

WINTER OF LIFE LIVING

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Architecture degree

by

N.Hiranya (3621030)



**DEPARTMENT OF ARCHITECTURE
SCHOOL OF BUILDING AND ENVIRONMENT**

SATHYABAMA

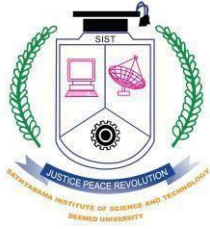
INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with Grade "A" by NAAC

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119

APRIL - 2021



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with "A" grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119
www.sathyabama.ac.in



DEPARTMENT OF ARCHITECTURE

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of N.Hiranya (3621030) who carried out the project entitled "**WINTER OF LIFE LIVING**" under our supervision from January 2021 to May 2021.

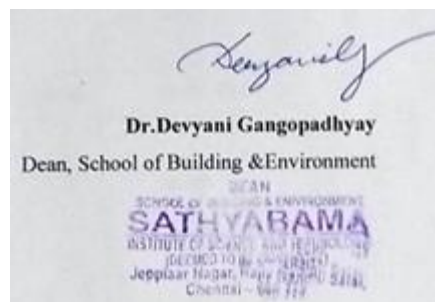
Internal Guide

(Name in Capital letters
with Signature)

External Guide (if Applicable)

(Name in Capital letters
with signature)

Head of the Department (Name in Capital letters with Seal & Signature)



Submitted for Viva voce Examination held on _____

Internal Examiner
(Name in Capital letters
with Signature)

External Examiner
(Name in Capital letters
with signature)

DECLARATION

I N.Hiranya hereby declare that the Project Report entitled Winter of Life Living done by me under the guidance of Dr. /Prof. / Mr. /Ms. Ar.Swetha_(Internal) and _____
_____(External) at Satyabhama Institute of Science and technology is submitted in partial fulfillment of the requirements for the award of Bachelor of Architecture degree.

DATE:

PLACE:

SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of SATHYABAMA for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. Devyani Gangopadhyay**, Dean, School of Building and environment and **Dr.Suresh Kuppusami**, Design Chair Dept. of Architecture for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Project Guide Ar. Swetha for her valuable guidance, suggestions and constant encouragement which paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the Department of Architecture who were helpful in many ways for the completion of the project.

I also thank my family and friends for their constant support in the completion of this thesis.

ABSTRACT

“Old age can be a time when the reasons for living seem uncertain. Prospects for future fulfilment, even enjoyment, seem remote, not just on the basis of how older people view their condition, but also from dominant social ideas about the inevitability of future decline.”

From ancient times, the elderly have always found a revered place in the families where all live together. With changing times, the joint families are replaced by nuclear families and the current generation of old people do not want to be dependent on their family members.

Most financially independent senior citizens will relocate from a family home to a retirement village as the pressures of daily activities become difficult to achieve without help. The concept behind old age homes are to cater for the physiological and psychological needs of the elderly. To provide good living environments to the old people, creating a friendly and family-like atmosphere where they can share their joys, sorrows and live happily to make the space more comfortable for the users. Retirement villages offer security to the residents, generally as walled off estates, paroled by security guards.

It is all about increasing the living quality of people in it through various design strategies. With age the elderly start facing various psychological ailments like dementia, clinical depression, diminishing senses etc. Designing the spaces elderly should help them to cope up with these ailments. Designing on the basis of factors like the spatial organization, sensory experience, sense of place, and the nature surrounding the elderly help in shaping up a perfect home for them.. With age, the elderly face various physiological ailments like muscular skeletal problems, respiratory problems etc. due to which it is difficult to continue with the normal life. Certain design strategies can help the elderly to cope up with physiological problems they face

LIST OF FIGURES

Figure number	Figure Title	Page No.
Figure 1.1	All about retirement life	2
Figure 1.2	Demographics of older people	3
Figure 2.1	Issues faced by elders	5
Figure 2.2	Benefits of healing environment	8
Figure 2.3	Natural lighting	9
Figure 2.4	Welcoming entrance	9
Figure 2.5	Open interaction space	10
Figure 2.6	Access to nature	10
Figure 2.7	Water garden	11
Figure 2.8	Fire Pit	11
Figure 2.9	Views and vistas	12
Figure 2.10	Easy way finding	12
Figure 2.11	Different color foliage	14
Figure 2.12	Giant wind chimes	14
Figure 2.13	Barrier free garden	15
Figure 2.14	Balcony Lawn	18

Figure 2.15	Community Garden	18
-------------	------------------	----

LIST OF PLATES

Plate number	Plate Title	Page No.
Plate 3.1	Parkside Retirement homes	20
Plate 3.2	Parkside Retirement homes	21
Plate 3.3	Parkside Retirement homes	22
Plate 3.4	MetLife Gulf Rise Retirement homes	23
Plate 3.5	MetLife Gulf Rise Retirement homes	24
Plate 3.6	Santa Maria Geriatric Centre	24
Plate 3.7	Santa Maria Geriatric Centre	25
Plate 3.8	Retirement & Nursing home, Wilder Kaiser	26
Plate 3.9	Retirement & Nursing home, Wilder Kaiser	27
Plate 4.1	Site Analysis	34
Plate 4.2	Site Analysis	35
Plate 4.3	Site Analysis	36
Plate 4.4	Site Analysis	37

TABLE OF CONTENTS

Abstract	i
List of Figures	i
List of Plates	iii
CHAPTER 1 – INTRODUCTION	1
1.1 Need for Study	1
1.2 Aim	2
1.3 Objective	2
1.4 Scope	3
CHAPTER 2 – LITERATURE STUDY	4
2.1 Health problems in old age	4
2.1.1 Common diseases in old age	4
2.1.2 Issues faced by aging seniors	4
2.2 Types of Retirement homes	5
2.2.1 Aging in place	5
2.2.2 Age Restricted communities	6
2.2.3 Assisted Living	6
2.2.4 Nursing homes	6
2.2.5 Respite care	6
2.2.6 Retirement village	6

2.2.7	Hospice	6
2.2.8	Continuing care retirement communities	7
2.2.9	Co-housing	7
2.2.10	Home sharing	7
2.2.11	Moving abroad	7
2.3	Healing environment	7
2.3.1	Goal of healing architecture	8
2.3.2	Benefits of healing architecture	8
2.3.3	Welcoming entrance	9
2.2.4	Qualitative day lighting	9
2.2.5	Human comfort	9
2.3.6	Privacy	10
2.3.7	Proximity of spaces	10
2.3.8	Open spaces	10
2.3.9	Access to nature	10

2.3.10	Elements of healing	11
2.3.11	Views and vistas	12
2.3.12	Easy wayfinding	12
2.3.13	Creating positive distraction	12
2.3.14	Chromo therapy	13
2.4	Sensory garden	13
2.4.1	Sense of sight	14
2.4.2	Sense of sound	14
2.4.3	Sense of touch	14
2.4.4	Sense of smell	15
2.4.5	Sense of taste	15
2.5	Common types of therapy for seniors	15
2.5.1	Geriatric physical therapy	15
2.5.2	Orthopedic therapy	16
2.5.3	Cardiopulmonary therapy	16
2.5.4	Neurological therapy	16

2.5.5	Occupational therapy	16
2.5.6	Cognitive behavioral therapy	16
2.6	Connection with nature	17
2.6.1	Nature architecture continuum	17
2.6.2	Windows, doors and views	17
2.6.3	Fresh air	17
2.6.4	Outdoor places for meditation	17
2.6.5	Balconies and patios	18
CHAPTER 3 - LITERATURE CASE STUDY		19
CHAPTER 4 - STANDARDS, SITE ANALYSIS & ARCHITECTURAL PROGRAM		28
4.1	Standards	28
4.2	Area Requirements	31
4.3	Site Analysis	34
CHAPTER 5 – EVOLUTION OF DESIGN PROCESS		38

Reference

CHAPTER 1: INTRODUCTION

Elder Friendly communities are residential alternative for older adults that provides flexible housing options, a coordinated system of services and amenities, and a continuum of care varying health and wellness needs of residents they grow older. The emphasis of this model is to enable residents to avoid having to move-except, perhaps to another level of care within the community if their needs change and they require health care and supervision. Remaining within the community allows the residents to continue their existing relationship with a spouse and friends avoid the stress of move, and receive health care.

The includes cottage Wing units independent living) assisted living units and skilled nursing care in campus-style setting. Residents have lifetime access to the community's continuum of care.

1.1 Need for study

The lack of proper advanced facilities and maintenance of the existing structures is an issue that needs further attention and new solutions. The living space no matter the age of the user always has the ability to influence the users. In India both the share and size of elderly population is increasing over time for a country like India this may pose mounting pressure. To reap the advantage of demographic dividend the focus is mainly on the children and the youth and fulfilment of their basic needs for proper development, thereby ignoring the aged. Also, the changing family value system economic compulsions of the children neglect and abuse has caused elders to fall through the net of family care. Also this segment of people face medical and psychological problems.

From 5.6% in 1951 it is projected to rise to 12.4% of population by the year 2026 and the old-age dependency ratio has climbed from 10.9% in 1961 to 13.1% in 2001. About 65% of the aged are dependent on others for their day-to-day maintenance.

- To provide interactive spaces to enhance their emotional and social living a Promoting sense of community between residents, including clusters of residences and shared commons.
- To offer independent units, assisted living and skilled nursing care.
- To establish a flow across various spaces.
- To provide a universal design.
- To provide basic services like housekeeping and laundry.

1.4 Scope:

The elderly Indian population is one of the fastest growing in the world. At 110 million, India has the second largest global population of ageing citizens.

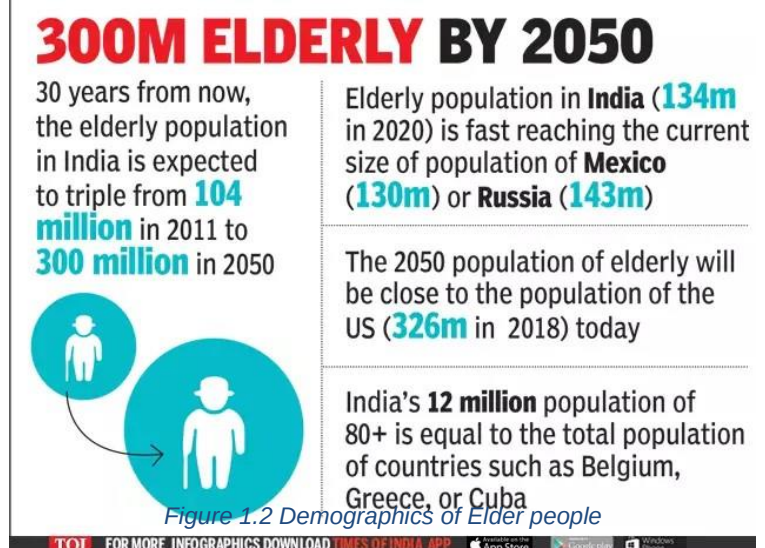
The trend started in South Indian cities first and then spiralled towards Northern states. By 2013, there were 30 assisted living projects in the country with 30 more lined up.

The senior living industry around the world is worth \$25 billion (Rs.16,410 cr), but in India it's in its nascent stages. However, the population of the elderly above 60yrs of age is expected to grow from around 76 million in 2020 to 173 million in 2025.

The industry is estimated to expand. The current demand is itself more than 3,00,000 units.

In urban environments with high building density, the little that is available for development must be utilized to meet the needs of the community, one of them being Retirement Community. Such projects increase the scope to fulfil the needs of age. An Elder-friendly Community engages in a community building process that involves assessment, planning that anticipates and prepares for the aging of its citizens, and implementation. This results in policies and actions that maximize opportunities to age successfully.

Chapter 2: LITERATURE STUDY



2.1 Health problems in old age

Health problems are supposed to be the major concern of a society as older people are more prone to suffer from health than younger age groups. It is often claimed that ageing is accompanied by multiple illnesses and physical ailments.

- The First National Sample Survey (NSS) conducted during the second half of 1980s, focussed on the elderly and indicated that
- 45%: CHRONIC, PAIN IN JOINTS
- 25%: COUGH
- 15%: BLOOD PRESSURE
- 10%: PILE, HEART DISEASE, URINARY PROBLEMS, DIABETES, CANCER

2.1.1 Common Diseases in Old Age

- Alzheimer's Disease Mental illnesses
- Arthritis, Osteoarthritis and Osteoporosis (Weak bones)
- Blood Pressure
- Heart problems and Heart attack
- Stroke
- Cancer
- Diabetes
- Kidney disease
- Control Obesity
- Prostate Enlargement
- Tuberculosis
- Eyes Diseases and hearing loss

2.1.2 Issues Faced by Aging Seniors

2.1.2.1 Transitioning to Retired Life: Research shows that most retirees have a difficult time adjusting to their retired life. This change can affect both their physical and mental health. No longer feeling productive or useful is difficult to come to terms with.

2.1.2.2 Dealing with Loneliness: Being alone can be difficult to deal with at any age, it can be quite overwhelming in the senior years. The social isolation can lead to

depression and cause them to withdraw, which can have a negative impact on their mental, emotional, and physical well-being.

2.1.2.3 Change of Environment: Seniors may find it daunting to sort through their personal belongings, physically move them from one location to another.

2.1.2.4 Loss of Old Social Connections: Another perceived problem with retired homes is loss of connection to old friends and family members.

2.1.2.5 Living Among Other Residents: Aging seniors will be among other residents in their age group as they can have interactions and make friends. Yet this perk isn't always well accepted. They may not get along with other residents or prefer to spend time alone.



Figure 2. 1 Issues faced by elders

2.2 Types of retirement place

2.2.1. Aging in place

A senior will keep living in their current home (stay in place). They can modify their current home to address any mobility issues, and they can work with home health care professionals to get assistance where needed.

2.2.2. Age-restricted communities

Age-restricted communities are housing options where residence is limited to people over a certain age. Depending on the community, residents might live in a single-family home, a condo, a townhouse or an apartment.

2.2.3. Assisted living

Assisted living facilities are housing options that provide help with instrumental activities of daily living (IADLs), like cooking and bathing, but not necessarily a lot of medical assistance. Residents usually have a private or semi-private bedroom and bathroom, but they share all other areas.

2.2.4. Nursing homes

Nursing homes are facilities that offer a high level of medical care. Like assisted living facilities, nursing homes provide all meals, transportation, housekeeping, laundry services and other help with basic activities.

2.2.5. Respite care

Respite care facilities can take many forms. In general, they are assisted living facilities or nursing homes that cater to individuals who need care for a short amount of time.

2.2.6. Retirement Village

Villages usually don't provide services directly, but act as a liaison or concierge service. Actual help comes from other able-bodied village members, younger neighbors, or youth groups doing community service. This model links neighbors and local businesses together to help each other stay in their homes as they grow older.

2.2.7. Hospice

Hospice isn't a place, it's a type of care for those with a terminal illness. People may receive hospice care in their home or in a nursing home. Hospice focuses on providing services like pain management to make the person's life as comfortable as possible.

2.2.8. Continuing-Care Retirement Communities

Continuing-care retirement communities (CCRCS) include several types of housing options for seniors. CCRCS vary, but one might have senior apartments, assisted living facilities and nursing homes all on the same property.

2.2.9. Co-housing

There are two types of co-housing: senior-only co-housing and general cohousing. In both types, residents own their home, but they share many common areas, like yards and community buildings.

2.2.10. Home sharing

Home sharing is when a homeowner gets a roommate in exchange for either rent or help with tasks around the house. For example, a retired woman might rent out her spare bedroom to another senior to reduce her expenses or to a college student in exchange for help with laundry and other housekeeping tasks.

2.2.11. Moving abroad

Seniors have a variety of senior living options outside of the United States. Most of the options available to seniors in the United States are also available to them in other countries.

2.3 Healing environment

Healing environment for healthcare centers describes a physical environment that supports patients and families through the stresses that develop as a result of illness. The physical healthcare environment i.e. physically healthy and psychologically appropriate can make a difference in patients recovery .The physical aspects (i.e. day lighting, window design, thermal conditions) should be designed without compromising the functionality of hospital building.

2.3.1 Goal of healing architecture

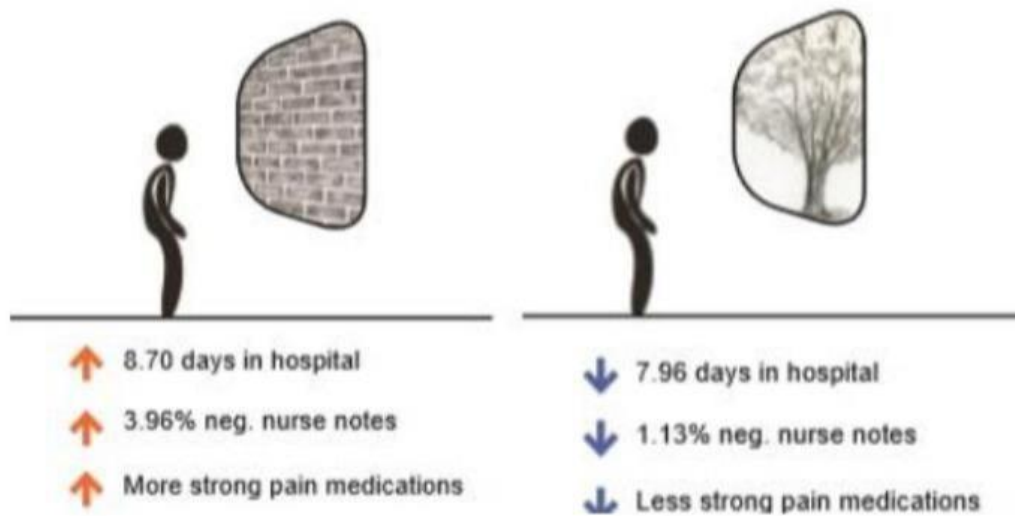


Figure 2. 2 Benefits of healing environment

The goal is to engage patients in the process of healing and recovery. As a result, spaces should be designed to reduce patient and family stress. Healing through architecture aims to:

- Eliminate environmental stresses, such as noise, lack of privacy, poor air quality and glare.
- Connect patients to nature Enhance the patient's feeling by offering options and choices eg- privacy versus socialization, type of music etc.
- Encourage opportunities for social support Inspire feelings of peace, hope, reflection and spiritual connection.

2.3.2 Benefits of healing architecture

A measurable impact on patient recovery, including shorter hospital stays, fewer infections contracted in the hospital and reduced pain.

1. Research by Department of Neuropsychiatric Science found that patients with bipolar disorder assigned to brighter, east-facing rooms with morning sunlight had hospital stays nearly four days shorter than those with westfacing rooms
2. Research by the Environmental Design Research Association, found that posters of realistic nature scenes were hung in the multipurpose lounge of patients who exhibit "aggressive and agitated behavior was 70 percent lower than when the walls were blank.

2.3.3 Welcoming entrance

Entrance is the first view of the patient which depicts the environment inside. To generate a good impression, it should be alluring. It should be easy to supervise and should have controlled flow of traffic. It could be shared with trees or canopies, well landscaped with trees, plants and water body.

2.3.4 Qualitative day lighting

The research shows that the exposure to sunlight gives better health outcomes. To optimize the quantity of light, design of openings, different materials e.g. tinted glass and building orientation, colors in the interior, visual comfort plays an important role. The light should not create undesirable glare.

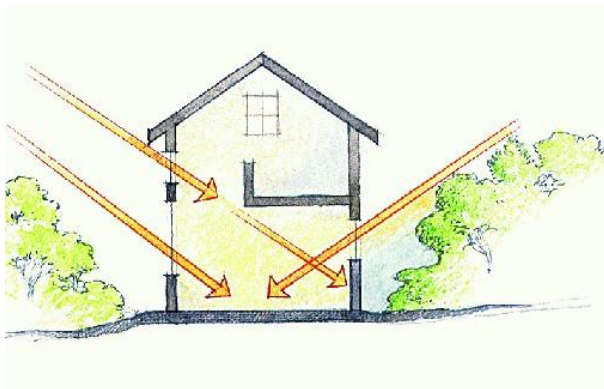


Figure 2. 3 Natural Lighting



Figure 2. 4 Welcoming entrance

2.3.5. Human comfort

As everyone has different comfort levels, in terms of visual, thermal and acoustical comfort. Liberty of regulating temperature, opening of windows, control of light through curtains and blinds should be provided. Room should be acoustically comfortable. The ceilings could be painted in darker colors than the walls to have a restful gaze. The room light should not be direct or focus lights, it could be reflected off the walls and ceiling to provide a sense of visual release.

2.3.6. Privacy

Studies suggested that there is faster recovery rate in single bedded wards .They offer more privacy and dignity, hence they are more preferable as compared to

multiple bed shared wards. Spaces should respect the privacy of the occupant. There should be a degree of liberty to the patient to decide the level of interaction with the world.

2.3.7. Proximity of spaces

All the interactive spaces such as gathering spaces and activity rooms should be close to wards, and centralized to create involvement and participation. It should be beneficial to all. There should not be long corridors. There should be good internal connections between spaces so that it will not lead to fatigue.

2.3.8. Open spaces

Open and free environment fastens the recovery rate. If a person is isolated, concealed and restricted, it is injurious for his health. Wards on one side and landscapes on the other side make spaces beautiful. Openness provides aliveness in the healing space large window, open window, windows with deep sill sized, shaped and positioned according to views gives more sense of freedom.



Figure 2. 5 Open interaction space



Figure 2. 6 Access to nature

2.3.9. Access to Nature

Nature has therapeutic abilities. Access to landscape to occupants offers a feeling of liberty and seclusion. Contact and access to nature increases the recovery rate and decreases the stress, blood pressure and maintains normal heart rates. Building should be placed and shaped so that it will create outdoor space in relationship to landscape, climate and place.

2.3.10 Elements of healing

Together the 5 elements, in varying degrees, constitute the essence of every living being. Each of the elements represents a different kind of energy and impacts in different ways. Each element, too, has a specific universal healing capability.

2.3.9.1 Water

Water calms the mind and body down and reduces stress. They also make people feel good. Water has always been associated with healing. In Ayurveda water bodies around the living space are considered crucial for balancing the body and restoring physical harmony.

2.3.9.2 Fire

Maintain balance in temperature of your home Return to your natural circadian rhythms, natural sleep cycle. This all affects the harmonizing of energy, mood and immunity. Fire is especially healing when there's pain, dullness, or loss of spirit in our life.



Figure 2. 7 Water garden



Figure 2. 8 Fire pit

2.3.9.3 Air

Fresh air is good for your digestive system. Improves blood pressure and heart rate. Strengthens immune system and cleans lungs. The more oxygen you will breathe which will increase the amount of serotonin (the happy hormone) inhaled.

2.3.9.4 Earth

The earth acts as an antioxidant. Exposure to green space reduces the risk of some diseases and ailments including Type 2 diabetes. High blood pressure cardiovascular disease and premature death. Walking barefoot on grass, sand, water will help in transferring positive ions to the earth.

2.3.11. Views and vistas

All the spaces should have views and vistas of nature from maximum spaces of the health care center. Openness and views make the rooms spacious. Calming and interesting and stimulating views decrease the blood pressure level. The quality of outside view depends highly on the site selection, building orientation, wards layout, bed positions and windows design. Translucent windows provide better view

2.3.12. Easy way finding

Difficulty in wayfinding may lead to stress and anxiety. It should have easy way finding by use of different art, colors, textures, materials and signage for ease of patients, their family and relatives. Graphics can be used on walls and windows to give each space an identity so that it will support way-finding. There should be short travel distances between destinations.



Figure 2. 9 Views and Vistas



Figure 2. 10 Easy Wayfinding

2.3.13. Creating positive distraction

Integration of art in architecture through art strategies, mural paintings, sculptures, illustrations on wall, sketches mounted on walls, demonstration of artwork divert the attention to the beautiful side of life from the pain and suffering. Involvement of the patient in painting and artwork can also make the patient forget his problems. Books, literature, wall pieces, music, yoga, colors, meditation, prayer and aroma also have the power to heal. Various types of sensory experiences aquarium or water feature, massage, acupuncture, guided imagery and visualization can boost the immune system and develop coping skill.

2.3.14. Chromotherapy

Color can be used to help balance a person physically, mentally, emotionally, or spiritually. Although there isn't much scientific research, color therapy might be beneficial to seniors, especially those living alone.

1. Blue - Relaxing and calming color lowers blood pressure, and can lead to better sleep.
2. Red & Orange - Stimulating the mind boosts energy and will power. Helps with poor appetite anemia and fatigue.
3. Green - Promotes balance within the nervous system and lower blood pressure.
4. White - Calming and believed to be purifying and cleansing as well.
5. Yellow - Helps with concentration, digestion and promotes a more joyful outlook.

2.4 Sensory Garden

An outdoor sensory garden is a self-contained garden area that is not only beautiful but is also stimulating to all the senses. Sensory gardens for the elderly provide intimate, colorful environments designed to allow visitors to soak up the sounds, smells, sights, and even tastes contained within the garden. Gardening can be uplifting, therapeutic, and just plain fun.

Benefits of sensory gardens:

- Being outdoors. Being in the fresh air provides Vitamin D, exercise and a sense of calming peace.
- Decreased unwanted behaviors. Residents who have the benefit of a sensory garden often experience decreased confusion, anxiety and agitation, resulting in a more comfortable state of well-being.
- Better sleep. Natural sunlight helps regulate the body's circadian rhythm, and physical activity helps tire residents out so they're ready for bed.
- Increased sense of self-worth. Activities in sensory gardens can easily be adapted so that seniors with dementia can use their remaining abilities to the fullest. Being able to complete tasks and see the benefits of their efforts grows self-confidence and provides purpose.
- Engaged senses through touch, sound, smell, sight and even taste.

2.4.1 Sense of sight

Planting flowers of varying colors to bring out a contrasting foliage, clipping or pruning plants such as conifers into interesting shapes. Including plants that appeal to birds and butterflies will make the environment livelier. A water feature having bright varieties of fish and water plants in ponds will also be a feast for the eyes. Using trees and plants to hide visually unappealing areas will also help in enhancing visual treat.

2.4.2 Sense of sound

Birds, wind chimes, crunching gravel, moving water and wind whistling through leaves bring a variety of sounds to the garden. Hanging wind chimes in breezy areas, installing a water feature (the sound of running water is relaxing), planting grasses that rustle against each other in the breeze and bamboo plantation would make a great sound garden. A huge tree that will welcome birds into that space.



Figure 2. 11 Different colour foliage



Figure 2. 12 Giant wind chimes

2.4.3 Sense of touch

Gardens can be full of delightful things to touch and feel. Incorporating plants with different textures such as large fleshy leaves, velvety or furry leaves, as well as feathery ferns. Varying the textures in your garden, choose hardy varieties of plants that can cope with handling, also placing delicate flowers and plants in hard-to-reach places will safeguard the plant on different types of surfaces.

2.4.4 Sense of smell

Crushing fresh herbs in your hands or walking under a flowering jasmine arch can delight the senses and trigger memories. Flowers with subtle smells, romantic, non-slip creepers or herbs such as mint, thyme or lemon grass, near path edges or seats, so that when we walk on them they release a beautiful aroma. Spacing scented flowers at intervals around your garden so that the different scents will not be confusing or overwhelming.

2.4.5 Sense of taste

Growing herbs, vegetables and fruits and using them in cooking. Building a raised bed for people with disabilities to participate in gardening. Small fruit trees in your garden can be planted or large pots can be used, if space is limited. Plant species with edible flowers such as paner rose and hibiscus, and use them in salads or desserts.



Figure 2. 13 Barrier free garden

2.5 Common types of therapy for seniors

2.5.1 Geriatric physical therapy

Geriatric physical therapy places a special emphasis on the needs of aging adults. It helps treat conditions like arthritis, osteoporosis, cancer, joint replacement and

balance disorders. Specialized programs are designed to help restore mobility, increase fitness levels and reduce overall pain.

2.5.2 Orthopedic physical therapy

Orthopedic physical therapy helps treat injuries of the musculoskeletal system, as well as help individuals recover from orthopedic surgeries. The goal is to restore function to the muscles, bones, joints, tendons and ligaments.

2.5.3 Cardiopulmonary physical therapy

When individuals have had a heart attack, or have other cardiovascular or pulmonary conditions such as Chronic Obstructive Pulmonary Disease (COPD) or pulmonary fibrosis, cardiopulmonary physical therapy can help increase endurance and functional independence.

2.5.4 Neurological physical therapy

Neurological physical therapy focuses on the brain and the body, making it slightly different from other types of physical therapy. When individuals have neurological conditions such as Alzheimer's disease, ALS, and Parkinson's disease or have suffered a brain injury, a neurological physical therapist focuses on teaching them to adapt to visual, mobility, balance and muscle loss impairments to more easily complete activities of daily living.

2.5.5 Occupational Therapy

Occupational therapists work with elderly patients and teach them exercise and rehabilitation techniques that make completing daily tasks, such as dressing, eating, and bathing, much easier. Even small improvements in these areas can make all the difference when it comes to completing an everyday task.

2.5.6 Cognitive Behavioral Therapy

Cognitive behavior therapy has much to offer the elders, offering the possibility of change in emotional state within relatively brief periods of time. It is adaptable for use with a variety of issues, and includes focusing on daily problems and their

common sense solutions. Studies indicate that these treatments are effective in addressing more common problems in late life, including depression, alcoholism, insomnia, and issues related to physical illness and disability.

2.6 Connections with nature:

2.6.1 Nature-architecture continuum

A symbiosis between building and landscape empowers patients and families, and promotes privacy. Landscaping functions as a buffering element. On the other hand landscaping obscures the hospice from public view can make it appear threatening and uninviting .A single continuum between the interior and exterior is highly desirable. Transparency-the use of structural and non-structural glass-allows for a virtually seamless relationship.

2.6.2 Windows, Doors and Views:

A significant amount of empirical research conducted in hospital settings points to the therapeutic importance of a meaningful view from the patient's bedroom. A full view of the ground plane, the layer of vegetation, and sky permits one to take in salient information, and provides improvement to the patients. In retirement community it is preferred that patients room overlook natural settings. A door with full height glass can provide more view and daylight compared to a window alone.

2.6.3 Fresh Air:

Houses are always equipped with windows that open, hospitals are equipped with windows that do not, which setting allows for greater control on the part of the patient? A door to the patio outside of the room allows for this activity to occur. So do operable windows and layered screen walls.

2.6.4 Outdoor places for meditation:

These spaces are adjunctive elements to the interior realm and should therefore be carefully considered during the site planning and design process. Arbors, sitting

alcoves, running water from a fountain or pond and surrounding seating allows patients and families the opportunity to remain near while gaining some temporal distance-perspective from life within. They can function as informal places for bereavement counselling, or as places to be alone for a few minutes.

2.6.5 Balconies and Patios:

The family member needs a place to obtain a break in the outdoors without, being forced to go the public part of community .A window seat in an alcove at the end of the hallway, a quiet patio outdoors, or a small balcony will afford a space for people to recharge without feeling in the way .Similarly, patients should have the option to make use of such spaces to the extent they are able. Provide doors from the bedroom to all for direct access to one or more outdoor rooms or to a path leading to a garden or a fountain. These spaces also give patients and others the chance to supervise children playing outdoors.



Figure 2. 14 Balcony lawn

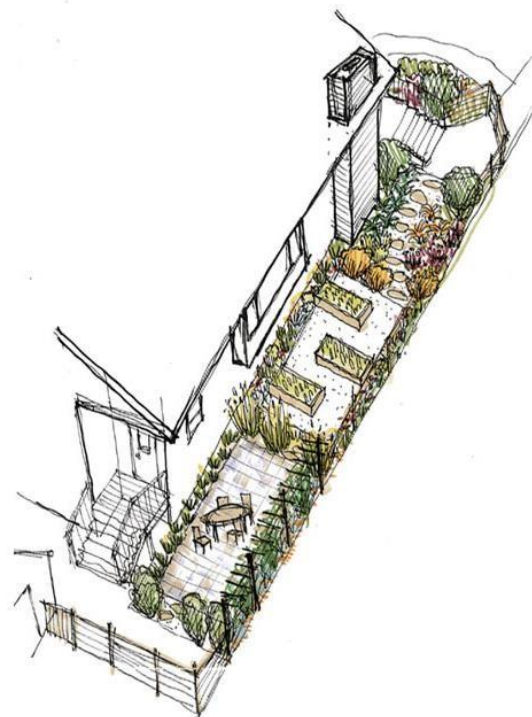


Figure 2. 15 Community garden

CHAPTER 3 : LITERATURE CASE STUDIES

Parkside Retirement Homes

Location : Devanahalli, Bangalore India
Total site area : 30,00,000 ft
Architect : Mindspace

This is a part of 130 acre integrated township located at Devanahalli. Located 3 km away from Kempegowda International Airport.



Site context:

Located 40 kms towards the north east of Bangalore.
Devanahalli is an ideal suburban that has all basic amenities but is also away from urban traffic.
Distance from Railway station - 39.6 km
Distance from Airport - 10 kms
Nearest Metro station - 39 kms
Nearest Ring road - 36.7 kms



Kempegowda Airport to the south and an existing temple are the important site features that were positively made use in the design.

As a response to this context podium level is opened up and connected to the temple with wide steps and cascading terraces at higher levels along the South side is created to view the flights take off and land.



Site Plan

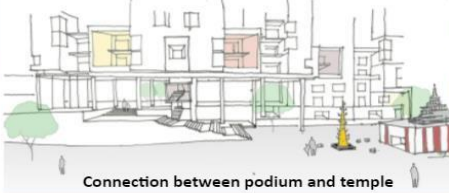
3621030 | N. HIRANYA | THESIS 2021



Activity Centric Design

The activity zones are distributed across the floor for easy access and to have a lively atmosphere and encourage interaction across the building.
Each of the floors has one activity centre which is visually connected across different levels through a central atrium with a skylight.

- MEDITATION & YOGA
- ARTS & CRAFTS
- LOUNGE
- CHESS & CARROM
- MUSIC ROOM
- SPARE ACTIVITY
- LIBRARY



Connection between podium and temple



Cascading terrace

3621030 | N. HIRANYA | THESIS 2021



Longitudinal Section



Visual connection between corridors and activity spaces

Cross Section

3621030 | N. HIRANYA | THESIS 2021

Plate 3. 1 Parkside Retirement Community

Parkside Retirement Homes



Main Entrance



Activities distributed among floors

Seating areas in the atrium to provide visual connection among levels



Stilt Level Plan

- 1 Store
- 2 Main Entry
- 3 Community centre
- 4 Kitchen
- 5 Dining
- 6 Electrical Room
- 7 Services



The facade is articulated with overlapping double height volumes accentuated with colors to visually scale down the ten floor facade.

3621030 | N. HIRANYA | THESIS 2021



- 1. Existing temple
- 2. Physiotherapy
- 3. Gym
- 4. TV Room
- 5. Lounge
- 6. Outdoor Dining
- 7. Western entry
- 8. Lobby
- 9. Mailbox room
- 10. Indoor dining
- 11. Admin block
- 12. Kitchen
- 13. Salon
- 14. Store
- 15. Eastern entry
- 16. Amphitheatre
- 17. Store room

3621030 | N. HIRANYA | THESIS 2021



An amphitheatre on the podium



Podium is open to have visual connectivity



Entry 2



Entry 1



Entry 3

3621030 | N. HIRANYA | THESIS 2021

Plate 3. 2 Parkside Retirement homes

Parkside Retirement Homes

Residential Apartments

There are 2 types of residential units (1 and 2 BHK)

1BHK - Living cum dining, master bedroom, toilet, kitchen and balcony

2BHK - Living cum dining, 2 bedrooms, 2 toilets, kitchen and balcony

Features:

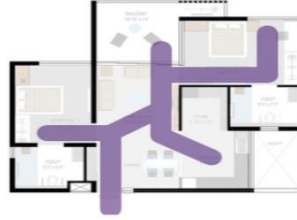
- Anti skid tiles to prevent accidental or unintended actions.
- Low threshold of balcony doors for easy wheelchair access
- Emergency pull cards that are connected to the nurse stations
- Door peepholes for wheelchair users at 43"
- No automatic features for safety purpose
- Provision of door kick plates for wheelchair users.



Furniture layout



Visual Connection

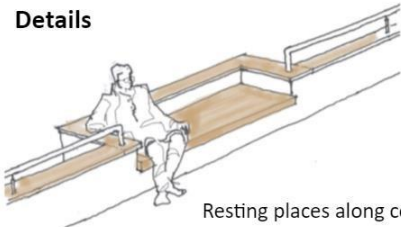


Wheelchair Movement

Two bedroom unit (Area - 1,033 sqm)

3621030 | N. HIRANYA | THESIS 2021

Details



Resting places along corridor

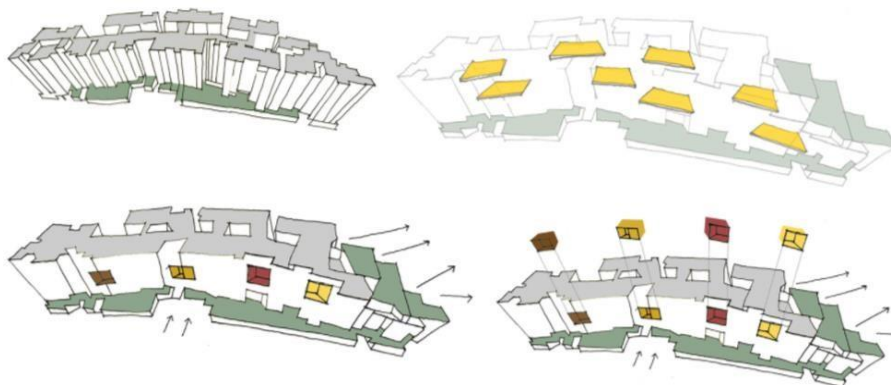


Platform at entrance



3621030 | N. HIRANYA | THESIS 2021

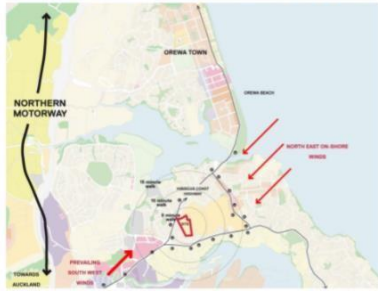
Evolution of form



3621030 | N. HIRANYA | THESIS 2021

Plate 3. 3 Parkside Retirement homes

Metlifecare Gulf Rise Retirement Homes



Location : Auckland, New Zealand
Architect : Warren and Mahoney

- A secure community is a fundamental consideration for the elderly. Gulf rise strongly opposes the stereotypical gated community approach.
- The village is designed to welcome and connect with the wider community through streets and CPTED.
- It also stresses on applying urban design principles into the design.

Design Brief:

A village that would potentially become the new benchmark for quality designed retirement villages. Strong design focus was placed on human bulk and massing, context, overall scale, diversity in residential offering and strong community engagement breaking the stereotypical norm of large overwhelming blocks onsite.



Masterplan, showing Stage 1 and future development, which includes assisted-living facilities

3621030 | N. HIRANYA | THESIS 2021



Site Plan

The village design has implemented a logic street layout street layout by integrating with the surrounding existing street network providing a clear hierarchy and character driven laneways and streets.

The streets and footpath gradient across the site have focussed on 'walkability' within minimum gradients to shared laneways

Amenities in Stage 1:

- 35 units - Single level two bedrooms villas(115 sqm to 128 sqm) attached with a garage
- Two apartment blocks
- Lobby cafe(common for both the residents and surrounding community)
- Two glass houses



Two glasshouses are for the residents to use and the garden is designed to bring back the birds and the bees. This fosters strong social engagement with village amenities, but also sees potential to bring the community through. A social pavilion built around a bird, butterfly and bee sanctuary are shared by all and fosters intergenerational engagement.

3621030 | N. HIRANYA | THESIS 2021



Single level two bedrooms villas attached with a garage.

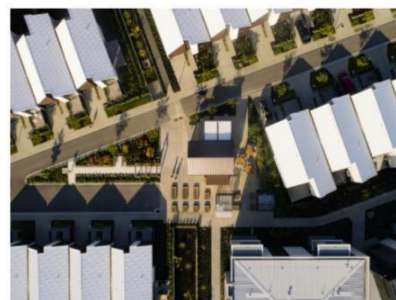


Combining a subtle blend of bronze aluminium and brick cladding .

Social Pavilion:

The centerpiece of the village, a triangular area with a central social pavilion is a bird, butterfly and bee sanctuary garden with greenhouse for the residents to plant vegetable.

Shared by all, this space aims to foster integrational engagement when their families visit.



The roof apex was maintained at 5m above the ground

3621030 | N. HIRANYA | THESIS 2021

Plate 3. 4 MetLife Gulf Rise Retirement homes

Metlifecare Gulf Rise Retirement Homes



3621030 | N. HIRANYA | THESIS 2021

Plate 3. 5 Metlife Gulf rise retirement homes

Santa Rita Geriatric Center

Location : MENORCA, [SPAIN](#)
Total site area : 1200 sqm
Architect : [Manuel Ocaña](#)

Aim and ideology: Ensure total accessibility, physical autonomy, psychological security and respect to individual privacy, facilitating access to visitors. To create a characteristic atmosphere in a vital space where spare time prevails and where residents spend the last years or months of their lives.



Focus : steer clear of any similarities with a traditional hospital. The concept revolves around a single open space, with no passages, doors, corridors or architectural barriers, and all on one floor.

3621030 | N. HIRANYA | THESIS 2021

Poly Atmospheric Circulation space:

In between the residential area and the polygonal perimeter : **open, interconnected, fluid, flat and unusual space** that accommodates at once the **different program and circulation uses**.

Function : A series of events that can stimulate the senses and ease the disorientation and spatial tedium that one can 'experience' in a geriatric center.

Circulation : Traversing a space with neither doors nor corridors, establishing paths that do not necessarily entail a single solution.



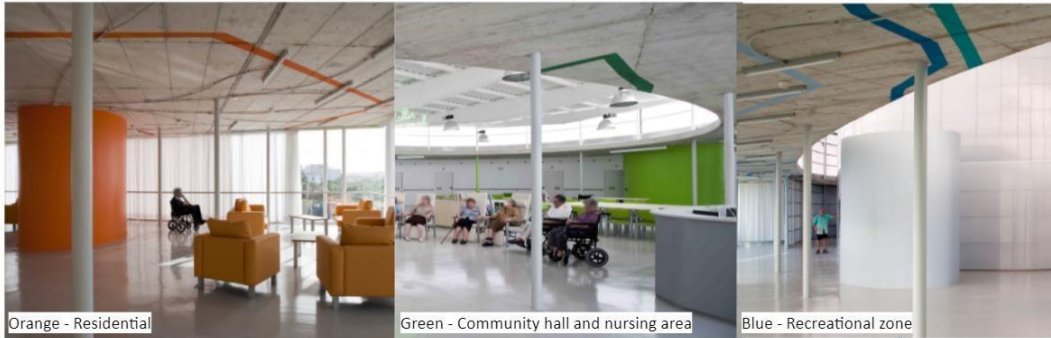
3621030 | N. HIRANYA | THESIS 2021

Plate 3. 6 Santa Rita Geriatric centre

Santa Rita Geriatric Center

3 different tones :

This allows to define three areas through the use of three ranges of colors that include the outer adapted restrooms, and that are also associated with the tones filtered by the polycarbonate surfaces.



Orange - Residential

Green - Community hall and nursing area

Blue - Recreational zone

North Side

South & West Side

The north facade strengthens the cold light through the use of blue and greenish plastics, whereas the south and west one favors warmer atmospheres using yellow plastics.

Wayfinding: This palette of changing atmospheres, of different densities and intensities of light, allow the user to decide "which way to go" and "where to stay"

3621030 | N. HIRANYA | THESIS 2021



The site is equally distributed between buildings and surrounding gardens with 6000 sqm each.



The roof – a bare slab of reinforced concrete – displays orientation lines that are the projection of the topographical surface

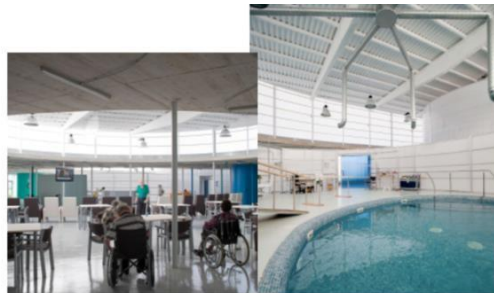


The synthetic enclosures of 2 layer cellular polycarbonate enclosure in line with its geographical orientation

3621030 | N. HIRANYA | THESIS 2021

Facilities :

- Residential unit
- Dining hall
- Counselling
- Physiotherapy
- Swimming pool
- Jacuzzi
- Lounge
- Activity room
- TV room
- Large garden
- Outdoor seating



Residential unit:

Residents rooms are positioned on a single floor around the central courtyard and can be accessed from the garden or from a collective space surrounding them. Each and every one of the rooms has two direct accesses to two different areas: to a large garden serving as a kind of lobby, and to the common areas.

3621030 | N. HIRANYA | THESIS 2021

Plate 3. 7 Santa Rita geriatric centre

Retirement and Nursing Home Wilder Kaiser

Location : VIENNA, AUSTRIA

Total site area : 5120 sqm

Architect : Dürschinger Architekten, SRAP Sedlak Rissland

- Tyrolean municipalities Ellmau, Scheffau and Söll decided to pull together to make a reality of their **new retirement and nursing home**.
- Therefore they organized an architectural competition.
- As it happened, the winning proposal came from a German team of architects.



Site :

The site was the geographical center of the three municipalities.

The new building is situated at the foothills of the "Wilder Kaiser" Mountain Range.

It is adjacent to a former residential and care home that no longer corresponds to the required standards.

3621030 | N. HIRANYA | THESIS 2021

Massing :

The building consists of two compact volumes interlocking at the central section where they form an atrium.

Three different outside spaces are created by the positioning on the plot: a public garden, a separate dementia garden and a playground for children.

Form :

Different structure enables communication and the encounter between the residents and the community.

Connection between interior and exterior spaces offer enough possibilities for contemplation and mingling.

Integration, Community and individual lifestyle do not overlap each other.



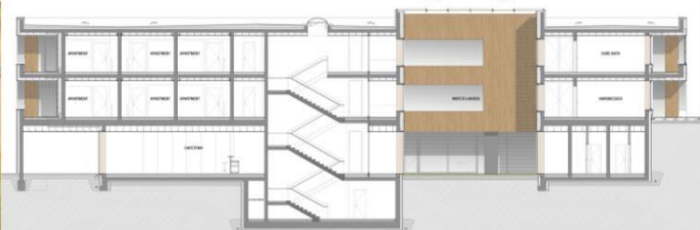
3621030 | N. HIRANYA | THESIS 2021

Exterior : Simple and clear appearance.

The main entrance of the building is marked by a crystalline Y-support made of prefab concrete.

Atrium:

The central and green atrium brings zenithal skylight inside the building. Furthermore, it enables a visual communication across floors, between the dining areas and communal areas of the different care units.



3621030 | N. HIRANYA | THESIS 2021

Plate 3. 8 Retirement and Nursing home- Wilder Kaiser

Retirement and Nursing Home Wilder Kaiser

Residential unit: These Units are spread over the two upper levels with a total of 54 apartments.

The apartments are equipped properly and designed in a modern way.

Bathrooms have transom light strips.



Interaction space: There are niches offering seating benches at the entrances to the apartments.

Little community spaces are situated all over a care group with cantilevering, roofed terraces and balconies

The spaces are orientated to the Mountain Range and the picturesque Village Centre of Scheffau.

Ground Level:

The public areas are located on ground floor level.

- Café-Lounge
- Event Hall
- Chapel
- Administrative offices
- Service rooms
- Production kitchen.
- Smoking room
- Workshop area
- Laundry
- Social room

Near the main entrance

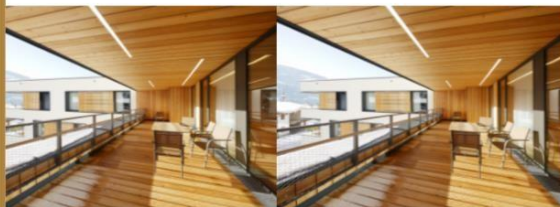
At the rear end



3621030 | N. HIRANYA | THESIS 2021

Wooden Detailings:

- They are a familiar reference to local **handcrafted traditions**.
- Inside the nursing home the warm material wood becomes an companion.
- In the entire building color coordinated surfaces provide an orientation for residents and guests.



Use : Wooden inlays of profiled larch boards **accentuate the windows.**

Wooden formwork emphasizes the facade of the **ground floor and the recessed balconies.**

The rest of the outer surface is covered by a **broom finished plaster.**



Blend in of Tradition and modernity :

But the traditional system of cut outs and palings is translated contextually and used as screen providing privacy, protecting from the sun and painting subtle shadows on the facade.

3621030 | N. HIRANYA | THESIS 2021

Plate 3. 9 Retirement and Nursing home- Wilder Kaiser

CHAPTER 4: STANDARDS, SITE ANALYSIS & ARCHITECTURAL PROGRAM

4.1 Standards

4.1.1 Average size of dwelling units

1 BHK - 40 to 60 sqmts

2 BHK - 50 - 80 sqmts

4.1.2 Indicative norms for Retirement Homes as Group Housing

Plot size (sq.mts.)	Ground Coverage (%)	FAR	Dwelling density (DUs/Acre)	Height Excluding stilts (mts.)
3000	35	2.00	150	18

4.1.3 Specifications for community facilities and open spaces

Medical Room	Community Space	Convenience Store	Total Open Spaces
Mini 15 sq./25 DUs or part thereof	2 sq. / person or 500 sq. whichever is lesser	2% of Built-up Area (BUA) or 30 sq. m whichever is lesser.	65% of Site area

4.1.4 Stairways

- Minimum width: 1350 mm. • Height of the riser < 150 mm • Width of the tread: 300mm.
- The steps shall not have abrupt (square) nosing.
- Number of risers on a flight: 12(max)
- Handrails shall be provided on both sides and shall extend 300mm on the top and bottom of each flight of steps.

4.1.5 Railing

- Railings should be installed around areas more than .40m high.
- Handrails should not obstruct the path of travel.
- Mounted between .85m and .95m above the finished floor level.
- For wheelchairs users a second hand rail .7m and .75m from the floor to be installed.

4.1.6 Ramp

- Ramp shall be finished with non-slip material to enter the building.
- Minimum width of ramp shall be 1800mm with maximum gradient 1:12.
- Length of ramp shall not exceed 9.0 meter having 800mm high handrail on both sides extending 300mm beyond top and bottom of the ramp.
- Minimum gap from the adjacent wall to the hand rail shall be 50mm.

4.1.7 Corridors

- Guiding floor materials' shall be provided or device that emits sound to guide persons with visual difficulties.
- The minimum width shall be 1500mm.
- In case there is a difference of level, slope ways shall be provided with a slope of 1:12. Handrails shall be provided for ramps/slope ways.

4.1.8 Toilet

- Minimum size: 1500 mm x 1750 mm.
- Min. clear opening of the door : 900mm (door should swing out)
- Vertical/horizontal handrails with 50mm clearance from wall
- W.C. seat: 500mm from the floor.

4.1.9 Entrance / Exit door

- Minimum & clear opening : 900mm ● Threshold: < 12mm.
- There should be no obstruction for the passage of a wheelchair user.
- Doors should be fitted with special locks that can be opened from outside

4.1.10 Lift

- Clear internal width : 1100 mm
- Clear internal depth :2000 mm
- Entrance door width 900 mm
- A hand rail : > 600mm long at 1000mm above floor level ● Lift lobby shall: 1800 mm x 2000 mm or more.
- The time of door closing : 5 seconds(min) Closing speed: < 0.25 m/ sec.
- The interior of the cage shall be provided with a device that audibly indicates the floor the cage has reached indicates that the door of the cage of entrance or exit is either open or closed.

4.1.11 Entrance Landing

- Entrance landing: 1800mm x 2000mm (min).
- Floor materials to attract the attention of visually impaired person.
- Finishes should have a non-slip surface with a texture traversable by a wheelchair.
- Krebs wherever provided should blend to a common level.

4.1.12 Signage

- Signs should be designed and located so that they are easily legible by using suitable letter size (not less than 20 mm high).
- To ensure safe walking, there should not be any protruding sign which creates obstruction in walking.
- The symbols/information should be in contrasting color and properly illuminated because people with limited vision may be able to differentiate amongst primary colors.

- International Symbol Mark for wheelchair be installed in a lift, toilet, staircase, parking areas, etc.,

4.2 Area Requirements

4.2.1 Therapy and Admin Block

Space	No. of units	Area(sqm)
Reception and waiting lobby	1	50
Chairperson	1	35
Accounts room	1	144
Record room	1	20
Pharmacy	1	35
Medical room	1	145
Geriatric Therapy	1	110

Orthopedic therapy	1	85
Cardiopulmonary therapy	1	110
Neurological therapy	1	75
Behavioral therapy	1	50
Nutritionist	1	35
Sauna and Massage		235
Nurse's resting room		30
Therapist resting room		30

4.2 Dining block

Space	No. of units	Area(sqm)
Dining Hall	1	690
Outdoor Dining	1	

Kitchen	1	135
Storage	1	75

4.3 Clubhouse

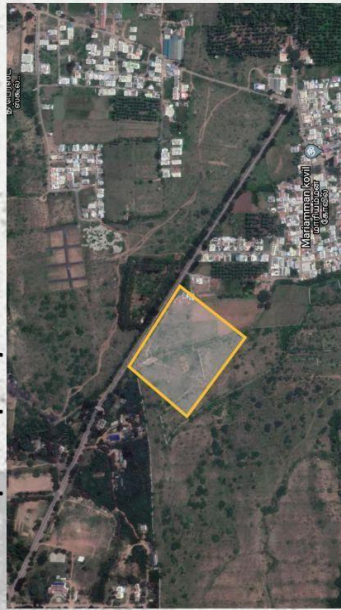
Space	No. of units	Area(sqm)
Indoor games	1	125
Activity room	1	170
Sensory stimulation room	1	140
Library	1	140
Outdoor reading area	1	110
Indoor yoga hall	1	170
Geriatric gym	1	125
Storage	1	35

4.4 Housing Module

Space	No. of units	Area(sqm)
Studio Apartments	48	35
Row Houses 1	32	45
Row Houses 2	15	55
1 BHK	6	35
2 BHK	24	45

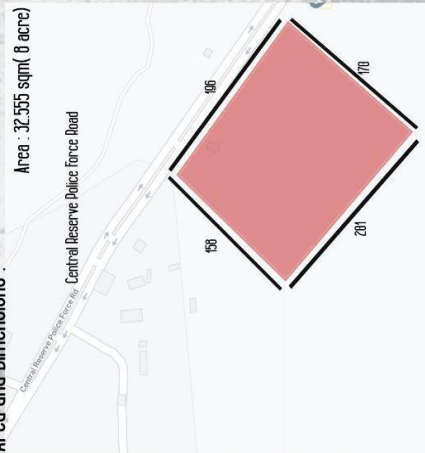
4.3 Site Analysis

Kathirnakampalayam, Coimbatore



Area and Dimensions :

Area : 32.555 sqm (8 acre)



Hospital : 2.5 km

Railway station : CBE Junction - 15 kms

Bus Stop : Narasimhanampalayam - 2 kms

Candhipuram bus stand - 14 kms

Airport: 23 kms

Coimbatore is a major city in Tamil Nadu, located in the banks of Noyyal River and surrounded by the western ghats. The city is divided into two distinctive geographic regions: the Eastern side which includes majority of the urban area of the city and the western side which has the scenic Western Ghats.

Coimbatore is one of the top 5 cities in South India listed for peaceful retirement life (Source : Business Today).

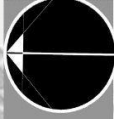
The site is located at is located in North - Western side of Coimbatore in Vadamadurai, which is on the foot hills of Kurudi hills away from the city hustle which is very vital for retired homes.

It is a calm and serene location surrounded by agriculture land and green cover.

Neighbourhood Analysis



Chronology



Winter of Life living

N.Hiranya | 3621030

Site Analysis

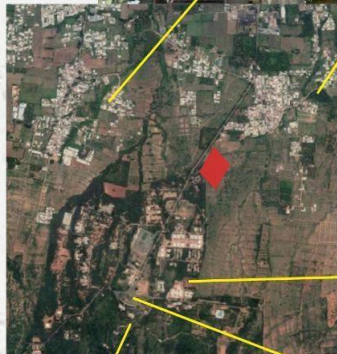
Plate 4. 1 Site Analysis

Kathirnayakampalayam, Coimbatore

Neighbourhood analysis:



Kurudi Hills



Malai Perumal Kovil

Climate data



Coimbatore has a tropical wet and dry climate, with a wet season lasting from September to November due to the north east monsoon.

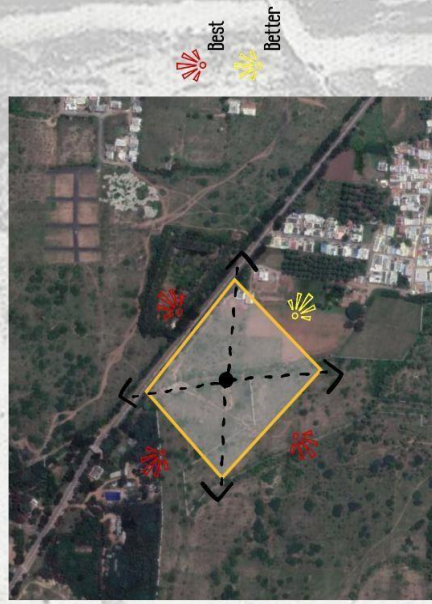
Winter of Life living

N.Hiranya | 3621030

Site Analysis

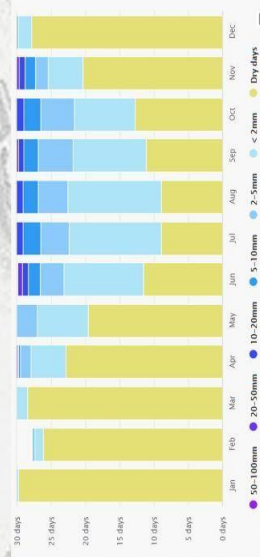
Sensory Analysis

Views to and from the site and quality of vies from each zone



The quality of views are best on the northwestern side with the Kurudi hills on the backdrop and on the north east : south west facing the agriculture lands. The area on the south east gets the second best views ..

Average Precipitation



Average Temperature



Kathirnayakampalayam, Coimbatore

Hierarchy of roads



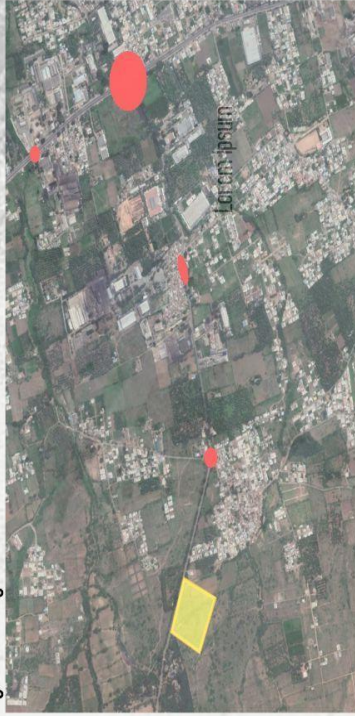
Mettupalayam road is the main road connecting to the site and Kathirnayakampalayam.

The road is 8m wide with 4m of shoulder on each side.

Site is located 1.8 km from the main road connected by the Central Police Reserve Road.

The road is 5 m wide and the same road leads to the Kurudi hills and also CPPF training college.

Major Traffic generators



The main traffic flows on the mettupalayam road.

This road is also the access to Isha Yoga centre and Doty.

The secondary traffic is the residents of Tottampatti and Marasimampalayam.

Contour



The contours are minimal inside the site.

The max level difference between the lines is 2 mts.

Slope intensity and surface drainage



The major slope on the site is the one on the eastern side and the slope on the other areas are minimal.

Vegetation



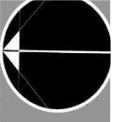
Situated in a very greeny area the site is the home to many trees. Lots of thorny bushes are also there.



Winter of Life living

N.Hiranya | 3621030

Site Analysis



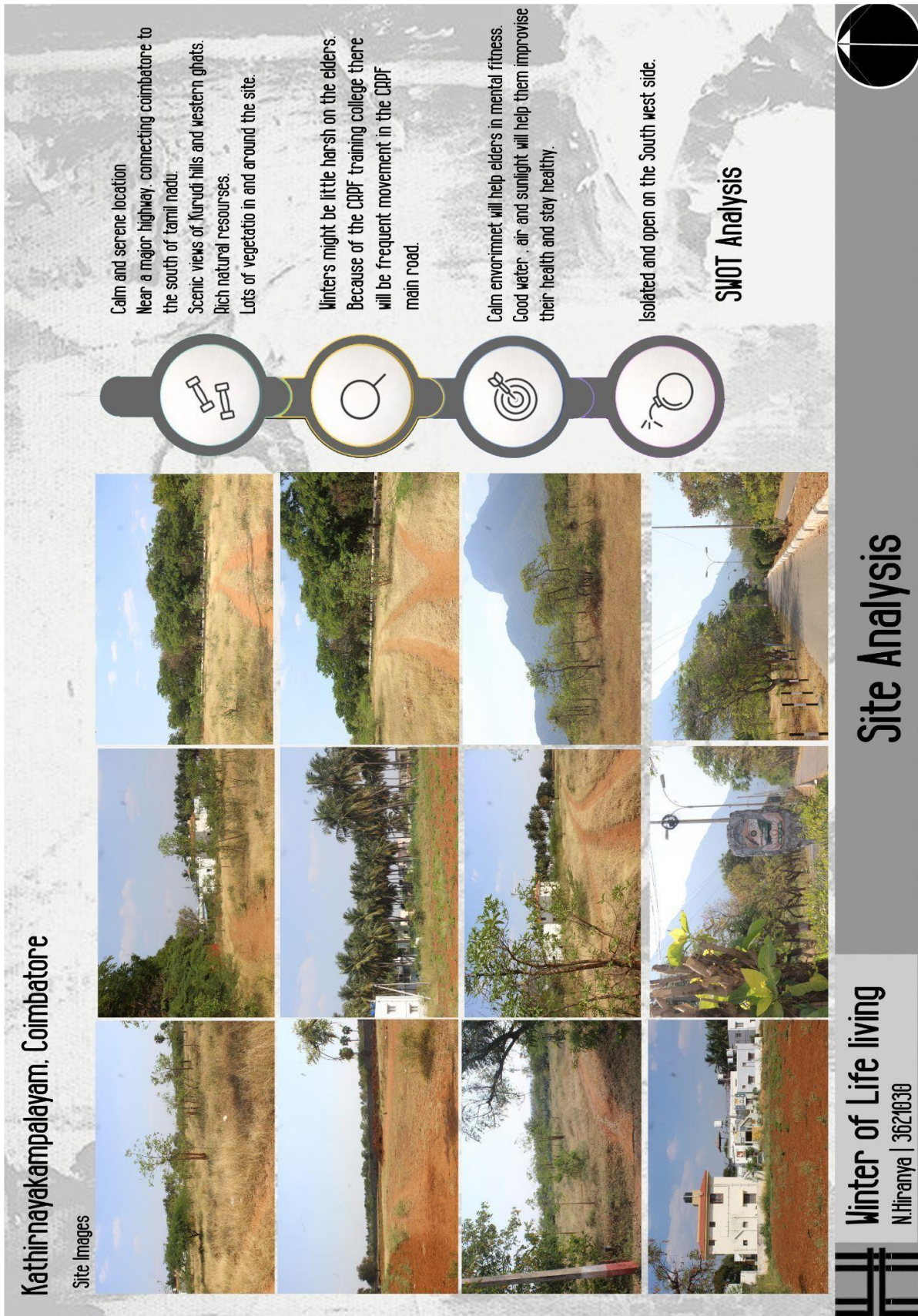
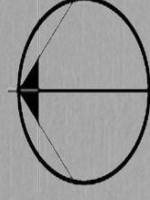


Plate 4. 4 Site Analysis

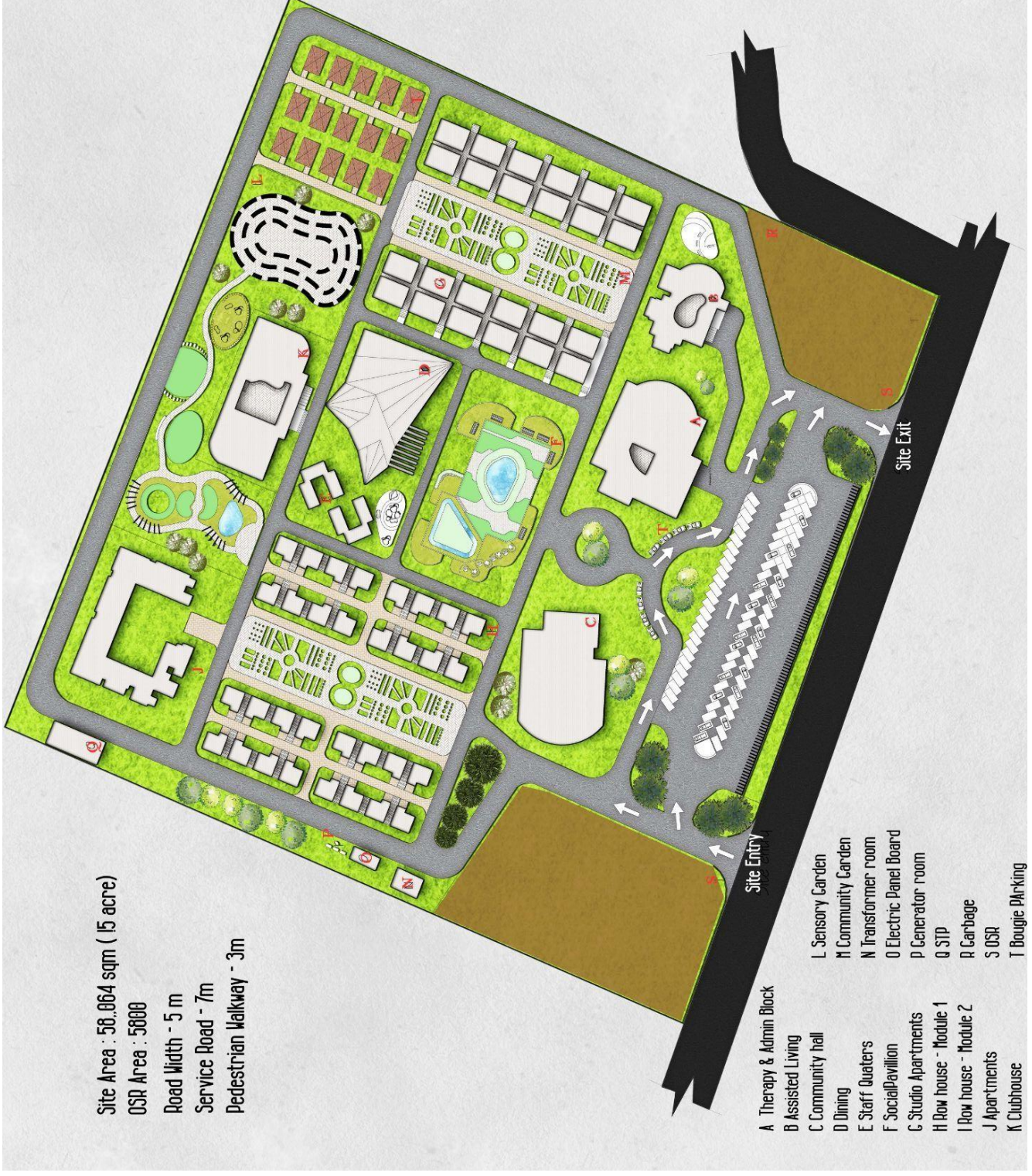
Site Area : 58,064 sqm (15 acre)
 OSR Area : 5800
 Road Width - 5 m
 Service Road - 7m
 Pedestrian Walkway - 3m

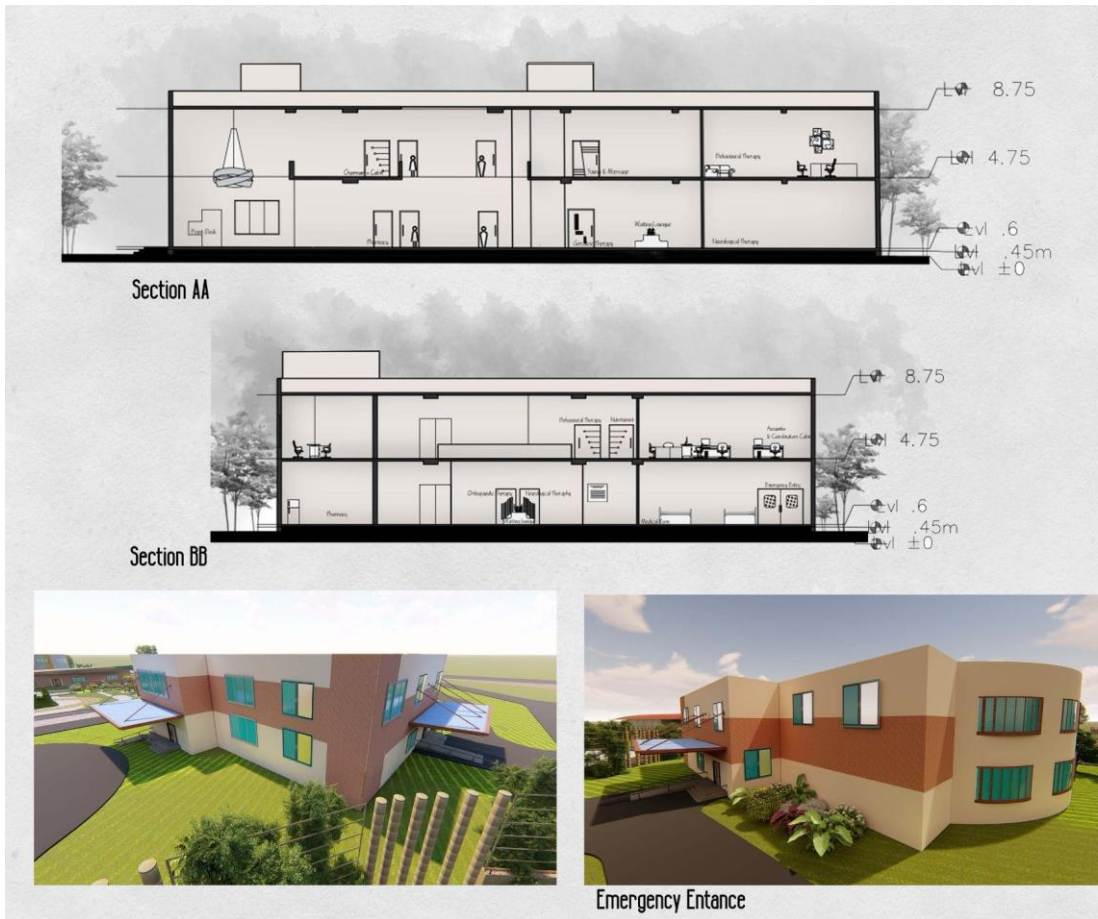
Winter of
 Life Living

Master plan



N Hiranya | 3621030
 2016- 2021
 SZIPROJ2 Thesis





3

Winter of Life Living

Master plan

All units are in m

0 5 10 15

N.Hiranya | 3621030
2016- 2021
S21PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY

2

Winter of Life Living

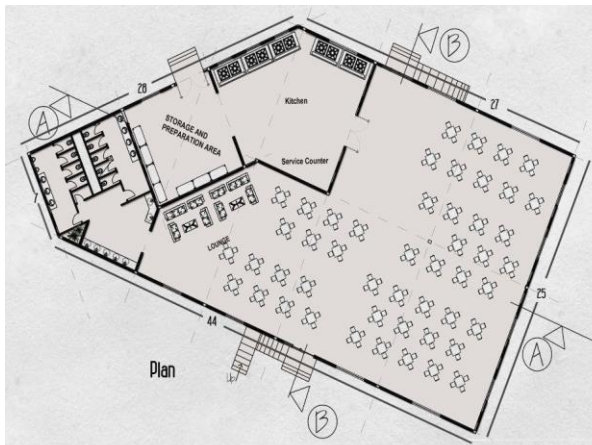
Master plan

All units are in m

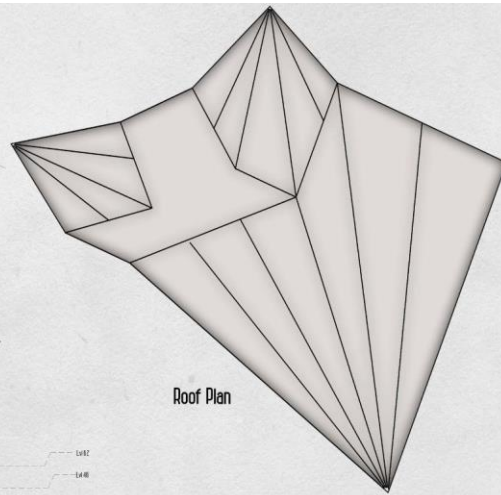
0 5 10 15

N.Hiranya | 3621030
2016- 2021
S21PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



Plan



Roof Plan



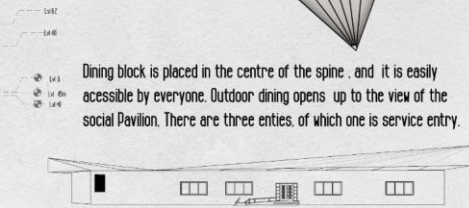
Section AA



Section BB



Rear Entrance



Front elevation



Outdoor seating view

Dining block is placed in the centre of the spine, and it is easily accessible by everyone. Outdoor dining opens up to the view of the social Pavilion. There are three entries, of which one is service entry.

1

Winter of Life Living

Dining



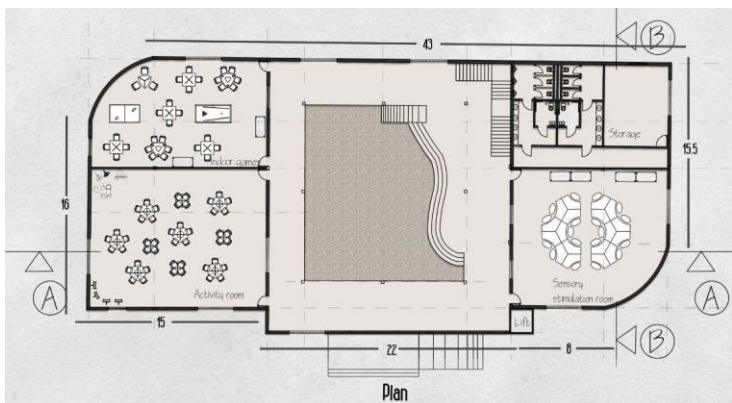
All units are in m

0 5 10 15



N.Hiranya | 3621030
2016-2021
S21PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



Plan



Outdoor activity place, which also serves as an interaction zone.



Section AA

Club house is located at the peripheral of the central spine. It has an activity room. Indoor games area and Sensory stimulation area in the ground level. There is an central courtyard that can also be used as a interaction space.

Activity room : 170 sqm
Indoor games room : 125sqm
Courtyard : 174 sqm
Sensory stimulation : 140 sqm
Storage room : 35 sqm



Elevation

The elevation holds a refreshing wall mural that also acts as an memory care art for th people with dementia and alzheimer's. With the sensory garden on the backdrop this mural elevates the look.

1

Winter of Life Living

Club House



All units are in m

0 5 10 15



N.Hiranya | 3621030
2016-2021
S21PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



1

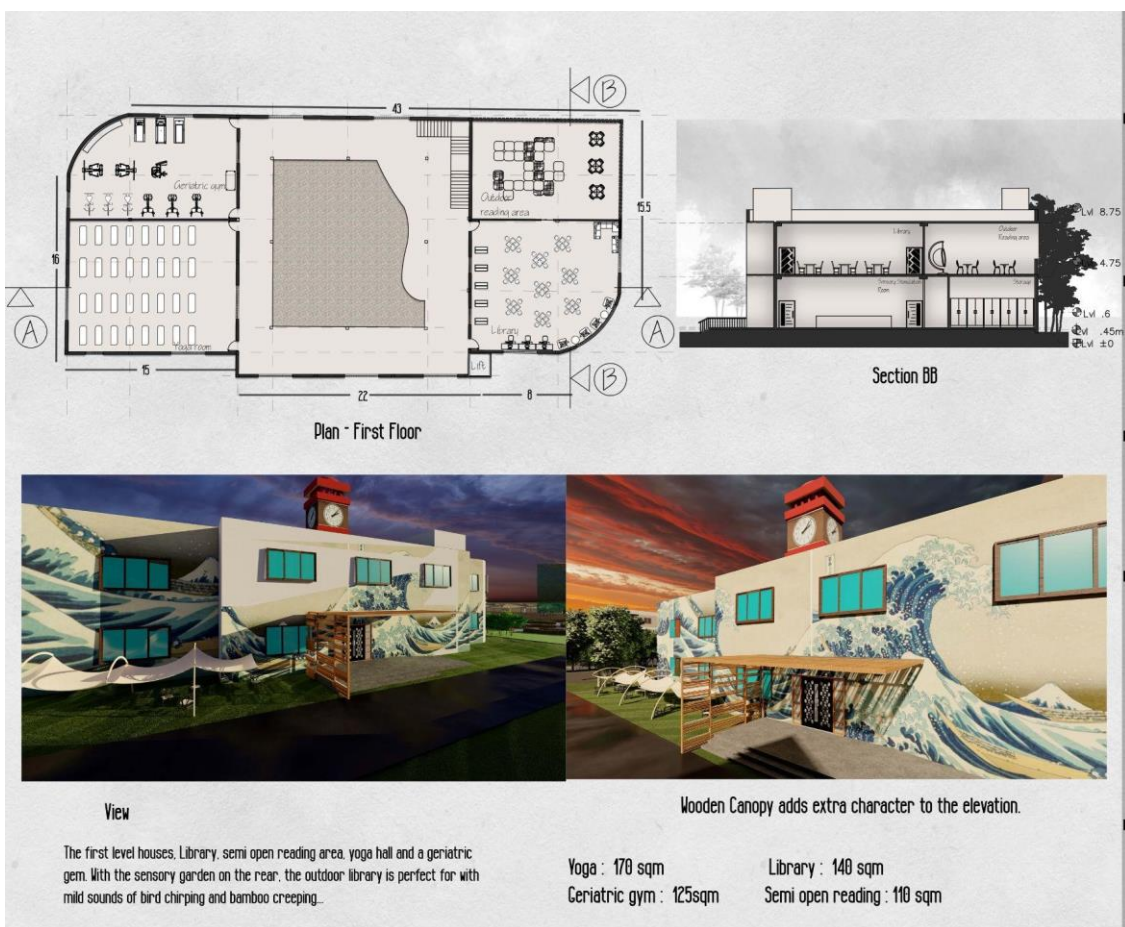
Winter of Life Living

Assisted Living

All Units are in m

N.Hiranya | 3621030
2016- 2021
SZ1PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



1

Winter of Life Living

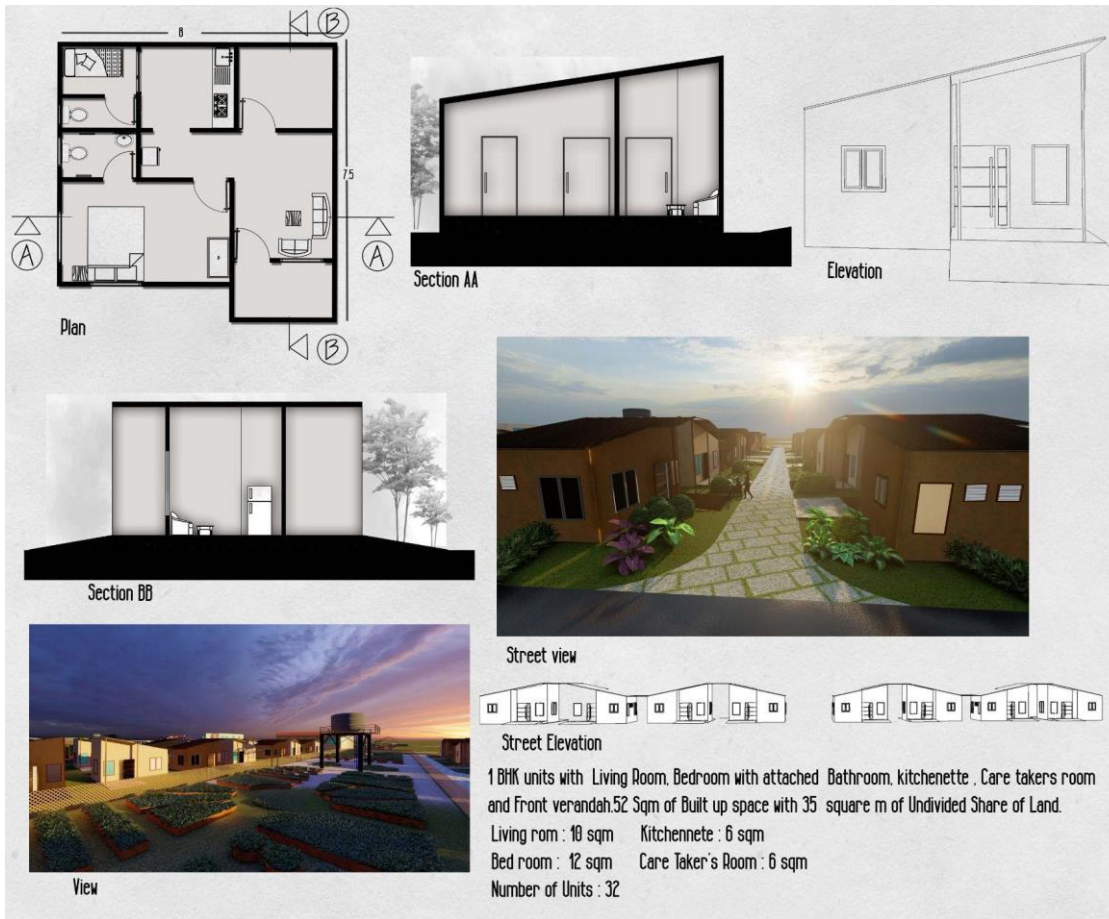
Club House

All units are in m

0 5 10 15

N.Hiranya | 3621030
2016- 2021
SZ1PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



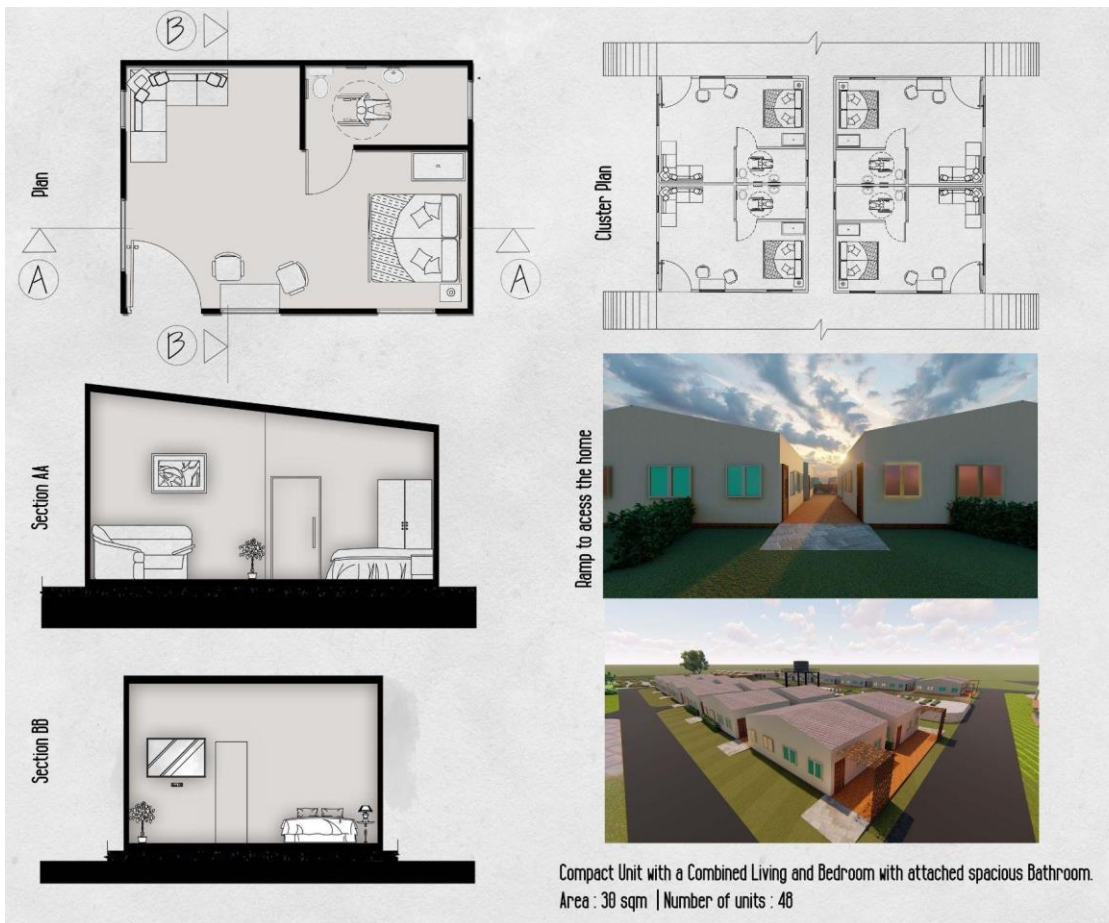
1

Winter of Life Living

Row House - Module 1

N.Hiranya | 3621030
2016- 2021
S21PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



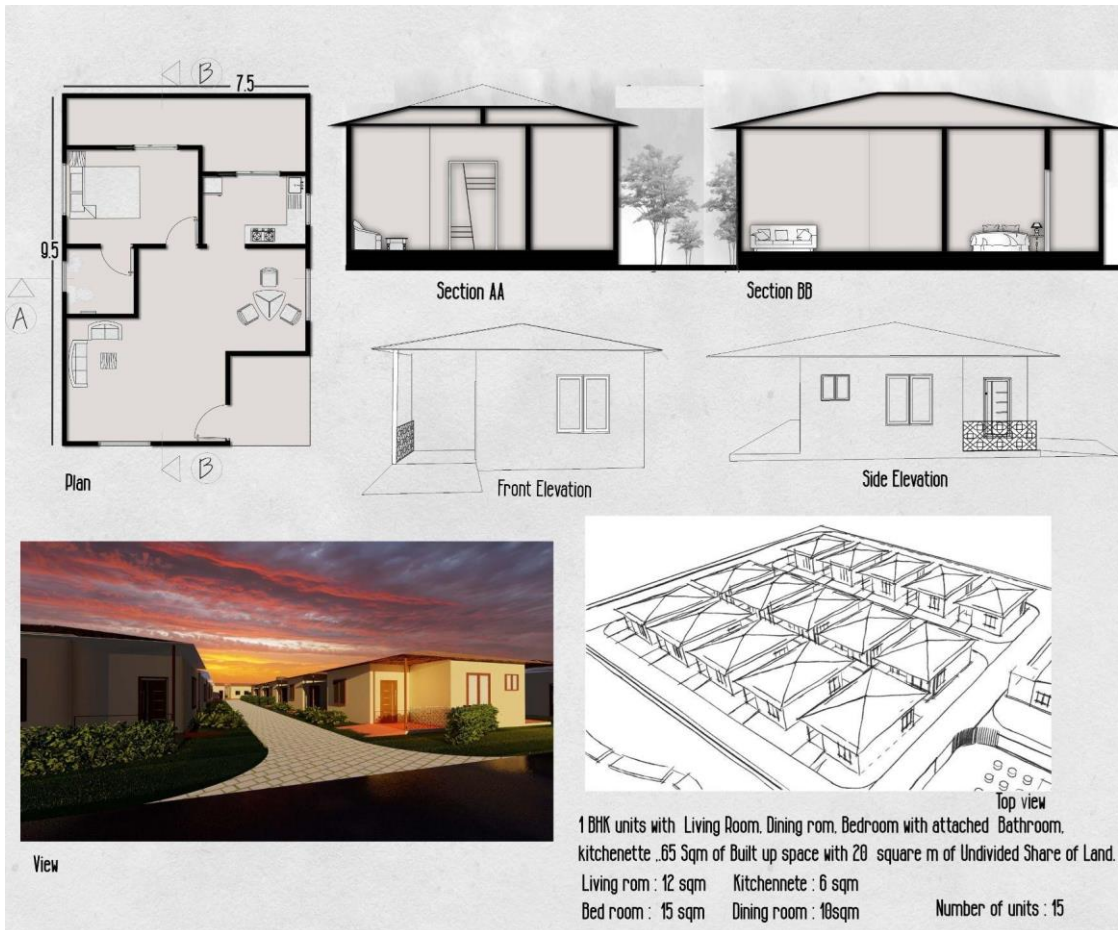
1

Winter of Life Living

Studio Unit

N.Hiranya | 3621030
2016- 2021
S21PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



1

Winter of
Life Living

Row House -
Module 2

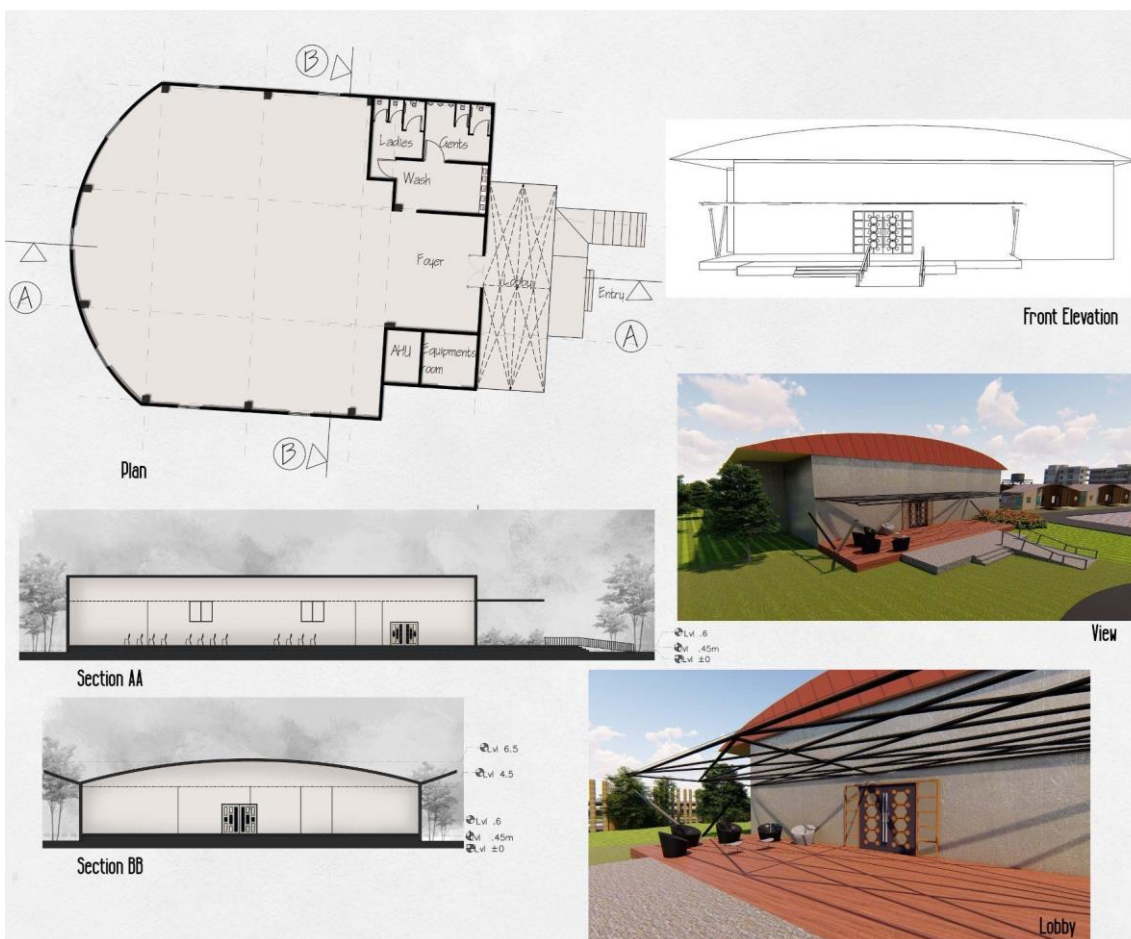


All units are in m



N.Hiranya | 3621030
2016- 2021
SZ1PROJ2 - Thesis

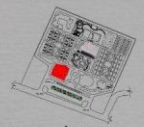
SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



1

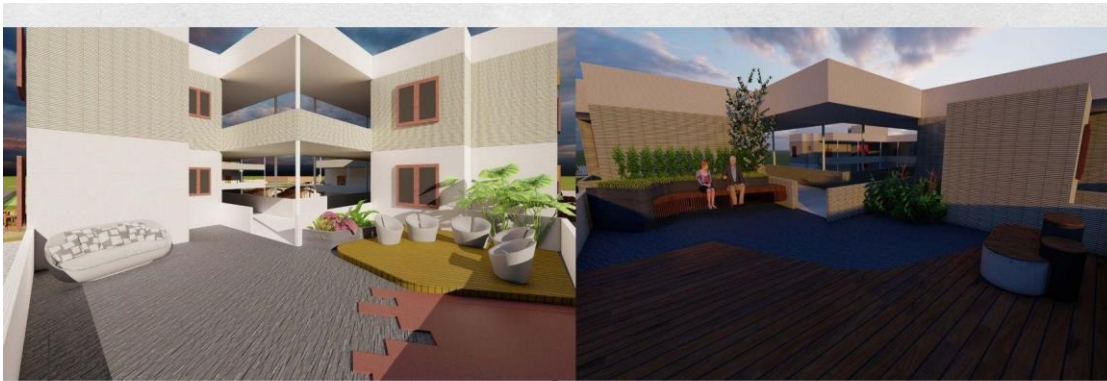
Winter of
Life Living

Community hall



N.Hiranya | 3621030
2016- 2021
SZ1PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



1

Winter of
Life Living

Apartments



All units are in m

0 5 10 15



N.Hiranya | 3621030
2016- 2021
SZ1P0J2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



Typical floor plans

2 BHK - 50 sqm

1 BHK Module - 35 sqm

Section AA

Section BB

The apartment block is a C + 3 Structure with 5 1 BHK and 3 2BHK in a floor. The houses open up to a central space that visually connects with the rest of the floors. There is one green pocket in each floor with a double height that acts as a lung space.

1

Winter of
Life Living

Apartments



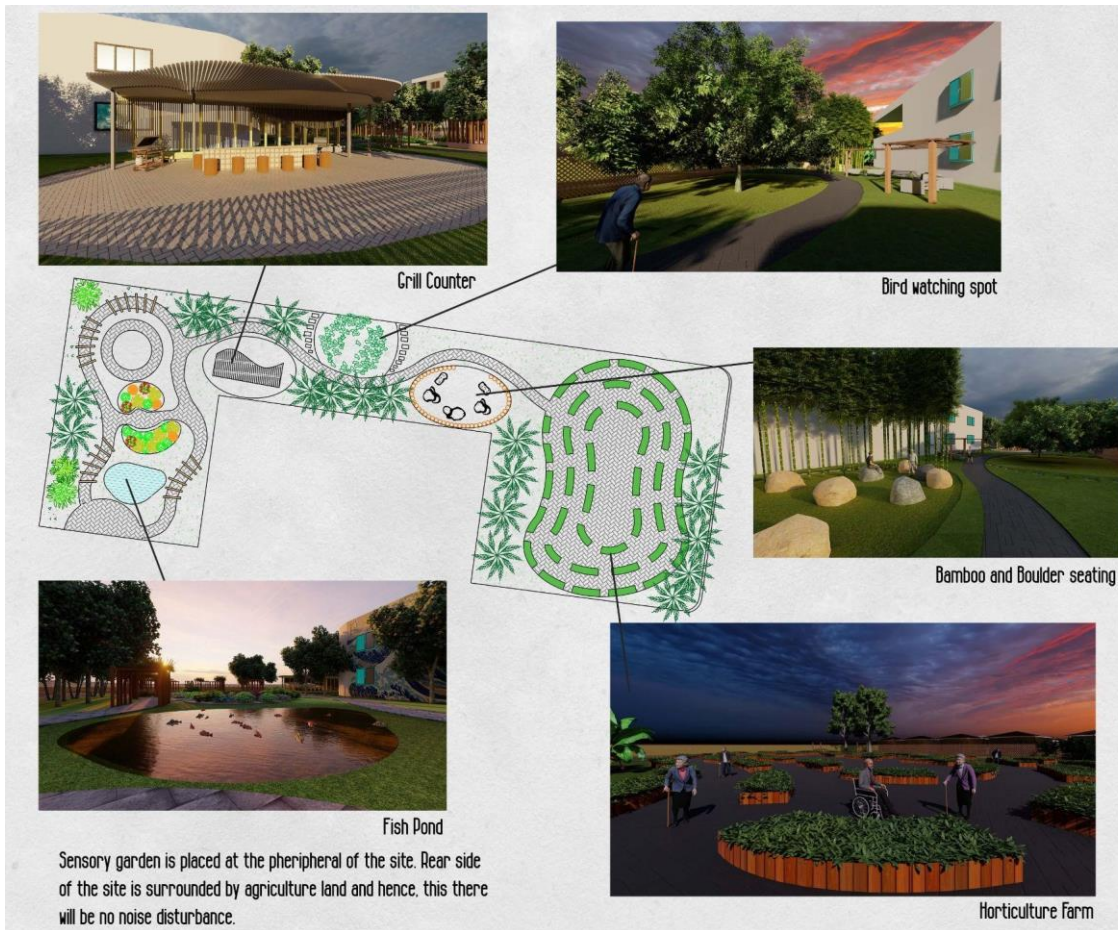
All units are in m

0 5 10 15



N.Hiranya | 3621030
2016- 2021
SZ1P0J2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



1

Winter of Life Living

Social Pavillion



N.Hiranya | 3621030
2016- 2021
S21PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



13

Winter of Life Living

Social Pavillion



N.Hiranya | 3621030
2016- 2021
S21PROJ2 - Thesis

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY



Community Garden



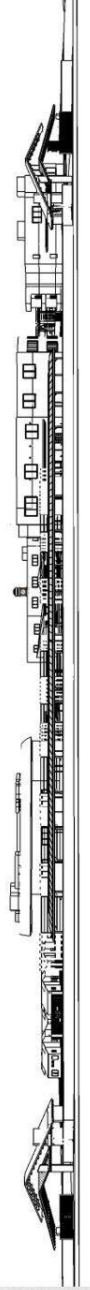
Social Pavilion



Infinity walking trail - Reflexology



Drop off zone



Front Elevation