

ASSISTED LIVING ENVIRONMENTS FOR THE AGED THROUGH UNIVERSAL DESIGN

A Case Study of Mji wa Huruma, Kiambu.

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B05/0479/2007

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**A Research Project Submitted in Partial Fulfillment of the Requirements
for the award of the Degree in BA(Design) at University of Nairobi**

Submitted on 10th June 2011

DECLARATION

I, Beatrice Wambui Muragu, declare that this is my original work and also affirm that to the best of my knowledge, this project has not been presented in this or any other university for examination or any other purpose.

Signed Blwagn

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DEDICATION

To my beloved grandmother, you brought me up well in the way of the Lord. You ignited a desire in me to follow Christ all the days of my life. Blessed are you among many women.

ACKNOWLEDGEMENTS

Uttermost praise to the Almighty Father for the strength he has given me throughout especially when I felt most faint. You Lord are my Ebenezer. Much love to my family for their constant encouragement and the much needed financial support. This project would only have been a pipe dream.

Sincere appreciation goes to my lecturer Mrs. Lilac Osanjo. Your wisdom, positive criticism and constant encouragement helped me push myself out of my comfort cocoon. You are an asset to the School of Design. To my project supervisor, Dr. Onyango, thank you for been a father to me. You have listened to me at my lowest points, given me advice and supported me in many ways.

Much gratitude to my friends Muiya, Terri, Jamin and Rhodes for the fun times, the tears and the moral support. The journey was not easy but it was worthwhile because of your friendship. Not forgetting my mentors Tish and Robert Balusi and the entire Campus Life family. You are special.

Last but not least to the residents at Mji wa Huruma. Your warm reception and loving hearts moved me to tears at times. You treated me like your own granddaughter. My prayer is that the proposal shall be implemented so that you have the comfortable stay you deserve in your old age.

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ABSTRACT

“In an age in which efficiency and immediate gains or profit are emphasized, there lies the possibility of reducing the worth of the individual to his or her ability to contribute materially to society as opposed to seeing the intrinsic value of each as a human being regardless of age or ability. This may greatly affect more vulnerable individuals in society including the elderly, disabled and those declining in health.” Martha Tyson


This research investigates on design for the aged. As we know, the ageing process brings into play some factors that can potentially restrict one’s life. As a result of the diverse needs of the aged, the environment they live in must be well suited to support them. Design can aptly be used to adapt these environments. Victor Reigner calls this type of design for special groups “assisted living”. (Reigner, Pg 1). Universal Design is recommended for creating these assisted living environments. This is because it is an approach to the design of all products and environments to be used by everyone regardless of age, ability or situation. In addition, Therapeutic Design is also a relevant tool since it is the design of an environment that supports health and well being. (Tyson, pg 4)

Mji wa Huruma, Home for the Aged that is located in Kiambu was used as a case study. Using qualitative data collection tools like focus groups, guided interviews and questionnaires, the researcher investigated the current facilities at the home and their conditions. In addition, the researcher profiled the residents citing their lifestyles, medical conditions and their other special needs. The data analysis done established that Mji wa Huruma had not adequately applied universal and therapeutic design. In addition, Nyumba ya Wazee, a home for the aged located Kasarani was used as a comparative case study. This is because, investigative research carried out at the site established that both universal and therapeutic design had been applied so as to create an assisted living environment.

The data analysed by the researcher has been presented in form of detailed reports, tables, charts and photographs. In conclusion, the researcher has recommended applicable design solutions using universal and therapeutic design for the interior architecture, furniture design, landscaping, exhibition and display at Mji was Huruma.

Chapter

1 I N T R O D U C T I O N



“...the true measure of compassion and civility
of a society lies in how well it treats
its frail older people.”

Victor Reigner

1. INTRODUCTION

1.1 OVERVIEW

This chapter provides detailed background information about the aged in Kenya. It also outlines the objectives of the researcher and the research questions to be answered. In addition, it provides a justification for the type of investigative research that the researcher has embarked on as well as outlining the significance of such a study.

Buckminster Fuller, a renowned designer of the 19th Century said “All people are handicapped for at least part of their lives in some way. As designers, we must meet the real needs.” (*Papanek, Pg 165*). This is true because for design to be relevant, it must be operative – that is, related to the true needs of the people. It is for this reason that design philosophies like universal design, sustainable design and social design have developed to meet the growing needs of man.

A case in point is the development of Universal Design. This philosophy of design is slowly gaining popularity as its aim has now evolved to creating an accessible universally designed environment from the beginning rather than focus on adapting things for individuals for a later time. Universal design is been applied in enacting laws on building codes to improve accessibility to public spaces.

An old person is defined as someone who is over 60 years of age (*UN, 2008*). In 1999, during the International year of older persons, the African Union in collaboration with Helpage International highlighted the issues affecting older people in Africa. (*AU Policy Framework, Pg 7*) One of the issues highlighted was housing and living environments. The recommendation was that member states should ensure that older persons have the access to safe, durable and affordable shelter.

Closer home, Article 57 of the Kenyan Constitution states about the rights of older persons. It says that older persons have the right to fully participate in the affairs of society as well as the right to receive reasonable care and assistance from their family and the state. In addition, they have the right to pursue their personal development as well as the right to live in dignity and respect and be free from abuse.

1.2 BACKGROUND TO THE PROBLEM

"The true measure of the compassion and civility of a society lies in how well it treats its frail older people." Victor Reigner

In a research compiled by Helpage Kenya in 2009, there were 1,630,000 old people in Kenya. This formed about 4% of the total population. Of this number, there were 83 male older persons for every 100 female older persons. In Kenya, most of the aged are taken care of by their families. Only about 14% live alone. However, some do not have families and it is for this reason that the government and other well wishers set up homes for them. One such home is Mji wa Huruma that is located in Kiambu and managed by the City Council of Nairobi.

Mji wa Huruma was began in the late 1960's and it is currently home to 45 residents aged between 60 and 100 years. Of this population, more than half of them are suffering from chronic illnesses like diabetes, some are wheelchair users while others are visually and hearing impaired. The main facilities at the home are the hostels, dispensary, multipurpose hall and the kitchen.

For the interior architecture, the male hostel has been divided into cubicles while the female hostel has rooms. In both hostels, the walls are cream in colour and the lighting used is fluorescent. In addition, the washrooms are on the extreme ends of the buildings while the laundry space is right next to the hostel.

For exhibition and display purposes, there is a main sign post at the gate. In addition, there is signage for identification purposes in different facilities. Also, there is a reception area next to the manager's office with a notice board on one of the walls. At the resting shed, different types of artworks are displayed on the roof.

For landscaping, there are many different types of trees, shrubs and grasses at site. Some trees are for shade, others are fruit trees while others are for ornamental purposes. Though the large is 8 acres large, more than half of it is used for farming purposes.

For furniture, both hostels have high metallic beds except for the disabled residents who use low wooden beds. For storage purposes, wooden lockers have been provided

for storage of personal effects and metal boxes for clothes storage. Every resident has either a plastic seat or the foldable canvas type of seat. However, there is minimal outdoor furniture.

1.3 STATEMENT OF THE PROBLEM

After an investigative research it can clearly be said that Mji wa Huruma, Home for the Aged has not adequately applied universal and therapeutic design in order to create an assisted living environment to the premises. The key problem areas of investigation were landscaping, interior architecture, furniture design, exhibition and display.

1.4 OBJECTIVES

Main Objective

To investigate the needs of the aged at Mji wa Huruma with the aim of determining an interior design solution that will improve the assisted living environment for the residents and staff.

Specific Objectives

1. To investigate the facilities available for the aged at Mji wa Huruma .
2. To profile the aged living at Mji wa Huruma
3. To investigate case studies of other Homes for the Aged that have fully applied assisted living design for the aged.
4. To demonstrate how universal design principles can be applied to the facilities and environment at Mji wa Huruma to create an assisted living environment for the aged.
5. To establish how landscape design can be used as a therapeutic tool in an assisted living environment.
6. To propose the furniture design, interior architecture, exhibition and display, and landscape design appropriate for the aged at Mji wa Huruma.

1.5 RESEARCH QUESTIONS

Main Question

What are the needs of the aged at Mji wa Huruma and how can Interior Design be used to improve the assisted living environment?

Other Research Questions

1. What facilities are currently available at Mji wa Huruma and what are their conditions?
2. In what ways have other Homes for the Aged created assisted living environments through design of their facilities?
3. In what ways can universal design be applied in the internal and external environment at Mji wa Huruma to create an assisted living environment?
4. How can landscape design be used as a therapeutic tool to create an assisted living environment?
5. What are the appropriate ways in designing the furniture, interior architecture, landscaping, exhibition and display for the aged at Mji wa Huruma?

1.6 SIGNIFICANCE OF STUDY

To learn about the needs and limitations of the elderly population and the design requirements that need to be factored in creating assisted living environments for them.

To apply universal and therapeutic design at Mji wa Huruma using interior design as a tool so as to create assisted living environments for the elderly.

1.7 JUSTIFICATION OF THE STUDY

The research project will contribute to the scarce academic resources on design for assisted living environments available in the country.

The research project will be a resource for use by the management of the home in looking for funds for the purpose of improving the facilities so as to create a better assisted living environment.

The research will provide design solutions for remodeling Mji wa Huruma to an assisted living environment bearing in mind that it was previously built as a men's club in the colonialist's era.

The research will guide in the much needed renovations to the facilities as most are old and dilapidated.

1.8 PURPOSE OF THE STUDY

To evaluate the site in an attempt to establish if it is a suitable assisted living environment.

To improve the landscaping, interior architecture, furniture design, exhibition and display of the facilities and environment.

To explain how an environment that is not designed using principles of assisted living can have hazardous effects to residents and staff.

1.9 DEFINITION OF TERMS

Dementia: This is severe impairment or loss of intellectual capacity and personality integration due to loss of or damage to the brain.

Swing space: This is the space that is used up when a door opens and it must be allocated in the design even if it feels like a dead space.

Confusion: It occurs when a person appears to be out of touch with their surroundings and becomes forgetful and unable to manage their own affairs.

Environmental Psychology: The psychological social effect of the environment.

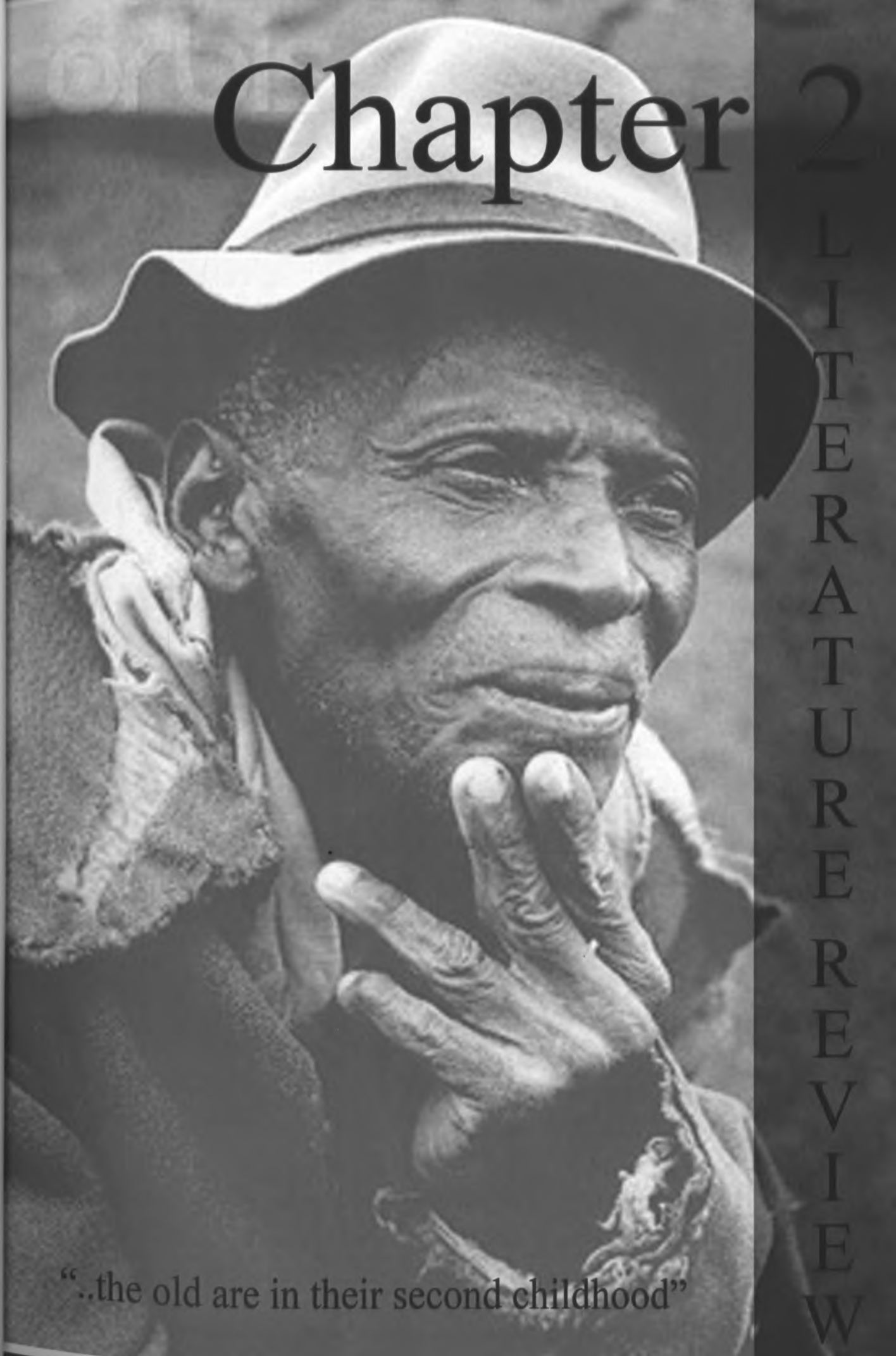
Psychoneuroimmunology: The effect of the environment on the immune system

Neuroscience: How the brain perceives architecture.

Chapter

2

L I T E R A T U R E R E V I E W



“..the old are in their second childhood”

2 . LITERATURE REVIEW

2.1 OVERVIEW

"To try and define the needs of the elderly people is like defining the needs of the human race. It is so vast." Pauline O'Driscoll

According to *Martin Valins* in his book *Housing for the Elderly*, the elderly are defined as those men over 65 years and women over 60years. They can further be subdivided into younger-old (up to 75years) who are active and independent and old-old (over 75years) who are heavy consumers of care resources. (*Valins, 1988, pg. 12*).

This chapter seeks to understand the needs of the elderly and the design considerations that must come to play when creating suitable environments for them.

2.2 ASSISTED LIVING DESIGN

Buckminster Fuller passes across a very important message in *Victor Papanek's* book, *Design for the Real World*. He says that, "All people are handicapped for at least part of their lives, in some way. As designers we must find their real needs." (*Papanek,1974, pg 165*)

According to Dr. Anne Roberts, a geriatrician with special interest in care for the elderly, the ageing process does bring into play some factors that can potentially restrict one's life. One of them is the inability to reach such items like shelves or switches which may be the result of lack of dexterity in joints and nervous control of body movement. Another restriction is the increased tendency to fall which may result from illness. In addition, the elderly suffer from the decline of sensory input like the inability to see or hear. Also, it becomes extremely difficult as one grows older to maintain body temperature. Furthermore, though elderly people remain independent, mobility problems are very common as a result of stiffening joints or a fall. Moreover, some may be mentally frail and as a result be impaired by dementia, confusion or depression. (*Valins, 1988, pg 12-13*).

As a result of the special needs for the elderly, the environment that they live in must be well suited to support him/her. Design can be used to adapt this environment to suit

the user, because as *Papanek* puts it, Design is a powerful tool with which man shapes his tools and environments and by extension, society and himself. (*Papanek, pg 16*).

Kate Hunter in her report “*Design guidelines for aged care facilities*” emphasizes the importance of Good Design. She says that good design is vital so that the resident feels at ease in their home and the members of staff are able to work in a safe environment. This is because good design is of benefit to the residents because they are protected from the risk of falls, it also provides staff safety, it is cost effective and it provides a good management practice. In fact, service delivery is improved when workers, volunteers and residents are secure, safe and healthy. (*Hunter,2005, pg. 6*).

Victor Reigner calls this type of design for special groups, assisted living. Assisted living is a long term care alternative which involves the delivery of professional managed personal and health care services in a group setting that is residential in character and appearance in ways that optimize the physical and physiological independence of residents. This creates a highly supportive, humane residential housing for the mentally and physically frail. (*Reigner, 1994, pg 1*).

Creating an innovative and attractive assisted living environment requires careful thinking about how the environment will serve the needs of the residents, promote therapeutic goals, efficiently operate, encourage social exchange and support stimulating activities. Design creates this assisted living environment by creating a purposeful, functional as well as a symbolic environment. An important consideration to be put in check is that the environment must recognize the vulnerability of the oldest-old, the goal being to create an environment that encourages sensory stimulation, social engagement and opportunities for passive observation. (*Reigner, 1994, pg. 24-25*).

As *Papanek* puts it, “All socially relevant integrated design must be operative- that is, related to the true needs of the people.” Design for an aged care facility needs to take into account these needs. *Kate Hunter* outlines some principles of good design for aged care facilities. A major principle is that the design must be one that complies with the necessary standard and legislation and one that supports safety and security of residents, staff and visitors. Also, one that is homely for the residents and pleasant to work for the staff. Another key factor would be one that supports residents’

independence and facilitates provision of assistance when required. In addition, an environment that supports the appropriate level of care required by residents as well as one that meets the changing needs of the residents and enables future alterations to be conducted with minimal cost. Also, one that enables the residents to maintain their connection with the local community, is energy efficient, and blends well with the local community. (Hunter. 2005, pg 6- 7).

The major design factors that are looked into are the indoors environment, the outdoors, furniture fittings and equipment and other general issues like flooring and lighting.

a. Design for Indoors

According to Kate in her report on *Design Guidelines for Aged Care Facilities*, design for indoors, looks into the general layout of the facility, traffic flow, transition areas and the specific rooms used by residents and staff. Some considerations to be put into account are the following: First and foremost, the main common areas should have easy flow to outdoor areas. Also, the travel distance for both staff and residents should be ideal since distance can facilitate independence. In terms of proximity, the bedrooms, lounge dining and bathroom should be proximate to each other.

Kate suggests that in transition areas, simple cues should be provided where different areas meet so as to differentiate them. The treatment rooms, for example the dispensaries or physiotherapy rooms should not be directly exposed to resident's general use and they should appear residential in character. In addition, the bedrooms should be large enough and bear a homely look. In case of shared rooms, curtains should be introduced to create privacy. The dining rooms should have sufficient space to allow people in wheelchairs to move freely and pedestal tables are most ideal as they accommodate people in wheelchairs.

The kitchen should have slip resistant floors as a safety precaution for the members of staff with the storage areas having being ergonomically fitted. As for the corridors, they should have sufficient width to allow passage of residents in wheelchairs, have handrails on either side and bear provision for swing space for beds and wheelchairs. In the same breadth, the doorways should be wide and high enough to allow access of

beds and wheelchairs comfortably. In addition, the weight of the door should not be excessive so as to cater for residents with varying abilities and door closers should be avoided.

b. Design for Outdoors

The outdoors play a crucial role in aged care facilities and the factors to be considered here are gardens, stairs, resting areas and car parks. The following considerations should be kept into account so as to create an assisted living environment: The main entry should be accessed by following the most logical and direct path and it should easily access the local community. Also, paths should accommodate wheelchairs and other walking aids, they should be well lit, and bear no tripping hazards as well provide handrails at appropriate sites. Moreover, the paths should provide clear and logical linkage with different facility sections and avoid ninety degree corners.

A report on *Planning outdoor space for the ageing* outlines certain design considerations key in the creation of outdoor settings. Access to shade, available seating, appropriate walking surfaces and minimally sloped paths are just a few of the elements that allow a person to move about in the outdoor landscape. Of primary importance is the ability to move easily from one place to another. We all want to be able to decide in which direction we want to go and how we would like to get there, and to have the opportunity to do this effortlessly and independently.

2.2 UNIVERSAL DESIGN

According to a report on *Universal Design and Disability Information*, universal design is an approach to the design of all products and environment to be usable by everyone, to the greatest extent possible, regardless of age, ability or situation. It serves people who are young or old, with excellent or limited abilities and in ideal or harsh circumstances. In summary, it benefits everyone by accommodating limitations. Universal Design will highly be applicable in Mji wa Huruma because of the different categories of people found there: the residents, who are the elderly, the members of staff who are young and middle aged and a wide range of visitors.

Universal Design is also called design for all, inclusive design or barrier-free design and its aim is to create an accessible universally designed environment from the

beginning rather than focus on adapting things for individuals for a later time. It addresses usability issues such as accessible design for the aged and persons with disability. However, in the case of barrier free or assistive design, if not carefully done, it often results in separate and stigmatization solutions. However, universal design seeks to be a broad spectrum solution that helps everyone, not just people with disabilities.

The principles that make designs to be universally usable are those that are equitable and flexible in use, those that require low physical effort and those simple and intuitive to use. In addition, those that bear perceptible information and are tolerant in error.

A Report done in 2008 by *The Centre for Universal Design Environments* cites entrances and bathrooms as two significant areas where mobility is essential. It is critical to ensure that people are able to get in and out of their home. Usable bathrooms, on the other hand, are essential for surviving in one's home with a temporary or a long-term disabling condition. Safety and independence within one's home is impacted by bathroom design.

2.2.1 CREATING STEPLESS ENTRANCES

According to a report by the Centre for Universal Design Environments, when modifying an existing entrance, options to create a step less entrance include ramps, vertical platform lifts and landscaping. Each is appropriate for a particular combination of resources, heights, and site conditions. The advantages and disadvantages for each option must be carefully considered.

Ramps

Ramps are the most familiar residential accessibility modification. They can be built relatively quickly and inexpensively. Although ramps make a big difference in the lives of those who use them, they do have some drawbacks. Ramps accommodating rises above 30 inches require extensive construction, may be very long, occupy a significant amount of space, and can be quite expensive. Ramps are not maintenance free. Rain, painting, and periodic repairs all take time and resources. Ramps should be thoughtfully planned so they are constructed in a style compatible with the house.

Some residents are concerned that ramps label the occupant as vulnerable and make them more susceptible to break-ins. Plantings minimize and soften the visual impact of ramps.

Figure 1: Ramps installed to upgrade an entrance



Source: Residential upgrading and remodelling (www.nscu.edu)

Site Grading and Landscaping

Site conditions can offer an opportunity to use landscaped earth pathways for a more natural and blended solution. This approach may include a retaining wall, an earth berm, and sometimes a bridge to an entrance. A safe path with a gentle slope of 1:20 or less can be built without handrails (unless there are abrupt drop-offs or they are needed by users), thereby avoiding the cost and intrusive appearance of handrails. Landscaped options may be more expensive than an equivalent ramp, but usually have a longer lifespan and require less maintenance.

2.2.2 UNIVERSAL WASHROOMS: DESIGN AND DIMENSIONS

BATHROOMS

Wheelchair Accessible Bathroom Dimensions

A report by *Aging Home Healthcare on Assisted Living Bathrooms* advises that wheelchair users need larger bathrooms to allow for manoeuvring. The more space you leave for manoeuvring around a bathroom in a wheelchair (or with a walker) the easier and safer it is going to be. Wheelchair handicapped accessible bathroom dimensions require at least 5 feet (60") in diameter to make a 180 degree turn. To conserve space, a T-shaped turning space with aisles 36" wide allowing a three-point turn is also acceptable. A portion of the diameter or T-shaped turning space may be located under fixtures as long as the required knee and toe clearance is provided. The space can be positioned for a forward or parallel approach to equipment.

Curbless Showers with Trench Draining

A report done in 2008 by *Centre for Universal Design Environments*, describes the advantages of curbless showers with trench draining. A Trench Drain is a long narrow trough that runs along the open side of a curbless shower. Water flows across the shower floor into the “gutter” (or trench) and into a standard drain. The trench is covered with a metal or plastic grate, flush with the shower and room floor.

Trench drains are an effective method of controlling water, especially if waterproof membranes are used and correctly installed. Showers constructed with a trench style drain, eliminates compound slopes in the shower floor and a stepless entry is provided. This can easily be accessed by wheelchair users. In designing these curbless showers, certain considerations must be checked to ensure that the showers are built to standard. First and foremost, quality materials and careful installation must be used to ensure a leak and maintenance free shower. In addition, curbless showers must include waterproof membranes, non-slip floor materials, and no abrupt change of



level greater than 1/4 inch. Also, shower floor slope should not exceed 1/8 – 1/4 inch per running foot and as with all shower installations, caulk should never be used as a primary leak prevention method. Cast or molded trenches are best and common materials for grates include stainless steel, fiberglass, and plastic. However, grates should be light enough to remove easily for cleaning.

Figure 2: A wheelchair user accessing a curb less shower with a trench drain

Source: www.nscu.edu

Wide Doorways

Bathroom doors should be wide enough to allow comfortable passage. In order to accommodate a wheelchair, (a standard wheelchair is 24-27" wide), doorways should be a minimum of 32" wide. If the doorway is located in the typical hallway and requires turning a wheelchair, you'll need a 36" door, when it is open in a 90° position to provide wheelchair access. A narrower width may possibly be adequate,

particularly when a bathroom door location allows a straight wheelchair approach. Also, in order to increase accessibility, easy-to-grasp lever door handles should be installed on all doors.

Non-slip Surfaces

Bathroom floors can be very slippery, especially when wet. Use non-slip flooring and bathing surfaces. Many accessible showers and bathtubs come with anti-slip surfaces. Sheet vinyl flooring is also a good choice, since it is smooth and easy to clean. If using ceramic tile, select large, smooth tiles to minimize grout lines and surface irregularities, and look for a non-slip surface texture.

Bathroom Safety Grab Bars

Grab bars are a wonderful feature in any bathroom, and make the room safer and more convenient for anyone to use. They should be installed grab next to the toilet and in bathing areas. They should be 2.5cm -3cm in diameters. Also, the space between the grab bar and wall should be 2.5cm to 4cm.

Shower Seats

Bathrooms designed for the elderly should ideally have shower seats for them to sit on while taking a bath. This is because though bathtubs are most ideal they are cumbersome to get use especially for wheelchair users. Shower seats can either be inbuilt or be stools made of waterproof material.

Bathroom Lighting and Electrical

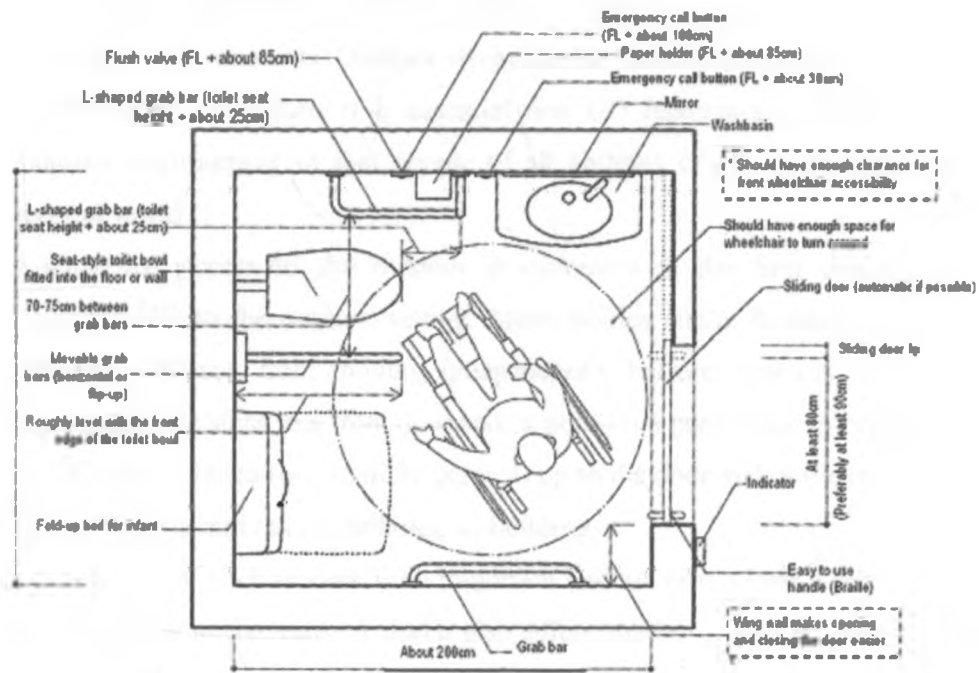
Bathrooms should be well illuminated with artificial lighting enhanced by natural daylight. A casement window is generally the easiest to use and a skylight is another way of bringing daylight into the bathroom. Shower interiors are often dark when the curtains are closed, so a waterproof light fixture is recommended inside stalls and above tub/shower enclosures.

TOILETS

Wheelchair Accessible Dimensions

According to a report on *Handicap Wheelchair Accessible Bathrooms*, clear space measuring at least 80cm x 120cm must be provided to accommodate a single wheelchair. The space can be positioned for a forward or parallel approach to equipment. A portion of the clear floor space may be located under fixtures, lavatories or accessories as long as the required knee and toe clearance for people in wheelchairs is provided. A standard compartment has a minimum width of 150cm and a length that allows using a wheelchair to approach the toilet either from the front or side. Horizontal grab bars must be mounted behind the toilet and on the nearest wall or partition. Below is a floor plan for a universal toilet.

Figure 3: Universal Toilet Floor Plan



Source: Universalguide.com

Accessible Toilet Seats

In addition, high toilet seats are ideal for ambulatory bathroom users who have difficulty getting to their feet from a sitting position. An accessible toilet with a high seat is 7-12cm higher than standard seats. This reduces the need for lowering and



lifting oneself on and off the seat. Elevated toilet seats are 43cm to 48cm above the finished floor, compared to standard seats at 35cm or 38cm. Flush controls must be placed on the open side of the toilet with the most clear floor space and mounted no higher than 111cm above the finished floor.

Figure 4: Universal toilet with grab bar

Source: www.accessibilitybathrooms.com

2.2.3 UNIVERSAL PRINCIPLES IN LANDSCAPING

Jack Carman, A Therapeutic Landscape Architect in his report on *Bringing Universal Design to the Outdoor Landscape* points out a vital point. He says that though integrating universal design (UD) within a person's home and community buildings is an idea that is growing in acceptance today, the application of UD to the outdoor environment has been slower to gain a foothold in the public's perception of accessible environments. Outdoor environments offer improvement in quality of life for everyone. Therefore, it is essential that UD features are incorporated into the outdoor environment so that people of all abilities can benefit from access to the natural world.

Unimpeded access to the outdoor environment is the first consideration when applying UD to the outdoor setting. Many homes and/or buildings have steps that prohibit a person from moving independently between indoors and outdoors, so eliminating the steps to a front door and/or porch is a good place to begin. A ramp that is minimally sloped (two to three percent) up to the door makes it easy for a person to move freely in and out of the house or building.

In addition, a porch or deck is an important feature, as it allows a person to transition from indoors to the yard. A porch also offers shelter in case of inclement weather, giving the person time to move indoors if it starts to rain or if the heat of the sun becomes too intense. Also, the elder eye takes as long as 15 minutes to adjust to the brightness of the outdoor sun, and an overhang can give an older individual the opportunity to pause and adapt to sunlight.



Raised planters help people of all ages and abilities to garden by providing convenient opportunities to get their hands in the soil and can be set at a variety of heights to accommodate different needs.

Figure 5: Resident on wheelchair tending a raised garden

Source: hubpages.com

Stable, comfortable and attractive outdoor furniture encourages people to pause, sit and enjoy nature. The seat of a chair should be 18 to 19 inches high and have sturdy arms to provide support when getting in or out of the chair. Furniture should be movable but stable, allowing for a variety of inviting areas to be configured for socializing in the outdoor setting during different seasons or times of the day.

Moving into the surrounding neighborhood should also be a simple transition. Paths that are a minimum of five feet in width and have smooth level walking surfaces will provide easy access. Trees that provide ample areas of shade are important so that heat from the sun does not become excessive. Glare can also be reduced by coloring or tinting the concrete pavement surface. Maintaining plantings adjacent to the sidewalk is also important so that the walkway doesn't become overgrown and unsafe. Low hanging branches from street trees, shrubs that grow over the walks and leaves from plants on pavement can make for hazardous conditions as well. It is important to provide not only a safe physical environment, but also one that is psychologically safe. An individual's perception that their neighborhood is safe to walk around is fundamental to their willingness to participate fully in the outdoor environment.

Other UD considerations include, but are not limited to, easy-to-use handrails and sufficient area lighting. Appropriate landscaping that allows a person to clearly see their way to the door or out into the yard can also make them feel secure and comfortable. When outdoor environments are implemented correctly with UD

features, everyone moves through the space in the same way. Aesthetics, access and design are all interwoven, so that everyone feels welcome and not singled out as “special.” The UD features of the outdoor environment should be made to be a part of the overall landscape and allow a person to feel at ease and in charge of their outdoor environment.

2.3 THERAPEUTIC DESIGN

According to Reigner, assisted living should also be viewed as a therapeutic environment where care-giving assistance and competence –building interventions encourage the highest level of independence. This is according to Lawton’s competence –press theory which suggests that the best match between the environment and the individual is one that engages abilities rather than passively supports the need. Therapy concerns physical exercise, mental stimulation and opportunities for social exchange and a well designed physical setting can be an active contributor to this. (Reigner, 1994, pg. 87-90).

This means that essentially, an aged care facility is a health care facility only that it is in a home setup. According to a report on *Therapeutic Environments*, health care facilities are designed not only to support and facilitate state-of-the –art medicine and technology, patient safety and care, but also to embrace the patient, family and care givers in a psycho-socially supportive therapeutic environment.

A healthcare environment is therapeutic when it supports clinical excellence in the physical body and also when it supports the psycho-social and spiritual needs of the patient, family and staff. Also, an environment that produces measurable positive effects on patients’ clinical outcomes and staff effectiveness. This therapeutic environment theory stems from the fields of environmental psychology, psychoneuroimmunology, and neuroscience.

In fact, according to *Martha Tyson*, in her book *The Healing Landscape*, she says that in designing therapeutic environments, determining behavioural relationship between the physical surroundings and the people who use them is even more critical.

Healthcare architects and interior designers have identified some key factors which when applied in the design of a healthcare environment can improve patient

outcomes: an environment that reduces or eliminates environmental stressors and provides positive distractions. Also an environment that enables social support and one that gives a sense of control.

2.3.1 HEALING DESIGN

Barbara Huelat, a health care interior designer defines healing design as the design of an environment that supports health and well being. She goes on further to outline the major components of healing design which are light, nature and noise which fall into the context of the mind, body and spirit. *Jim Norris*, her counterpart in the healing design industry outlines the following as other components which need careful consideration in designing healing environments; workflow, ergonomics, way finding, views of nature, and access to natural light and public areas.

Marberry and Zagon, in their book *The Power of Colour* also point out additional factors that must be considered when creating healing environments. They are listed below. (*Marberry and Zagon, 1995. Pg 87-88*).

Noise Control- Sound of footsteps in corridors, slamming doors and clanking latches.

Air quality- The need for fresh air and avoidance of odiferous cleaning agents.

Thermal Comfort- The ability to control room temperature and humidity to suit personal needs.

Privacy- The ability to control the view of the outdoors, the ability to control social interaction or view of resident in the adjacent bed, secure place for personal belongings, a place to display mementos.

Lighting- Full spectrum, non-glare lighting, ability to control intensity of light, the window should be low enough for resident to see outdoors while lying in bed.

Views of Nature- Views of trees, flowers, mountains and oceans from rooms: the regenerative power of nature, indoor landscaping.

Colour- Careful use of colour to create mood, lift spirit and make rooms cheerful.

Textural Variety- Introduction of textural variety in wall surfaces, floors, ceilings, furniture, fabrics and artwork.

According to a Tyson Martha in her book *The Healing Landscape*, she says that current research and historic examples show that a homelike atmosphere designed to encourage participation with ordinary daily domestic activities may be especially therapeutic for people in a vulnerable state of mind and physical health. The restorative qualities of gardens span the human spectrum and have no social, cultural or ethnic boundaries. Historically, healing gardens were places designed for the restoration of the mind, soul and body. (Tyson Martha, 1998, pg 4).

According to a report on *Garden Therapy*, the author says that there is something powerful about watching a seed sprout, grow, mature and flower because there is something very basic about gardening that resonates to our most basic instincts. Whatever the explanation, it seems to help the heart and soul to find a sense of belonging.

The report goes on further to say that the garden can be a great healer. Watching a bee at work, studying the intricate design of the interior of a flower, watching fish glide serenely through a water pond or listening to the splash of water from a fountain, all calm the mind and slow the heartbeat. It is for this reason that gardens have proven helpful to the young and the old, the happy and the stressed and gardening programs have been incorporated into many healing programs.

In a report done by *Jack Carman*, he notes that research has shown that a view of nature helps us to recover more quickly from illness, that natural absorption of vitamin D from sunlight helps strengthen bone tissue, that blood pressure levels lower when we experience scenes of nature, and that stress levels are reduced simply by viewing nature. Also, on a more intuitive level, we know that we generally feel better after we have taken a walk in the park, have experienced the vibrant colors of a sunset or picked wild flowers for a special someone.

According to *Jane Adler* in her Report for *Chicago Tribune* the healing environments have a lot of natural features such as plants, water and even animals. Nature not only provides humans with an important connection, but also a positive distraction. A healing environment also fosters control by the resident. It could be something as simple as having access to the light switch. And healing environments promote social

connections and provide stimulation, important stress reducers especially for the elderly.

In addition, *Roger Ulrich*, a Professor of *Behavioural Science* has conducted numerous studies, mostly in hospitals, that show surgical patients actually recover more quickly in rooms that have attractive window views. Even pictures of peaceful natural scenes can have the desired effect. The most curative images have been found to be verdant English landscapes. "Looking at nature produces a reduction in stress within three minutes," Ulrich says. Fountains and aquariums also have been found to reduce blood pressure. Soothing music helps, too.

Another specialist, *Dr. Yvonne Clearwater*, a senior research psychologist, supports this by quipping that, views of nature effect measurable physiological changes. In fact there is evidence that simulated views of nature may be as effective as the real thing. (*Marberry and Zagon, 1995. Pg 89-92*).

According to *Reigner*, the type of artwork recommended would be one that evokes memories, stimulates positive emotions and sparks conversations. Abstract graphics and modern art should be avoided as this is not meaningful to the residents. (*Reigner, 1994. Pg 119*)

Attributes of Healing Gardens

Oliver Chonga, in his thesis on *Naturopathic Landscapes as Settings for Primary Healthcare*, (*Chonga, 2008 pg. 43-44*) outlines some basic guidelines for developing a healing garden which are:-

- The client should be involved throughout the design process
- The garden should stimulate the users' senses.
- The garden should be easy to comprehend and navigate.
- The garden should offer contrast which provides relief from stressful environments.
- Mobility should be considered in and around the garden for ease of client use.
- The garden should be unlocked and inviting
- Encourage wildlife in the garden (birds, butterflies, small animals etc).
- Reinforce the cycle of life through plants that provide seasonal change.

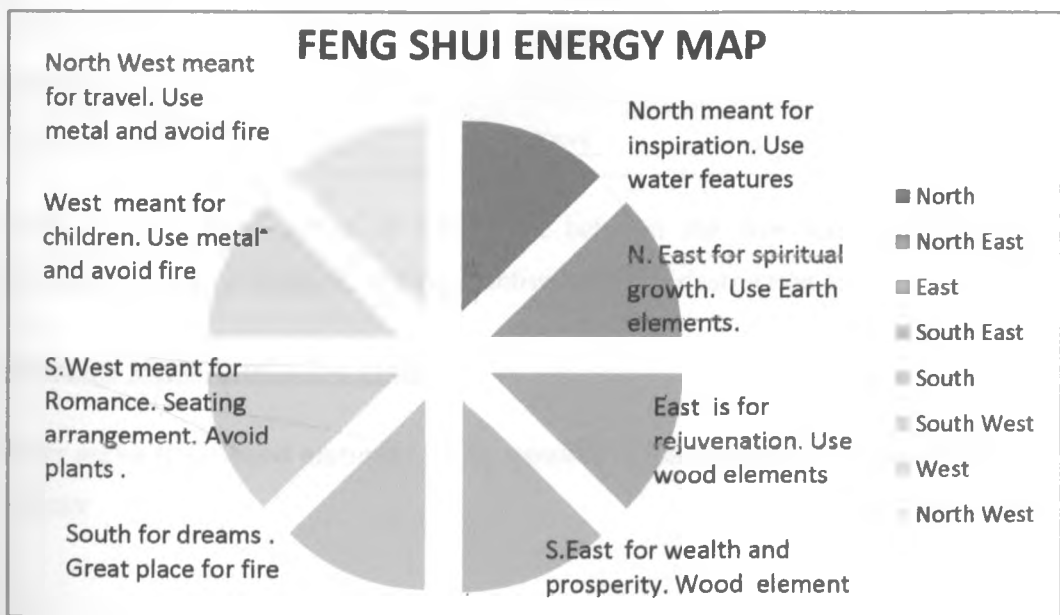
- Promote reflection and self awareness n the garden
- It should provide a feeling of relief for garden users

2.3.2 FENG SHUI

According to a report on *Feng Shui History and Theory*, Feng Shui is an ancient art and science developed over 3,000 years ago in China. It is a complex body of knowledge that reveals how to balance the energies of any given space to assure the health and good fortune for people inhabiting it. Feng means wind and shui means water. In Chinese culture wind and water are associated with good health, thus good feng shui came to mean good fortune, while bad feng shui means bad luck, or misfortune.

Feng Shui is based on the Taoist vision and understanding of nature, particularly on the idea that the land is alive and filled with Chi, or energy. The ancient Chinese believed that the land's energy could either make or break the kingdom, so to speak. The theories of yin and yang, as well as the five feng shui elements, are some of the basic aspects of a feng shui analysis that come from Taoism.

Figure 6: *Fengshui Energy Map*



Source: [www.fengshui/about.com](http://www.fengshui.about.com)

One of the basic principles of feng shui is the principle of five elements, which are Wood, Fire, Earth, Metal and Water. These feng shui elements interact between themselves in certain ways generally defined as the Productive and Destructive cycles. Each feng shui element is represented by a specific color, and color is the easiest way to use the five elements principle to bring more harmony into your home.

Table 2: Colour Correspondence of Feng Shui elements

Source: www.fengshui.about.com

WOOD	Green, Brown
FIRE	Red, Bright Yellow, Orange, Purple,
EARTH	Light Yellow, Sandy, Light Brown
METAL	White, Gray
WATER	Blue, Black

Table 3: Shape correspondence of Feng Shui elements

Source: www.fengshui.about.com

WOOD	Rectangular
FIRE	Triangular
EARTH	Square
METAL	Round
WATER	Wavy

There are two main-cycles of interaction between the five feng shui elements: Productive (cycle of creation) and Destructive (cycle of destruction.)

Summary of the Productive cycle.

Water nurtures -> Wood nurtures -> Fire nurtures -> Earth nurtures -> Metal nurtures -> Water.

Summary of the Destructive cycle.

Water weakens -> Fire weakens -> Metal weakens -> Wood weakens -> Earth weakens -> Water.

The report goes on to further advice on Bedroom design. It says that to create a good feng shui bedroom, one should be mindful of the quality of air in the bedroom. One cannot have good feng shui in the bedroom if the air they breathe in is stale and full of pollutants. In addition, plants in the bedroom are not good feng shui since they release carbon dioxide at night.

Use of soothing colors achieves a good feng shui balance in your bedroom. Feng shui bedroom decor is a balanced decor that promotes the best flow of energy for restorative sleep. In this case, the best feng shui colors for the bedroom are considered the so-called "skin colours which vary from pale white to rich chocolate brown. Colours within this range work best for bedroom decor. For bedroom art, one should choose images that they want to see happening in their life. Unless one enjoys being sad and lonely, they should not use sad and lonely images in their bedroom.

2.4 COLOUR PSYCHOLOGY FOR THE ELDERLY

"Colour must be understood as an architectural form, not solely as a decoration."
Sara Marberry.

According to *Marberry and Zagon* in their book *the Power of Colour* , they suggest that colour should be used in a systematic and sensible order based on the laws of nature. When this natural order of colour is used in the design of interior spaces, a harmonious sensation occurs, which in turn positively affects the health and well-being of those interacting with the space. However, not all of us require the same dosages of colour as we each have a personal colour palette. In creating healthy interior spaces these personal colour palettes should not interfere with the universal system of colour. (Marberry and Zagon, 1995. Pg 1)

A full-spectrum colour palette is a balanced mix of various proportions of tints and shades from the hues of each of the seven colours of the spectrum (red, yellow, orange, green, blue, indigo and violet). Marberry and Zagon propose that using

balanced proportions of the entire spectrum in a systematic order provides a natural harmony that can promote health and well-being. (Marberry and Zagon, 1995. Pg 9).

According to Zagon and Marberry, the chart below summarises the human response to colour. (Marberry and Zagon, 1995, pg 16).

HUMAN RESPONSE TO COLOUR

Table 4: Human Response to colour
Source: The Power of Colour

COLOUR	RESPONSE
Red	Its nature symbol is the earth. It is defined often by its qualities of high energy and passion. Studies have shown that red has the ability to excite and raise blood pressure.
Orange	Its nature symbol is the sunset. It is defined often by its qualities of emotion expression and warmth.
Yellow	Its nature symbol is the sun. It is defined often by its qualities of optimism, clarity and intellect. Bright yellow is often noted for its mood enhancing ability. Yellow must be carefully applied, as it may connote ageing and the yellow skin tones associated with jaundice.
Green	Its nature symbol is growth. It is often defined by its qualities of nurturing, healing and unconditional love.
Blue	Its nature symbols are the sky and the ocean. It is defined often by its qualities of relaxation, serenity, and loyalty.
Indigo	Its nature symbol is the sunset. It is defined often by its qualities of meditation and spirituality in that it is the exact mixture of blue and violet.
Violet	Its nature symbol is the violet flower, it is defined by its qualities of spirituality. It is also a stress reducer and can create feeling of inner calm.

Color choices are very important when designing a facility for the elderly, because the aging eye experiences changes in vision that affect the perception of various colors. The following guidelines are offered when choosing colors for a facility:

- Avoid monochromatic color schemes. Use colors to contrast between vertical and horizontal surfaces, as well as focal objects and background. Similar colors often look the same to those with diminishing vision.
- Create contrast through the use of light-dark and cool-warm color combinations. Problems adapting to light-dark changes is one of the most common vision challenges for the aging.
- Dark, dull colors seem to advance toward the observer, whereas lighter, brighter colors appear to recede.
- Cool colors, such as blues and greens, promote relaxation. Warm colors, such as yellows, reds and oranges, stimulate activity.
- The elderly often experience a decrease in the ability to differentiate cool colors, as opposed to warm colors which are much easier to distinguish. Thus, a light peach may be more effective than a light blue for an older person.
- Yellow is cheerful. Green is tranquilizing. Blue is spacious, inducing a contemplative mood.
- Neutral or muted colors are restful.
- In poorly lit conditions, yellow is the most visible, orange and red hold the most attention, while blue appears hazy and indistinct.
- Light colored walls with a matte sheen and light flooring with a low-glare finish should be used to optimize lighting and reduce glare. Light scatter increases within the eyes as people age.

Since the elderly need a fair amount of stimulation, the appropriate colours should be bold primary reds, yellows and blues to help with way finding and to generate additional energy.

2.5 FURNITURE FOR THE ELDERLY

2.5.1 Furniture for the Epileptic

According to a report on *Safety Advice for people with Epilepsy*, the author gives cautionary advice on the type of furniture ideal for those with epilepsy. Epileptic seizures can happen when a person is sleeping too hence beds should be kept touching the wall. Placing protective cushions or a mattress around the bed can help to reduce

any injury caused by falling out of bed. The lower the bed, the less distance there is to fall and this will reduce the risk of injury. If the seizures involve convulsions or jerking movements, avoid placing the bed against a wall as this can prevent the person from knocking their limbs on the wall.

Hard furniture such as bedside cabinets and tables must be avoided or kept away from the bed. It is also a good idea to keep sharp-edged objects, and furniture such as bedside tables, away from the bed, to prevent injuries. Sharp edges, or any that stick out, for example on furniture must be covered either by use of padding, such as pieces of foam rubber that come in sheets, or tubes that are designed for lagging pipes. When buying new furniture, those that have rounded edges or corners should be considered. Glass furniture should also be avoided.

2.5.2 Beds for the Elderly

In a report, on *Beds for the Elderly* the author explains how the ageing process changes the body and goes on to give recommendations on the type of beds suitable for this stage of life. The author explains that time, old injuries and bad habits can cause the spinal discs to lose their hydration and shock absorbing abilities and the bones and ligaments that make up the spine become less pliable. Immobility and pain can result, leading to a lower quality of life that some people just accept as a consequence of getting older. For people in pain, sleep is actually very important, and for people with low mobility, keeping up some manner of movement is also important.

For coping with the difficulties of old age, the elderly need a bed with comfort and support. In addition, a bed that also facilitates independence by being one that is appropriate for the elders height, firm enough to allow getting in and out of and moving in the bed but soft enough to allow him/her to rest gently.

In addition to these qualities Reigner in his book *Assisted Living for the Elderly* goes on to further say assert that transforming an interior to a residential environment is greatly dependent on furniture choices and finish decorations. (Reigner, 1994, pg 52) In the case of bed designs, the material used and the headboard design heavily determines whether a bed looks institutional or not. A wooden bed looks more homely

because wood evokes a feeling of warmth. On the other hand a bed with a big headboard looks more homely and inviting. Also, use of soft furnishings like kilts for the bed covers, duvets and pillow cases goes a long way in creating a comfortable residential environment.

Figure 7: *Comfy sturdy beds*



Source: www.bedsforbacks.com

2.5.3 Chairs for the Elderly

In a report by Myrland Stables on *Assisted Living Furnishings* the author asserts that, elderly people unlike young people are not always strong enough to lift their bodies out of furniture so certain considerations need to be observed when designing furniture for them. First and foremost, furniture for an elderly person needs to be firm so the elder does not sink into the furniture. Also, furniture that comes in easy to clean upholstery is most ideal. In addition, furniture for an elderly person can't be low to the ground or the elder will not be able to get up. The aged need furniture that is high enough to allow the person to sit and stand easily. Also, furniture for elderly people must have arms so they have something to hold while they get up. Last but not least, the elderly need good, sturdy furniture so there is no danger of the furniture tipping over or collapsing.

2.6 CASE STUDY RESEARCH: Nyumba ya Wazee

2.6.1 OVERVIEW

Nyumba ya Wazee, Home for the aged is located in Kasarani and it is managed by the little Sisters of the Poor. It is a facility that has been universally designed, complete with assisted living design elements as well as components of therapeutic design. The

facilities at the home are the hostels, kitchen and dining area, laundry room and a large communal space that serves as a multipurpose hall, resting area and entertainment room. The space layout has been carefully designed to ensure that social interaction is promoted, independence is achieved and therapeutic goals are met.

For purposes of this report, the researcher had intended to use photography as an additional data collection tool . However since photography is strictly prohibited by the management, the researcher has compiled the following detailed report outlining her key areas of study as they have been adequately applied at Nyumba ya Wazee.

2.6.2 INTERIOR ARCHITECTURE

Universally Designed Washrooms

The bathrooms are curbless so as to allow easy entry. Also, shower seats are provided. In case of residents who use wheelchairs , special bathtubs have been designed for them with an assistive device which allows the residents to get off the wheelchair and into the bathtub. The toilets have wide doorways and are wide enough to allow manourvering by wheelchair users. Both the bathroom and toilets have grab bars.

Corridors and Entrances

Both the male and female hostels have corridors that are wide enough to allow residents on wheelchairs to use them comfortably. In addition, the corridors have wooden railings that greatly aid the residents while walking.

In the case of entrances, much effort has been put in creating stepless entrances so as to allow accessibility in and out of the different facilities. This has been done by erecting gently sloping ramps.

Residential Ambience

To create a homely ambience, incandescent lighting has been used in the resident's rooms. In addition, there are miniature decorative sculptures in the residents rooms as well as beautiful wall hangings. All buildings at Nyumba ya Wazee have tiled floors which are easy to maintain.

Colour Scheme

Warm colours and Earth tones are predominantly used at the facilities in Nyumba ya Wazee. In the rooms, the walls are cream in colour while the floor is brown. In addition, the wall hangings are done in bright colours that liven up the rooms.

2.6.3 LANDSCAPING

Site Grading

The land has been leveled to become relatively flat as this greatly promotes independence for the residents and it also encourages them to explore the outdoors. Also, for those using wheelchairs, smooth cemented paths have been created to facilitate movement within the home. In addition, along the paths, there are railings to assist the residents. Also, these railings serve as a guide for the blind residents.

Therapeutic Gardens

In order to encourage the residents to explore the outdoors, different types of landscaping features have been created. First and foremost, there is a fountain which serves as a centerpiece at the home. In addition, outside every hostel, there are bird baths outside the hostels which serve as a great source of entertainment to the residents as they watch the birds eat and play.

Also, small gazebos dot the landscape where the residents can sit, chat and relax. These gazebos serve as places for reflection and meditation. On the shady trees where there are garden benches, chimes are hung to continually produce musical sounds whenever the wind blows. In addition, there are beautiful sculptures in the garden.

Vegetation

On site, there are ornamental trees and shrubs with brightly coloured flowers which attract birds and butterflies. In addition, there are large shady trees like terminalia under which there are garden benches to encourage the residents to enjoy the outdoors. In addition, sweet smelling shrubs like lavender dot the landscape especially in areas with heavy traffic flow. These flowers are not only attractive to the residents, but they also serve as guides to the blind residents.

2.6.4 EXHIBITION AND DISPLAY

Signage

For identification purposes, there is a large metallic sign outside the gate with the name of the home. Once inside, there are small wooden signs placed at the entrance of every facility for identification. These wooden signs are made of logs that have been cut, polished and the name engraved on.

Artworks

There is a large mural of a landscape inside the multipurpose hall. In addition, there are painted wall hangings inside the residents rooms and along the corridors

Display

There is a large noticeboard outside the reception with information about Little Sisters of the Poor, the organization that runs Nyumba ya Wazee. In addition, at the reception, there are paintings of The Pope and The Sister who pioneered the movement of Little Sisters of the Poor.

Sculptures

Small miniature sculptures (with a religious theme) are placed inside the resident's rooms and other facilities. These are sculptures of either Mary or Jesus, bearing in mind that Nyumba ya Wazee is a Catholic Institution.

2.6.5 FURNITURE DESIGN

Outdoor Furniture

Garden benches have been placed on the open lawns and under trees to encourage to residents to explore the outdoors. These benches are either metallic or concrete.

Indoor Furniture

In the dining area, there are plastic dining tables and chairs. In the multipurpose hall which also serves as an entertainment room, there are couches and padded seats. Inside the resident's rooms, there is a bed, a chair and two kinds of storage. There is a wardrobe for storing clothes and shoes and a small cabinet for personal effects.

Chapter

3

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“..Wrinkles should merely indicate where
smiles have been”

Mark Twain

3. RESEARCH METHODOLOGY

3.1 OVERVIEW

This chapter outlines the research design used as well the main population from which the researcher draws out the sample. In addition, it gives the instruments that are used for data collection, and it concludes by giving a detailed data analysis.

3.2 RESEARCH DESIGN

CASE STUDY RESEARCH

Robert Yin defines case study research method as an empirical enquiry that investigates a contemporary phenomenon within its real life context; when the boundaries between the phenomenon and context are not clearly evident; and in which multiple sources of evidence are used. (Yin,1984, Pg23)

- The six steps used in case study research are:
- Determining and defining the research questions
- Selecting the cases and determining data gathering and analysis techniques
- Preparing to collect the data
- Collecting the data in the field
- Evaluating and analyzing the data

Data gathered in case studies is largely qualitative but it may also be quantitative. Qualitative tools of collecting data are surveys, interviews, documentary reviews and observation.

In case study research, specific techniques are used so as to force the researcher to move beyond the initial impression so as to improve the likelihood of accurate and reliable findings. Such techniques include placing information into arrays, creating matrices of categories, creating flow charts on the display and tabulating frequency of events.

In addition, researchers use quantitative data that has been collected to support the qualitative data which is most useful for understanding the theory of underlying relationships.

3.3 POPULATION AND SAMPLING PROCEDURE

According to a research carried out in 2009 by Helpage Kenya, the population of older persons in Kenya was 1.630,000. Out of this number, there were 83 male older persons for every 100 female older persons. Through random sampling, the sample population for this study is drawn from the residents at Mji was Huruma, Home for the aged. The residents in this home are 45. 27 of them are male, while 18 are female. This provides an adequate sample population since they vary in ages, interests, previous occupations, cultures and lifestyles.

3.3 DATA COLLECTION TOOLS

Documentary Research

The entailed secondary information will be gotten from journals, books, reports and newspapers and some of the topics to be studied will be: design considerations for the aged, universal design principles, the role of landscaping in therapeutic design and healthcare design.

Focus Groups

Since the residents here are the aged, having informal discussions in groups would be an ideal way to gather relevant data about the facilities they enjoy and what could be improved. Recordings of these discussions would be an ideal way of gathering the data to later be analysed by the researcher.

Formal Interviews

This is a reliable way of gathering information from the members of staff and Management at Mji wa Huruma. Relevant information regarding the residents will be; the current population, their gender, their ages, medical conditions and any other information relevant to the researcher.

In addition, questionnaires will be filled by members of staff to collect information regarding their working environment, their work schedules and challenges they face.

Formal interviews will also be ideal when gathering information from designers and architects at the City planning department of Nairobi City Council. The reason of interviewing them is to establish the design considerations that were put into account in design of this facility.

Formal interviews would also be used when collecting data from the management of other old people's homes like Nyumba ya Wazee. These homes will serve as comparative case studies of aged care facilities in Kenya.

Direct Observation

This is a continuous data collection tool that will be used by the observer at the site. Through direct observation by the trained eye, the researcher will keenly look at how people relate to the environment, ergonomic standards of the fixtures and equipment and universal design considerations to the facilities.

Photography

Photography is a tool that shall be used to capture diverse facets of the living and working environment at Mji wa Huruma to present a real time visual illustration of the data. Photography also serves as a recording tool of the current situation of the area of study.

Formal letters

Mji wa Huruma is owned by City council of Nairobi, a government parastatal and so it goes without saying about the bureaucracy involved in conducting the research. The researcher needs to fill request letters at the City Planning Department of Nairobi City Council specifying the nature of the research. Also, the researcher requires authenticity letters from the school identifying them as a student and providing assurance that the research is purely for academic purposes. Moreover, the researcher must agree in writing that they shall submit a copy of the research proposal to the Nairobi City Council once the research is complete.

3.4 DATA ANALYSIS

The information collected from the sample population shall be presented in form of a written research report, complete with plans of the site, accompanying sketches and artistic impressions. Also photographs will also be used as they depict the real time situation at Mji wa Huruma as well as recordings of focus group discussions.

3.5 LIMITATIONS

For the researcher had to wait for two months for the request to conduct research at Mji wa Huruma to be approved. This is because of the bureaucracy involved when dealing with government parastatals like Nairobi City Council. This delayed the proposed time schedule the researcher had intended to use.

The researcher experienced language barrier especially when conducting group discussion with the residents who were only be able to communicate in their mother tongue.

The researcher experienced a setback while conducting the case study research at Nyumba ya Wazee in Kasarani. The management at this home does not allow taking of photographs though the researcher had intended to use photography as a data collection instrument.

The researcher also faced some financial constraints while conducting the researcher. Sometimes money for transport to and from the site lacked thereby causing unnecessary delays

Chapter 4

FINDINGS

“.. A society that doesn't treasure the knowledge, experience and wisdom of the elders is in trouble”

Dr. David Suzuki

4. FINDINGS

4.1 HISTORY AND BACKGROUND INFORMATION

Mji wa Huruma Home for the aged was founded soon after Kenya attained its independence by the then Mayor of Nairobi, His Worship, Mr. Charles Rubia. This was a single room in Bahati Estate in Eastlands. The mayor had a heart for the elderly, beggars and less fortunate, hence brought them together and the City Council took care of them. The home was then relocated to its present land that was initially owned by the white settlers before independence, who used it as a club house. After independence the white settlers moved to Zimbabwe and Mr. Rubia requested that they donate the land to the Council which they did. The elderly people were then moved to the present land in Kiambu.

Currently, the home has a population of 45 old persons, 27 males and 18 females. Most of them are boarders at the facility while a few are day scholars who come from the neighbouring Huruma and Githogoro slums. In the case of Mji wa Huruma, 32 are younger- old (below 75 years) while 13 are classified in the old-old category. (above 75 years).

The home is run by a senior assistant welfare officer who is answerable to the Senior Family Welfare Officer and the Director Social Services and Housing Department. It also has two committee members from the community who help in management. There are 9 members of staff from the Social Services and Housing Department, 2 Health Officers from the Public Health Department, 2 Security officers and 4 Volunteer workers from the partner NGO working at the dispensary.

4.2 SITUATIONAL ANALYSIS

4.2.1 PHYSICAL LOCATION

The home is situated in a cool atmosphere near Karura forest next to the up market Runda estate away from the hustles of the City 12km off Kiambu Road. The Mji wa Huruma neighbourhood has quite a striking contrast between the slum areas, Karura forest and the posh Runda residences.

Figure 8: Mji Wa Huruma Neighbourhood



Runda residences
Source: Author



Karura Forest



Huruma Slum

4.2.2 FACILITIES

The home lies on an 8 acre piece of land with the following structures

Figure 9: The different facilities at site



Female Hostel



Kitchen and Multipurpose Hall



Male Hostel



Zero grazing unit



Resting Shed



Office Block



Staff House
Source: Author



Dispensary

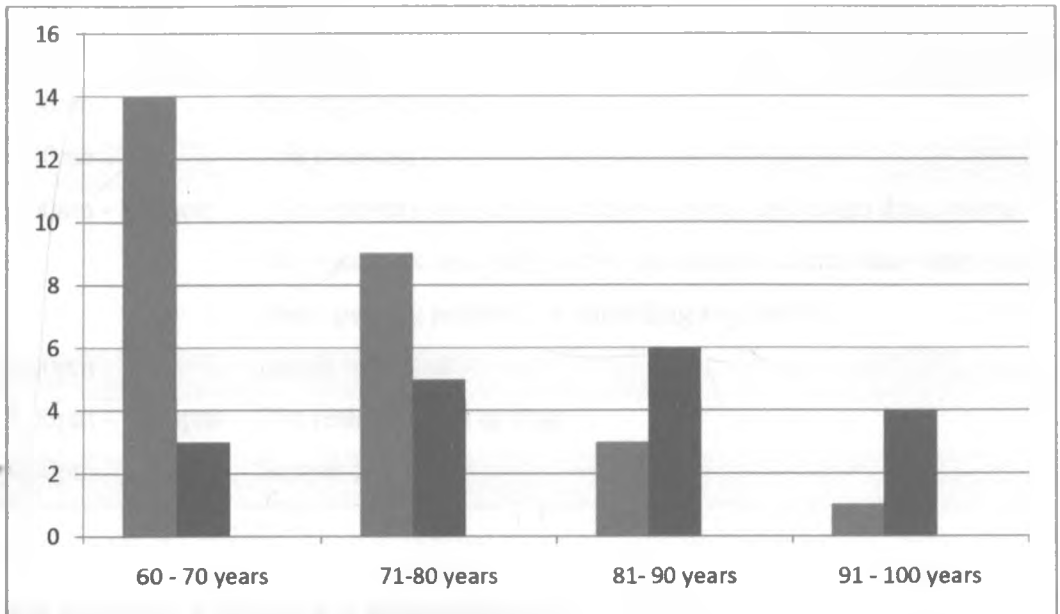


Farm Storehouse

4.3 RESIDENTS PROFILE

4.3.1 Age Distribution

Figure 10: Age Distribution of the Residents at Mji wa Huruma



The blue colour represents the male residents while the red colour represents the female residents

Out of the 45 residents more than half of them have chronic medical conditions while some have age –related diseases thus they can be classified as follows.

4.3.2 Medical Conditions

Table 4: Medical Conditions of the Residents

Medical condition/ Physical Disability	Number of Residents
Those with epilepsy	3
The blind	1
The Deaf/ Partially Deaf	3
The mentally sick	4
Those on wheelchairs	7
The bedridden	1
Those suffering from arthritis	2

4.4 PROGRAM OF ACTIVITIES

Table 5: Program of Activities at the Home

TIME	ACTIVITY
6.00am	Waking up
7.00am	Porridge is served
8.00am	Tea is served
9.00am - 12noon	The residents shower, wash their clothes and clean their rooms. The residents also help out in household chores like winnowing grain, peeling potatoes or shredding vegetables
1.00pm	Lunch is served
1.00pm – 5.00pm	The residents rest or chat
5.00pm	Supper is served

4.5 ISSUES CITED BY RESIDENTS

Focus group discussions were carried out separately in a sample population of 10 female and 10 male residents with the aim of finding out the design problems in the built environment.

Report from Male Residents

Positive Issues

- Most residents cited that they liked the shared cubicles since they promoted companionship.
- Some residents also said that they enjoyed having an entertainment room in their hostel since they could keep busy watching the television.

Negative Issues

- The male residents complained about the garbage dump near the hostel saying that it usually emitted a foul smell that got right into their rooms when wind blew.

- They also requested for additional bathrooms and toilets citing that the ones available were not enough. In addition they complained that lack of an efficient piping system to the washrooms resulted to lack of water thereby resulting to a foul and unbearable smell from the toilets.
- For the wheelchair users, they proposed for the cubicles and the corridors to be expanded so that they could have adequate space for movement. In addition, they requested that the land be flattened out so that they could easily access the outdoors and the neighbourhood.
- The male residents also recommended that a ceiling be placed in their hostel because of the extreme heat and cold during the hot and cold seasons respectively. They also recommended for a fireplace in the hostel to keep them warm during the night.
- The residents recommended that additional lighting be installed in the hostel since some areas like the washrooms are dark during the night.
- Some of the residents also complained that their beds are too high resulting to some of them having to struggle to get on them. Also, they cited the risk being seriously hurt in case one fell at night. In fact, the photo below is of one of the



residents, Mr. Christopher Echwa. Currently, he is nursing a wound in his eye which was a result of a fall in the hostel. This resident is epileptic. He got a fit at night and fell off his bed, unluckily, his face hit a poorly stored wheelchair, and this caused his eye to be badly hurt. Poor storage can result to avoidable harm to the residents.

Figure 11: Resident nursing wounded eye after an accident in the hostel

Source: Author

Report from female residents

Positive Issues

- Most female residents cited that they liked sitting at the corridor since they could chat, laugh and enjoy each other's company all day.

- They also said that they liked the fact that the female hostel had been built on a higher platform than any of the other buildings on site and so they had a clear view of the outdoors.

Negative Issues

- They cited the corridor being too dark at night because of lack of lighting. This was risky for them especially when someone needed to visit the washrooms at night.
- They complained that the storage provided was not enough for their clothes and personal effects. In addition, they complained that some of the shelves erected were too high for their reach. They proposed wardrobes for storage of clothes as opposed to metal boxes.
- The residents proposed that the rooms should be made bigger so as to accommodate a communal space where residents can sit, eat, chat and watch television. In addition they proposed that a place for serving their food be designated since food is served with the plates on the floor which is unhygienic. Also, they complained for lack of a place to wash their utensils resulting to them washing them in their rooms.
- They complained for lack of mirrors in their rooms.



➤ The residents also complained about the wobbly stairs at the entrance of the female hostel. Many residents have slipped and fallen over the years. This picture is of one of the female residents who is nursing a broken arm after a fall on the corridor.

Figure 12: Resident with broken arm

Source: Author

Chapter 5

ANALYSIS

“.. A silver haired head is a crown of glory, if it is found in the way of righteousness

Prov 16: 31

5. ANALYSIS AND EVALUATION

5.1 INTERIOR ARCHITECTURE

5.1.1 MALE HOSTEL

The Male Hostel accommodates 26 residents. It is divided into cubicles which are shared by two residents each. Also, it has an entertainment room, washrooms, a laundry and a foyer. In addition, there are benches just right outside the hostel where the residents rest and bask during the day. The floors in the hostel are cemented and plastered in Red Oxide, while the walls are cream in colour.

The Cubicles

The lack of curtains in the cubicles denies the residents the much needed privacy. The lighting in the hostel is fluorescent lighting. The absence of a ceiling results to cold at night and many residents complain due to this especially during the cold seasons.

Figure 13: Interior of male hostel



Figure 14: Roof in the male hostel



Source: Author

The Washrooms

Figure 15: The toilets



There are 3 bathrooms and 3 toilets. The toilets do not have railings which provide support for wheelchair users. Also, the toilets are not wide enough for comfortable wheelchair access. This is because they are 160 cm by 80 cm. Ideally, according to universal design, toilets to be accessed comfortably by wheelchair users should be 180cm 100cm.

Source: Author

Figure 16: The bathrooms with a curb



In the case of the bathrooms, curbs have been installed to prevent water spillage to the rooms. However, this curbs act as hindrances to accessibility by wheelchair users. Also, the bathroom are not wide enough for comfortable wheelchair access. This is because they are 160cm by 80cm. Bathrooms ideally for comfortable wheelchair access should be 180cm by 100cm.

Source: Author

The Entertainment room

Figure 17: Male residents watching television



This is the room from where the residents watch television. It has a set of sofas and a television cabinet.

Source: Author

The Porch

Figure 18: Residents resting at the porch



Currently the porch is a dead space. Though it is the main entrance to the male hostel it does not have an inviting ambience. As shown in the picture the dustbin, dirty mops and buckets are stored here all day. Also, the door does not have a different colour from the walls and this creates a boring monotony.

Source: Author

The Laundry

Figure 19: Laundry outside the male hostel



The laundry is located right outside the male hostel next to the washrooms. It has a sloping cemented floor so as to facilitate drainage.

Source: Author

5.1.2 FEMALE HOSTEL

This hostel is divided into 10 rooms, each accommodating 3 residents. The significant areas are the rooms, the washrooms, the corridor and the laundry

The Rooms

Figure 20: Interior of the rooms in female hostel



The walls in the hostel are cream in colour while the doors are dark green. The floors are a cemented grey colour. There are two windows in each room; one is a horizontal like strip on one side while directly opposite it is a large window with louveres. The lighting inside the rooms is fluorescent lighting.

Source: Author

Broken Windows

Figure 21: Missing panes in louver windows



In addition, the ladies hostel has broken windows which let in cold air especially at night which is not an appropriate environment for the aged. This is because one of the limitations in old age is the inability of the body to maintain constant body temperature.

Source: Author

The Corridor

It serves as a resting place during the day as this is where they spend most of their time. Also, this is where they sit as they help in household chores like preparing food



for cooking. As a result of soil erosion over the years, the soil next to the female hostel has been carried off leaving space between the corridor and the ground level and this greatly hinders accessibility. In this picture, it depicts inaccessibility especially by wheelchair users. Here, one of the residents cannot enjoy the outdoors to the maximum as they are confined to the corridor all day.

Figure 22: Inaccessibility to outdoors especially by wheelchair users
Source: Author

Figure 23: Residents groping for something to cling on at corridor



This picture shows one of the oldest residents walking on the corridor. As can be resident, the resident is groping for something to cling on as she slowly walks. This

Source: Author

Figure 24: Dilapidated Ramp



A ramp has been built to ease access but due to poor maintenance, it is dilapidated. This greatly poses a slipping hazard to the residents. Also, because the ramp is uneven it denies independence to those residents who use wheelchairs since they require assistance to go out or come into their rooms.

Source: Author

In addition, a stair-like structure has been erected using stones and this greatly hampers access to the hostel by the residents. In the picture below, one of the

residents demonstrates how they access their rooms with extreme difficulty. In group discussions held with the residents, many cited that the stairs are a slipping hazard because many have fallen and gotten hurt as they climbed the stairs.

Figure 25: Wobbly Stairs Figure 26: A resident struggling to climb the stairs



Source: Author

The Washrooms

The washrooms in the female hostel consist of 4 toilets and 3 bathrooms.

The Toilets



There are two types of toilets in the female hostel. The Asian type and the European water closets.



*Figure 27: Asian type WC
Source: Author*

Figure 28: European type WC

*Figure 29: Resident struggling to get from the wheelchair to the toilet.
Source: author*



Just like in the male hostel, the toilets do not have railings and this thus makes them extremely difficult for use by those on wheelchairs. Also, the toilets are not wide enough for comfortable wheelchair access. This is because they are 160cm by 80 cm wide yet toilets for comfortable wheelchair

access should ideally be 180cm by 100cm. In this picture, the resident holds on to the door knob so as to get off her wheelchair. In addition, the wheel chair does not comfortably fit into the toilet for the resident to get off easily. Such design hinderances can actually harm the resident physically.

Figure 30: The bathrooms with a restrictive curb



In the case of the bathrooms, they have been ergonomically designed for wheelchair users because they are 150cm by 110 cm. However, curbs have been installed to prevent water spillage to the rooms. These curbs act as hindrances to accessibility by wheelchair users.

Source: Author

The Laundry

Figure 31: Dilapidated laundry at female hostel



As can be seen from the photograph, the laundry is a small cemented patch just right under the main tap. Considering that the female hostel is currently hosting 18 residents, this laundry space is not enough. Also, the drainage is poor.

Source: Author

5.1.3 KITCHEN

Figure 32: The industrial cooking stoves

Source: Author



The kitchen is located right next to the multipurpose hall. It is a modern kitchen complete with industrial stoves, large sinks and food preparation tables. Cooking is done using industrial stoves that use firewood as fuel. As a result of poor ventilation in the kitchen, the ceiling is full of soot. This smoke is also poses a

health hazard to the chefs and those working in the kitchen.

Figure 33: The flooring with poor drainage



In addition, there is poor drainage in the kitchen as a result of leaking sinks. This results to flooding in the kitchen which poses slipping hazards to the members of staff. Moreover, the floor has been finished using non-grip ceramic tiles which pose slipping hazards to the staff.

Source: Author

5.2 FURNITURE DESIGN

5.2.1 Furniture at Male Hostel

The main storage for clothes and personal effects is in the wooden lockers and metal boxes. The types of seats that they use are the canvas camping seats which they unfold and use and fold to store. The beds used are the metallic ones which are firm and high. Firmness is ideal especially for the aged. However, some beds are too high for the residents to climb on and so they have to step on their metal boxes to get on their beds.

Figure 34: The different types of furniture



Storage

Source: Author



Seats



Beds

Absence of adequate outdoor furniture



Lack of outdoor furniture also greatly restricts the staff, the residents or visitors from enjoying the outdoors. The only furniture present is outside the male hostel but as a result of poor maintenance and extreme weather conditions, they are dilapidated.

Figure 35: Male residents resting on the only bench outside
Source: Author

5.2.2 Furniture at Female Hostel

Ergonomic considerations have not been put in check especially in designing the shelves in the ladies hostel. Some of the racks are too high and as a result, they are not utilized. Also, there is lack of adequate storage facilities in the rooms and so the metal boxes that serve as storage spaces for the residents are kept on top of the beds during the day and kept on the floor at night. In addition, there are hooks for hanging clothes that have been placed on the walls. Also, the beds are too high and the residents have to step on their metal boxes to climb on to their beds. Just like in the male hostel, they use the foldable canvas camp seats.

Figure 36: Types of furniture at female hostel



Storage lockers
Source: Author



Beds



High Shelves

Absence of furniture at Corridor

Figure 37: Residents serving food on the corridor



In addition, at the corridor, due to absence of enough furniture, food is served when placed on the floor and this is unhygienic.

Source: Author

5.2.3 Furniture at Resting Shed

Figure 38: Shed being used during a foot clinic



The shed is being used during a foot clinic by Kenya Diabetes Board. As one can see from the picture the benches have not been ergonomically designed to cater for the aged. They are too low and they do not have a backrest or arms. As a result the residents are not comfortable while seated.

Source: Author

Absence of Storage at Kitchen

Figure 39: Utensils sprawled on the floor due to lack of storage



As can be seen from the picture, there is lack of storage at the kitchen. It is for this reason that utensils are kept on the floor and this is unhygienic

5.3 LANDSCAPING

5.3.1 Site Layout

The land generally gently slopes eastwards and southwards. Although, the land is 8 acres large, a big portion of it is mostly used for farming. The site has poor space planning. This is because after being donated by the colonialists, the structures that were there before were demolished since they were old and others built at the same location without consideration of the new residents who were elderly. As a result, though the land is expansive, it has been underutilized due to poor placement of structures. Most structures are placed near the main entrance except the dispensary. Large trees are grown along the perimeter fence while the compound is dotted with shrubs and flowers.

Accessibility

Figure 40: Main driveway



The main access to Mji wa Huruma is on at the North from the murram road that leads to Huruma Slum. The main entrance is characterized by a driveway. Inside the compound, accessibility to different facilities is through paths.

Source: Author

Figure 41: Steep slope at female hostel



In some areas, accessibility has been greatly hampered due to poor site grading. This is especially seen at the female hostel where the land has a steep slope due to continuous soil erosion. As a result, most residents cannot enjoy the outdoors as much.

Source: Author

Figure 42: Hazardous entry to the female hostel




















The main access to the female hostel also greatly hampers accessibility because it has big stones which are hazardous especially to the residents. Tripping and falling accidents are common due to this.

Source: Author

5.3.2 Vegetation

At Mji wa Huruma are indigenous as well as exotic trees and shrubs, since the soils are fertile red volcanic soils. These soils also have good drainage. This are some of the plants on site.

Category	Types		
Fruit Trees	 <p data-bbox="396 1338 538 1369"><i>Mango Tree</i></p>	 <p data-bbox="658 1338 812 1369"><i>Pawpaw Tree</i></p>	
Shrubs	 <p data-bbox="396 1587 555 1618"><i>Bougainvillea</i></p>	 <p data-bbox="658 1587 748 1618"><i>Duranta</i></p>	 <p data-bbox="915 1587 980 1618"><i>Palm</i></p>

<p>Indigenous Trees</p>			
	<p><i>Mugumo Tree</i></p>	<p><i>Neem Tree</i></p>	<p><i>Eucalyptus</i></p>
<p>Ornamental Trees</p>			
	<p><i>Nandi Flame</i></p>	<p><i>Terminalia</i></p>	
<p>Food Crops</p>			
	<p><i>Banana Farm</i></p>	<p><i>Vegetables</i></p>	<p><i>Maize Farm</i></p>
<p>Grasses</p>			
	<p><i>Pennisetum</i></p>	<p><i>Paspalum</i></p>	<p><i>Kikuyu grass</i></p>

Landscaping Features

Little has been done in terms of landscaping on site except the growing of bushes, trees and shrubs in a haphazard manner. Although the land is 8 acres, and it is fertile in a cool climate, the full benefits of landscaping have not been utilized. Due to this,



the residents, staff and visitors do not enjoy the outdoors to the fullest as most of them prefer staying indoors. Currently, there is a big empty patch of land near the entrance that is an eyesore due to overgrown shrubs and grass. Also, there are big rocks and building stones on site which hinder accessibility.

Figure 43: Unutilised patch of land at entrance of site

Source: Author

Figure 44: Encroachment of farm land to facilities



Another reason why landscaping has not been developed is because farm land has been allocated until right next to the facilities. This encroachment of space leaves very little room for landscaping that has such a vital role to play on site.

Source: Author

Figure 45: Bare patch of land at main entrance



In addition, there is a big patch of bare land right in front of the male hostel. Been the centerpiece at the home, this land has been under utilized. In addition, when wind blows a lot of dust is blown into the male hostel which is a health hazard to the residents.

Source: Author

Outdoor Structure

Resting Shed

This is the shed just right in front of the male hostel and it acts as a centre piece in the home. It is made of green iron sheets and has inbuilt benches all round and a table in



the middle. It is used for various functions; many times it is used during functions like church services or prayers conducted by various groups that visit the home. Also, it serves as a resting bay for the residents and visitors where they can sit and chat.

Figure 46: Resting Shed

Source: Author

Figure 47: Bare flower garden at resting shed



Also, the flower beds around the shed are deficient of flowers. Moreover, huge stones have been placed around them which are tripping hazards especially to the residents as well as they deny accessibility to those who may want to touch the flowers.

Source: Author

Figure 48: Uneven entrance acts as hindrance to wheelchair users



In addition, though the flooring in the shed is even, the point whereby the floor and the ground meet has not been well finished. This may result to tripping accidents especially to the residents as well as hamper access to wheelchair users.

Source: Author

5.3.4 Physical Amenities

Garbage Disposal

There is poor waste disposal at Mji wa Huruma. This is because at different locations, the compound has shallow pits that are used for dumping garbage, which creates an eyesore as well as posing a health hazard to the residents.



Figure 49: Pit next to male hostel
Source: Author



Figure 50: Pit next to Staff Quarters

Parking

There is no designated parking at site and as a result the visitors and staff park anywhere on site where they can access shade.

Figure 51: Poor parking Spaces



Parking at the hall
Source: Author



Parking at the Dispensary



Parking at the office

Inadequate Clothes Lines

Figure 52: Clothes hanging on the hedges



Also at the male hostel, no space has been designated for clothes lines resulting to the residents hanging clothes on the trees and shrubs within their reach.

5.4 EXHIBITION AND DISPLAY

5.4.1 Signage

Signage has been well done in various facilities at the site for identification purposes and also as a commemoration of those who donated towards building the home. However some signs are dilapidated due to extreme weather conditions.

Figure 53: Signage at various facilities



Dilapidated Sign

Male hostel

The entrance

The Dispensary



The office

Male hostel

The Hall

The gate

Source: Author

5.4.2 Office Block and Reception

This comprises of the manager's office and a reception. The reception has been under utilised because it consists of an empty room which is sometimes used as storage area.



Ideally, the reception should be a place where visitors are received and also a place that has information displayed about the home like photos. This will serve in giving the visitors and interested parties an orientation on the facility, for example, achievements, awards and historical background.

Figure 54: Empty reception space

Source: Author

5.4.3 Display at Resting Shed

Figure 55: Pictures at the resting shed



Also at the resting shed there are pictures and photographs of various subjects hanging from the roof and this is a disadvantage as one has to strain in order to see them. Also, they are not attractive as they are covered in dust.

Source: Author

Chapter

A black and white photograph of an elderly man, likely a Black man, wearing a light-colored hat with a dark band. He is looking slightly to the right with a thoughtful expression, his hand resting near his chin. The background is dark and out of focus.

6 R E C O M M E N D A T I O N S

“..Old age needs so little, but needs
that little so much”

Margret Willour

6. RECOMMENDATIONS

*“Never lose sight of the fact that old age needs so little but needs that little so much.”
Margret Willour.*

Jonathan Ive, the Senior Vice President of Industrial Design at *Apple* sheds light about creating smart design solutions in the documentary *Objectified*. He says that the goal in designing smart products is to get design out of the way. He adds that an effective product is one that is able to condense the design needs so well that the resulting solution becomes one part that has so much functionality. To achieve this, the designer must comply to the hierarchy of needs to be met and this results to development of smart solutions that bring uttermost satisfaction to the end user.

It is with this in mind that the researcher proposes the following solutions for Mji wa Huruma using interior design as her tool of trade.

6.1 INTERIOR ARCHITECTURE

This is the process through which the interiors of building are designed with all aspects of human uses of the structural spaces in mind and the elements considered here are lighting, floor finishes, wall coverings, colours and ventilations. The desire of assisted living is to create residential character and imagery and the researcher recommends the following design possibilities.

6.1.1 Universal Design Consideration in the Washrooms

Bathrooms

Figure 56: Universally designed bathroom interior



Source:activerain.com

In the hostels, the bathrooms being 80cm by 160cm, hinder comfortable wheelchair accessibility and use. It is for this reason that some of the residents prefer to sponge bath in their rooms. Due to this reason, the researcher proposes that the dimensions of the bathrooms be the recommended 100cm by 180cm. In addition, the bathrooms should have grab bars.



Figure 57: Curbless Trench drains
Source: meetinghousedesigns.com

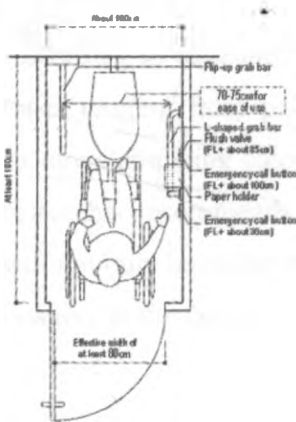
Figure 58: Shower seat



Source: johnbridge.com

Toilets

Figure 59: Universal Designed toilet floor plan



In addition, the researcher recommends curbless trench drains as these allow for wheelchair access. Also, the bathrooms must be fitted with hand rails for assistance. In fact, these handrails will greatly assist the blind residents

Since the residents use showers, the researcher proposes the introduction of shower seats for the residents to sit on when taking their bath. This is because some of them are too old to shower while standing. Bathtubs are also not ideal as they will reduce independency.

The toilets are currently 160cm by 80cm and this greatly hinder wheelchair access. The researcher proposes that the toilets be rebuilt with the recommended dimensions of 100cm X 180cm. In addition handrails and grab-bars should be fitted into the toilets to assist in movement.

Source: www.universaldesignguide.pdf

Figure 60: Universal Designed toilet interior



This picture shows how an interior of a toilet that is universally designed looks like. There are railings on the sides and at the back of the toilet to provide support for wheelchair users. The railings should not be more than 36 inches high.

Source: abadiaccess.blogspot.com

Raised Toilet Seats



The researcher proposes the adoption of the higher type of water closets which instead of being the normal 38cm high are 48cm high. These facilitate ease of use by wheelchair users as they are able to get off the wheelchair and onto the toilet easily.

Figure 61: Raised Toilets

Source: solmobility.com

6.1.2 RESIDENTIAL AMBIENCE

Colour Scheme

According to fengshui, the ideal colour schemes for bedrooms are those of the skin tones ranging from pale white to rich chocolate browns. In addition, the elderly require stimulating colours that bring energy to their environments. In this regard, the researcher recommends the use of warm colours in all the buildings on site as these will not only be therapeutic but it will create warmth and the much needed residential imagery at the facility.

Space Layout in the Rooms

A therapeutic environment is supposed to encourage as much social interaction as possible. In order to create a facility that naturally encourages bonding among residents, staff and visitors the researcher puts across some recommendations for the space layout.

In the rooms the researcher recommends the arrangement of furniture in such a way that leaves central activity space. This deliberate arrangement promotes interdependence among residents and it also creates an inviting ambience to the visitors. In addition, in the arrangement and layout the researcher recommends that no furniture be placed on sides of the beds or on walkways. Furniture at the bedsides can cause unnecessary accidents in the case of residents who may get epileptic fits.

Ceilings

The male hostel lacks a ceiling and it thus loses the residential ambience as a result. The researcher proposes the installation of a ceiling in this hostel. It will serve in creating the residential scale of measurement to the space. In addition, the residents will be kept warm at night.

Finishes

Giving the interior the look of a residential environment is greatly dependent on the finished decoration. In terms of floor and wall coverings, the researcher recommends the use of materials that evoke the feeling of warmth. One way to do use is the use of carpets and floor rugs. For the windows, the researcher recommends that curtain boxes be installed and the curtains to be put to bear homely patterns and textures. In



addition, strips of wallpaper that blend well with the colour scheme will give that extra interesting and homely look in an inexpensive way. In the case of the male hostel, the researcher recommends the introduction of curtains at the entrance to promote privacy in the cubicles in case the resident may be dressing or needing some time alone.

Figure 62: Homely curtains

Source: autohomedecor.com

As stated earlier, especially for residents with epilepsy, the bed should not be placed next to the wall. However, the room layout that is best to promote maximum interaction is when the beds are against the wall. To curb this problem of the residents been hurt during epileptic fits, the researcher recommends that the walls have a padded strip on the wall next to the bed to reduce injury during epileptic fits.

Main Entrances

In the case of the male hostel, the main entrance is a porch while the female hostel has a corridor. The researcher proposes creation of an inviting ambience as well as a functional space.

The Porch

In the case of the porch, the researcher proposes that seating furniture, preferably a sofa be placed at this location since many residents prefer to rest here. In addition, potted plants should be placed here to create the transition from the outdoors to indoors. The lighting recommended in this case is soft indirect ceiling lighting that creates a residential ambience.

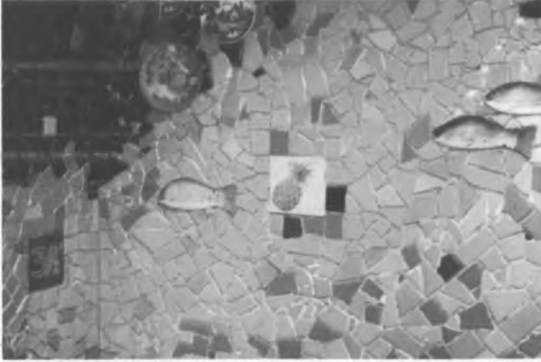
The porch should also have a different flooring pattern from the rest of the rooms. In addition, textured walls should be used as opposed to the monotonous plastered walls.

The researcher also proposes that the door from the porch to the rooms should open inwards and not outwards as it currently does. This is because the door remains open throughout the day therefore reducing usable space at the porch.

So as to create a functional use for the porch, the researcher proposes that well framed photos of residents be hung here. These photos will serve to give the visitors an orientation to the residents. In addition, the photos can be juxtaposed with beautiful wall hangings to create a complete look.

The Corridor

The dominant feature on the corridor in the female hostel is the pillars. The researcher proposes the use of these pillars as art pieces to create an inviting ambience for the residents and visitors. This may be done by having large paintings, mosaics,



collages or any other forms of wall art. In addition, usable as well as aesthetic outdoor furniture must be incorporated in this space since this is where the female residents spend most of their day either chatting or helping in household chores.

Figure 63: Wall mosaic

Source: chigig.com

Another important ingredient in the corridor will be introducing plant life either by potted plants, hanging baskets or wall vases. In addition, chimes can be installed to create a therapeutic environment since wind blows gently towards the direction of this hostel.



Figure 64: Potted plants along corridor

Source: istockphoto.com



Figure 65: Hanging baskets

Source: realsimple.com

6.1.3 LIGHTING

Currently the lighting used in the rooms is fluorescent lighting for the ceiling lamps. The researcher proposes incandescent lighting in the hostel as this creates a homely



and warmer ambience. Also, soft indirect lighting will be most ideal. In the case of the male hostel where there are cubicles, the researcher proposes the installation of wall lighting as opposed to ceiling lighting so as to create individuality in the rooms.

Figure 66: Soft indirect lighting
Source: shareinterior.com

6.1.4 WINDOWS

Some of the residents are bedridden and thus they stay indoors all day. Since nature is a great healer, they should be able to have a clear view of the outdoors while they are still indoors. An ideal way of doing this would be to have windows that are lower than the beds. In addition, currently the windows in both hostels have louvers which obstruct the viewing of nature. The researcher proposes change of these windows to French windows which provide clear view of the outdoors as they have large panes. The windows should also be large so that as much natural light is able to get in to the rooms. Moreover the windows should be installed in such a way that they have large window sills so as to accommodate window seats.



Figure 67: French Windows
Source: www.wikipedia.org



Figure 68: Window Seats
Source: www.smallsworld.com

6.1.5 FLOORING

In creation of a warm and homely look in the hostels, wood flooring is the most ideal. However, cost of installation and maintenance is relatively high. In this light, the



researcher recommends vinyl planks for flooring. These are pvc tiles that look like real wood flooring, but without the hassle of frequent polishing. They are economical since they are half the cost of solid wood flooring and at least twice as durable.

Moreover, previous falling accidents on the cemented floors in the home have resulted to fracturing of the limbs to some of the residents. These floors will go a long way in reducing the number of falls since they are slip resistant. In addition, since they are made of thick

pvc, they provide sufficient padding and so the impact during falls is greatly reduced.

Also floors should avoid strong patterns or changing colour as these could be misconceived as change in level thereby creating a potential tripping hazard.

6.1.7 INDOOR LANDSCAPING

Since nature is a great healer, the researcher recommends incorporation of elements of nature in the indoors. One such way would be to introduce potted plants. However, it is bad feng shui to have plants in the bedroom since they produce carbon dioxide at night. For this case the researcher recommends simulated nature views by introducing wall hangings, pictures or photographs of landscapes and other expansive nature views. These have the same healing effect as nature itself. These pictures will strategically be placed in the rooms.

Figure 69: Simulated therapeutic landscaping



Source: wallco.net

In addition, in the male hostel there is a corridor that separates the cubicles. In order to liven up the corridor, the researcher proposes that paintings, wall hangings or enlarged textured mosaics and collages be put up.

6.1.8 ACCESSIBILITY TO THE OUTDOORS

Accessibility and maneuverability is extremely vital especially in a therapeutic environment. This is because it provides the residents with the much needed independence.

As highlighted in the previous chapter, there is poor accessibility especially at the female hostel because of continuous soil erosion. The researcher recommends creation of a stepless entrance which shall be done by a combination of ramps and site grading. This is because use of ramps only tends to label the residents as too vulnerable. On the other hand, site grading offers a more natural and blended solution. This will especially assist the wheelchair users as they will be able to access the outdoors more easily.

6.2 EXHIBITION AND DISPLAY

The aesthetic expectations coupled with anthropometric needs in assisted living are often difficult to merge and the researcher recommends the following key suggestions in order to maintain residential character and imagery.

6.2.1 SIGNAGE

Currently the signage used for identification of the facilities is too institutional in appearance. Some is also dilapidated due to extreme weather conditions. For the former, the researcher recommends signage that has residential imagery as well as that which blends in as naturally as possible with the environment. Also, signage that is in brighter colours so that it is easier to see as well as be erected at the eye level. With all these considerations in mind the researcher recommends rustic wooden planks, crafted metallic pieces or painted ceramics for signage.

In addition, since the home is highly funded by donors and well wishers, the researcher recommends signage for commemoration purposes to friends of the home. This can be done using planks of wood that are erected on poles to form continuous bars.

As seen in previous pictures, the sign at the entrance is highly dilapidated due to extreme weather elements. In addition, the metallic signage erected by the city council is too institutional. For these reason, the researcher recommends a more inviting signage. This can be done by having a printed signage that includes a photo of the residents apart from the normal identification information.

6.2.2 RECEPTION AREA

This is the space where visitors to the home are received and it also serves as a boardroom. Currently it is a big empty room with one large table and a few chairs. The reception ambience can be greatly improved and for this the researcher has a few vital design proposals for exhibition and display.

Well framed large photos of residents and visitors can adorn the walls as this will give new visitors an orientation as well as historical information on the home. In addition, posters with



information about the aged can also be part of the wall decorations. Moreover, framed certificates and awards that the home has received over the years can also be hung on the walls. To break this monotony a wall hanging or two will give the reception a complete look. For display purposes, a glass cabinet would be most ideal for displaying trophies won by the home, souvenirs by the donors as well as handcrafts produced by the residents.

Figure 70: Homely reception ambience

Source: 3Dshore.com

6.2.3 ARTWORKS

Artworks displayed in the facility should create a homely environment as well as serve as a therapeutic tool. The type of artwork recommended would be one that evokes memories, stimulates positive emotions and sparks conversations. Abstract graphics and modern art should be avoided as this is not meaningful to the residents.

6.2.4 ROOM DISPLAY

In the rooms the researcher recommends that pictures, paintings or any other type of wall hanging be displayed to break the monotony of the plain walls as well serve the therapeutic needs of the residents. In addition, accessories like antiques and collectibles when used in contract furnishings add interest and variety because they have a curiosity-provoking connection to the past. For the residents, the research recommends that their rooms be designed in a way that creates space for display and storage of these antiques and special collectibles.

6.2.5 PUBLIC SPACES

The resting shed is one of the public spaces that is used by residents, staff and visitors. To create an ideal ambience for these different groups of people, the researcher recommends the display of wall hangings and artefacts. The themes of these artworks should be those that spark conversations or stimulate positive emotions.

The porch forms the main entrance in the male hostel. So as create a residential imagery and inviting ambience, the researcher recommends that photographs of the residents be displayed here. In addition, a wall masterpiece like a mosaic would be

ideal on one of the walls. The theme for the masterpiece should ideally be nature oriented.

In the case of the corridor at the female hostel, the researcher recommends the use of the wall pillars as ideal spaces for large artworks like paintings, textured walls or mosaics.

6.3 LANDSCAPE DESIGN

A core factor to be considered in assisted living is creation of a therapeutic environment which challenges residents to renew their lost abilities or build new competencies. Exterior landscapes have the potential to provide spaces for contemplation and retreat as well as places for exercise and sensory stimulation.

6.3.1 LANDSCAPING FEATURES

a. Healing Gardens

To create a therapeutic environment the researcher recommends gardens which contain plants with pungent, sweet or savory aromas which stimulate senses in a way



that is pleasant and memory provoking. Also, plants with enhanced colour and scents so as to attract birds and butterflies as this provides places to watch these mind stimulating activities. In addition, wandering gardens could be developed for dementia residents as they will symbolize spaces and places that are familiar and comfortable

Figure 71: Healing gardens
Source: Home and garden journal

Figure 72: A wheelchair user tending a raised garden



Furthermore, plants that drop leaves and fruits that could pose potentially slipping hazards should be avoided. Also, in order to accommodate residents that are on wheelchairs sweet smelling flowers and herbs can be grown on planter boxes for them to touch, smell and tend.

Source: Universal beds.com

b. Outdoor Structures

The researcher recommends more outdoor structures to be constructed so that the residents can enjoy the therapeutic outdoors. In addition, the only outdoor structure, the resting shed should be renovated. There are different types of outdoor structures that can be incorporated into the landscape.

Figure 73:Gazebo



This is a pavilion structure that is constructed in parks or gardens. A gazebo is freestanding or attached to a garden wall, roofed and it is open on all sides. It provides shade, shelter, ornamental features in a landscape and a place to rest. Gazebos are popular in warm and sunny climates.

Source: gazebosandgardens.com

Figure 74:Pergola



A pergola is a garden feature forming a shaded walk or a passageway of pillars that support cross-beams and a sturdy open lattice upon which woody vines are trained. Freestanding pergolas offer provide a sitting area that allows for breeze and sunlight but offers protection from the harsh glare of direct sunlight. They also give climbing plants a structure to grow on.

Source: fineartamenza.com



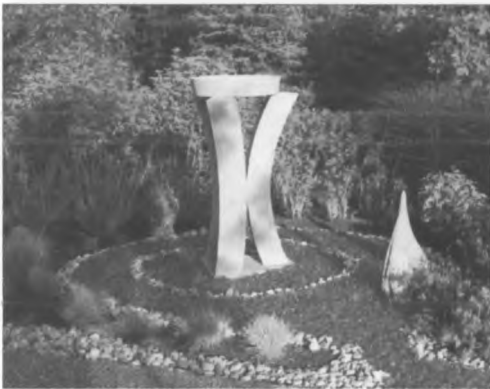
Figure 75:Trellis

A trellis is an architectural structure usually made from interwoven pieces of wood, bamboo or metal that is often made to support climbing plants. Metal trellis are not the best choice for many vining plants because as the sun beats the metal, it gets very hot and stunts the growth of many vines. For tender plants, wood is the preferred choice.

Source:gardenshed.com

c. Water Features

Figure 76: Simulated Fountain



Water has several psychological effects depending on its state of motion or rest. Vigorously moving water creates a feeling of energy while slow running water induces a feeling of calmness and rest. So as to create different moods at the site, the researcher proposes that appropriate methods will be employed.

Source: skparrot.wordpress.com

d. Rock Features

Interesting arrangement and placement of different sizes of rock boulders creates beautiful and natural outdoor features. The researcher recommends these features in the healing gardens. In addition, some of them can be placed in the playground as natural playing features.

e. Children's Playground

Since there are many children at Mji wa Huruma, the researcher proposes creation of a playground for them. The playground will encourage social interaction as well as be an interesting space for the elderly residents watch the children play. The space recommended is the area behind the staff quarters.

f. Lawns, Hedges and Flower Gardens

On the bare space in front of the male hostel the researcher recommends there be a well manicured lawn dotted with trees for shade and flower gardens. This is because this space forms the centre piece for the home since the resting shed is erected here. Hedges should also be incorporated at site since they create partitions and mark boundaries thus defining open spaces with different functions.

Figure 77: Flower garden



Source: desktopwallpaper.hd.com

Figure 78: Open Lawn



Source: greencarelandscapes.com

6.3.2 SITE GRADING

Some areas at the home are extremely steep due to continuous soil erosion thereby rendering these places inaccessible especially by those residents on wheelchairs. A classic example is especially at the space just next to the female hostel. In order to create a relatively flat landscape the researcher recommends site grading by use of retaining walls or earth beams.

In addition, gently sloping ramps can also be constructed on main entrances so as to promote independence of residents on wheelchairs. Smooth cemented paths will be most ideal for Mji wa Huruma so that wheelchair users can maneuver easily. Along these paths, railings should be erected, firstly to assist the residents while walking and also to act as a guide to the blind residents.

6.3.3 THERAPEUTIC TREES AND SHRUBS

PLANT PALLETTE

ORNAMENTAL TREES

These are trees that are aesthetically appealing due to their shape or the colours of their leaves or flowers. They are a key component in a therapeutic environment since bright colours stimulate the senses. In the case of Mji wa Huruma which is located in a cool climate, the researcher proposes the following ornamental trees.



Cassia



Nandi Flame



Bottle Brush



Cypress



Conifer



Jacaranda

TREES FOR SHADE

Since the researcher proposes that the residents should interact with the outdoors as much as possible, trees that provide shade will be much needed in site. In addition, the parking areas require large trees for shade. The following are some of the trees recommended by the researcher.



Terminalia



Delomix Regia



Eucalyptus

FLOWERS AND SHRUBS

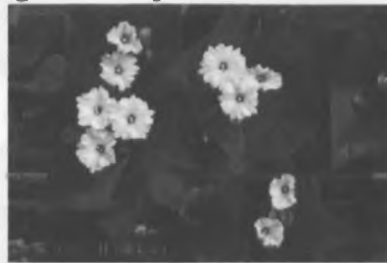
The shrubs shall be used to create hedges that assist the resident to navigate the site easily. Also, some of the shrubs like pyrostegia are creepers which can be used in trellis and pagodas to make them more attractive. Also, considering that some of the

residents are deaf and some are suffering from dementia, a colorful therapeutic garden provides a place for reflection.

In addition, some of the flowers attract insects like butterflies and these small organisms go a long way in adding the value of the therapeutic gardens. Some of the flowers and shrubs to be grown at Mji wa Huruma are shown below



Hermerocalis Fulva



Bouganvillea



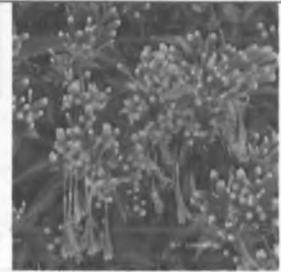
Hibiscus



Duranta



Brunfelsia Pauciflora



Pyrostegia

SCENTED SHRUBS

Many times, for us who can see the beautiful colours in our environment we forget about the blind who have to depend on other senses so as to interpret their environment. In the case of Mji wa Huruma where there are blind residents, the researcher proposes scented shrubs like lavender and rosemary which emit sweet fragrances when the wind blows.



Lavender



Rosemary



Jasmine

GROUND COVERS

In addition to having grass on the lawns, ground covers will be used to introduce the much needed variety of colours, texture and sweet scents to the environment. The researcher recommends the groundcovers below for the site.



Gazania



Lantana



Spathiphyllum



Bird of Paradise (Strelitizia)



Spider Plant



Periwinkle

GRASSES

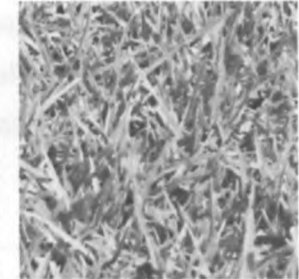
The grass to be used at site should have a carpet look in order to be accessible by the residents on wheelchairs so that they can also enjoy the outdoors. In addition, it should also be easy to maintain. For this reason, the researcher proposes the following types of grasses to be used on site



Paspalum



Fountain Grass



Kikuyu Grass

6.3.4 PHYSICAL AMENITIES

Parking

The researcher proposes that designated parking be marked and constructed for use by the staff and visitors. Appropriate shading must be provided for this parking.

Garbage Disposal

The researcher proposes that garbage at the home be sorted into biodegradable and non-biodegradable types. The latter shall be used as compost manure for the farm while the former should be burned appropriately. In order to achieving this sorting, two dustbins each should be placed in the kitchen and the hostels.

Clothes Lines

The researcher recommends that clothes lines be erected at the male hostel so that the residents can stop hanging their clothes on the hedges. These lines should be placed at close proximity of the laundry.

In case of the female hostel, the clothes lines should be tightened since they are sagging and this is a tripping hazard especially at night. Also, the lines should be arranged in neat rows as opposed to the haphazard manner that they are now in.

6.4 FURNITURE DESIGN

In the case of assisted living, there are certain crucial elements that must be considered in design of furniture. This is because the aged use furniture for a large part of their day and night. Firstly, it should be universally designed, bear residential imagery and cater for residents with extreme medical conditions like epilepsy.

6.4.1 BEDS

For coping with difficulties in old age, the researcher recommends a bed with comfort and support. Also, a bed that facilitates independence by being one that is ergonomically designed for the residents, firm enough to allow getting in and out and moving in the bed but soft enough to allow the resident to rest gently.

In addition, so as to enhance residential imagery the researcher recommends wooden beds with a big headboard as they evoke the feeling of warmth. Also, the use of soft furnishings like kilts for bedcovers, duvets and pillow cases goes a long way in creating a comfortable residential environment.

Moreover, in light of those residents suffering from epilepsy, the beds should be as low as possible to reduce risk of injury during a fall. Also, due to jerking movements during seizures, the headboard and the sides should be padded for protective purposes.

6.4.2 SEATS

Since the elderly are not always strong enough to lift their bodies out of furniture, the researcher recommends that the seats should be firm so that the elder does not sink in. In addition, seats that are easy to clean and that are high enough to allow the person to sit and stand easily. Also, the seats must have arms for holding on when getting up.

In light of those suffering from epilepsy the researcher recommends furniture with rounded edges. Also, so as to maintain residential imagery, the choice of furniture upholstery should bear homely colours, patterns and textures.

6.4.3 STORAGE FACILITIES

Due to the inadequate storage space in the hostels the researcher proposes the expansion of storage space in ways that still meet the universal design considerations. Minimalist design principles are to be followed so as to maximize the small space in the rooms but still meet all storage needs.

In addition, the researcher recommends application of universal design in the storage design so it requires low physical effort in using as well as having ergonomic dimensions.

6.4.4 OUTDOORS FURNITURE

In landscaping, permanent outdoor furniture is a major component. However, it must be carefully selected because of extreme weather conditions. In light of this, the researcher recommends that the furniture be rot resistant so as to increase its shelf life. In addition, the material used should be one that ages gracefully under the sun. Some of the materials that the researcher recommends are metal, wood or plastic.

Figure 79: Garden bench



Source: gardenseating.co.uk

Figure 80: Garden Swing Chair



Source: totalfergie.com

CONCLUSION

This has been an exciting research for me. To have interacted with the residents at Mji wa Huruma, some of them over a century old has given me great joy. To have learnt that design can be used to improve people's lives has been a fulfilling experience me. My deepest prayer is that this project shall get the necessary funding so that it can benefit the residents of Mji wa Huruma.

However, undertaking this research has also taught me some vital lessons about life. Some of the residents are residing at the home have been abandoned by their children. With no other place to go they have no choice but to live there and yet, maybe, just maybe, their children are wallowing in luxuries. God lets us choose friends but not family because he has a reason for it. Please cherish your family because it's the only one you will ever have.

AREAS OF FURTHER STUDY

The researcher proposes that further study be carried out on the subject. This is because of the scarce materials that are currently available on the subject especially in Kenya.

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APPENDICES

QUESTIONNAIRE TO THE MANAGEMENT

Thank you for taking time to fill in this questionnaire. It is for a research being carried out by a Design student at the University of Nairobi. The information given will be used by the researcher for academic purposes only

- 1. Please give a brief history of Mji wa Huruma indicating when it was began, who was the founder and what was their motivation in beginning the home?
.....
.....
.....
- 2. Who currently manages the home? Also, who are the major stakeholders and donors?
.....
.....
.....
- 3. What are the current facilities available at the home and what function do they serve?
.....
.....
.....
- 4. Please give a brief description of the residents at the home (their number, gender, ages, previous occupations and their hobbies)
.....
.....
.....
- 5. Please give a brief description of the staff (Their number, gender and job description)
.....
.....
.....
- 6. Please give a brief description of the program of activities at the home.
.....
.....
.....

QUESTIONNAIRE TO THE RESIDENT NURSE

Thank you for taking time to fill in this questionnaire. It is for a research being carried out by a Design student at the University of Nairobi. The information given will be used by the researcher for academic purposes only

- 1. Please give a brief medical history about all the residents.
.....
.....
.....
.....
- 2. How many residents are suffering from a chronic illness that needs a specialized attention? What form of specialized attention?
.....
.....
.....
- 3. How many residents are suffering from a disability? What type of disability?
.....
.....
.....
- 4. Is the living environment at Mji wa Huruma ideal for residents with disabilities or those with chronic medical conditions?
.....
.....
.....
- 5. If the answer to the above question is no, what improvements can be made to the home to improve it?
.....
.....
.....

GUIDED INTERVIEW TO THE RESIDENTS

Name:.....

Age:.....

Date:

1. What was your previous occupation?

.....
.....

2. What are your hobbies?

.....
.....

3. Do you normally practice your hobbies at Mji wa Huruma?

.....
.....

4. What restrictions do you normally face in the built environment at Mji wa Huruma?

.....
.....

5. What improvements would you like to see made in the built environment at Mji wa Huruma?

.....
.....
.....

CITY COUNCIL OF NAIROBI



SHAURI KWA UAMINIFU

SOCIAL SERVICES AND HOUSING DEPARTMENT

M E M O

FROM: PRINCIPAL ADMINISTRATIVE OFFICER

TO : SENIOR FAMILY WELFARE OFFICER

REF : ST.17/415/SM/dnm

DATE : 3RD FEBRUARY, 2011

RE: ATTACHMENT - BEATRICE WAMBUI MURAGU (B05 - 0479 - 07)

The above mentioned intern will be deployed in your Section for a period of 3 months.

She requests to be attached at Mji Wa Huruma, as her major is Interior Design.

Please assign her duties to practice and exercise her skills. Find a copy of her attachment letter.

Your cooperation will be appreciated.

S. K. KITHAKA

FOR: PRINCIPAL ADMINISTRATIVE OFFICER

CITY COUNCIL OF NAIROBI



CITY PLANNING DEPARTMENT

MEMO

TO : DIRECTOR SOCIAL SERVICES AND HOUSING

FROM : CHIEF ADMINISTRATIVE OFFICER (CP)

REF : CPD/ADMIN/0890/RMM/bs

DATE : 31ST JANUARY, 2011

RE : RESEARCH – BEATRICE WAMBUI MURAGU (B05-0479-07)

Reference is hereby made to the above named student of University of Nairobi.

The Human Resources Management Department has offered her a research opportunity on Interior Design at Mji wa Huruma.

Kindly give the necessary assistance to the student.

Note that the student is undertaking a Planning course but the research paper is on your facility, Mji wa Huruma.

Copy of the research offer is attached for your easy of reference.

R. M. MUEMA
Ag:CHIEF ADMINISTRATIVE OFFICER

Cc. DCP
DDCP

① PAO
pleased
W
2/2/2011 DSSH

CITY COUNCIL OF NAIROBI



TOWN CLERK
TELEGRAM: "MUNICIPALITY" NAIROBI
TELEPHONE: 224282

Website: www.citycouncilofnairobi.go.ke
EXT 2351

CITY HALL
P. O. BOX 30075
NAIROBI
KENYA

HUMAN RESOURCES MANAGEMENT DEPARTMENT

Ref: HRM/ -2/Vol III/496/2011

Date: 19/11/2011

Branch: Human Resources Management

Nairobi University

P.O. Box 30171

Nairobi

RE: RESEARCH

Reference is hereby made to your research letter dated 11/11/2011 on the above subject.

The City Council of Nairobi has approved your request subject to the following:-

1. The period of research will be three (3) months with effect from February 2011 to JUNE 2011.
2. You will be attached to the CITY PLANNING DEPT.
3. You are expected to adhere to the rules and regulations pertaining to your research.
4. That during your study there will be no cost devolving on the Council.
5. That you undertake to indemnify the Council against any claim that may arise from your research.
6. You are expected to be decently dressed at all times.
7. You are required to submit a copy of the final research document within 1 (one) weeks/month after completion

By a copy of this letter City Planning is /are requested to accord you /or you the necessary assistance

Please report to the Chief Administrative Officer CITY PLANNING DEPT for your research.

TSALA H.B
TSALA H.B

FOR: DIRECTOR - HUMAN RESOURCES MANAGEMENT DEPARTMENT.



UNIVERSITY OF NAIROBI
SCHOOL OF THE ARTS AND DESIGN

*P.O.Box 30197
Nairobi, Kenya
Tel. 2724524/56
Telegram Varsity*

14th January 2011

The Director
Mji wa Huruma

Through Human Resource Management Department
City Council of Nairobi
P.O.Box 30075
Nairobi

Dear Sir/Madam,

RE: B05/0479/2007-BEATRICE WAMBUI MURAGU

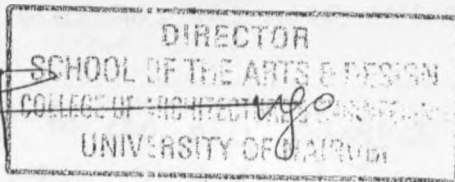
The above mentioned is a fourth year student of the University of Nairobi, School of the Arts & Design. She is studying for a Bachelor of Arts Degree in Design (Interior Design).

As part of the course work project, the students are expected to conduct a research and collect sample materials, take photographs and interviews towards the attainment of the objectives of this project.

The purpose of this letter is therefore to request you to kindly accord her the opportunity to undertake this exercise and to assure you that this work will be used purely for scholarly purposes.

Thanking you in advance for your co-operation.

Yours sincerely,



Dr. W.H. Onyango
Director
School of The Arts and Design

Beatrice Wambui Muragu,
School of the Arts and Design,
University of Nairobi.
14th January 2010.

To,
The Director,
Human Resource Management Department,
City Council of Nairobi.
P.O BOX 30075, Nairobi.

Dear Sir/Madam,

RE: REQUEST TO USE NJI WA THURUMA FOR MY PROJECT PROPOSAL

I hope this mail finds you well. My name is Wambui Muragu, a 4th year interior design student at University of Nairobi. Currently I am writing my project proposal on the impact of Interior Design on specific environments.

I have always had an interest for the aged and to this effect I would like to use my Interior Design skills to propose a refurbishment/improvement of Nji wa Thuruma home for the aged. Interior Design entails landscaping, furniture design, interior architecture, exhibition and display.

To be able to do my project successfully, I am required to gather relevant data, take measurement of spaces, take photographs and interview a few members of staff. I hope that you shall assist me accordingly by granting me permission to carry out my research.

Enclosed, is a copy of my student ID and an authentic letter from school.

SOCIAL SERVICES AND HOUSING DEPARTMENT
FAMILY WELFARE SECTION

MJI WA HURUMA (HOME FOR THE AGED)

Back Ground Information.

Mji wa Huruma Home for the aged was founded soon after Kenya attained its independence by the then Mayor of Nairobi His Worship Mr. Charles Rubia. This was in a single room in Bahati Estate in Eastlands. He had a heart for the elderly beggars and less fortunate, hence brought them together and the Council took care of them.

The home was then relocated to its present land that was initially owned by the white settlers before independence, who used it as a club house. After independence the white settlers moved to Zimbabwe and Mr. Rubia requested that they donate the land to the Council which they did. The elderly people were moved to the present land to particularly take care as the population grew fast.

His worship realized that most of the elderly persons were left homeless and poor with no one to take care, and they spent much of their time in the struggle for independence.

Situational Analysis

The problem of older persons in Kenya continues to persist arising from the following factors:-

- Hard economic times
- Irresponsible parenthood that has a negative effect at old age
- Lack of planning for retirement
- Erosion of our cultural values/traditions
- Natural calamities
- Extended families ties are not embraced hence disadvantaged elderly persons are left to fend for themselves.
- There are more male disadvantages elderly persons than the female

Criteria for Admission

Our residents are drawn from poor backgrounds and with no known attached relatives

Must be referred with a committal document by either:-

- City Council Social Workers
- Provincial Administration
- Recognized NGO's
- Hospitals, churches

And offered the following services

- Counseling and guidance
- Provision of basic needs
- Medical care all provided by the organization
- Integration back to families & whenever identified, spiritual nourishment

Once admitted the able and strong old persons are involved in the following activities:-

- Put into groups for experience sharing.
- Daily chores of the home e.g.
- Feeding the cows
- Cleaning the compound
- Preparation of food for cooking
- Handcraft
- In door games e.g. draughts

Expected Outcome

The project is expected to have the following outcome:-

- Give an opportunity for the old persons who are energetic to involve in more physical work.
- Cost reduction – Part of the proceeds will be utilized in the home hence supplement councils supply:-
- Self sustainability – part of the farm, zero grazing and poultry produce will be put into revolving funds

- Improve nutrition hence boost the old persons health.
- Enable the home have an emergency kitty for medical care and day to day running of the centre.

Projects

The home is currently engaged in a project in partnership with an N.G.O. (New Dawn Kenya) in farming and zero grazing, the proceeds are used in the home to supplement the Councils supply.

The home however ~~intends to engage~~ intends to engage in intensive farming, zero grazing and poultry keeping projects fully owned by the Home for sustainability. This will be made possible in partnership with, co-operative companies, NGOS and well-wishers to fully utilize the farm.

The projects are intended to offer a comprehensive package of workable solution for some of the major challenges experienced.

Challenges

this include:-

- Lack of a vehicle
- Expansion of already existing structures to ~~later~~ ^{Cater} for the fast growing population of elderly persons in need of our services.
- Construction of more staff houses
- Modern kitchen

Partners and friends of the Home

The home has continued to partner with various friends who offer spiritual, and other services to the elderly.

- P.C.E.A Evergreen Church
- Evergreen
- Ridgeways Baptist Church
- All Saints Cathedral
- SAI foundation
- New Dawn Kenya
- U.S.I.D

POSTERS

Grandparents: The unsung heroes and heroines of our times!



Provide older carers with economic support, in the form of social pension or cash transfer, to help meet the costs of care and to compensate for the time taken away from income earning opportunities.



European Union
Printed with the support of the EU



HelpAge Kenya
P.O. Box 24339-00100 Nairobi, Kenya
Tel: 27309475, Fax: 27309497
Email: helpagekenya@helpagekenya.org
Website: www.helpagekenya.org

HelpAge International

HelpAge International,
Africa Regional Development Centre,
P.O. Box 12122, 00102 Nairobi, Kenya
Tel: 254-20-4844205, 4105997, 4059107
Fax: 254-20-4844812, Website: www.helpage.org

**WAZEE WAMEACHWA NJE
KATIKA KUPAMBANA NA UKIMWI**

Swala la kitaifa la Ukimwi linafaa lizingatie mahitaji ya wazee waliogathiriwa na ukimwi wa Uki.



P.O. Box 34339-00100 Nairobi, Kenya
Tel: 27309475 • Nairobi: 27309497
Bamba: 0111-254364849 • www.helpagekenya.org
Email: helpagekenya@helpagekenya.org

Wahabari: Kupata Fursa katika miongo ya pili kushika JDC yagathirika na NAOC pamoja na ANACO Ceterorum

Older Persons Have a Right to Accurate Information to Protect Themselves and Those Under Their Care Against HIV and AIDS



P.O. Box 34339-00100 Nairobi, Kenya, Tel: +254 - 20 - 27309475, Fax: +254 - 20 - 27309497
Mobile: +254 720 837 263, Email: helpagekenya@helpagekenya.org, Website: www.helpagekenya.org

“Universal Access Implies:



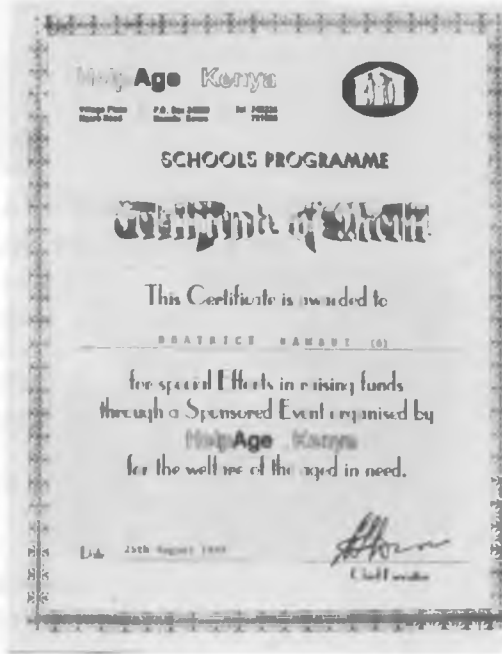
Accessing HIV & AIDS Prevention, Treatment and Care Services to Older Persons”



Call Centre, Phase 1 House No. 48, P.O. Box 34339-00100 Nairobi, Kenya
Tel: +254 - 20 - 27309475, Fax: +254 - 20 - 27309497
Mobile: +254 720 837 263, Email: helpagekenya@helpagekenya.org
Website: www.helpagekenya.org



HELPAge KENYA CERTIFICATES





PREVENTING HIV/AIDS AND ALLEVIATING ITS IMPACT IN MULTIGENERATIONAL HOUSEHOLDS.

The 5-year programme is funded by the BIG Lottery Fund (UK) through HelpAge International (HAI) and the HAI-Africa Regional Development Centre (HAI-ARDC). The programme is implemented by HelpAge Kenya in collaboration with two local FBOs (CCS Mangu HIV/AIDS Integrated Programme and Integrated AIDS Programme Thika).



- I. Mainstreaming Ageing into HIV/AIDS Responses
- II. HIV/AIDS data disaggregation by gender and age to include Older Persons aged 50 years).
- III. Preventing HIV in Older Persons through peer education
- IV. Supporting Multi-generational Household through economic empowerment.



THE PEER EDUCATION PROGRAM

The project is aimed at equipping Older Persons' with skills that will allow them to provide support to their peers in relation to increasing awareness of HIV/AIDS, accessing VCT and ART services, rights and entitlements, and coping with the psychosocial impact of HIV/AIDS.

This is achieved through the training and induction of 150 Older Persons as peer educators every year. Each Peer Educator provides accompaniment on HIV prevention to five Older Persons.

The trained peer educators also engage in advocacy for increased support from community organizations, NGOs/CBOs and government service providers for Older Persons to access healthcare and HIV/AIDS services, increased VCT access and ART uptake.



Investing in Older Persons

HelpAge Kenya

Investing in Older Persons



“An older person is defined as someone over 60 years of age” (UN 2008)”

**HelpAge
Kenya**

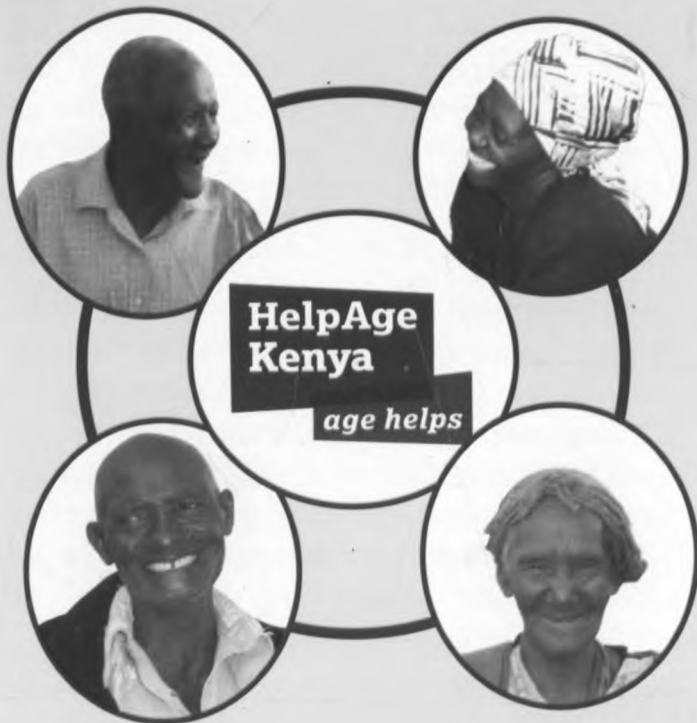
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Investing in Older Persons

“An Older Person is defined as someone
over 60 years of age” (UN 2008)”



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