drew on the design language he developed for his award-winning vaulted structures of the Mapungubwe Interpretation Centre and adapted its design principles to suit the needs of the local context in Ethiopia. Architects need to get off their pedestals and engage with local people and communities in an active yet respectful way, says Rich. While Rich doesn't consider designing golf estates and private residences as wrong, he urges architects to question where they invest their energy and where their real passion lies, "you can move outside the comfort zones of the normal stereotypes", he adds (DESIGN INDABA, 2013).

2.6.1   MAPUNGUBWE INTERPRETATION CENTRE

Mapungubwe National Park, Limpopo, South Africa

Sited at the confluence of the Limpopo and Shashe Rivers, on the border of Zimbabwe and Botswana, the new Mapungubwe National Park celebrates the site of a technologically advanced ancient trading civilization in the context of a natural setting.

Fig. 2. 9 Mapungubwe National Park, Source: (PETER RICH ARCHITECTS, 2018)

Fig. 2. 10 Fig. 10 Mapungubwe National Park, Source: **(PETER RICH ARCHITECTS, 2018)**

The complex rocky landscape was both the inspiration for the design and the source of the materials for the construction of the new Interpretation Centre, resulting in a composition of structures that are authentically rooted to their location. The building, set at the foot of a mesa at the park entrance, is visually contained by three hollow cairns that evoke rock route-markers commonly found in Southern African cultures. Timbrel vaulting, a simple expression of natural forces and materials, is used to construct dramatic cave like spaces. From a distance the undulating rock clad vaults blend into the landscape. On approach the thin arched edges are exposed and the vaults soar and seem to billow out of the earth.

Delicate walkways create a zigzagging ramped route through the complex, through exhibition spaces, gently climbing the mesa to the highest point on the site, providing the visitor with a multiplicity of experiences and views, evoking the complex social interactions of the many cultures that have traversed the land.

The project's agenda extends beyond the presentation of the area's history to awaken an understanding of the vulnerability of the local ecology. These objectives are manifested in the construction process of the Centre in which unemployed local people were trained in the manufacture of stabilized earth tiles and in building the timbrel vaults. The masons have continued to use these skills by using the remaining tiles for their houses in nearby villages. Thus, the Centre is not only emblematic of the site, Africa and its unique place in the origin of the world become part of a story that is still unfolding, of culture developing in symbiosis with its natural legacy (PETER RICH ARCHITECTS, 2018).

2.6.2   GHERALTA

Tigray Province, Ethiopia

Fig. 2. 11 Gheralta project, Source: **(PETER RICH ARCHITECTS, 2018)**

Fig. 2. 12 Gheralta Project, Source: **(PETER RICH ARCHITECTS, 2018)**

In this project Peter Rich decided to look at nature for all their inspirations. The vault work was inspired by nature's forces. They were inspired by how plants and trees grow branches for reasons of economy and not for aesthetics (DESIGN INDABA, 2013).
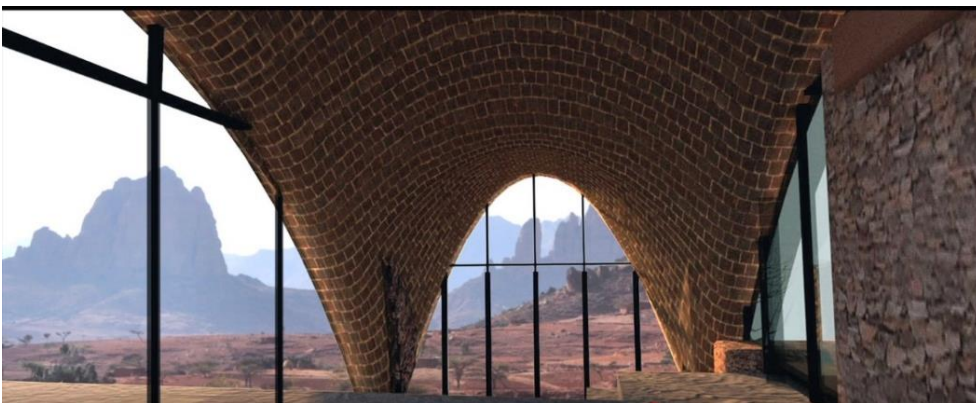
Fig. 2. 13 Gheralta Project, Source: **(PETER RICH ARCHITECTS, 2018)**

2.7 DESIGN EXEMPLARS

2.7.1   PRIMROSE CHIMHANDA ON NATURE AS INSPIRATION FOR HER TEXTILE DESIGNS

"Each design is inspired by a form of nature which represents an expression of the most powerful lessons I've learnt." When deciding the name for her latest collection of textile designs, 27-year-old Primrose Chimhanda looked no further than the number of years she's been on earth. 27 Collection is the name of her nature-inspired collection of textiles which she recently exhibited as one of the 50 Design Indaba Emerging Creatives at Artscape Theatre two months ago. She says the collection is a celebration of all the moments which made up her 2018. These include all her failures, disappointments, joys and successes.

Fig. 2. 14 Collection 27, Source: **(Martin T. , 2019)**

The collection also falls under her company, Primrose Charmz. The company specializes in creating eco-friendly designer textiles and homeware products. She started it after deciding to take her business seriously following being named as one of the 2018 finalists in the Nando's Hot Young Designer talent search. The search was for bespoke prints and drawings that Nando's could use in their restaurants around the world.

Fig. 2. 15 Collection 27 (2), Source: **(Martin T. , 2019)**

Chimhanda was the only finalist whose entry was inspired by nature while others focused on different aspects of African culture. "The competition had triggered my enthusiasm and curiosity to see what kind of patterns I could produce if I gave myself a brief. It was through this exploration that I created the 27 Collection," she explains.

Fig. 2. 16 Collection 27 (3), Source: **(Martin T. , 2019)**

The 27 collection looks at surface design inspired by nature and geometry. It is made up of four flower patterns: the protea, lotus, daffodil and dandelion. According to Chimhanda, each flower symbolizes empowerment. "These flowers were then turned into pattern designs which serve as a source of visual motivation and as a reminder that as human beings we are stronger than we think

and that we have the power to overcome difficulties and to emerge victorious on the other side." She adds: "Each design is inspired by a form of nature which represents an expression of the most powerful lessons I've learnt" (Martin T. , 2019).

2.7.2 MEDUSA, CHINITA AND BELLOTA WICKER LAMPS BY CLAESSON KOIVISTO RUNE

Claesson Koivisto Rune designed the wicker lamp shades for Chilean brand Made in Mimbre by The Andes House. Named Medusa, Chinita and Bellota, the three designs are meant to resemble jellyfish, ladybirds and acorns.

Fig. 2. 17 Medusa, Chinita and Bellota Wicker Lamps, Source: **(Andrews, 2013)**

Claesson Koivisto Rune was impressed by the achievements of the young team at Made in Mimbre, because they succeeded in creating and manufacturing their beautiful lighting collection locally. Not only that, their whole ethos of employing local artisans to create contemporary objects in a professional context and in so doing preserve their wicker weaving techniques made him profoundly happy to be a part of.

Fig. 2. 18 Medusa, Chinita and Bellota Wicker Lamps, Source: **(Andrews, 2013)**

Not only is there great potential and intrinsic value in the handicraft of their products, the quality of the light from within their lamps is fantastically warm and atmospheric. In honor of the origins of the manufacturer we have chosen to give the lamp designs Spanish names: Medusa, Chinita and Bellota.

The Medusa lamps, with their oval-shaped lampshades, appear to balance on numerous thin, spindly supports. Rather than trimming the excess lengths of wicker, as is usually done, we have kept them and hidden three, thin metal legs amongst them. The resulting designs reminded us of jellyfish, floating, with their many trailing tendrils.

Fig. 2. 19 Medusa lamp, Source: **(Lisa, 2013)**

Almost as if they have been nipped and then pulled, four 'feet' appear to have been stretched from the bottom edge of the Chinita lamps. We think that the gesture results in a series of lamps with a cute, creature-like character. Like small, friendly bugs. Like ladybird bugs, for example.

Fig. 2. 20 Chinita lamp, Source: **(Lisa, 2013)**

The Bellota suspension lamps are two, similar forms combined to make a whole. Yet there is a clear division between the two. In keeping with the nature theme, the inspiration for the BELLOTA design is derived from the distinctive form of the acorn, where one form can be seen to partially 'cover' the other.

Fig. 2. 21 Bellota lamp, Source: **(Lisa, 2013)**

The small and large jellyfish lamps feature woven shades with long wicker tentacles left dangling below to disguise three thin metal legs.

Fig. 2. 22 Medusa lamps, Source: **(Andrews, 2013)**

The designers also created small, medium and large rounded floor lamps with four legs teased out from the corners of each one, which they liken to ladybirds.

Fig. 2. 23 Chinita lamp sizes, Source: **(Andrews, 2013)**

The third product in the range is an acorn-shaped pendant, which is available in three sizes. (Andrews, 2013).

Fig. 2. 24 Bellota lamp sizes, Source: **(Andrews, 2013)**

2.8 RECYCLING WASTE WOOD
2.8.1   WOOD WASTE RESOURCE
The broad use of wood generates a large amount of waste. In 2002, nearly 63 million metric tons of solid wood waste was generated in the manufacture, use, and disposal of solid wood products in the United States. This waste wood comes from a variety of sources and in a variety of forms. Its principal sources are two waste streams: municipal solid waste (MSW) and construction and demolition (C&D) waste. Each generates distinctly different types of wood waste, with differing degrees and levels of recyclability (Woolridgea et al, 2005).

2.8.1.1   **Municipal Solid Waste**
Municipal solid waste (MSW) is waste from residential, commercial, institutional, and industrial sources. It includes durable and nondurable goods, containers and packaging, food scraps, yard trimmings, storm debris, and miscellaneous inorganic waste5. MSW does not include waste from other sources, such as construction and demolition activities (with the exception of waste from remodeling activities on existing residential structures), automobile bodies, municipal sludge, combustion ash, and industrial process wastes that may or may not be discarded in municipal waste landfills or incinerators. Two components of MSW, "wood" and "yard trimmings," contain solid wood. The "wood" component includes items such as wooden furniture and cabinets, pallets and

containers, scrap lumber and wooden panels, and wood from manufacturing facilities. It does not include round wood or unprocessed wood and repaired or recycled pallets. Yard trimmings include leaves and grass clippings, brush, and tree trimmings and removals.

2.8.1.2   **Construction and Demolition Waste**

Construction and demolition (C&D) waste is often thought of as a single form of waste because both are typically discarded together in landfills. But since construction and demolition wastes originate from distinct types of activities, have different characteristics, and differ in their ease of separation, recovery, and recyclability, they are in fact different. Construction waste originates from the construction, repair, and remodeling of residential and nonresidential structures. It consists of fairly clean, contemporary building materials, which can be readily separated at the job site. Demolition waste originates when buildings or other structures are demolished. Demolition waste is often contaminated with paints, fasteners, adhesives, wall covering materials, insulation, and dirt, and typically contains a diverse mix of building materials. Some of these materials may no longer be in use or may presently be considered hazardous, making recovery more difficult.

2.8.1.3   **Other Sources of Waste**

Other sources of waste wood include chemically treated wood from railroad ties, telephone and utility poles, and pier and dock timbers, untreated wood from logging, chipped brush and limbs from utility right-of-way maintenance, and industrial waste wood outside the MSW stream. Some of this material is reused, burned, or discarded in hazardous waste landfills but much is left on site. Chemical treatments and costs of collection make much of this material difficult to recover.

2.8.1.4   **Current wood waste recycling activities**

The markets for recovered wood are greatly influenced by local supply and demand; however, they are dominated by production of landscaping mulch and waste wood for fuel. Chipped or shredded wood is also used as a composting bulk agent, sewage sludge bulking medium, and animal bedding. Recovered wood can be used to manufacturer value-added products such as medium density fiberboard and particleboard. However, these industries demand clean and consistent feedstocks, which can be difficult to achieve with wood from the waste stream. Wooden pallets are perhaps one of the best successes in solid wood recycling (Woolridgea et al, 2005).

2.9 PROFILE OF WELL KNOWN DESIGNER ADVOCATING FOR SUSTAINABLE DESIGN
2.9.1   TRISTAN TITEUX

Fig. 2. 25 Tristan Titeux, Source: **(Titeux, 2012)**

Tristan was born in 1976 in Paddington, London, then spent the first 13 years in Belgium on the edge of a village close to nature. He lived in a beautiful house made of flint stone with two wood fires, no central heating, and TV or fridge just one single cold tap in the kitchen. His dad spoke about wild plants on the radio for many years, and used to feed his family from wild mushrooms and plants in the wild, his garden, bees, goats, chickens. Tristan's time growing up with his dad in Belgium cemented his relationship with nature. Today Tristan lives in London and in 2011 decided to offer an eco-friendly option to his fitted furniture clients. Tristan now feels it is his mission to carry on making use of what his dad taught him and do what he can to educate the World about the environmental injustices currently happening all over the World.

Tristan is the UK sustainability and Eco expert, the Milo table, is Tristan Titeux's first baby from the "Milo" series. Milo is a small coffee or bedside table made of recycled waste off cut wood material and unwanted old fitted furniture pulled out of people's houses. He made it in 2011, after deciding to follow his passion and do something for the planet he started looking closer at how people use materials. He came up with a design called the "Milo™" series, the first piece is a small coffee table or bedside table called Milo named after his third son who was born in 2011.

Fig. 2. 26 Tristan amongst Milo tables, Sources: **(Titeux, 2012)**

His company makes furniture out of large sheets of wood material, and there are always waste offcuts that are too small to use for anything. These are ideal for making Milo tables because the table is designed so that only small pieces of wood are needed. The design came from, letting the material dictate the look, rather than the other way around, but he puts as much effort into the look of course. When they go and fit furniture they also sometimes take out old furniture that they re-cut to make the Milo tables, and when he is out and about and he sees a nice bit of wood discarded he brings it back to add more variety, it's like a treasure hunt. He has always despised, throwing anything away. It has always broken his heart to see what people throw away in the street, in dumps and at the recycling centers, and the thought that all that will be wasted instead of reused. He sees precious life and resources in all that stuff.

The table is a cubic shape and each is totally unique, although the basic size and design stays the same, the order of materials you see are always different depending on what materials we have and on the mood of the particular crafts person's mood at the time.

Fig. 2. 27 Milo table, Source: **(Titeux, 2012)**

For Tristan, the Milo table and the Milo™ series, is about more than beautiful design, it is about starting a discussion about resources, about waste, materials, your everyday goods, whatever we consume and buy. He wants the user to look at their belongings and think about them, think about and care about where they came from, what it has taken to get them to them, right from the very beginning, from the person who planted the tree, seeded the hemp or the straw, how far away that is or how close from where they live it is and what that means for the environment, both good and bad, it is important to acknowledge the good so that we can do more of it, he is all about solutions, not about showing problems, anyone can show problems. But of course you need to understand the problems to start to fix them.

Fig. 2. 28 Side and underside of Milo table, Source: **(Titeux, 2012)**

Milo is left bare with just oil or varnish, and the bottom untreated, raw, and uneven with nothing to hide. You can see what it is made of, all the layers of different materials that are commonly used today and wasted too. The outside is sanded smooth and oiled with a plant based material, he is still experimenting with this. It is put together with screws, and the glue that is made of natural materials, there is enough petrol used in the waste offcuts used to make this table, he doesn't want to add anymore. The inside is left uneven, unfinished and rough to further accentuate the fact that these are waste offcuts (Titeux, 2012).

2.10   DESIGN EXEMPLARS
2.10.1 COMMUNITY WOODWORKS,
Oakland, California

Product: Lumber and lumber products

Community Woodworks is a custom mill house specializing in reclaimed and salvaged urban lumber. The mill is located on the Oakland Army Base. The bulk of the inventory is Douglas-fir that was reclaimed from deconstructed warehouses on the Oakland Army Base. Community Woodworks offers a customized line of 100% reclaimed wood products. In addition to producing large quantities of flooring and paneling for resale, the mill offers custom milling and woodworking services, including furniture, doors, windows, cabinet face frames, countertops, molding, and trim.

Fig. 2. 29 Oakland Countertop, Source: **(Service)**

Wood waste source: Beyond Waste, C & K Salvage, individual contributions

Community Woodworks was incorporated as a California public benefit nonprofit organization. The millhouse was started in September 1998. Funding to establish Community Woodworks was provided by the Department of Health and Human Services, Job Opportunities for Low Income Individuals Program; the William and Flora Hewlett Foundation; and the U.S. Environmental Protection Agency, Region 9.

Current support is provided by the East Bay Community Foundation, the Richard and Rhoda Goldman Fund, the Alameda County Homeless Collaborative, and the Alameda County Source Reduction and Recycling Board.

Benefits Community Woodworks supports deconstruction enterprises that employ or train low-income individuals in building deconstruction and wood reuse.

- Benefit Quantity
- Savings in landfill space 0.006 acres
- Employment of disadvantaged persons Goal of 8% by end of 2001
- Assuming density of landfilled wood waste at 1,000 lb. /cubic yard and landfill height of 50 ft.
- Wood Waste Only clean solid wood, excluding plywood, is processed; painted or treated wood is avoided.
- Community Woodworks purchases only from dedicated deconstructed job sites where the wood is carefully dismantled. Emphasis is placed on dimension lumber, from 2 by 4s through 2 by 10s (Service).

Fig. 2. 30 Oakland Community Countertop, Source: **(Service)**

2.10.2 GLASGOW WOOD RECYCLING

Glasgow Wood Recycling is a social enterprise and charity established in 2007 and committed to reducing the amount of wood needlessly going to landfill by finding creative ways to recycle and reuse this valuable natural resource. Through these activities we provide volunteer and training opportunities to local people, as a practical way of tackling poverty and social exclusion (Community wood recycling, 2018).

Fig. 2. 31 Glasgow wood recycling, Source: **(Good work, 2017)**

Glasgow Wood Recycling is a value driven social enterprise established in the year 2007 which is based in the city of Glasgow. It entails sourcing wood from construction sites to subsequently reuse the natural resource to design and produce tailor-made quality pieces of furniture. The organizations' innovative offerings are suitable for an abundance of purposes and serve the needs of many, for example, schools, businesses, homes, and libraries to name just a few. Products available range from; coffee tables, chairs, dressing tables, mirrors, benches, storage chests, bookshelves, cabinets, and planters.

Everyone is behind the creativity of the goods. The customers can come in with specific ideas that they have designed and the business make it to their specifications or customers can ask for an item to fulfil a specific purpose and provided measurements. Glasgow Wood Recycling staff have the freedom to create pieces of furniture which is then displayed in the show room and catalogues.

Glasgow Wood Recycling pursues their mission of being environmentally friendly by reusing and recycling waste wood in order to divert it from landfill.

Inspiration

A main driving factor was to follow in the footsteps of the first ever UK community wood recycling organization which started in Brighton approximately 20 years ago and was highly successful in diverting waste wood from landfill. Motivation to set up in Glasgow stemmed from the success in Brighton, as stated by Peter; "So in terms of sustainable social enterprise this is one of the

attractions that made me want to start this up in Glasgow. So if it happens elsewhere why not in Glasgow?" As a result of this motivation, Glasgow Wood Recycling is an enterprise part of a sustainable network of around 30 similar organizations in the UK.

Fig. 2. 32 Glasgow recycling showroom, Source: **(Good work, 2017)**

Overall impact

The company help the environment by offering a cost effective and convenient wood collection service, which provides a sustainable alternative to skip hire and landfill. All collected wood waste is recycled or reused to create quality pieces of furniture. Glasgow Wood Recycling is committed to reducing the amount of waste going to landfill, recycling other people's waste wood helps create jobs in the community.

Glasgow Wood Recycling use mainly construction waste and not very much household or domestic wood waste. Furniture from places like Ikea, although it is very fashionable and stylish doesn't last very long and it cannot really be recycled or reused. The reason for this is because of the various glues and chemicals used in making them.

The staff and volunteers at Glasgow Wood Recycling learn many skills which allows them to make very unique products, many of these are shown throughout their showroom, one product that they created that is very innovative is their shop, this was done by cutting the end off of a support cabin and modifying it (Wrona, 2019).

Fig. 2. 33 Glasgow recycled products, Source: **(Wrona, 2019)**

2.11   DESIGN PROCESS

The design process is described as a decision-making framework developed on a step-by-step-bases that guides designers to meet their ultimate goal of satisfying their clients' needs. It is applicable in architecture, graphics or engineering (www.ehow.com). The design process is a linear sequence of events, that designer employs when a new project is embarked on, according to Tech it out Uk (2005) it has a start and an end point. The design process is a flexible process; designers can adopt their own, based on the design problem and constraints. In certain cases designers may only consider one or two stages (Tech it out Uk, 2005).

a) Problem statement – The researcher will identify needs and set preliminary goals.

b) Programming – The researcher will analyze the existing features, identify user needs, clarify goals and define what can be altered or controlled and define the limits

c) Concept development – The researcher will brainstorm ideas, draft concept statement and develop schematic designs.

d) Compare alternatives – The researcher will compare alternatives with the set goals and weigh the pros and cons against cost and liabilities.

e) Make design decisions – The researcher will decide on the materials and aesthetics of the chosen design.

f) Develop & refine design – The researcher will further refine the chosen design.

g) Implement design – The researcher will execute the refined design.

h) Re-evaluate completed design – the researcher will investigate the completed design to find out whether it serves the user's needs.

2.12 ANALYTICAL REVIEW

This research adds to the body of knowledge critical information on the application of emotional design through use of African design in the hospitality industry. The study adds to the body of knowledge various works of different designers in the context of emotional design, African design and recycling.

2.13 CONCLUSION

The researcher in this chapter has shown how various designers and companies have employed the three philosophies that is, emotional design, African design and wood recycling. The researcher has established that emotional design can be achieved through the use of nature based African design. This chapter has also clearly proved that there is a large amount of waste wood available from both municipal solid waste (MSW) and construction and demolition (C&D) waste, which creates an opportunity for a designer to apply recycling methods and create products that are sustainable in line with the UNSDG goals. Finally the researcher has stated the critical information gaps the research is filling.

3.0 RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter will describe the research designs, population, sampling method, data collection methods, data analysis tools, and data presentation methods that the researcher will use in the research.

3.2 THE SELECTION OF A RESEARCH APPROACH

Research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. Informing this decision should be the philosophical assumptions the researcher brings to the study; procedures of inquiry (called research designs); and specific research methods of data collection, analysis, and interpretation. The selection of a research approach is also based on the nature of the research problem or issue being addressed, the researchers' personal experiences, and the audiences for the study. Creswell advances three research approaches: (a) qualitative, (b) quantitative, and (c) mixed methods

The researcher applied qualitative research approach which is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data (Creswell, 2014).

3.3 QUALITATIVE DESIGNS
3.3.1 CASE STUDY

Creswell (2003) defines case study as "researcher explores in depth a program, an event, an activity, a process, or one or more individuals" (p. 15). Leedy and Ormrod (2001) further require a case study to have a defined time frame. The case study can be either a single case or a case bounded by time and place (Creswell, 1998). Leedy and Ormrod (2001) state, case studies attempt to learn "more about a little known or poorly understood situation" (p.149). Creswell (1998) suggests the structure of a case study should be the problem, the context, the issues, and the lessons learned. The data collection for a case study is extensive and draws from multiple sources such as direct or participant observations, interviews, archival records or documents, physical artifacts, and audiovisual materials. The researcher must spend time on-site interacting with the people studied. The report would include lessons learned or patterns found that connect with theories.

The researcher spent time at the Yoeligen hotel and engaged with the hotel owners, employees and clients. The researcher aimed to investigate the interior design style used in the design of Yoeligen

hotel and establish whether it has emotional value to the users. The researcher also interviewed the managers, employees and clients of Yoeligen hotel so as to identify the elements of the design that they found emotionally satisfying and which ones they would like changed.

3.4 TARGET POPULATION

The target population was taken from Yoeligen hotel in Embu. The study comprised of the employees, managers and visitors of Yoeligen hotel in Embu.

3.5 SAMPLING DESIGN

A question that often plagues novice researchers is just how large their samples for the research should be. There is no clear-cut answer, for the correct sample size depends on the purpose of the study and the nature of the population under scrutiny. However, the larger the sample the better, as this not only gives greater reliability but also enables more sophisticated statistics to be used. Thus, a sample size of thirty is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis on their data, though this is a very small number and we would advise very considerably more. Researchers need to think out in advance of any data collection the sorts of relationships that they wish to explore within subgroups of their eventual sample.

The number of variables researchers set out to control in their analysis and the types of statistical tests that they wish to make must inform their decisions about sample size prior to the actual research undertaking. Typically an anticipated minimum of thirty cases per variable should be used as a 'rule of thumb', i.e. one must be assured of having a minimum of thirty cases for each variable (of course, the thirty cases for variable one could also be the same thirty as for variable two), though this is a very low estimate indeed (Cohen et al., 2007).

The sample of this study consisted of the managers and employees of Yoeligen hotel and clients who visited the hotel. The hotel has two managers and nine employees, the rest of the sample was filled in by the clients that visited the hotel while the researcher was collecting data.

3.5.1   BIASED SAMPLING OR NON-PROBABILITY SAMPLING

Most qualitative studies use non-probability samples because the focus is on in-depth information and not making inferences or generalizations. It is used when the researcher is not interested in selecting a sample that is representative of the population (Maina(Phd), 2015).

3.5.1.1   **Purposive sampling**

Purposive sampling is a sampling technique that allows a researcher to use cases that have required information with respect to the objectives of his or her study. Cases of subjects are therefore handpicked because they have informative or they possess the required characteristics. A researcher

who proposes to use purposive sampling must specify the criteria for choosing the particular cases. (Maina(Phd), 2015) In purposive sampling, often (but by no means exclusively) a feature of qualitative research, researchers handpick the cases to be included in the sample on the basis of their judgement of their typicality or possession of the particular characteristics being sought. In this way, they build up a sample that is satisfactory to their specific needs. As its name suggests, the sample has been chosen for a specific purpose. While it may satisfy the researcher's needs to take this type of sample, it does not pretend to represent the wider population; it is deliberately and unashamedly selective and biased. In many cases purposive sampling is used in order to access 'knowledgeable people', i.e. those who have in-depth knowledge about particular issues, maybe by virtue of their professional role, power, access to networks, expertise or experience. There is little benefit in seeking a random sample when most of the random sample may be largely ignorant of particular issues and unable to comment on matters of interest to the researcher, in which case a purposive sample is vital. Though they may not be representative and their comments may not be generalizable, this is not the primary concern in such sampling; rather the concern is to acquire in-depth information from those who are in a position to give it.

Another variant of purposive sampling is the boosted sample. Gorard (2003: 71) comments on the need to use a boosted sample in order to include those who may otherwise be excluded from, or under-represented in, a sample because there are so few of them. For example, one might have a very small number of special needs teachers or pupils in a primary school or nursery, such that they may not feature in a sample. In this case the researcher will deliberately seek to include a sufficient number of them to ensure appropriate statistical analysis or representation in the sample, adjusting any results from them, through weighting, to ensure that they are not over-represented in the final results. This is an endeavor, perhaps, to reach and meet the demands of social inclusion (Cohen et al., 2007).

The researcher purposively selected the sample purposively based on the researcher's perception of their knowledge on design. This was due to the fact that the research aims to collect data to demonstrate how emotional design can be applied to hospitality spaces. This criteria helped the researcher to ensure reduction of the wastage of time in explaining design and to get the required information.

3.6 COLLECTING QUALITATIVE DATA

To obtain field interpretations, researchers employ a variety of qualitative methods, most of which fall under the rubric of either observation or interviews. Because the purpose of qualitative research is not to predict but to conduct a "search for understanding," its design is based on researchers'

spending enough time with participants that the researchers begin to form interpretations of how a phenomenon is thought about in the field. Based on the researchers' analysis—and reanalysis—of such interpretations, they develop a theoretical model. Collecting qualitative data requires researchers to immerse themselves in the field.

In this study the researcher used participant observation as one of the data collection tools. It involves systematically describing events and interactions among people at the site. This method is a key way for researchers to "hear, see, and begin to experience reality as the participants do." Researchers trained in this form of data collection take extensive, unobtrusive, coded notes, which they immediately (within 24 hours) expand into detailed data descriptions that form the basis of a coding scheme. To ensure that the methodology has rigor, researchers must consider not only the influence of their presence on the respondents' behavior, but the way in which their own frameworks and biases may screen what types of data they see, hear, and collect. The researcher additionally took photographs of the different spaces in the hotel and took measurements using a measuring tape.

The researcher also used in-depth interviewing, which is the other primary form of data collection. It involves conducting structured or semi-structured discussions with participants. Usually researchers will prepare a set of interview questions to guide their conversations. Depending on the goals of their study, researchers may closely follow the interview protocol or they may use their protocol merely as a guide and encourage participants to expand on their responses to a question. Researchers trained in this form of data collection often tape-record their conversations with participants and, as soon as possible, transcribe their interviews into a format for data analysis. As an alternative, researchers incorporate open-ended questions into written surveys (Walsh, 2003).

The researcher conducted semi- structured interviews with the participants. The researcher had prepared a set of interview question for each of the participant groups that is; managers' interview guide, employees' interview guide and clients' interview guide. The researcher asked questions relating to the hotel interior design and the emotions evoked in them while using the spaces in Yoeligen hotel. Further the researcher wanted to find out the nature aspects that the participants related with Embu.

3.7 QUALITATIVE-DATA ANALYSIS

Data analysis is a stage that incorporates several elements. It is fundamentally about data reduction – that is, it is concerned with reducing the large body of information that the researcher has gathered so that he or she can make sense of it. Unless the amount of data is reduced, it is more or less impossible to interpret the material. Raw data have to be managed. This means that the researcher

has to check the data to establish whether there are any obvious flaws. The goal of qualitative data analysis is to move from summarizing the data to identifying related themes and patterns, to discovering relationships among the themes and patterns, and to developing explanations for these relationships. This iterative, non-linear data-analysis process is complex, arduous, and often messy.

Interviews are usually audio-recorded and then subsequently transcribed. The researcher needs to be alert to possible hearing mistakes that might affect the meaning of people's replies. Transcribed data is then examined to extract core themes that could be distinguished both between and within transcripts. This process is called thematic analysis. One of the main elements of the identification of themes is through coding each transcript. With the analysis of qualitative data, coding is a process whereby the data are broken down into their component parts and those parts are then given labels. The analyst then searches for recurrences of these sequences of coded text within and across cases and also for links between different codes (Bryman, 2016). The researcher transcribed the recorded interviews and keenly listened so as to identify voice intonations and other clues so as to get the meanings inferred in the participants' replies. The researcher then examined the data to identify similar themes within the responses.

Content analysis is a method of analyzing written, verbal or visual communication messages. Leedy and Ormrod [2001] define it as "A detailed and systematic examination of the contents of a particular body of materials for the purpose of identifying patterns, themes, or biases." The emphasis in conventional content analysis is on counting, where researchers would count occurrences of a word, phrase, or theme. It is used by sociologists to analyze social life by interpreting words and images from documents, books, newspapers, films, arts, music, and other cultural products and media. For example, responses to open-ended questions are on the basis of content analysis [Hancock et al., 2009]. The researcher used content analysis to analyze the photographs taken during the site visits. The researcher was then able to identify patterns within the elements of the interior design of Yoeligen hotel.

3.8 PRESENTATION OF QUALITATIVE DATA

Most of the data was presented in narrative, describing the findings from the research on the sample collected. There are two main approaches to writing up the findings of qualitative research. The first is to simply report key findings under each main theme or category, using appropriate verbatim quotes to illustrate those findings. This is then accompanied by a linking, separate discussion chapter in which the findings are discussed in relation to existing research (as in quantitative studies). The second is to do the same but to incorporate the discussion into the findings (P. Burnard, 2008). The researcher used the second approach by reporting the findings and accompanying them

with a discussion in the same chapter. However, a summary of the analysis was included in the final chapter.

Diagrammatic representations was also inevitable in representing illustrations. The researcher significantly relied on photographic data accompanied with appropriate explanations on the actual nature of the study. There are several aspects of the current condition of the restaurant that could only be more elaborate from the photographs. These pictures were used to capture any information that the researcher may not have described explicitly in writing (Anditi, 2013).

3.9 Logical Framework

Table 3. 1 Logical Framework. Source: (Author, 2019)

To establish the value of emotional design to create an appealing hotel interior design				
Data needs	Data source	Data collection tool	Analysis method	Expected outcome
To determine the importance of using emotional design in a hotel.	literature	Review of literature	Content analysis	Knowledge on the value of emotional design
To establish how to incorporate emotional in a hotel interior design				
Data needs	Data source	Data collection tool	Analysis method	Expected outcome
To investigate existing information on the application of emotional design in the hospitality industry	literature	Review of literature	Content analysis	Knowledge on the methods of applying emotional design in a hotel.
To investigate the interior design style used in Yoeligen hotel in Embu, in order to establish its emotional appeal				
Data needs	Data source	Data collection tool	Analysis method	Expected outcome
To determine the style used in the hotel and whether the style can achieve emotional design	Yoeligen hotel Embu Clients of Yoeligen hotel Employees and managers of Yoeligen hotel	Photography Observation Interviews Audio recording Note taking	Visual analysis Content analysis	Knowledge and understanding of the interior design style used in the hotel and its emotional design appeal
To propose new designs by using inspiration from Embu natural features to achieve emotional design				
Data needs	Data source	Data collection tool	Analysis method	Expected outcome
How can emotional design be achieved by using aspects of the Embu landscape	Literature site	Review of literature observation	Content analysis Visual analysis	New designs that emotionally appeal to the hotel guests

3.10   CONCLUSION

This chapter has described the research designs, population and sampling method, data collection methods, data analysis tools, and data presentation methods that the researcher used in conducting the research.

4.0 SITE ANALYSIS AND INTERPRETATION OF FINDING

4.1 INTRODUCTION

This chapter will analyse the various components of Yoeligen guest house and present data findings from the conducted research.

4.2 QUALITATIVE ANALYSIS

Below is the qualitative analysis of the collected data categorized in the four thematic areas; the interior architecture, furniture design, exhibition & display and landscape design.

4.2.1 INTERIOR ARCHITECTURE

Yoeligen hotel interiors has no definite theme used to guide its design. The arrangement of spaces is functional and basic. The rooms are generally small in size.
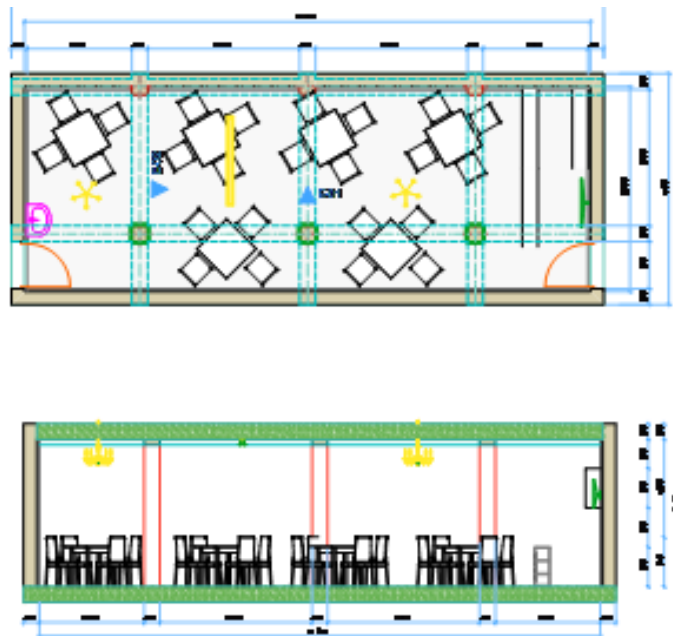
Fig. 4. 1 Plan & elevation of the existing design of yoeligen hotel restaurant, Source: (Author, 2020)

4.2.1.1   **Walls**

Fig. 4. 2 Yoeligen Hotel walls, Source: (Author, 2019)

Fig. 4. 3 Yoeligen hotel guest room wall, Source: (Author, 2019)

Walls are painted in a glossy cream color. The color does not add character to the hotel's interior.

4.2.1.2   **Floor**

Floors are tiled in a light brown tile for the rooms while the other spaces outside the rooms have brown tiles. The tiles are traditional and are worn out in some places due to high traffic and repeated washing.

Fig. 4. 4 Yoeligen hotel brown tiles, Source: (Author, 2019)

Fig. 4. 5 Yoeligen hotel light brown tiles, Source: (Author, 2019)

4.2.1.3 **Ceiling**

Fig. 4. 6 Yoeligen hotel vinyl ceiling, Source: (Author, 2019)

Fig. 4. 7 Yoeligen hotel white & orange ceiling, Source: (Author, 2019)

Ceilings are painted white and orange. On the highest floor the ceiling that has been used is a cream vinyl ceiling.

4.2.1.4 **Washrooms**

The bathroom has an instant shower head and a white with blue and green stripes shower curtain. The towel rod is fixed away from the shower in most bathrooms. The walls are three-quarter way tiled and painted cream or brown on the upper quarter

Fig. 4. 8 Yoeligen hotel bathroom, Source: (Author, 2019)

Wash rooms have white ceramic fixtures; the toilet bowls in most rooms are the western type except for one room on the ground floor that has an eastern toilet bowl. Wash hand basins are small and semicircular in shape with metallic stainless steel taps.

Fig. 4. 9 Yoeligen Hotel toilet, Source: (Author, 2019)

4.2.1.5   **Doors and windows and rails**

Fig. 4. 10 Yoeligen hotel window, Source: (Author, 2019)

The staircase has metallic railing with a rhombus detail. The staircase railing is painted black. Windows have a clear glass glazing with metal casing painted white. Doors to most spaces including washrooms, restaurant, kitchen, store and guest rooms are wooden. Metallic doors are used in the main entrance, the reception, the office, the conference hall and the lobbies. There is a wooden foldable door at the reception lobby, used to hide the rooms on the ground floor from view and to demarcate the lobby.

Fig. 4. 11 Yoeligen Hotel doors, Source: (Author, 2019)

4.2.1.6 **Fittings and accessories**

Ventilation and drainage holes have white plastic covers. Switches and sockets are also made in white plastic. Door handles and hooks are metallic and have a brass finish. The bathroom soap holder and tissue holders are ceramic and have been fixed to the wall. Beds have mosquito nets of various kinds, some hanging from the ceiling and others attached to the four posts of the bed. Mirrors have been placed in every washroom above the wash hand basin and in the rooms.

Fig. 4. 12 Yoeligen Hotel Accessories, Source: (Author, 2019)

4.2.1.7 **Lighting**

Fig. 4. 13 Yoeligen Hotel natural lighting, Source: (Author, 2019)

Some rooms in the hotel and the staircase have natural lighting while most rooms most rooms depend on artificial lighting. Guest rooms are lit by a bulb fixed at the center of the ceiling. There is also a half moon wall lamp on one of the walls for extra lighting. The restaurant has two

chandeliers and a fluorescent tube to provide light. The chandeliers are not fit for the space due to inadequate floor to ceiling height.

Fig. 4. 14 Yoeligen Hotel artificial lighting, Source: (Author, 2019)

4.2.1.8 **Soft furnishings**

Fig. 4. 15 Yoeligen Hotel curtains, Source: (Author, 2019)

The curtains in the hotel have a glossy finish and are in varying colors.

Fig. 4. 16 Yoeligen Hotel bed covers, Source: (Author, 2019)

The beds have white bed sheets and duvets and have bed covers that have varying colors with matching pillow cases. A white towel is laid out at the rear side of the bed.

Fig. 4. 17 Yoeligen Hotel mats, Source: (Author, 2019)

There are small mats at the entrance of the washrooms.

Fig. 4. 18 Yoeligen Hotel mosquito nets, Source: (Author, 2019)

All beds in the hotel have a mosquitoe net hanged above them by either being suspended from the ceiling or fixed to the four legs of the bed.

4.2.2   FURNITURE DESIGN

Below is a list of the furniture items in Yoeligen hotel categorised according to the space they are placed in.

4.2.2.1   Guest rooms furniture

The following are the furniture pieces found in the guest rooms of Yoeligen hotel.

4.2.2.2   Reading desk

Fig. 4. 19 Yoeligen Hotel reading desk, Source: (Author, 2019)

There is a reading desk provided in every room made of MDF board fixed to the wall, so that guests can have a place to read or pace their luggage.

4.2.2.3 Chairs

Fig. 4. 20 Yoeligen Hotel guest room chairs, Source: (Author, 2019)

Chairs in the guest rooms are plastic chairs.

4.2.2.4 Wardrobes

Wardrobes are made of MDF boards and are fixed to the wall mid-air. Most of the wardrobes are wrongly placed in the rooms and tend to crowd and overwhelm the room due to the small size of the rooms.

Fig. 4. 21 Yoeligen Hotel wardrobe, Source: (Author, 2019)

4.2.2.5   Bed

The beds are made of wood with some patterns carved on the upper part of the headboard, the lower part of the headboard has leather upholstery.

Fig. 4. 22 Yoeligen Hotel bed, Source: (Author, 2019)

Fig. 4. 23 Yoeligen Hotel bed headboard, Source: (Author, 2019)

4.2.2.6   Night stand

There are two types of night stands in the hotel guest rooms. One of the night stands is made of MDF boards with two shelves and has a gold coated pull diagonally fixed on its door. The other type is made of wood with a clear vanish finish, it has two drawers with gold coated knobs.

Fig. 4. 24 Yoeligen Hotel night stand, Source: (Author, 2019)
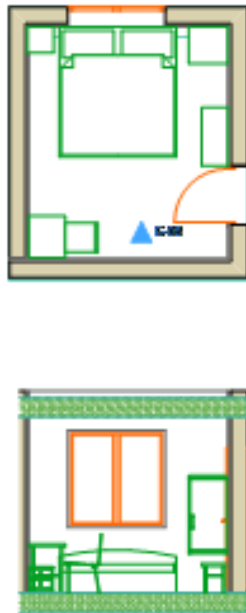
Fig. 4. 25 Plan & elevation of the existing design of yoeligen hotel restaurant, Source: (Author, 2020)

4.2.2.7   **Restaurant furniture**

The restaurant of Yoeligen hotel is located in the first floor, however, it is still accessible to walk in clients as well as clients that have spent in the hotel. The following are the furniture pieces found in the restaurant of Yoeligen hotel, Embu.

4.2.2.7.1 Restaurant tables and chairs

Fig. 4. 26 Yoeligen Hotel restaurant table & chair, Source: (Author, 2019)

The restaurant tables are made of wood and are covered with maroon mica coating and have metallic legs painted black. The mica coating has the name of the hotel,'yoeligen hotel' printed on the center of the table. The chairs in the restaurant are metallic painted in a golden color, the upholstery on the chairs is maroon with yellow dots. The restaurant is small and narrow and can hold six tables with four chairs each.

4.2.2.8 Reception furniture

The following are the furniture items to be found in the reception space in Yoeligen hotel, Embu.

4.2.2.8.1 Reception desk

Fig. 4. 27 Yoeligen Hotel reception desk, Source: (Author, 2019)

The reception desk is made of MDF board. It is rather plain and does not give a good first impression of the hotel.

4.2.2.8.2 Reception cabinets
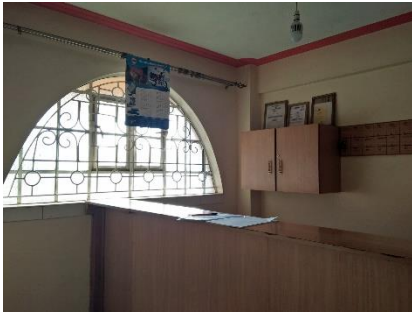
Fig. 4. 28 Yoeligen Hotel reception cabinets, Source: (Author, 2019)

The cabinet in the reception is made of MDF board, it is fixed to the wall. It is used to store files. Next to it is a key-holding board made also of MDF board with fixed hooks to place the keys.

4.2.2.8.3 Reception chairs and tables
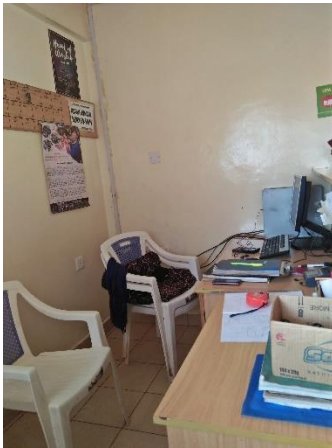
Fig. 4. 29 Yoeligen Hotel reception table & chair, Source: (Author, 2019)

The reception desk has two plastic chairs used by the receptionists. There are two MDF board tables behind the reception counter where the receptionists work from. There is a set of three black friendship chairs on the reception lobby where a guest can wait to be served.

Fig. 4. 30 Yoeligen Hotel luggage desk, Source: (Author, 2019)

There is a small table under the cabinets used to hold the client's luggage for safe keeping.

4.2.3   EXHIBITION AND DISPLAY

There are few exhibition and display elements in the hotel. In the restaurant area the buffet for displaying food has been covered with a sheer curtain while another has been placed on the ground out of site. There is a cabinet on the wall used to display different drinks offered in the restaurant.

Fig. 4. 31 Yoeligen Hotel buffet table, Source: (Author, 2019)

The hotel signage and key holders are functional but can be enhanced by applying an African theme.The key holder board and cabinet in the reception can be improved to be more effective and aesthetically pleasing.

Fig. 4. 32 Yoeligen Hotel food display, Source: (Author, 2019)
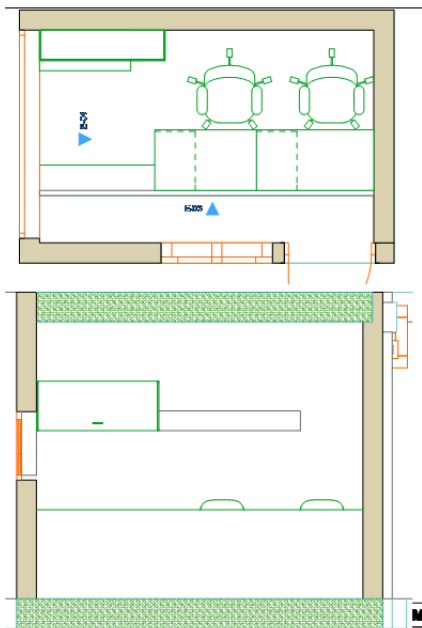
Fig. 4. 33 Plan & elevation of the existing design of yoeligen hotel reception, Source: (Author, 2020)

4.2.4   LANDSCAPING DESIGN

The landscape of Yoeligen Hotel is separate from the hotel inspite of it being located on a plot adjacent to the hotel. The landscape is used for parking cars and for garbage collection. The grass on the site has dried up due continued periods of hot sun. The fence on one side of the landscape is constructed using red corrugated roofing sheets. The landscape is generally flat and small therefore limiting the design solutions that can be proposed.

Fig. 4. 34 Yoeligen Hotel landscape, Source: (Author, 2019)
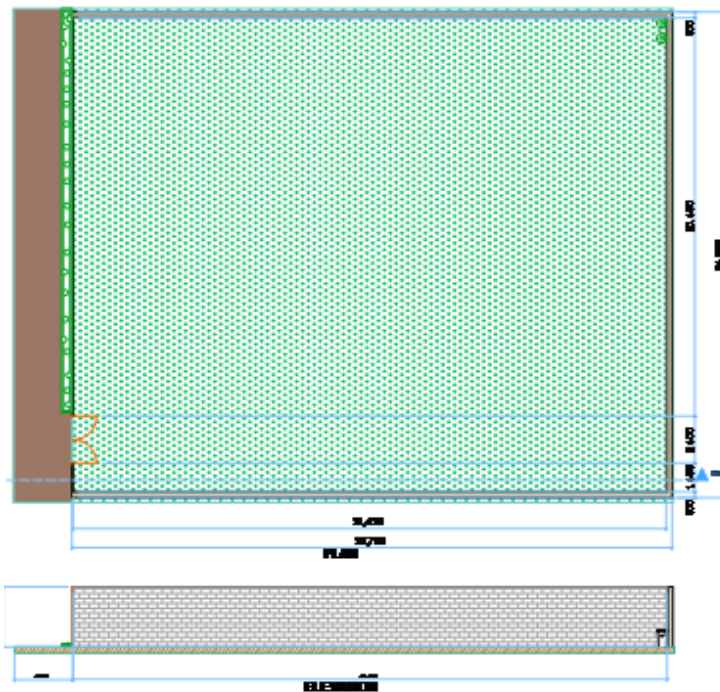
Fig. 4. 35 Plan & Section of existing conditions of the landscape, Source; (Author, 2020)

Fig. 4. 36 Yoeligen Hotel landscape entrance, Source: (Author, 2019)

4.3 QUANTITATIVE ANALYSIS

The researcher carried out semi-structured interviews on the employers, employees and clients of Yoeligen hotel. Due to the small size of the employer and employee population, the sample was taken based on the sample's willingness to be interviewed. The sample of clients was selected purposively based on the researcher's perception of a client's understanding of design.

OPINION ON A NATURE-BASED HOTEL RE-DESIGN
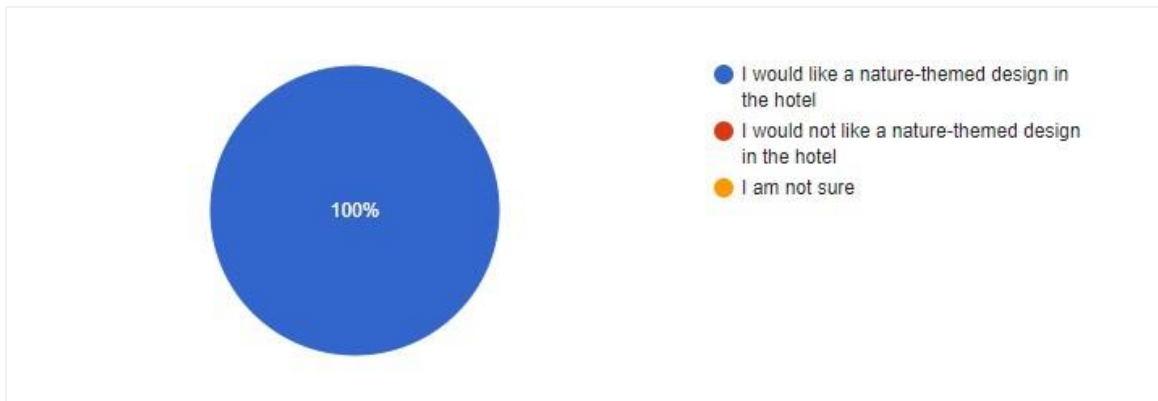
Fig. 4. 37 Pie chart I, Source: (Author, 2020)

From the conducted research, 100% of the participants when asked of their opinion on a nature themed hotel re-design were open to a nature-based hotel interior design.
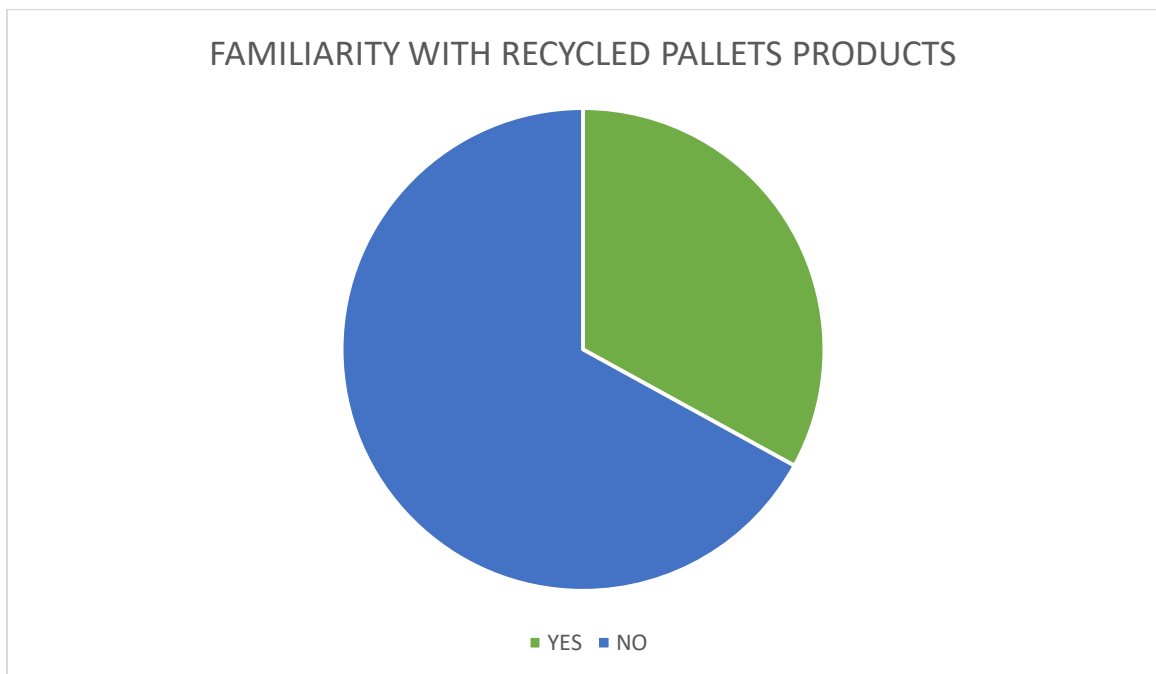
Fig. 4. 38 Pie chart 2, Source: (Author, 2020)

Most of the participants, 67%, were not familiar with the concept of using recycled pallets to make furniture products. The participants who were familiar with recycled pallets products were open to having recycled pallets products for outdoor furniture in the landscape.
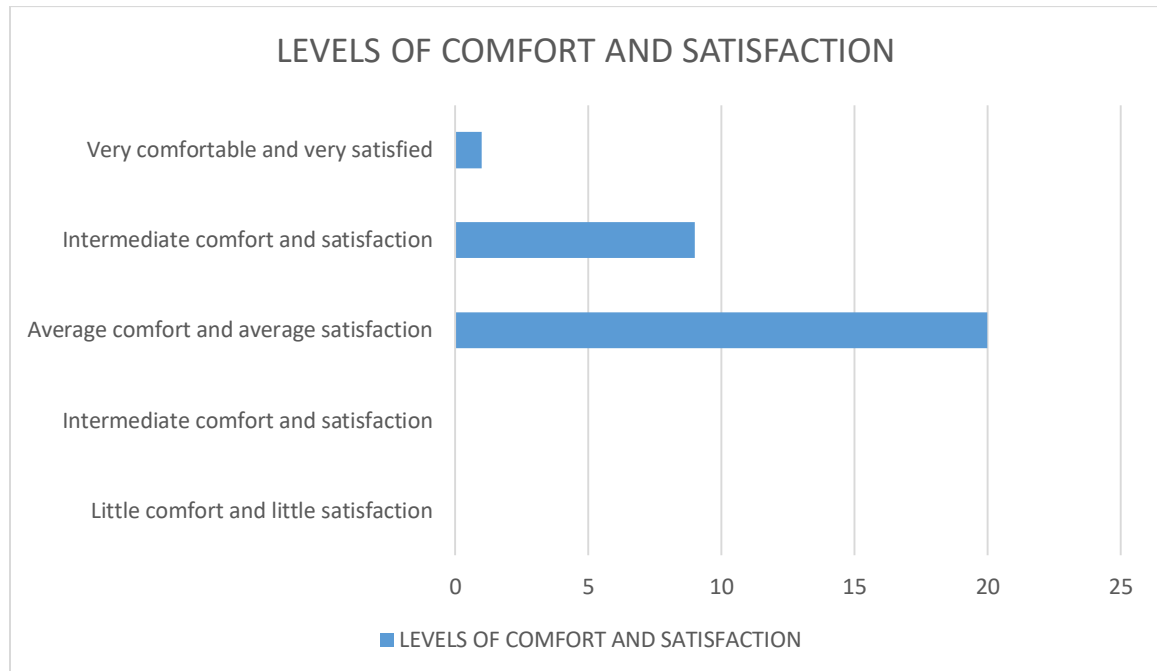
Fig. 4. 39 Bar chart I, Source: (Author, 2020)

The above graph shows that most of the participants felt that the comfort and satisfaction levels experienced while staying at the hotel were average while a few felt that they experienced comfort levels that were above average but not very satisfying. One of the participants felt that the hotel environment made them very comfortable and very satisfied.

4.4 PRESENTATION OF FINDINGS/ANSWERS TO RESEARCH QUESTIONS
From the research, emotional design has not been applied in the interior design of the hotel. The furniture, interior design, exhibiton and display and landscape design has no emotional value to the employees and the customers. The furniture items, interior design scheme, exhibition and display elements and the landscape design items are all budget items which are intended to cater for the user's needs and give them a memorable experience, only serve to cater to the client's basic needs.

The participants associate Embu with waterfalls, tea plantations, Mt. Kenya, forests, seven folks dams and Hills. The hotel's most frequent customers are professionals on assignment and seminar attendees from government institutions. The participants would like a redesigned restaurant and walls and better wall décor.

4.5 CONCLUSION

The chapter has presented the qualitative and quantitave data collected and the analysis of the same. The areas that the researcher analyzed include the landscape, reception, guest rooms, restrooms, kitchen and restaurant. The researcher gave attention to the various elements of furniture design, interior design, exhibition &display and landscape. The researcher has presented photographs taken on the site and the various response from the conducted interviews.

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In this chapter the researcher will give a summary of the data analysis and propose solutions to the problems identified in furniture design, interior design, exhibition and display and landscape design.

5.2 SUMMARY OF DATA ANALYSIS/FINDINGS

The neglect of emotional design in Yoeligen hotel has hindered the potential of the hotel in creating memorable guest experience and in evoking positive guest emotions. Therefore, a redesign of the hptel incorporating emotional design would create a better environment. The use of nature based african design will aid to achieve emotional design through the inclusion of elements of the surroundings in the design of the hotel so as to evoke positive user emotions. This can be incorporated through the choice of furniture design, the interior design scheme, the design of exhibition and display, and the landscape design components. The landscape design will additionally include recycled pallets products as a sustainable way to make wood products and in line with the UN SDG goal of ensuring sustainable consumption and production thereby managing the use of natural resources.

5.3 RECOMMENDATIONS

The researcher based on the findings of the collected data proposes that the hotel redesign should incorporate emotional design, nature- based african design and incorporate recycling of wood pallets in its landscape design.

5.3.1   FURNITURE DESIGN

The researcher proposes nature-based African inspired furniture design. The researcher was inspired by different aspects af the surrounding and African materials so as to come up with the different designs. In line with the theory of emotional design forwarded by Kathy Pui Ying Lo in the literature review, the researcher proposes the use of rattan and wicker in the materials used for furniture making. This is so as to go above the actual and augmented offerings which are functional and respectively evoke acceptance and satisfaction from the customers, to the level of eperiential offerings which are meaning-oriented and sensorial therefore evoking a memorable guest experience.

FIG. 5. 1 Rattan bed, Source: **(home to z, 2018)**

The researcher proposes the chair design in fig. 5.2 for the guest rooms to be used by the guests for reading and relaxing. The materials proposed for this desig are wood and rattan.
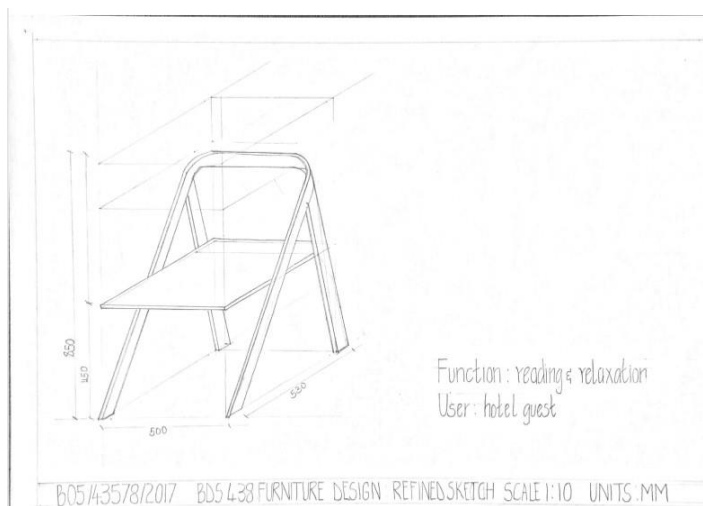
FIG. 5. 2 Sketch of proposed guest room chair design, Source: (Author, 2020)

The bed design was inspired by baobab tree leaves which have four parts. The design will be implemented through the use of rattan and wicker. This materials will further enhance the African feel of the room.
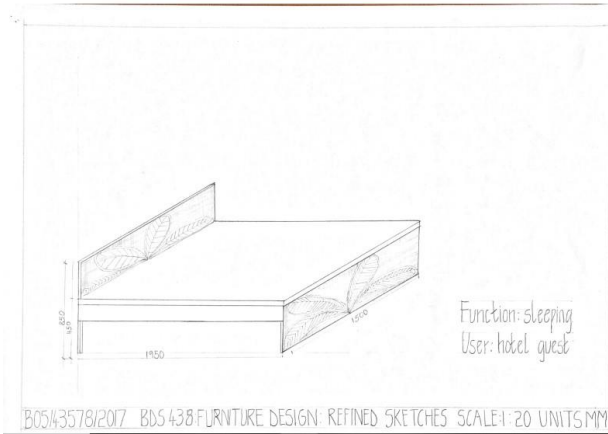
FIG. 5. 3 Sketch of proposed bed design, Source: (Author, 2020)

The researcher proposed the design in the figure below to be implemented for the night stand design. The proposed furniture are wood and rattan.
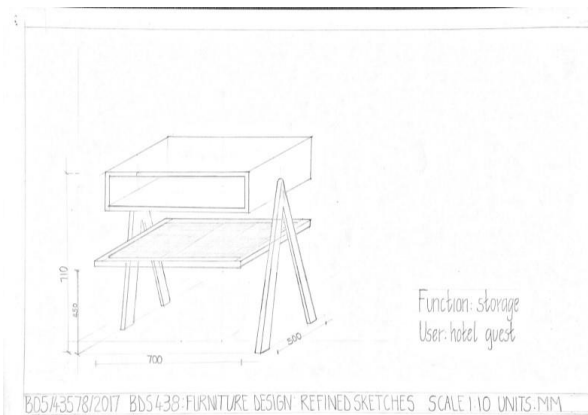
FIG. 5. 4 Sketch of proposed night stand design, Source: (Author, 2020)

5.3.2   INTERIOR DESIGN

The researcher proposes a colour scheme based on the different aspects of surrounding nature to be used in the wall paint and soft furnishing. The researcher also proposes different motifs that can inspired by elements such as trees to be used in the decoration of the hotel.
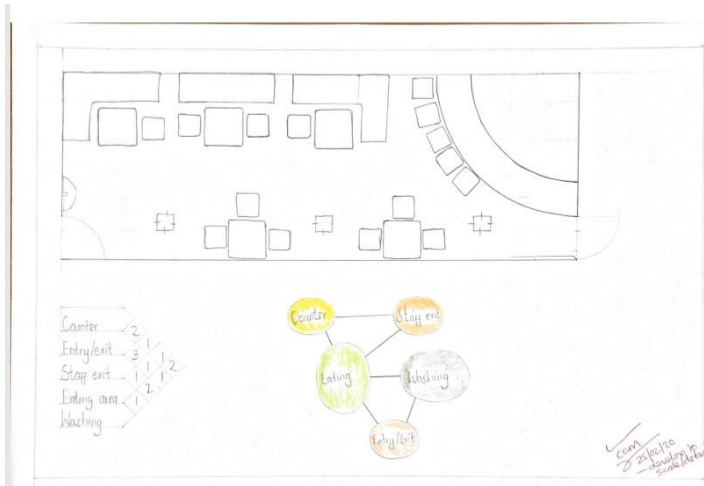
FIG. 5. 5 A sketch of proposed restaurant layout, Source: (Author, 2020)
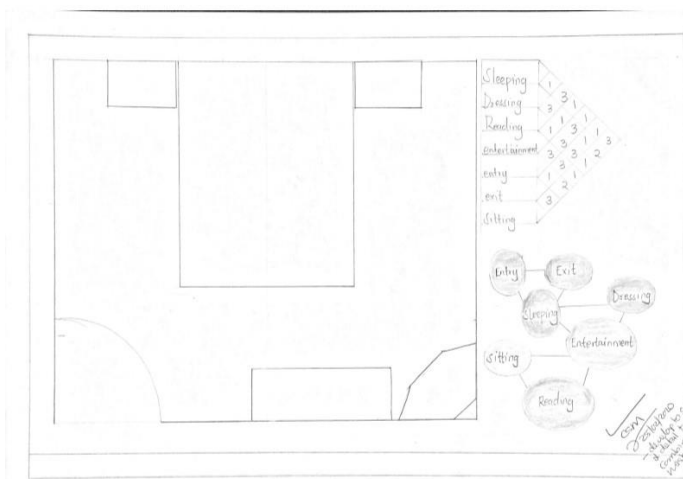
FIG. 5. 6 A sketch of proposed guest bedroom layout, Source: (Author, 2020)

5.3.3   EXHIBITION AND DISPLAY

The reception is in dire need of better exhibition and display features as does the office and the restaurant. The researcher further proposes better space arrangement to allow access to the exhibition and display components. Better lighting is also recommended to emphasize the items on display while highlighting the form of the display unit.

FIG. 5. 7 small well designed reception, Source: **(Designrulz, 2016)**
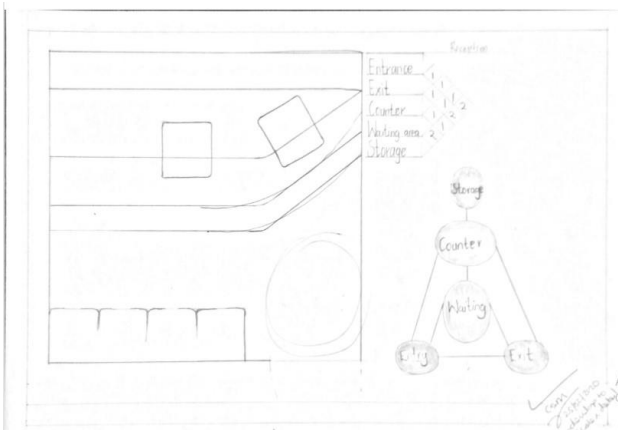
FIG. 5. 8 Sketch of proposed reception layout, Source (Author, 2020)

The proposed design of the reception will feature a curved reception desk made of wood to sit two people. Behind the reception desk will be a floor to ceiling cabinet for storage purposes. There will be sitting area within the reception all the while ensuring sufficient circulation space. The design takes into consideration the positioning of the windows and maximizing of the little space available.
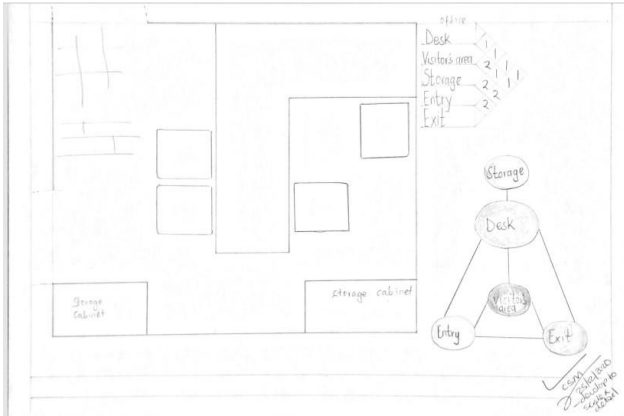
FIG. 5. 9 Sketch of proposed office layout, Source: (Author, 2020)

The proposed design of the office includes new storage cabinets placed in proximity to the manager. The display cabinets are placed in a way that they do not hinder movement within the room and customized so that they do not overbear the room. The design takes into consideration the placement of the door and circulation within the space as well as ease of access.

5.3.4   LANDSCAPE DESIGN

The researcher proposes the different elements that are needed to enhance the landscape of Yoeligen hotel. The researcher proposes appliction of the theme of recycling by the use of recycled wooden pallets. Wooden pallets will be used to design the outdoor furniture, fences, and the gate. The pedestrian walkways will be made of natural stone while the driveways will be constructed using concrete blocks.

FIG. 5. 10 Wooden fence with decorative laser cut metal panels, Source: **(Kc, n.d.)**

FIG. 5. 11 Wooden pallet planters for outdoor privacy, Source: **(Patio Diy, 2019)**

FIG. 5. 12 Vertical bicycle rack, Source: **(Pinterest, n.d.)**

The recommended trees and vegetation include; palm trees: travelers palm tree, fan palm and the foxtail palm (Benavides, 2018), Acacia tree; acacia xanthophloea, African Bamboo, bromeliads, ferns, cycads, bird of paradise, monster plant, tree philodendron, croton, orchids, Cordyline, Peace lilies, Anthurium and Alocasias (Livingasean, 2017). The plants are of varying heights therefore will create a variety of levels in the garden. Some of the plants like the bromeliads, anthurim and cordyline have flowers with various colors thereby increasing the aesthetic value of the garden. The recommended grass type is the Tifton grass because it has high cold tolerance, high ability to out-compete weeds, high drought and heat tolerance, medium shade tolerance and low frequency of mowing (Asepsis, 2019).
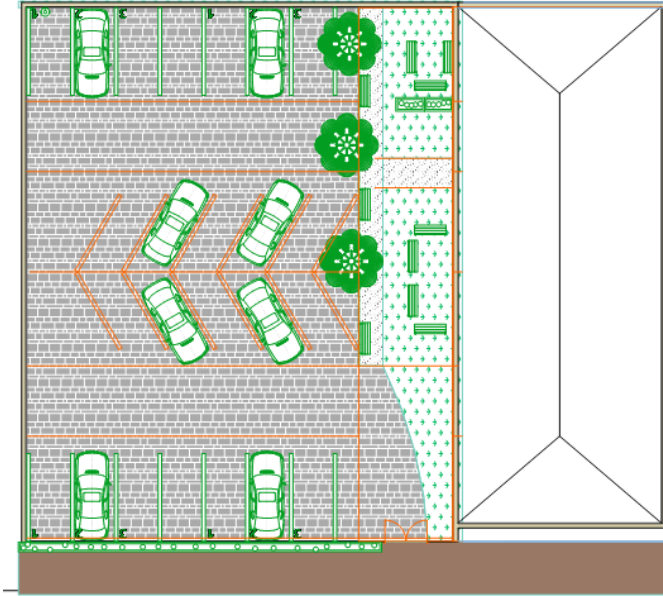
FIG. 5. 13 Drawing of proposed Yoeligen hotel landscape layout, Source: (Author, 2020)

5.4 CONCLUSION

This chapter has presented a summary of the analyzed findings and the proposed solutions to the problems identified , through the application of the three philosophies, that is, emotional design, nature-based African design and recycling of wooden pallets to the four areas of interior designing; interior design, furniture design, exhibition & display and landscape design.

5.5 SUGGESTION FOR FURTHER STUDIES

Due to the inexhaustiveness of this study, further research can be carried out on the topic of emotional design in the hospitality industry, how design influences emotions and design psychology.

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2. What is your opinion on the design of Yoeligen Hotel? In terms of the furniture, exhibition and display, interior design and landscape.

3. How does the interior design of the hotel make you feel in terms of comfort and satisfaction?

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5. What aspects of the hotel would you like changed in case of a re-design?

6. What elements of nature would you associate with Embu?

7. How would incorporating nature themed designs in the hotel in case of a re-design make you feel?

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