ALZHEIMER'S

Dementia and its subtypes.

What is Alzheimers.

Disease of decline

Effect of environment on the human brain

Alzheimers and Architecture

Dementia.

Dementia is an umbrella term used to describe a variety of brain disorders, where the capability of the mind to understand and undertake complex actions have been affeced.

Types of dementia.

Alzheimer's disease.	Korskoff syndrome	levy body dementia
Vascular dementia	Huntingtons disease.	Mixed dementia.

Alzheimer's disease.

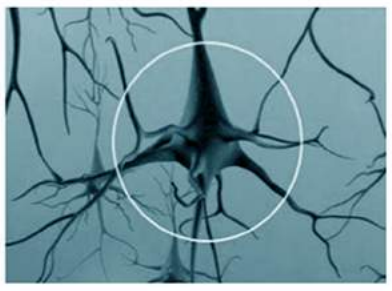
Alzheimer's disease is a progressive neurodegenerative condition that is responsible for over 80% of all dementia cases. Despite much efforts the condition's cause remains uncertain and no effective treatments exist yet.

Understanding Alzheimer's

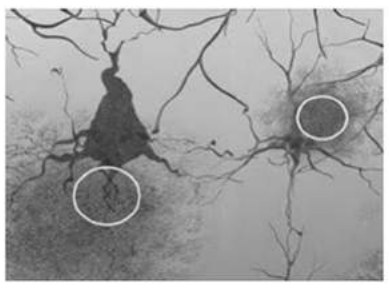
The Neuron forest The adult brain contains about 100 billion nerve nerve cells,branches connect the nerve cells at more than 100 trillion points This is termed as the neuron forest, signals travelling through this neuron forest make up our thoughts, memories and feelings.

Subtle loss of memory or changes in behaviour is the first outward sign of Alzheimers, slowly but relentlessly , cognitive decline, language, motor f unctions, and behavioural change accumulate diminishing a persons indipendence these changes are underpinned by both structural and microscopic changes in the human brain.

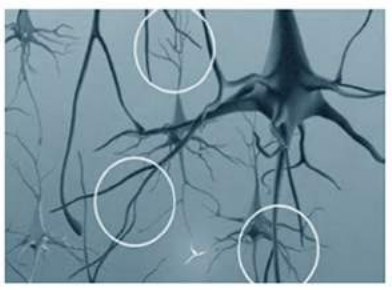
The Neuron forest.



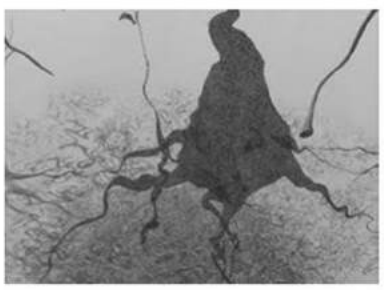
Nerve Cell



Plaques at nerve cells



Nerve Cell Connections



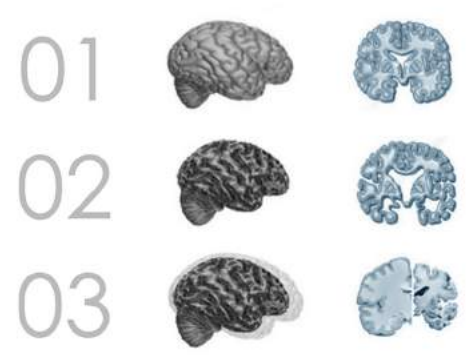
Plaques at nerve cells Connections

Dr. Alois Alzheimer was a German neuropathologist, he is credited with Identifying the first case of 'presenile dementia' in 1901 in Auguste Deter which would later be coined as Alzheimer's Disease.
Auguste Deter was the first recorded case of Alzheimer's.

Healthy Brain.

Alzheimer's affected brain

Progression throught the brain.



1967

William Uttermohlen

1996

1997

1998

1999

William Uttermohlen was a Uk based American artist who was diagnosed with Alzheimer's .
The paintings ae his self portraits over the course of 5 years showing the progress of the disease.

2000

ALZHEIMER'S

Effect on the human brain.

Understanding the human brain.

Specific regions of the brain.

- Processing smells
- Storing memories
- Thoughts and planning.
- Processing sight.
- Processing sound.
- Interpret sensations.
- Controlling movement.

These are the main three parts of the human brain.

The cerebrum fills up most of the space in the brain, various parts of the cerebrum are :

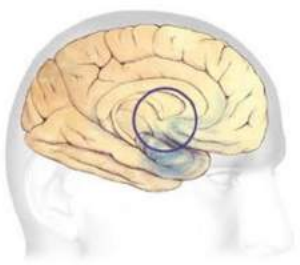
Amygdala - Regulates emotions.
Basal ganglia - planning and movement.
Hippocampus - learning new information.
Hypothalmus - regulates eating.
Nucleus accumbens - regulates motivation.
Pituitary gland - regulates growth.
Pineal gland - regulates sleep pattern.
Corpus collosum - joins 2 hemispheres.
Olfactory bulb - odour detection.

The brain stem connects the brain to the spinal cord and controls involuntury functions.
The cerebellum controls control and balance.

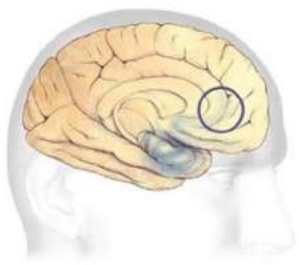
Spread of alzheimer's in the human brain in 5-8 years.

Plaque's and tangles (shown in blue) tend to spread through the cortex in a predictable pattern as alzheimer,s disease progresses.

1



Learning / memory

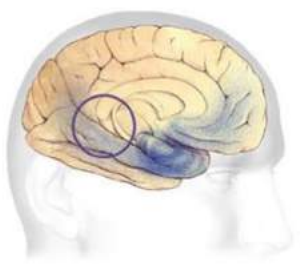


Thinking / planning

Regions affected.

Hippocampus
Basal ganglia
Pituitary

2



Speaking / planning

Sense of space/relation

Regions affected.

Frontal lobe
Occupital lobe
Temporal lobe

3

In **severe Alzheimer's**, most of the brain is seriously damaged, the brain shrinks dramaticaly due to widespread cell death, individuals lose t heir ability to recognize friends and family.

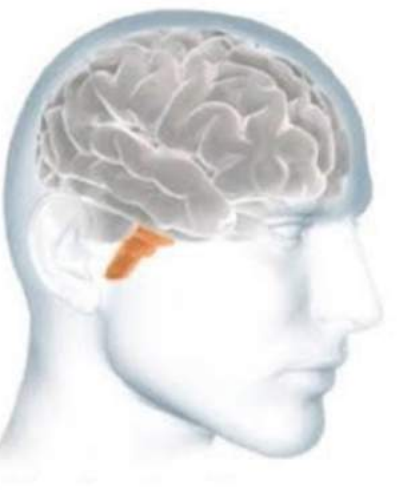
Final stage

Disease of decline

Main parts of the brain.

The cerebrum.

The cerebellum



The Brain Stem.

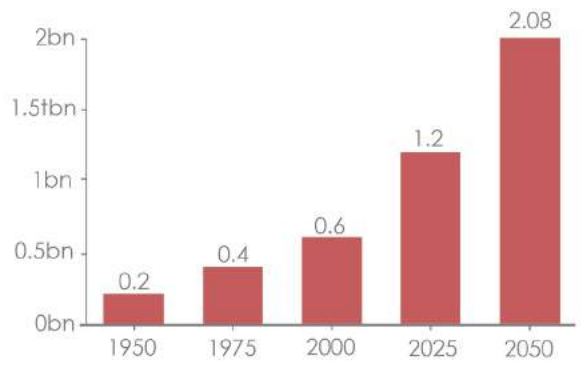
DEMOGRAPHICS

Micro, Meso and Local scale.

Demantia and its prevalance.

The advancements of medical science and health care is evident in the worlds aging population, contributing to people living longer and healthier.
according to the world health organizatio, betwnn 2020 - 2050 the proportion of the worlds population over 60 years old will nearly double from 12% to 22% that is soaring up to 2 billion from 900 million
This population is at risk and will be an economic burden to the world economy,

Global - Macro scale

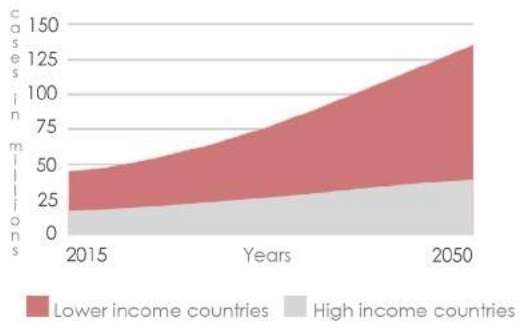


World population over age of 60
(in bilions)

Numerous disabilities following aging increases dependency in old age.
Facilities designed to aid for these disabilities will be less due to the population outburst.

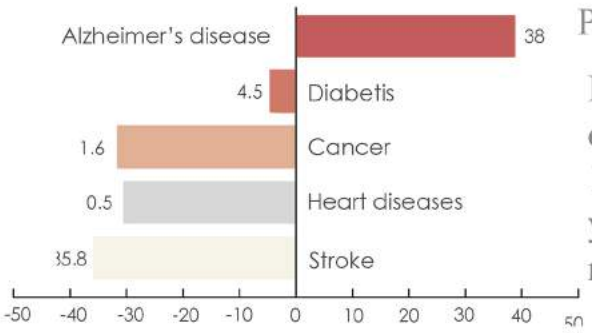
Associating with aging problems and disabilities ae health challanges. One of the increasingly common age associated disease in an increase of eldderly poulation is dementia.

Statistics show that as of 2001 there were 35.4 million people living with dementia.
This number is expected to double every 20 years.
65 million in 2030 to 115 million in 2050.



Rate of progress of dementia

According to W.H.O dementia is an epidemic and not much resources in terms of economy and healthcare are availabe to control it.



Percentage of death rates.

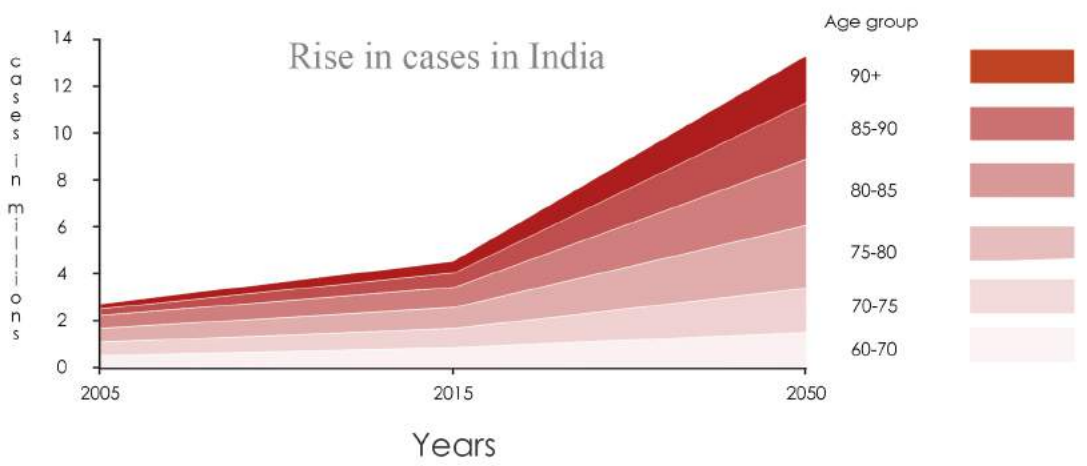
In comparision to other diseases alzheimemrs ranks 1 in terms of death rates and yet no research is done and not many care centers exist.

National - Meso scale.

India has a population of 4.1 million suffering from dementia, that is 3.7% of the population above 60.

One in 16 households with an elder has someone with dementia.

Dementia in India is not acknowledged because it is not diagnosed in most cases and disregarded as an age related disease.



India has a ratio of 4.1 million patients to 9000 specialists.
That is a ratio of 500 patients to one specialist.

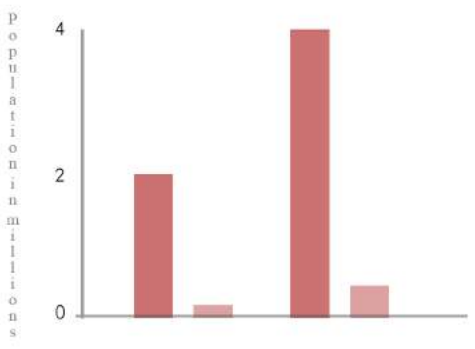
India has a population of 4.1million dementia patients and just 2000 patients capacity in care centers.

National - Meso scale.

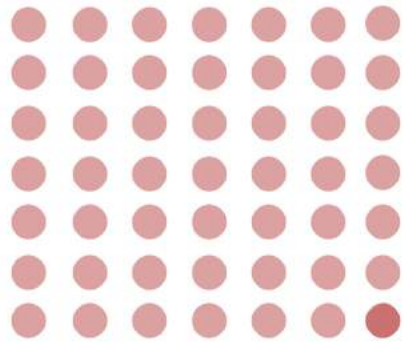
Mumbai is a densly populated metropolitan city, with the growth of elderly population an increase in the case of dementia will be witnessed in upcoming years, this will burden the economy.

Mumbai,s current population over the age of 60 is 1.8 million, 2.7% of this population suffer from dementia, 20000 people suffer from dementia in mumbai alone which will increase 2 fold by 2050.

Projected demographic outburst in mumbai



No. of people in mumbai affected.

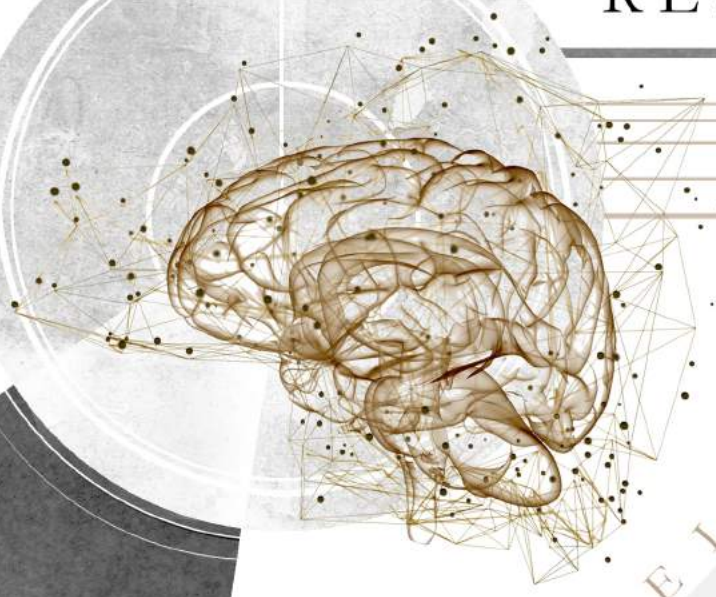


No. of care centers available.

Conclusion.

As dementia prevails, the future economy will be influenced by the demands created by dementia., the aging population must consider spendng their days in a facility that provide the necessary healthcare, respite and a better quality of life while doing so.

RESEARCH AND ANALYSIS



ALZHEIMERS

Problems faced by patients associated with Alzheimer's

- Spatial disorientation, Anxiety, Stress, Depression.
- Decline in cognitive abilities and Memory loss.
- Emotional outburtst and Physical agression.
- Stereoblindness, Reduced visibility.
- Sleep problems and Sundowning.
- Unhygenic living conditions

- Oligodynamic properties of copper, brass, silver.
  - These metals disinfect themselves, can be used in doorknobs and handrails.
- Pattern assisted navigation in patients with memory loss
- Soft and smooth surfaces like cork, rubber and linoleum.
  - These softer surfaces are kinder to joints and wont pose a trip hazard .

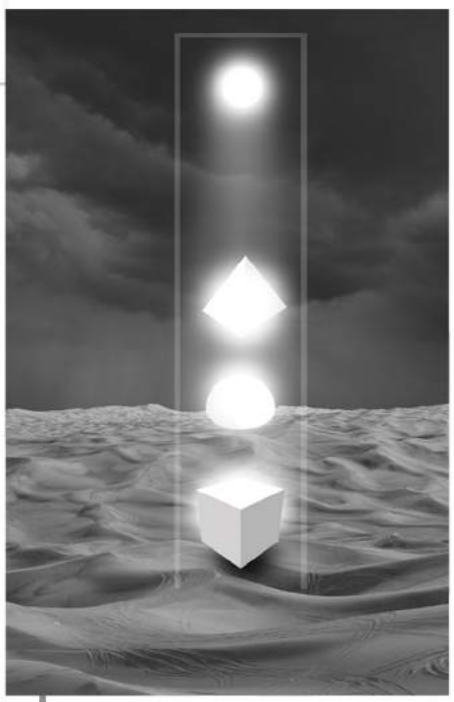
CONTRAST IN COLOR PALETTE FOR STEREOBLINDNESS

DISRUPT

Elements To aid design

Light and Circardian rythm.

Sunlight initates various biochemical processes important for the body's performances including sleep, heart rate, thermoregulation, alertness and cognition.
Morning light, that is blue light of the visible spectrum at wavelenght of 480nm is particulartly important.
At the age of 75 years a person requires three times the exposure to elict the same circardian responce.



Design for visual impairment.

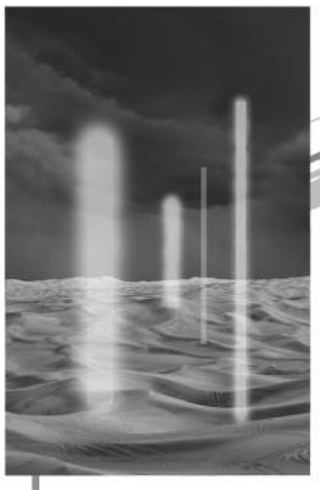
Alzheimers is a disorder most common with the population above 50 years.
Age related vision problems also have to be taken into consideration while designing for patients with alzheimers.
Reduced feild of view.
Impared colour perception.
Motion blur
Partial blindness

Haptic Architecture and tactile senses

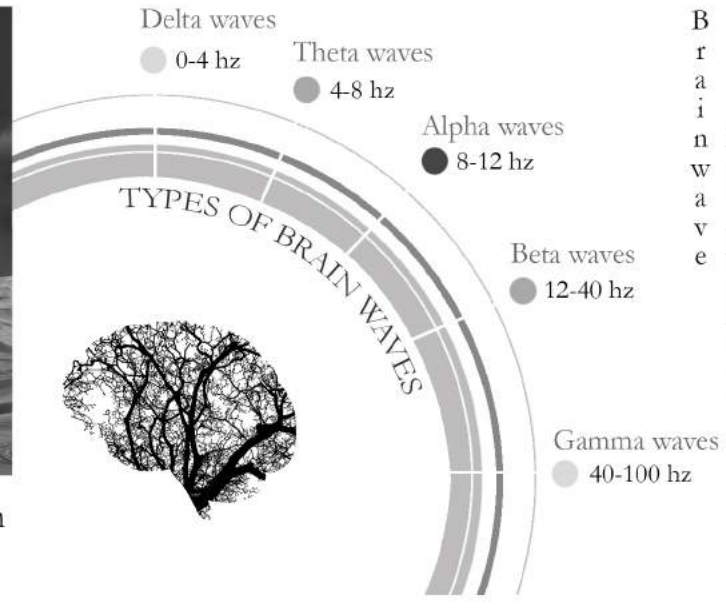
Design for alzheimer,s focusing on the sense of touch through colours and textures, patients often lose contact with the outside world due to severe cognitive decline and hence become more dependent on their sensorial perception for communication.

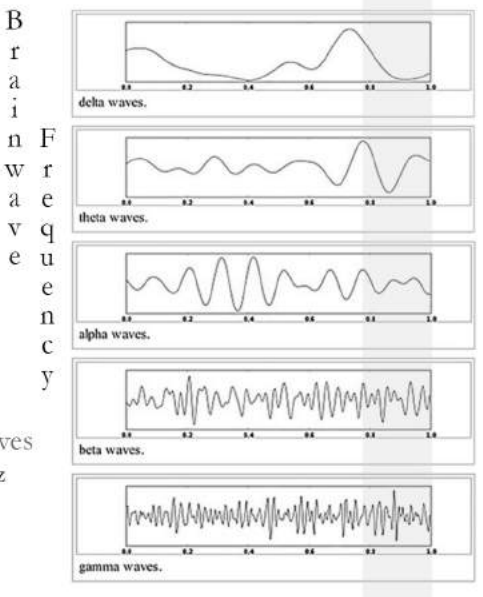
Biogeometry

Biogeometry is the science that studies relationship between the elements in the universe and human life.this science uses shapes, colours and sound to achieve balance to all energy levels.

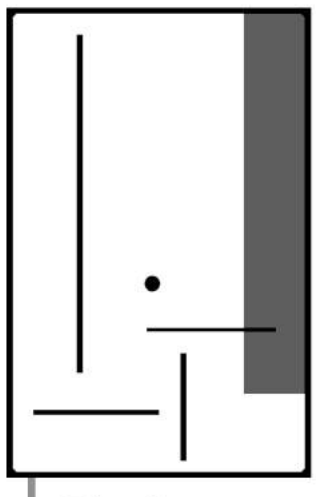


Depth Perception





Visual stress in Patients assosiated with alzheimers



Visual stress

ARCHITECTURE AND DEMENTIA.

MIND AND SPACE

Effect of space on the human brain.

An Architectural space has a subtle but a direct effect on the psycology of the human mind, this is usually ignored by our conciousness and rendered useless.

A space and its composition ie. colour, texture, space, geometry, lighting, volume etc have a huge impact on the person using and experiencing the given space.

Patients with memory loss percieve space differently that may induce anxiety and stress,hence these spaces must be such that it doesnt induce stress & depression.

Architecture as 'Prosthetics'

Design of spaces for people with dementia must not be viewed as a theraputic measure to promote wellbeing but also like a prosthetic to aid the cognitive decline

MULTISENSORY STIMULATION

Apart from the visual stimulus and aesthetic spaces that make an e nvironment pleasing to observe and navigate, the other senses play a very important role.

Light in terms of colours and luminosity can be used to control environments indoors.

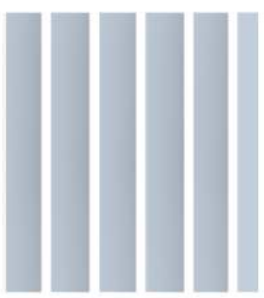
Contrast to distinguish edges - walls, stairs etc

Lack of contrast to disguise entrances

Sound can be used to make quieter environments and spaces for people using acoustic barriers as disturbance by noise can trigger anxiety, stress and depression.

Taste - smell systems influence contextual retrival cues for memories.
Rooms can be surfaces with odiferous materials like sandalwood for a distinct smell that the user gets only in the room and indentifies a room as personal space

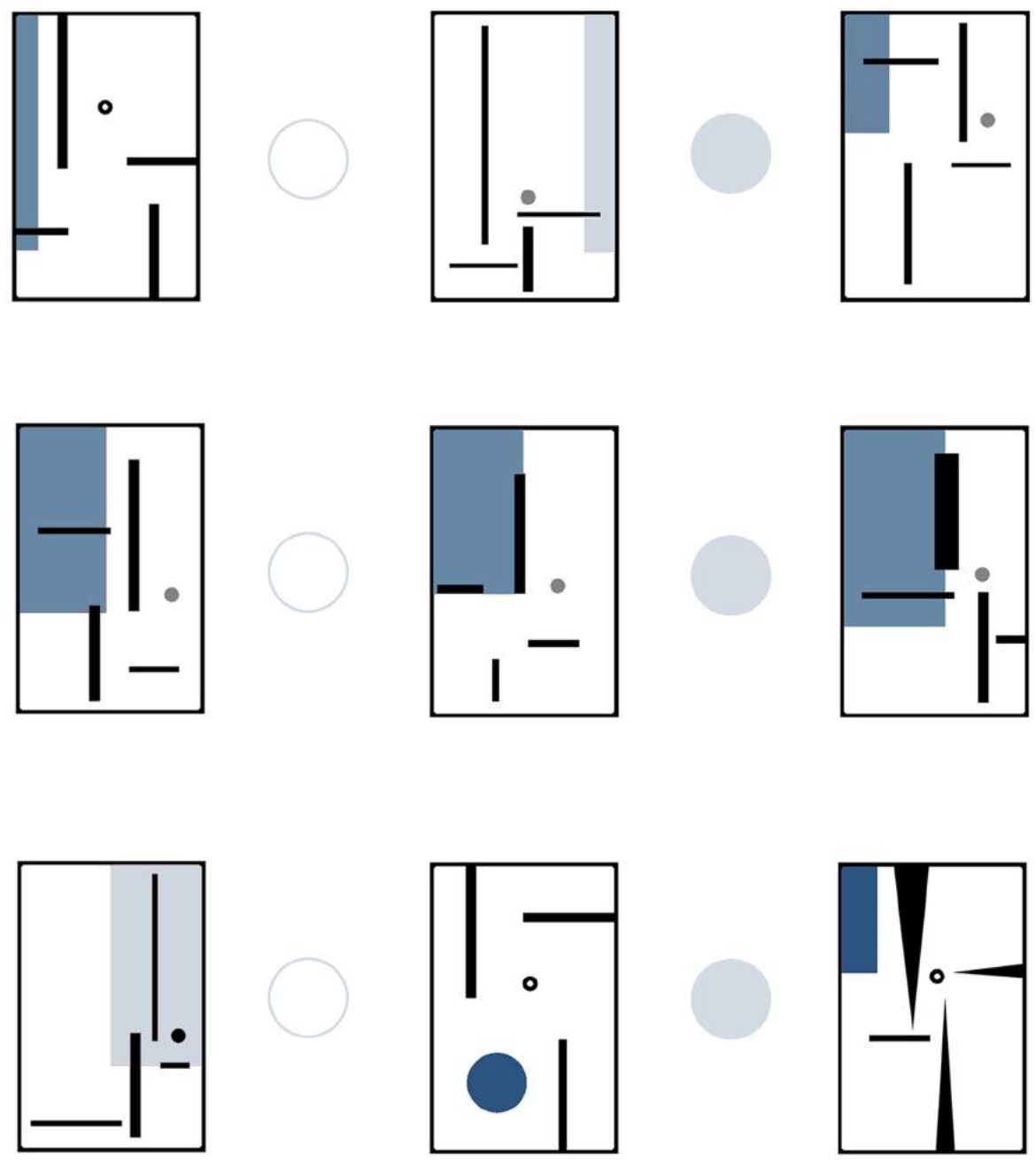
Touch or the haptic system is the mother of all senses
Power or sensation, pressure, touch, temprature are often overlooked. Feel of certain material evoke a specific behaviour like soft warm materials in bedroom indicating a space for rest, contrast to that, hard materials for place of work or to eat.



SPATIAL TENSION

An experiment designed to understand spatial tension and cues that trigger uneasiness.

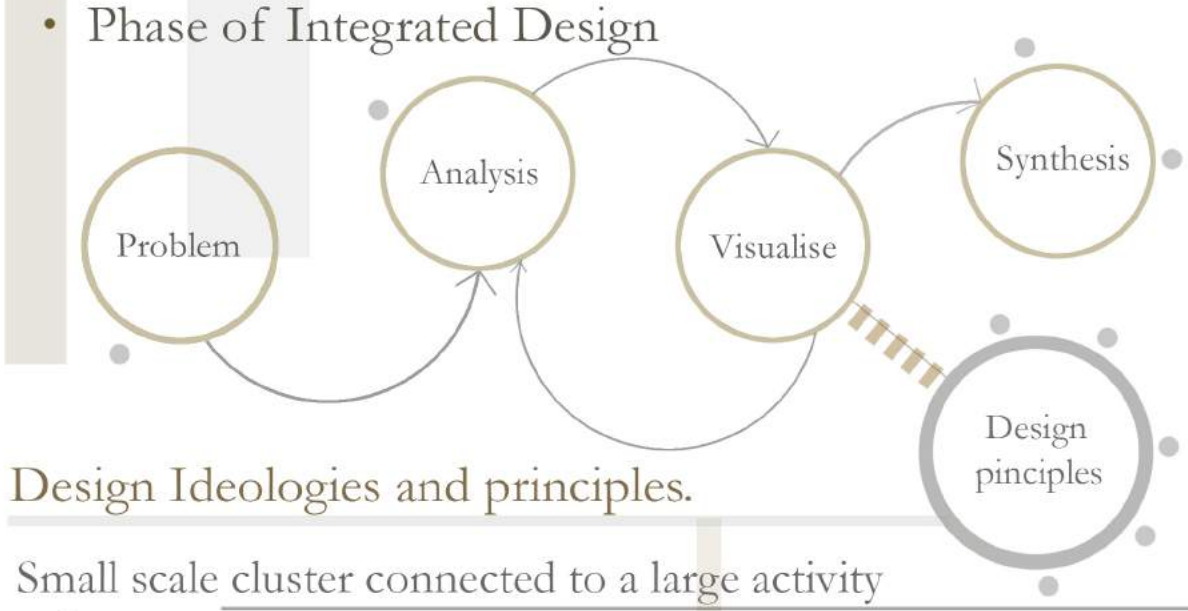
Focus set on the circle, each image gives a different feeling of space and uneasiness, which helps in understanding how the mind percives space.



When shown to patients with dementia, they could clearly differentiate between spaces inducing tension and calmness

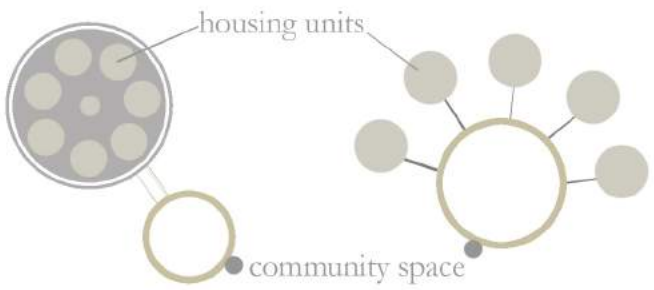
DESIGN PRINCIPLES

- Phase of Integrated Design



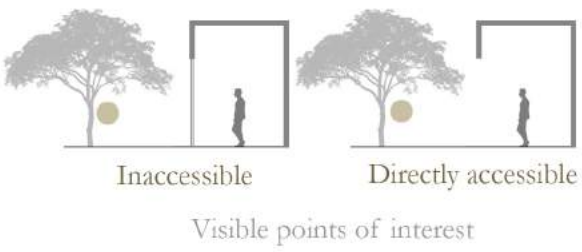
Design Ideologies and principles.

Small scale cluster connected to a large activity epicenter.



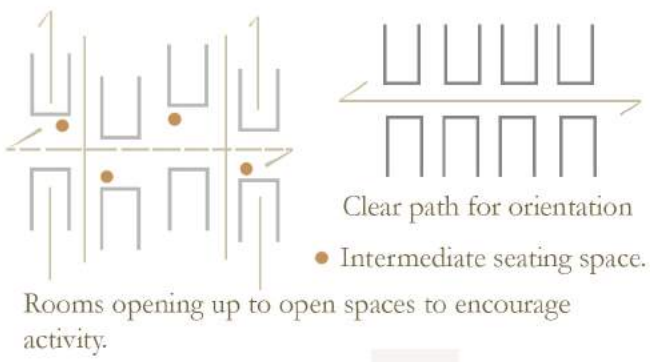
Large scale and croud lead to noise, confusion and overstimulation of senses which lead to Disorientation,Agression Agitation.

Focus on visual and Physical access to outdoor spaces.



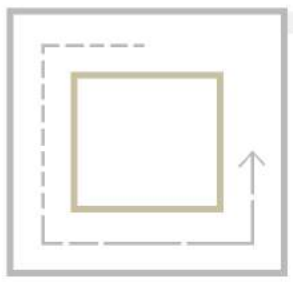
Elements in the feild of view and points of visual interest must be directly accessible to avoid disorientation during wayfinding.

Encourage Movement.



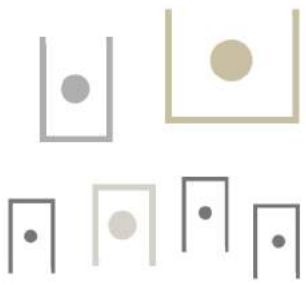
Dementia patients - "wander" wandering must not be seen as a negative symptom but as an oppurtunity for design.
Clear paths and feild of view to avoid disorientation.

Looped Pathwayes for orientation.



Design Opportunity for purposeful wandering .
Source of excercise and explore opportunities.

Pattern of Space



Design and considerations of how space will be utilized impacts how well they are occupied considerations:
Variability in size to prevent overcrowding
Differ in characteristics to create seperate moods.
These allow the user to distinguish each room function and establish an appropriate behaviour in choosing the desired function

Design Approach.

Programme focused on patients associated with cognitive decline ranging from mild to severe as the disease prevails in the elderly population, Design to focus on providing spaces for the cognitive impairment and age friendly design.

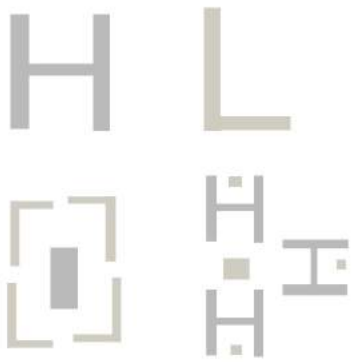
Transparency and previews.

Transparency between actvities having capabiities of seeing beyond the single room.
Provides patient maximum control on their social interactions.
Room to room transparancy and Visual connection in spaces.

Multisensory stimulation.

Importance and potential of information to be understood through other sensory modes is overshadowed by the visual stimuli.

Building configuration.



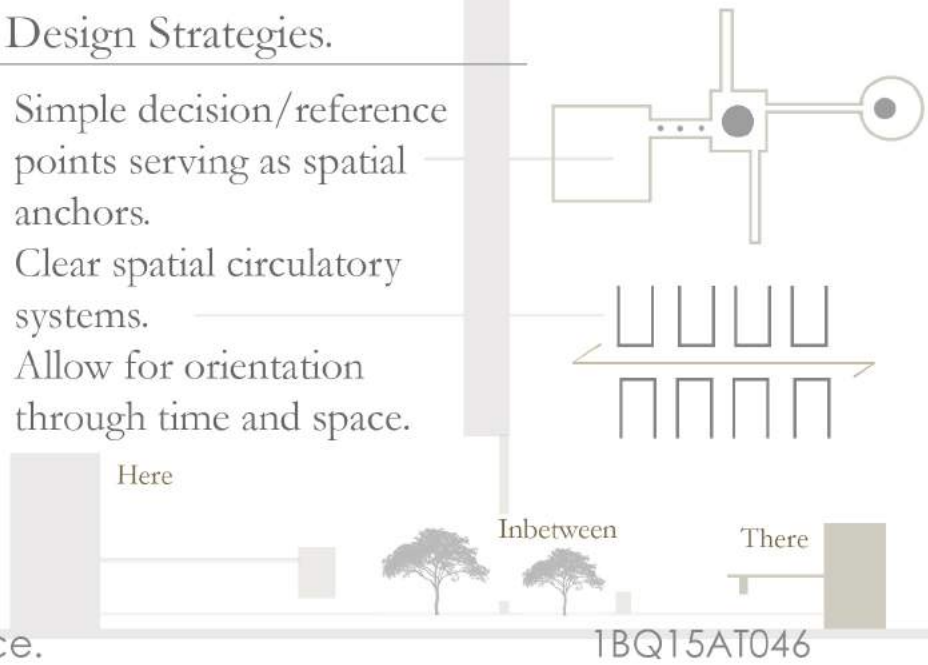
High level of orientation allowed by buildings in shape of L and H.
Open Plan layout allows the bedrooms to open up onto social spaces.

Non institutionalized appearance of interior and exterior

First trend in changing perception of feeling towards long term care is to change the institutional atmosphere into a setting that is more homelike.

Design Strategies.

Simple decision/reference points serving as spatial anchors.
Clear spatial circulatory systems.
Allow for orientation through time and space.



Area statement

Staff housing

Function	Area[m^2]	Total area[m^2]
Rooms	14	350
Vestibule	7	7
Common living unit.	30	60
Kitchen	20	40
Games room	20	40
Meditation space	25	25

Administration

Function	Area[m^2]	Total area[m^2]
Head office	30	30
Meeting room	18	18
Toilet	6	12
Miscellaneous	20	20

Nursing home.

Function	Area[m^2]	Total area[m^2]
Rooms	14	476
Vestibule	7	7
Clinic	15	15
Meditation room	25	25
Reading room	30	60
Games room	20	40
Staff room	15	30
Laundry/Cleaning room	5	10
Meeting space	40	40
Phisiotherapy room	40	80
Dining area.	80	160
Toilets.	7	28
Reception	10	10
Rooms for physically chalanged	20	140

Daycare unit

Function	Area[m^2]	Total area[m^2]
Rooms	14	210
Vestibule	7	7
Cafe	100	100
Meditation room	25	25
Reading room	30	60
Games room	20	40
Staff room	15	30
Laundry/Cleaning room	5	10
Meeting space	40	40
Phisiotherapy room	40	80
T.V room	25	25
Common living unit.	40	80
Reception	10	10
Toilets.	7	28
Clinic	15	15
Rooms for physically chalanged	20	140

Alzheimer's village in Dax, France.

Architect : Nord architects.

Year : 2019

Area : 19 acres

Concept : Healing Architecture.

Overview

The Alzheimers village in Dax, France houses 120 resients supported by 120 staff members and 120 volunteers.
It is designed for a trial, an experiment to provide a more social than medical approach towards treating patients with Alzheimer's.
The main components are :
Removal of medical symbols.
A compassionate facility.
Personalised support.
Respect for individuals views and lifestyle.
Maintaining a close relationship with loved ones.
Maintaining the urban fabric and life of town.

Masterplan

Vision of the village.

For patients to lead an active life, to find a kind of social and human dignity, to lead a normal social life, to enjoy themselves.

Entrance to the Alzheimers village

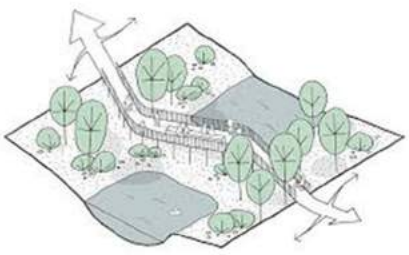
Birds eye

V I E W S

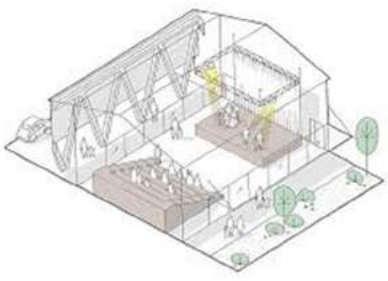
Interior.

Provisions

Gardening



Central lake.



Auditorium.

Section

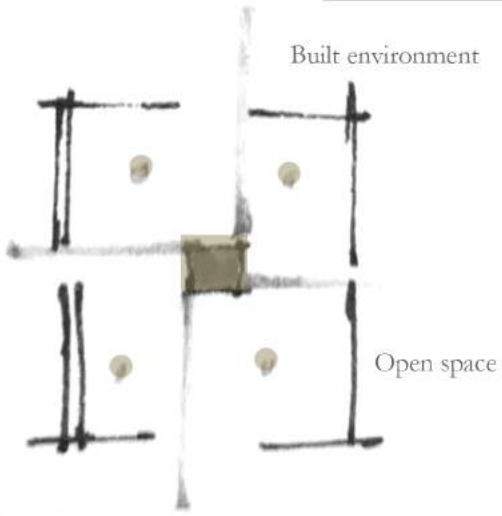
CRITICAL ANALYSIS OF CASE STUDIES

Observation and Analysis of Alzheimers village in Dax France

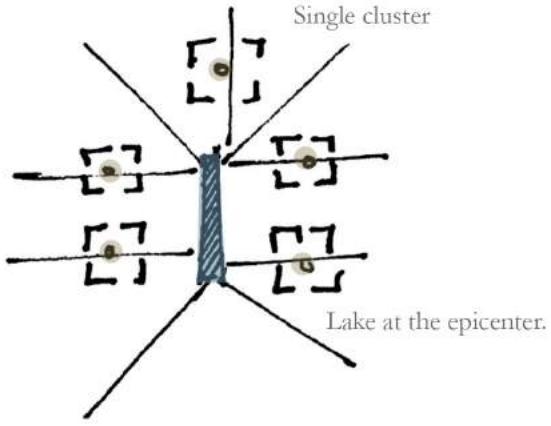
KEY IDEAS of design at Macro and micro scale Development and synthesis.

Macro scale - Plan developmet

Cluster orientation, planning and organization and its effects.



Basic Cluster Planning

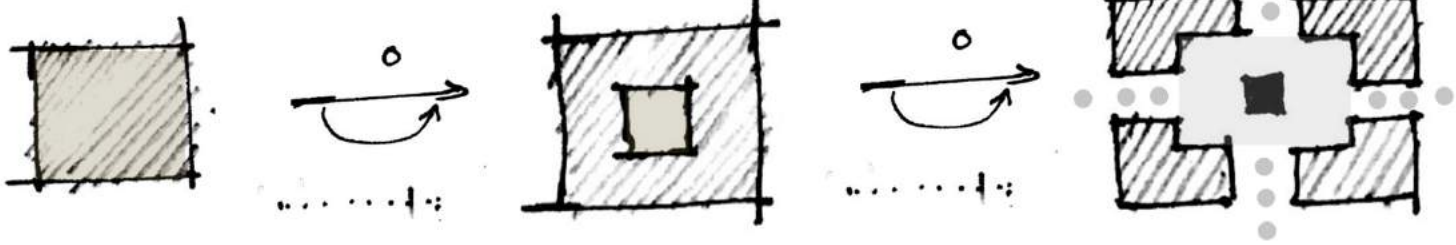


Various clusters grouped to form a supercluster.

Why the Layout?

Deconstruction of a complete unit and arrangement of the same in an order to

- Simplify movement..
- Create spillout space.
- Ease of Navigation and understanding.



Solid block

Void incorporated for open space.

Block exploded to create access to the open space

Open spaces between buildings & spaces provide a sense of sorrounding and direction in the Place by integrating and organising different places and elements.

Esthetic sense ny involving attractive sorrounding and create visual surprises..

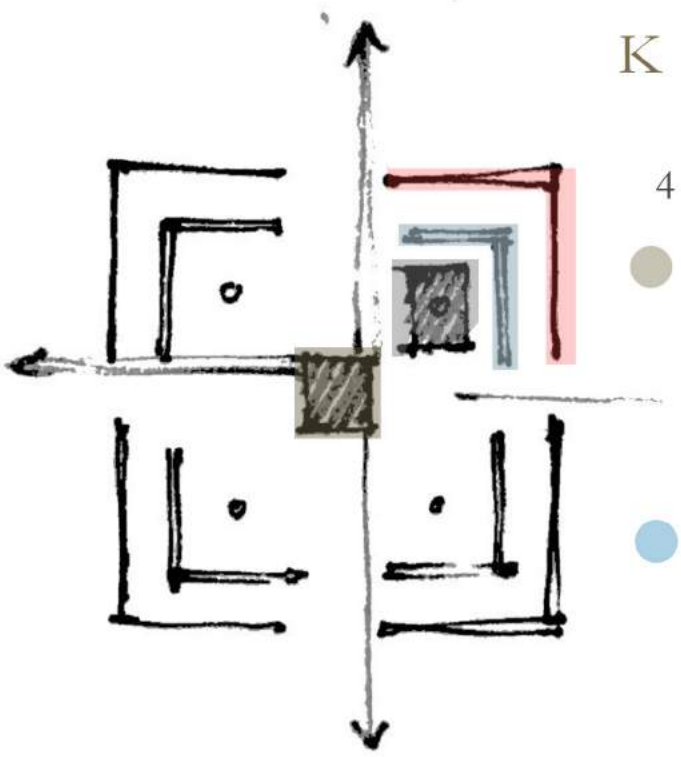
Advantages of typical cluster formation.

Residents are forced into an open spilout space.

No stress or confusion due to disorientation.

Ease of access, navigation & orientation.

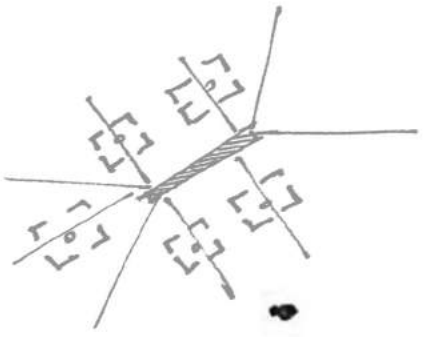
Light and wind received in sufficient quantity



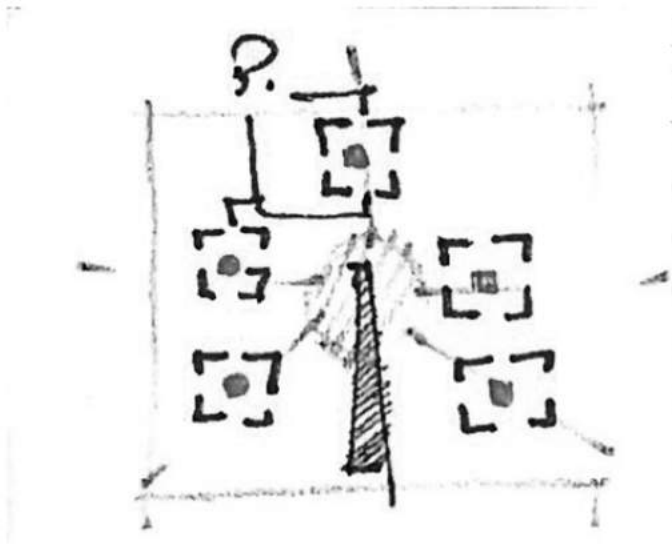
KEY IDEAS - Micro Scale

4 LAYERS OF ACTIVITY IN THE WHOLE CLUSTER.

- Central space
  Center or entire cluster.
  Epicenter of maximum visual focus at this area.
  Seating and relaxation.
- Sheltered walkway.
  Buffer between the built form and open space
- Spillout area from main built form and acts as an addition to the central area and to the built form.
  The inbetween from here to there.
  Walking, community activities etc.
- Built form.
  Houses residence for patients and caregivers and other activities.

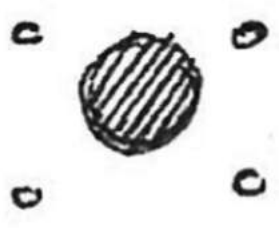


DESIGN IDEOLOGY



Main cluster.
Place for gathering, outdoor activities, sitting and relaxation.
Walkway with a Cold concrete facade.
Ceiling for walkway made of wooden battens reflecting a warm tone.
Gress, concrete and wood give an earthy tone to the sorrounding.
Courtyards deliver light important for the daily functions of patients.

Supercluster.
Cluster form a super cluste with the lake in between.
Lake acts as an epicenter for the whole programme with various activities taking place around like walking, parks and seating areas for patients.



Basic cluster concept

Alzheimers respite center, Dublin

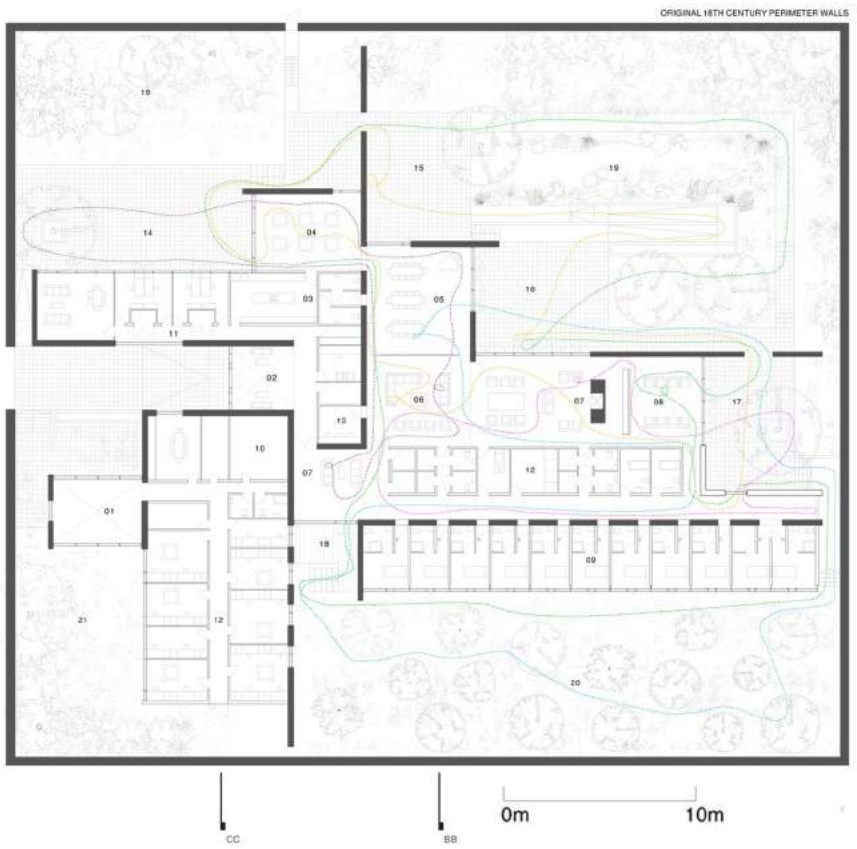
Architect : Nial Mclaughin

Year : 2009

NATIONAL OFFICES ENTRANCE 01
RESPITE CENTRE ENTRANCE 02
KITCHEN 03
DINING ROOM 04
ACTIVITY ROOM 05
CENTRAL SPACE 06
SITTING ROOMS 07
CONTEMPLATION ROOM 08
BEDROOMS 09
HAIRDRESSING 10
RESPITE CENTRE STAFF OFFICES 11
ALZHEIMERS SOCIETY OFFICES 12
THERAPEUTIC REMEDIES 13

MORNING TERRACE 14
UPPER TERRACE 15
AFTERNOON TERRACE 16
MAGNOLIA COURTYARD 17
EVENING TERRACE 18

HERB AND SCENT GARDEN 19
ORCHARD 20
WORKERS GARDEN 21



Ground Floor plan
The Alzheimer's Respite Centre

Overview

The alzheimers respite center in Dublin by Niall Mclaughin is a project by Alzheimers sociery of Ireland.
They divided the project into 2 phases, Phase 1 included an in-depth research about alzheimers and phase 2 included a a design a design proposal for the same.
Building has 2 main purposes.
Promote community solidarity and strenghten sense of orientation.

Concept

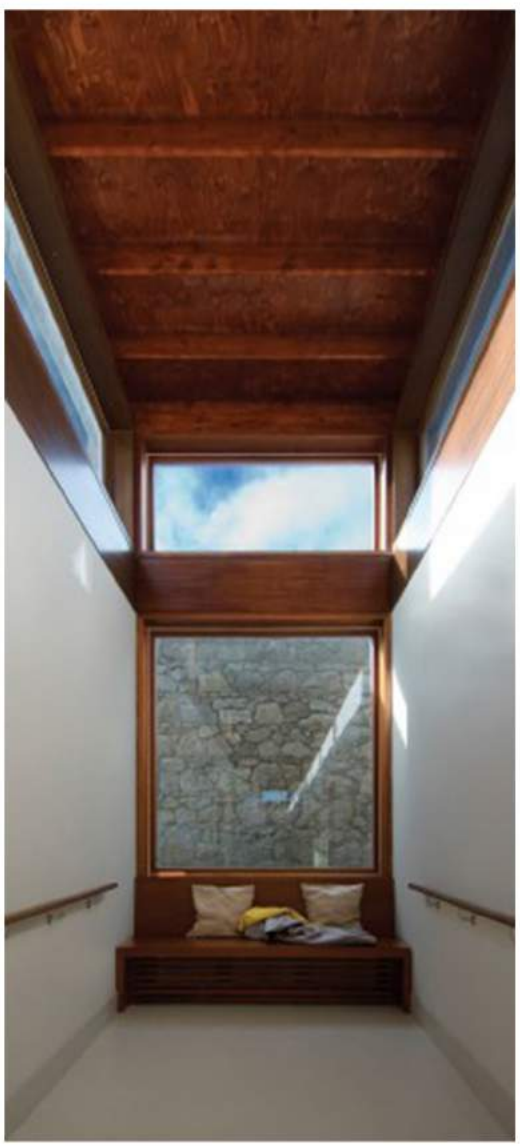
Promote a good balance between the staff, the elderly user and the family.
The facility is designed keeping in mind the traits of people affected by alzheimers.

Design parameters.

The main aim of the design is framing a community and aiding orientation.
The facility is planned in such a way that the interconnected routes that flow through the courtyard gardens, rooms are all linked to each other.
This brings the person back to the core of the facility no matter what route he takes., this helps them wander without getting lost.
Due to this there is a continoius movement of flow from the inner spaces to the outer spaces without feeling lost or overwhelmed.
Series of brick wall that create a labrynth like space which enclosed the gardens that follow the person who walks through.
Distance between seating spaces are minimum and pasages are wide enough to fit wheelchairs.
Windows are lighting have been designed to maximise glare and shadow.
Floor , skirting and walls , Doors are clearly diffrentiated by use of colour and tone.
To distuinguish between toilets and rooms and non accessible areas, coloured walls are in key position to aid orientation.
No dark corridors or dead ends.

Inference.

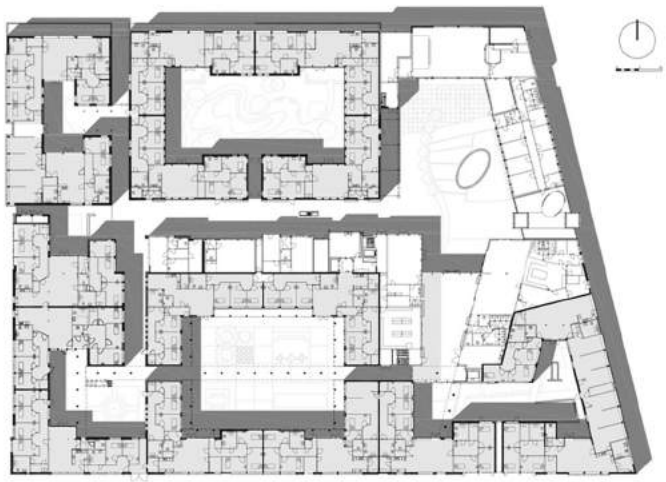
Stresses the importance of colour scheme.
Spatial planning and arangement ot maximise orientation.
Maximise wandering in secure and manageble way through planning.
Maximise social interactions.
Micro scale detailing that dont have a negative effect on patient psycology.
Direct access to points of visual interest.

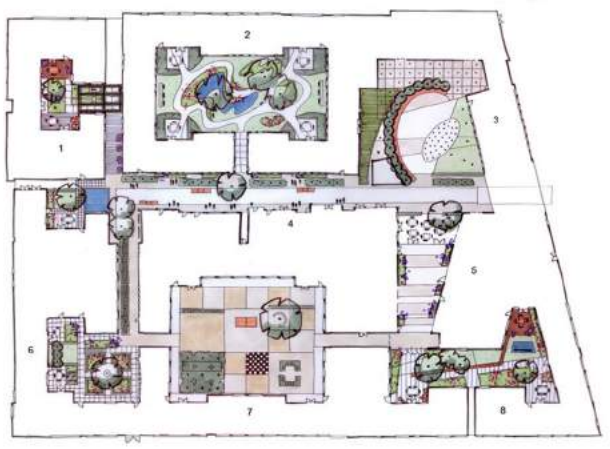


Hogewyk village for Alzheimers...

Architect : Molenaar & Bol & VanDillen

Year : 2009





Overview

The Hogewyk is a village for people sufering from dementia which was completed in 2009.
it is situated in an industrial suburb of Amsterdam.
Hogewyk is designed right in the resedential area and people living around can catch a glimpse of elderly living at hogewyk.
The dementia vilage was designed holding 2 main objectives.
To provide a safe and familiar environment for people suffering
from dementia and counter the negative feelings like anxiety confusion etc that is most commonly seen in people.
To keep the resiedents active and happy by engaging them in variour activities spread across the site.

Concept

To give the people suffering from dementia a second chance at life.
Most striking feature - to give people suffering from dementia a normal life thus, all staff- the nurses, caretakers, are in clothes other than uniforms.
This helps create a hyper reality in which the residents feel safe and free to do as they wish without feeling like being watched all the time.

Design parameters.

Occuping 15300sqm of area out of which 7000 is not built upon, Hogweyk is designed as a full fledged village or a township with streets, alleys, large squares, fountains and a park so that residents can enjoy life they would otherwise not be able to out of the closed gates.
The facility is designed to have all the amenities like a theatre,restaurant, cafe,market,barber/salon post office that are required in their everyday life.
Spaces flow into each other and are well connected with no dead ends.
Solid to void ratio designed in harmony to each other.with courtyards and gardens.
Al the roads are interconnected and connected to recreationa space which allow the patients to roam freely without feeling lost.
Every green space has a diffreerent function - the green space outside the nursing home can be used for physical therapy,
Space for theater can be used for street theater.
Building planning done in such a way that the buidings act as a boundary from the outside world eliminating the need for fences and walls.

Inference.

All the dementia care facilities are very diferent from each other in the sence of concept typology and design.
First township or village in the world and is one of a kind, the concept of this facility is to give people with dementia a second chance at life after getting Diagnosed with alzheimers or dementia.
Helps to understand the project on an urban scale.

Kahla house for the elderly.

Architect : Jörg Lammert

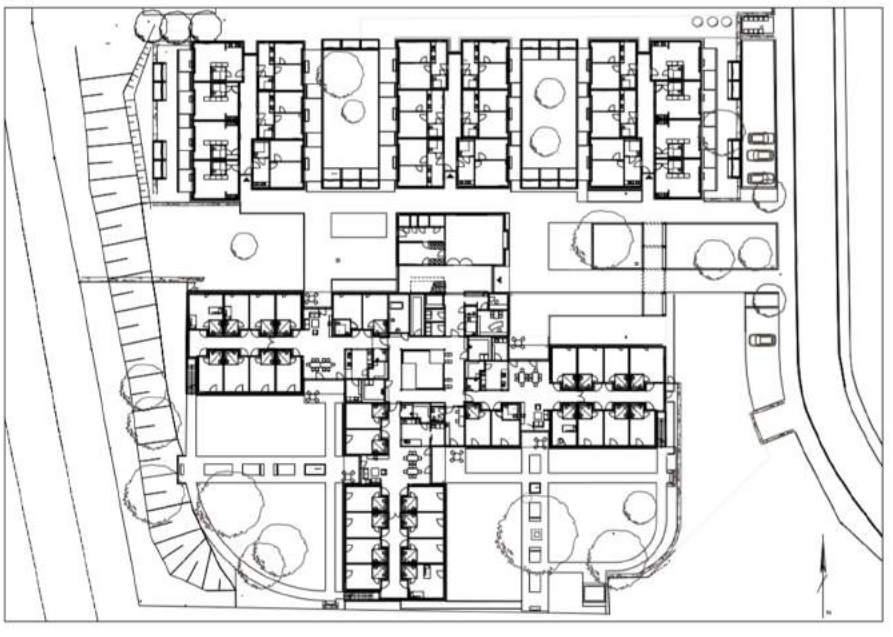
Year : 2007

Overview

The architectural concept focuses on the needs of the elderly residents and attempts to develop a functional and considered plan that caters for the wishes and particular needs of the residents.

Concept

To cater for all needs of the patients, physical, psycological and social needs to be met by design of interior and exterior spaces.patients in the facility.



Plan.

Design parameters.

The architectural concept focuses on the needs of the elderly residents and attempts to develop a functional and considered plan that caters for the wishes and particular needs of the residents.

The building is structured around seven compact courtyard spaces with a cloister-like walkway around them inviting one to either cross (square) or settle in them (garden).

The courtyards correspond to different types of social spaces and as such structure the complex into notional neighbourhoods.

The design creates an environment for six residential groups arranged on two floors around a leafy courtyard. These dense clusters in turn open onto the communal courtyards and the pergola court, which are used by all the residents in the complex.

Light wells, created by incisions cut into the volume of the building create transitional spaces between indoors and outdoors and allow daylight to spill into the interior.

Each courtyard has a specific botanic character and existing mature trees have been incorporated into the gardens.

Site analysis and social context.

Mumbai - Goregaon.

Why Mumbai?

In a metropolitian city, it gets increasingly difficult to managepatients with dementia alongside a busy working schedule and patients with Dementia require special care and support round the clock which a metropolitian city can not provide.

It is estimated that Maharashtra by the end of 2026 will have close to 5 lakh cases and Mumbai being the center of all still lacks in the field of dementia.

There is a wave of awareness in Maharashtra regarding Dementia and Mumbai being a metropolitian city has a capability of providing an infrastructural base which can be used for all the other cities to follow.

Optimal location for a center for Dementia

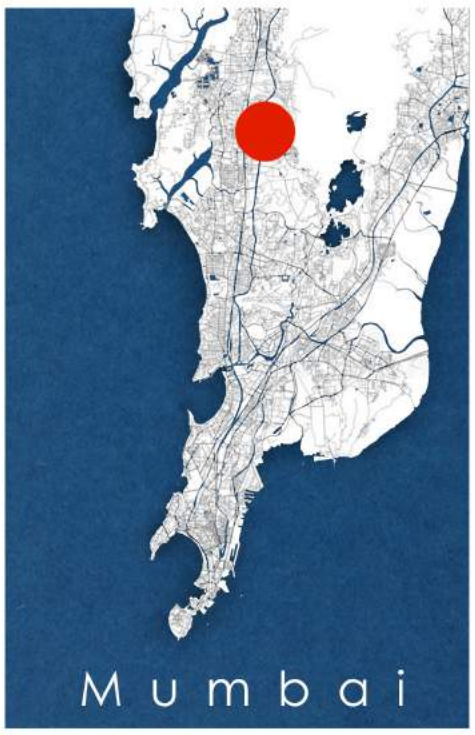
Site area. : 19.4 Acres.

Landmark : Vangrai police station. Goregaon.

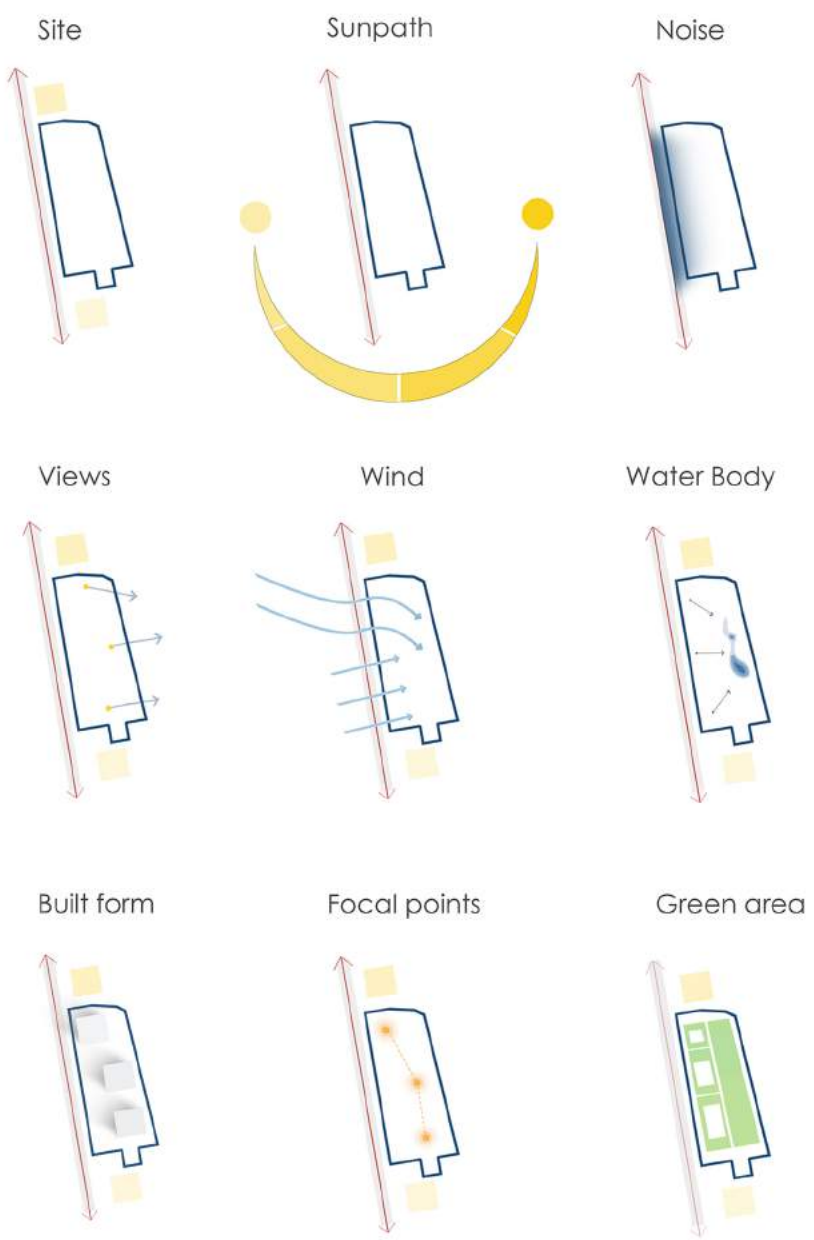
Area : Goregaon - a small district neibhourhood of Mumbai.

Landuse. : Mostly institutional and residential.

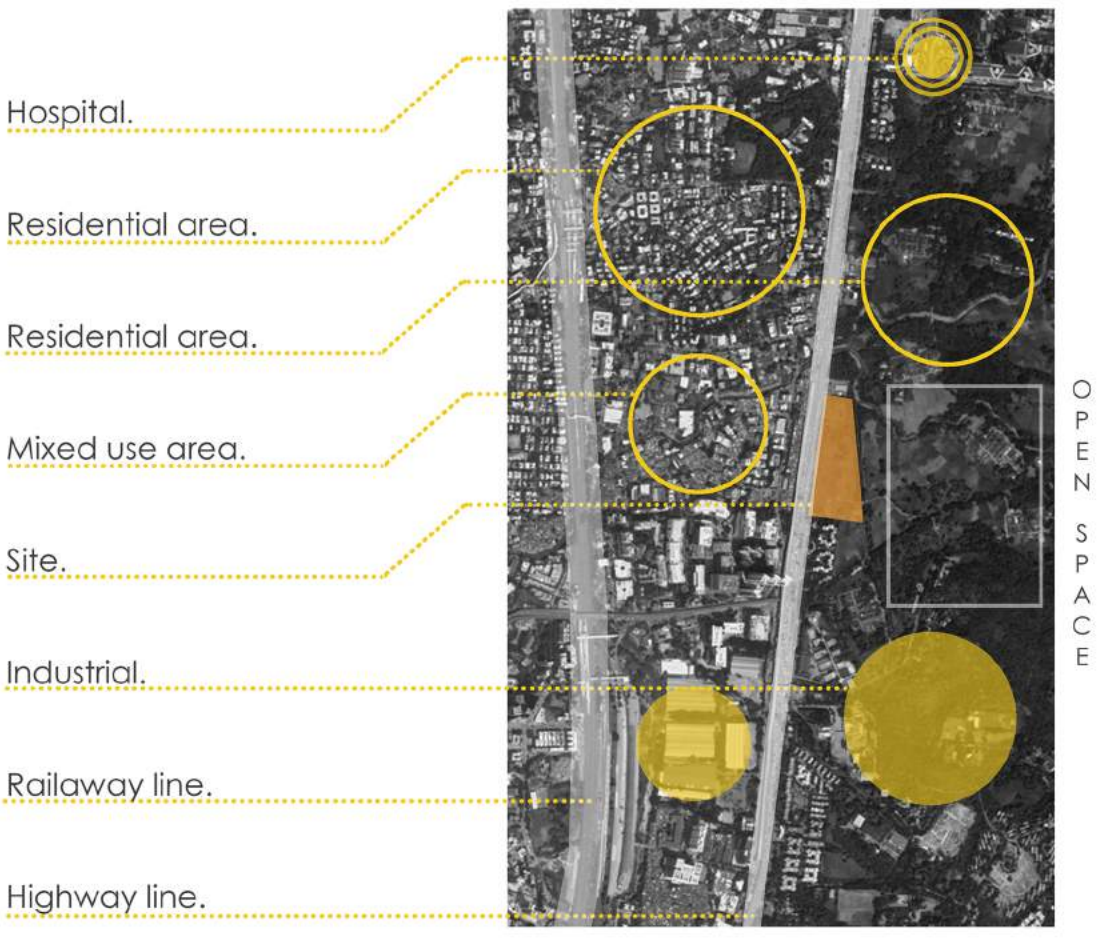
Existing use : Currently not being used for any activity.



SITE ANALYSIS



SOCIAL CONTEXT



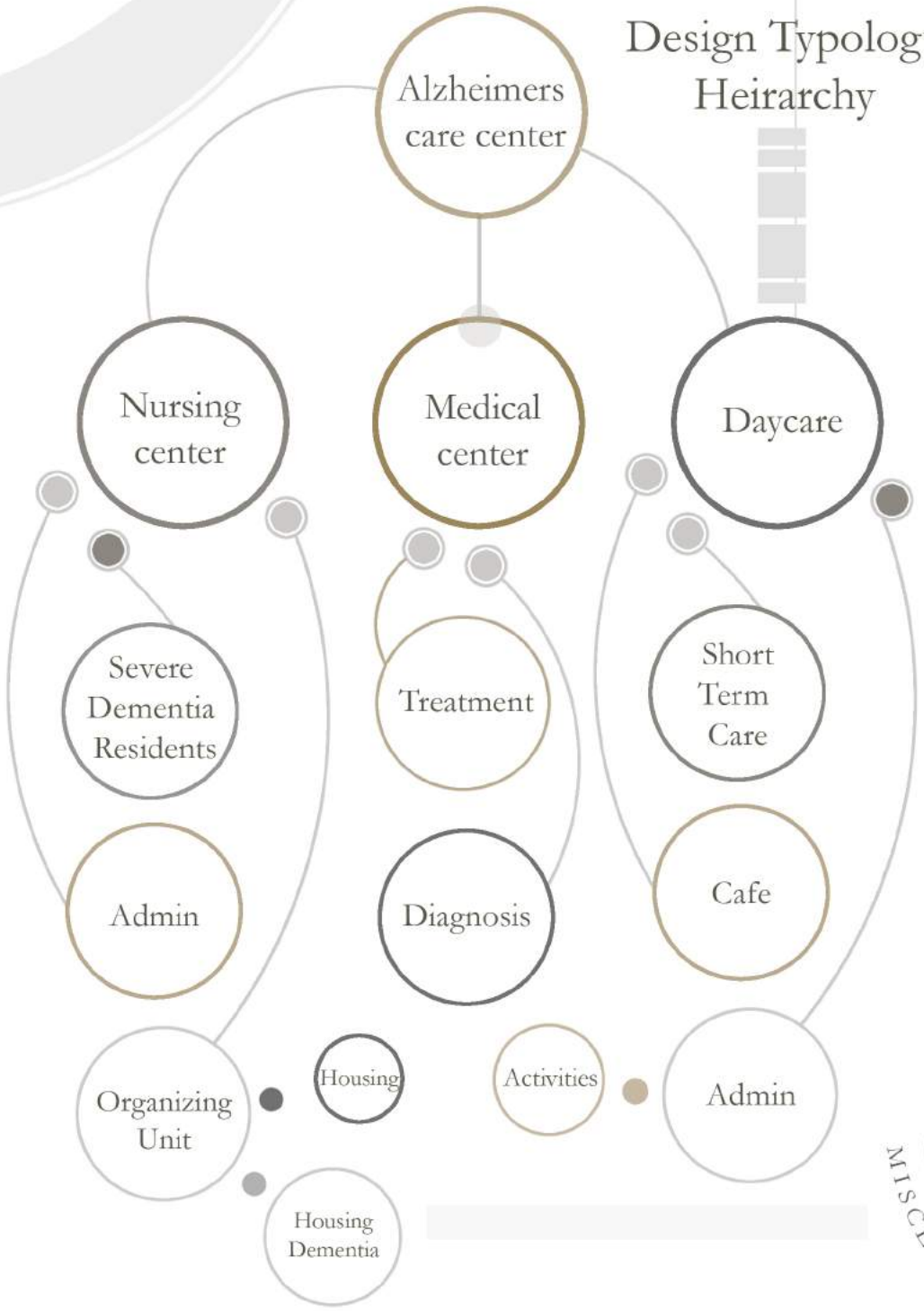
Mumbai chosen due to the most densly populated metropolitan city and in dire need of a dementia care center for its ever growing population and infrastructure that will aid in awareness of dementia.

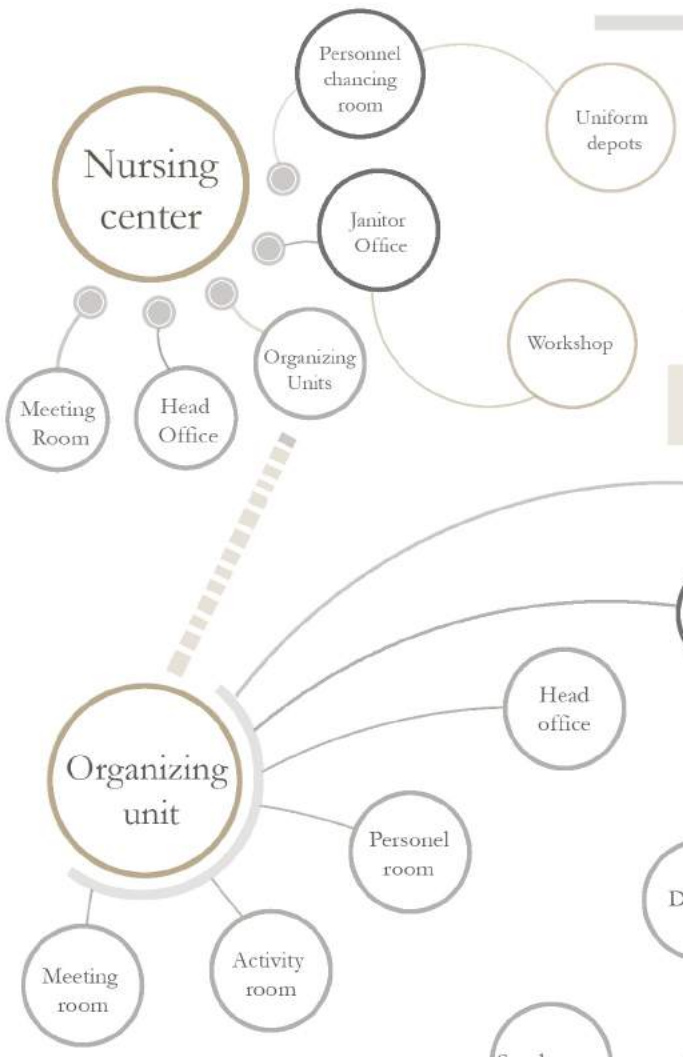
Site located in this context of Goregaon as it is a suburb and secluded from Mumbai and its busy traffic.
Site surrounded with various activities and has wide range of functions

The site is easily connected with the western express highway. Railway connectivity exist metro connection coming up in the future.

Perfect location for daycare as locality is packed with resedential area.

DESIGN PROGRAM - Typologies, areas, strategies.





Functions in the organizational Unit.

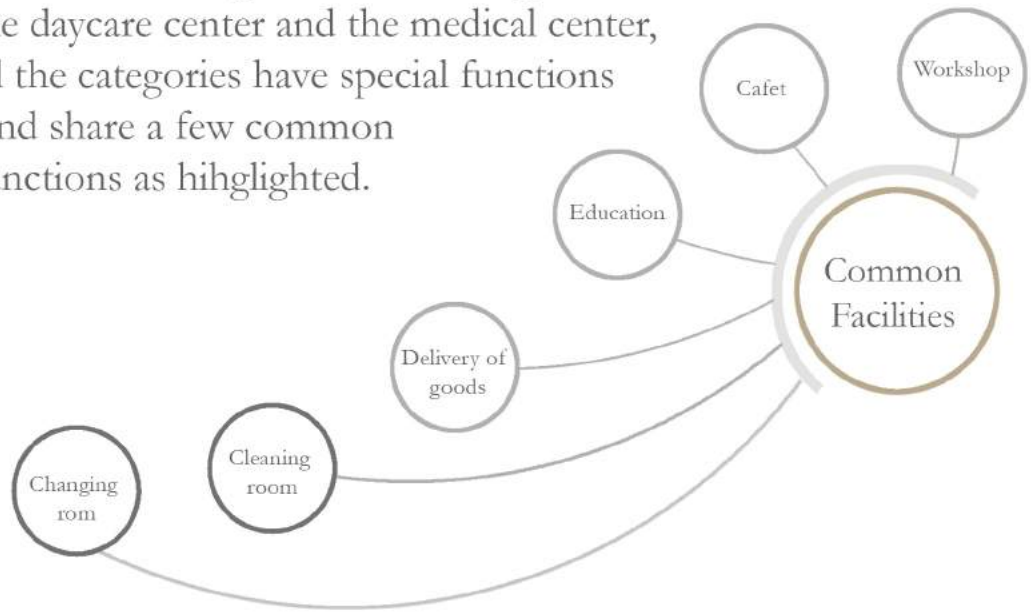
Nuring Center.

The internal distribution of function in the nursing home.

Distribution of functions in the Housing Unit.

Typology and Functions

The typology flowchart shows the interconnection between the different functions in the complex. The complex is divided into 3 main categories, the nursing center the daycare center and the medical center, all the categories have special functions and share a few common functions as hihglighted.

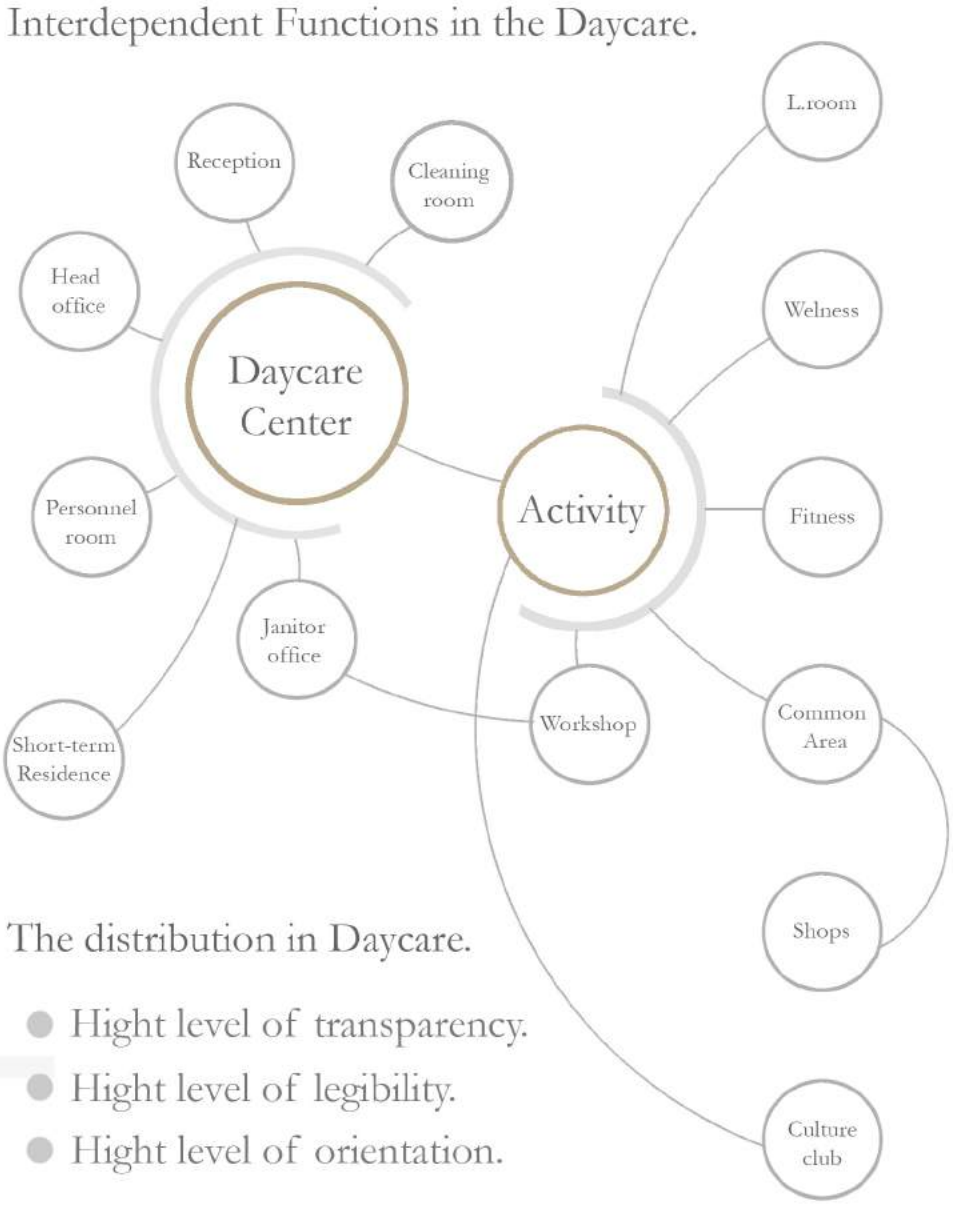


Distribution of common facilities in the program.

Design Strategies.

1. Direct visual access to relevant spatial programmes.
2. High level of natural light exposure for all common areas.
3. Continuity of public, semi public, private spaces.
4. Architectural articulation is to be distinct to the use and intent of the facility.
5. Use of materiality and colour to distinguish spaces.

Interdependent Functions in the Daycare.



The distribution in Daycare.

- Hight level of transparency.
- Hight level of legibility.
- Hight level of orientation.

Z O N I N G

Spatial layout

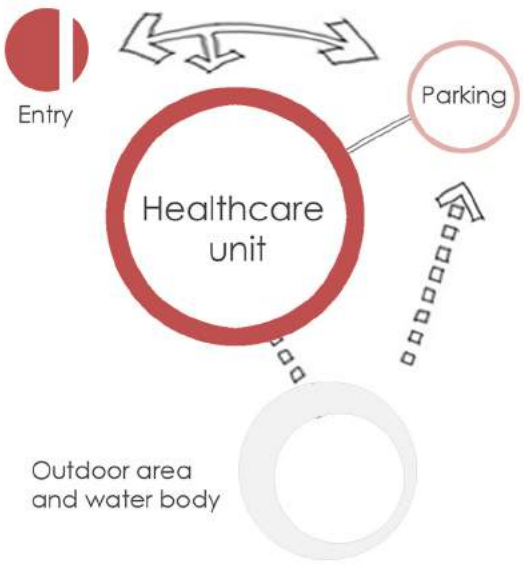
Derived from analysis and observation of site and program.

Objective

From analysis of program and site data, taking into account the advantages of the site, Site is zoned out and a basic connectivity of cluster is derived.

Objective of the analysis is to understand program and site and derive a functioning connectivity model of desired programs.

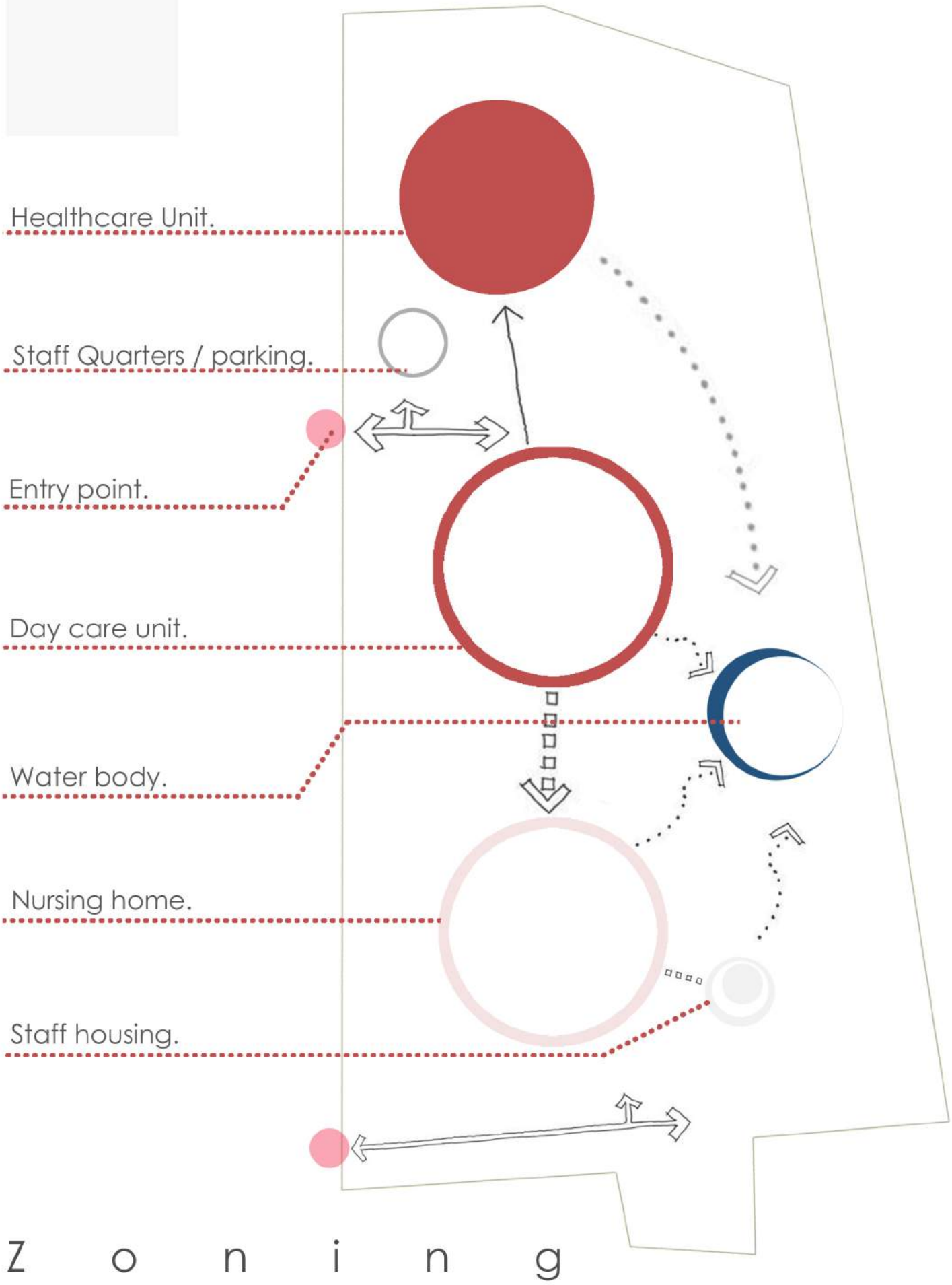
Basic cluster - Healthcare unit



Basic cluster - Daycare unit

Basic cluster - Nursing center.

Site connectivity and zoning.



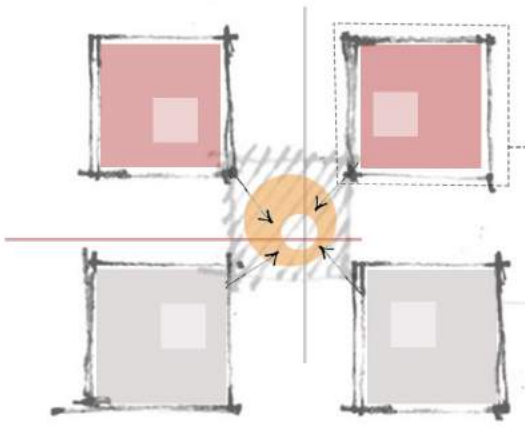
Z o n i n g

Central water body as a central social space in the site uniting all 3 functions of the program and indulging all users in quality environment .

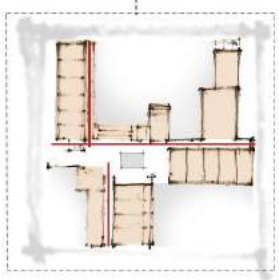
CONCEPT

VILLAGE

- Community design to reflect how a village functions to assist social activities and create a sense of togetherness.



BLOCK

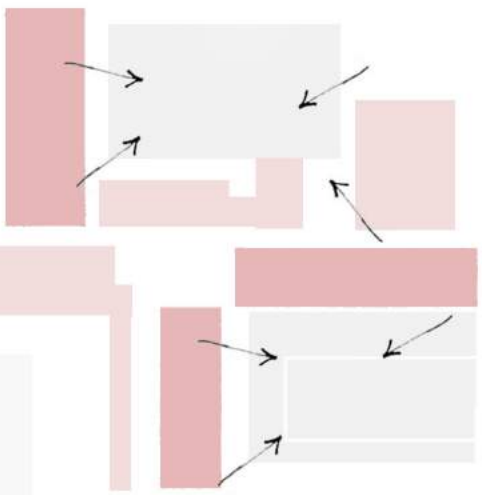


- Open space
- Built space
- Central circulation
- Boundary

Conceptual working cluster

BLOCK

- Patients rooms
- Secondary activity
- Garden and park
- Central space



Rooms oriented towards Garden and community spaces, transparency between activities to provide max. cotrol over social activities.

ACTIVITIES

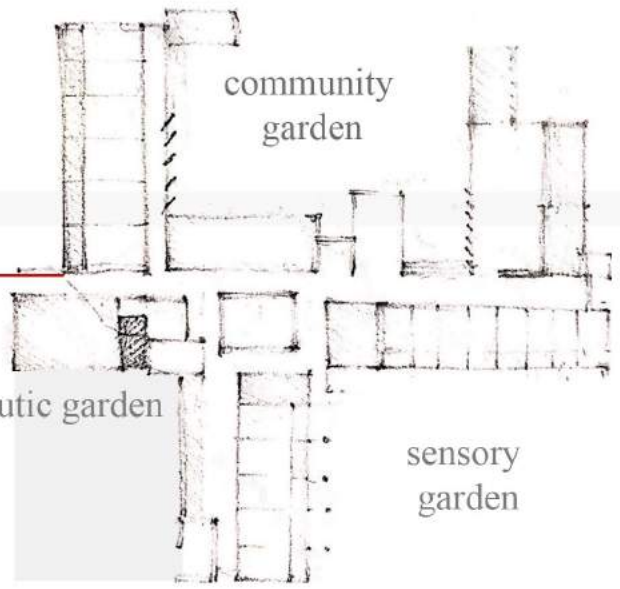
Interactive environment

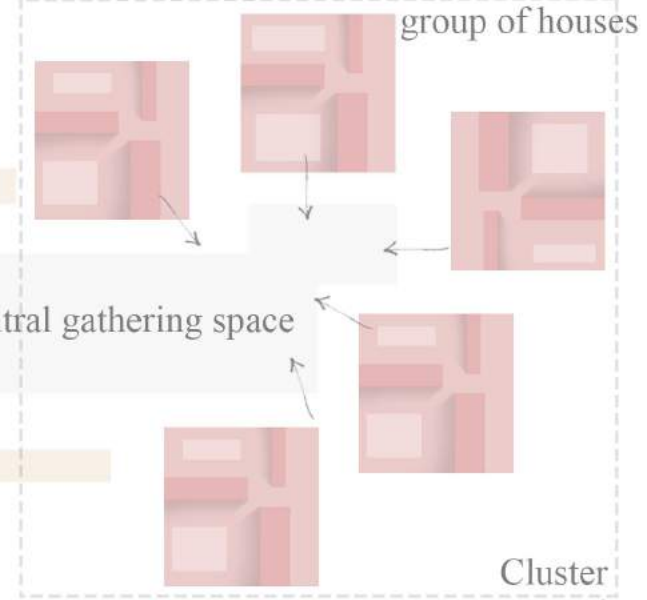
Garens and farms

Walking track and greenery

ALZHEIMERS VILLAGE

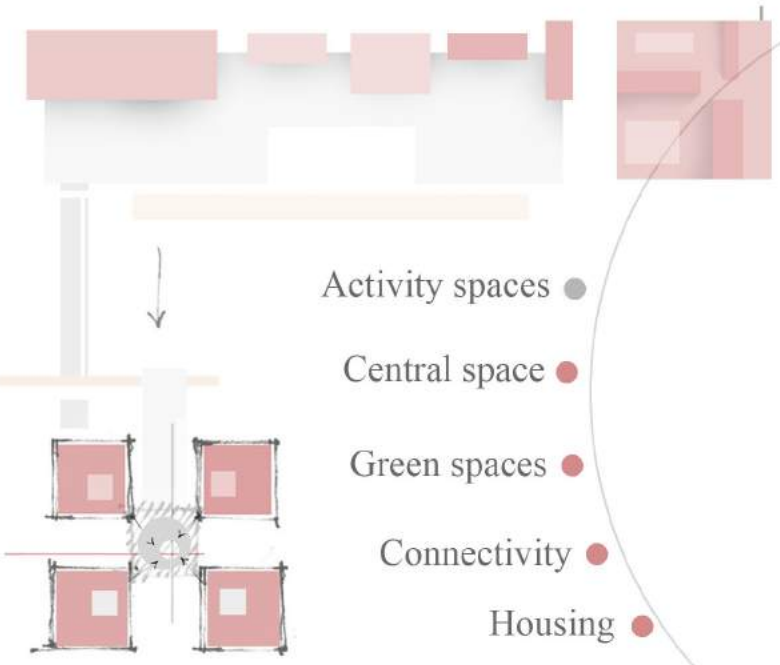
Block concept

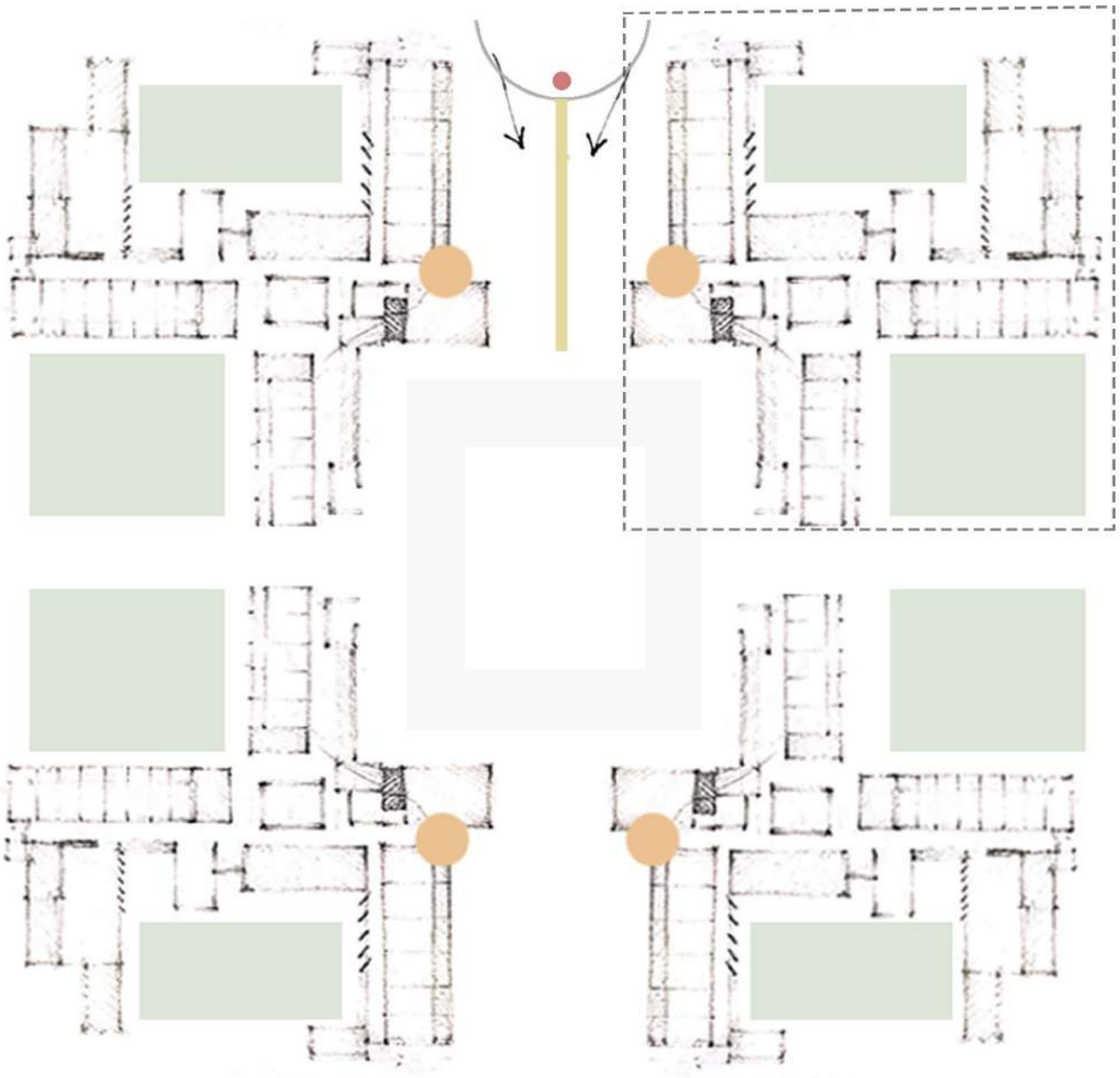




TYIPCAL VILLAGE CLUSTER

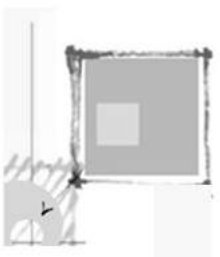
Deconstructing elements of a village





CLUSTER

- Gathering space within indivisual block
- Entry to indivisual block
- Entrance to cluster
- Pathway towards cluster
- Central gathering space for all blocks

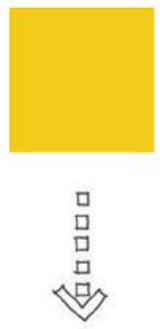


CLUSTER PLAN.

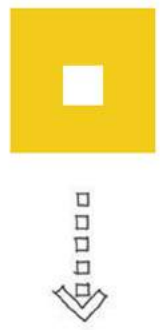
Design strategies utilized in planning.

CLUSTER CONCEPT

01

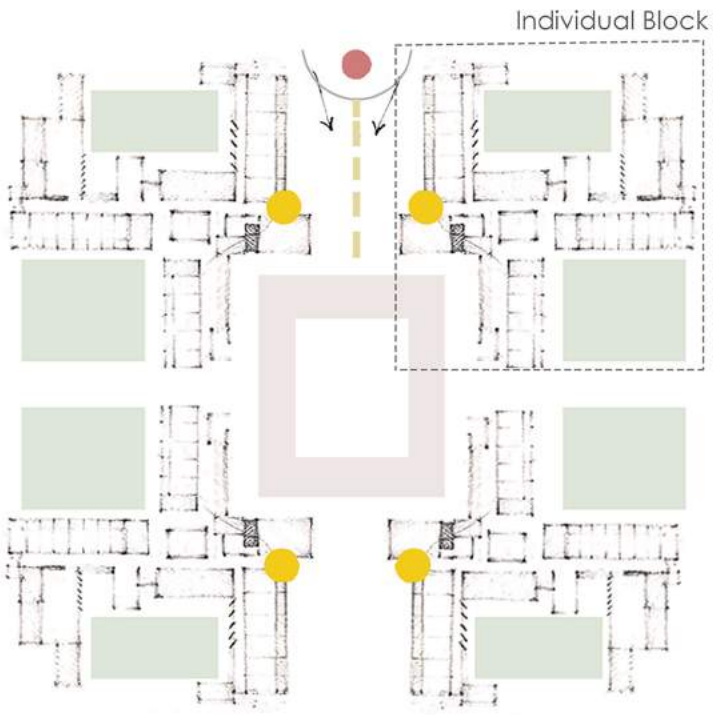


02



03

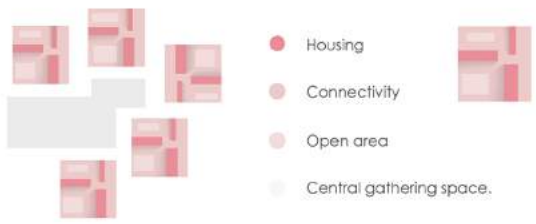
CONCEPT DERIVATION



There are group of houses forming a cluster, this cluster is the epicenter of all social activities. In a village this central spcae bifurcates into various activity zones or termin ates into a road network.

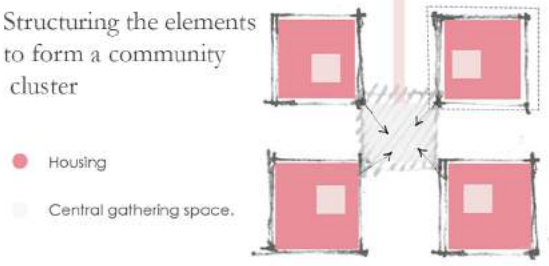
Element of a housing cluster :
Houses, adjacent semipublic and public space open spaces, central gathering space activity centers.

CONCEPT VILLAGE



Forming a model to depict the same environment

Structuring the elements to form a community cluster



CLUSTER

All living units face outwards towards open spaces to provide transparency between spaces and induce relaxation.

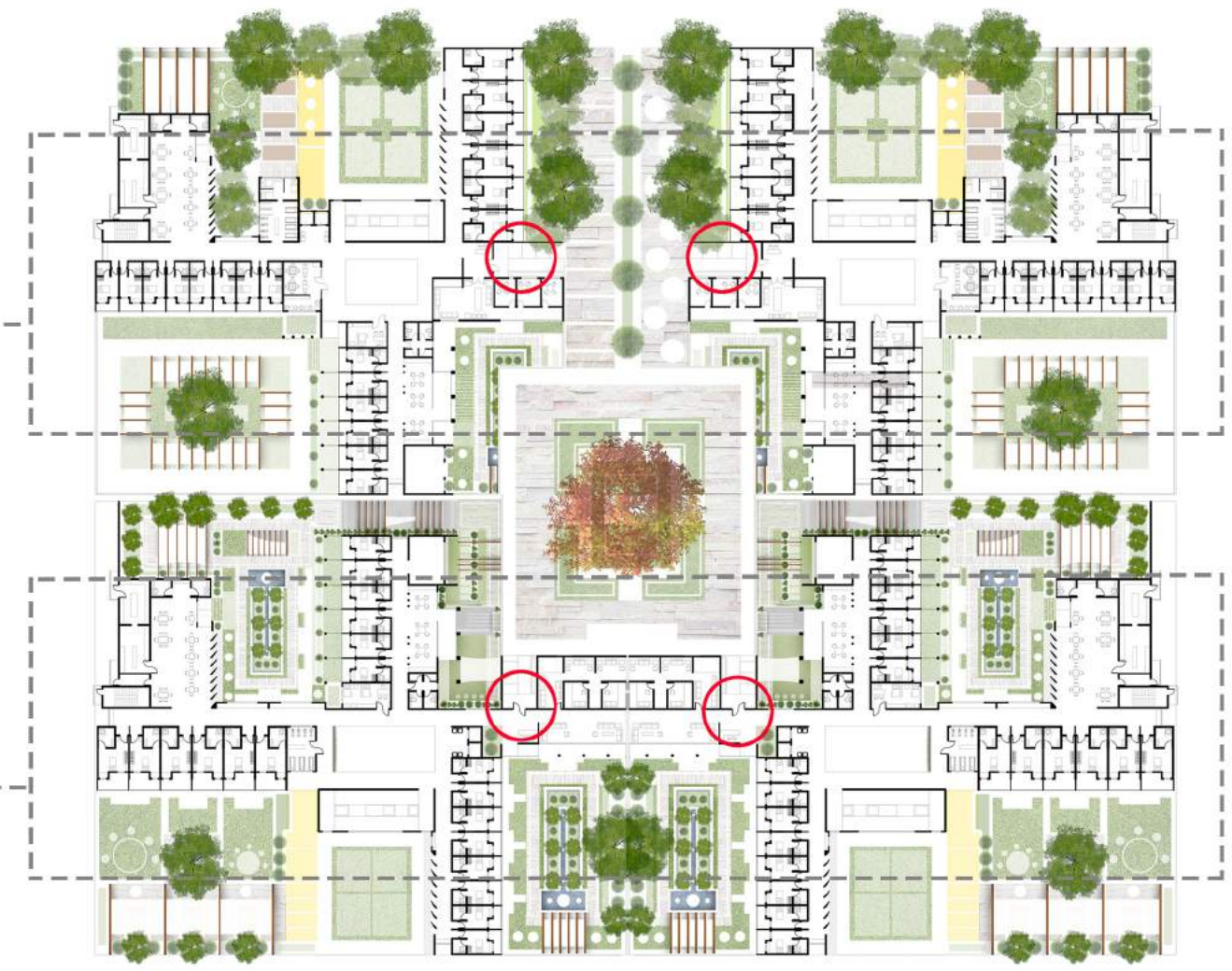
BLOCK A

Entrance to blocks

BLOCK B

A village concept helps in acheiving a good amount of social interaction required for the patients.

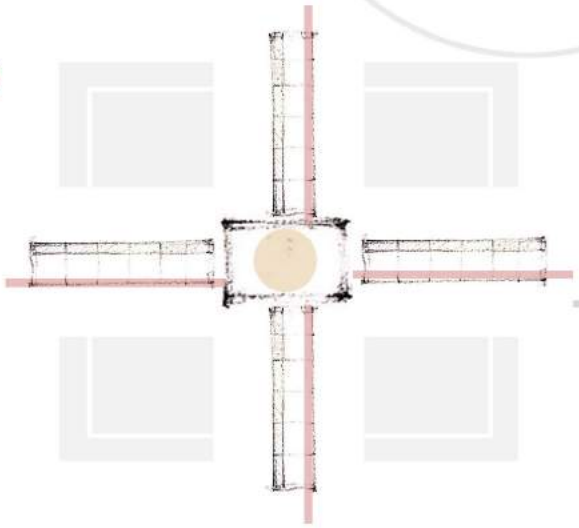
CLUSTER



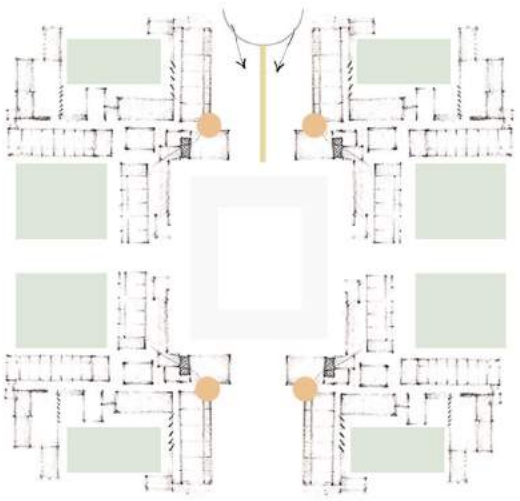
PLANNING

BLOCK LAYOUT

CONCEPT

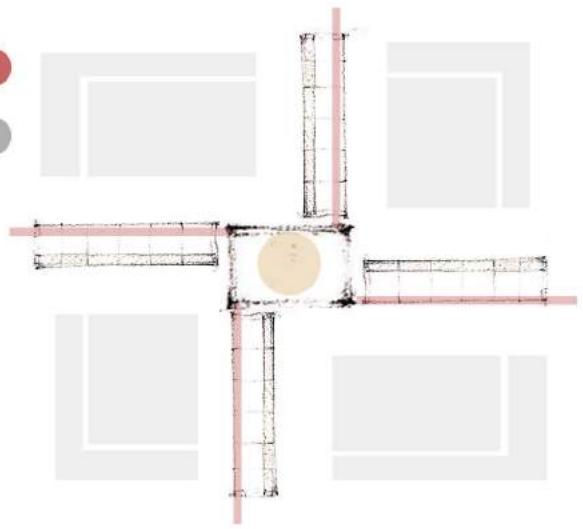


BLOCK - A



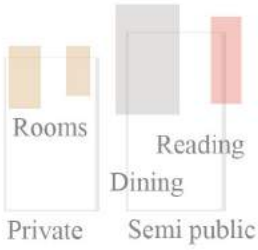
DESIGN GOALS

- High level of *Legibility*
- High level of *Transparancy*
- High level of *Orientation*



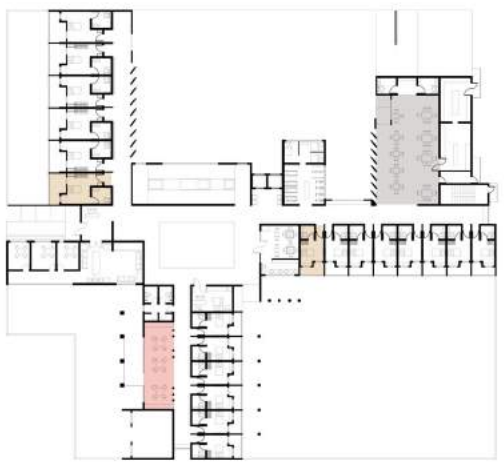
High level of legibility

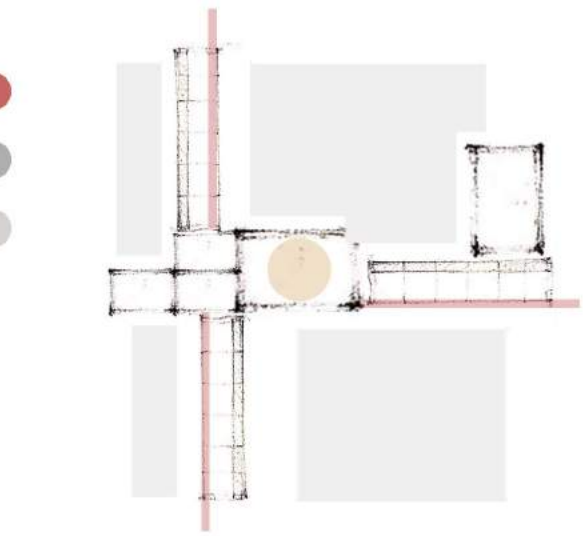
Scale of private and public spaces are to reflect the spatial hierarchy of use, aiding in understanding of behavioural expectations .This allows the users of the space to spatially orient themselves as part of their way-finding.



Spatial heirarchy in form of a public private gradient.

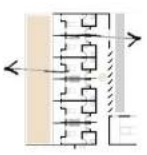
Design intent is to provide users a sense of autonomy to walk within the building venturing to different spaces without loss of orientation.





High level of Transparency

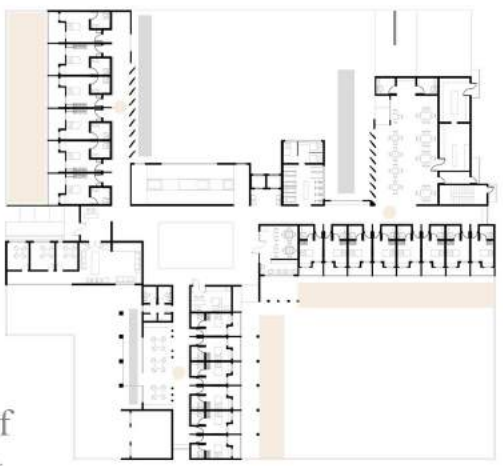
A high level of transparency of the internal and external spacesthat one is to engage with is required to allow for visual access and overview.

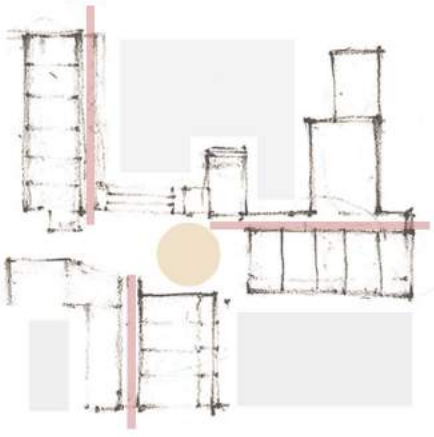


Elements and spaces in the field of view are directly accessible.

Having visual access from windows to the outdoors can have a therapeutic effect and reduce discomfort for the users

Windows with contextual views onto nature provided a level of life satisfaction, for its restorative quality, as well as enhancing control over the environment.





High level of Orientation

Simple decision/reference points, serving as spatial anchors

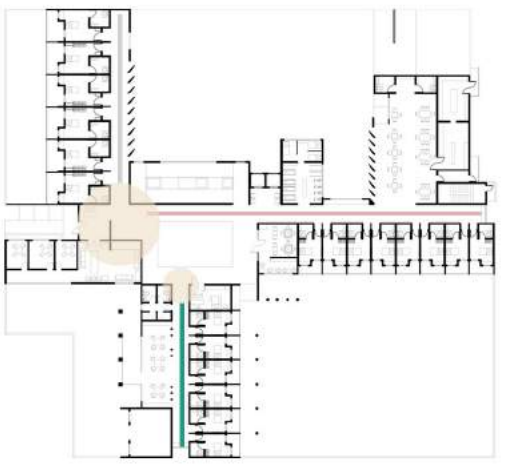
Clear spatial circulatory system

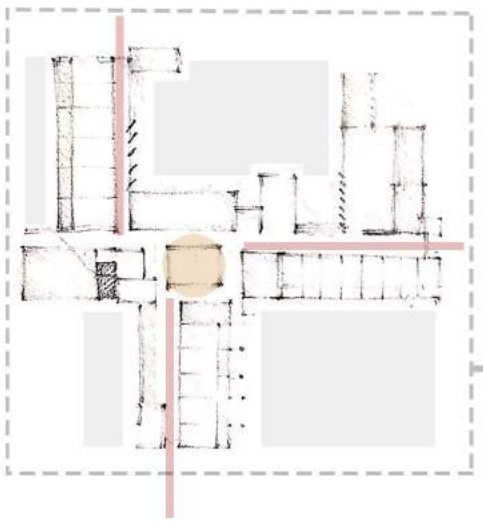
Allow for orientation through time and space

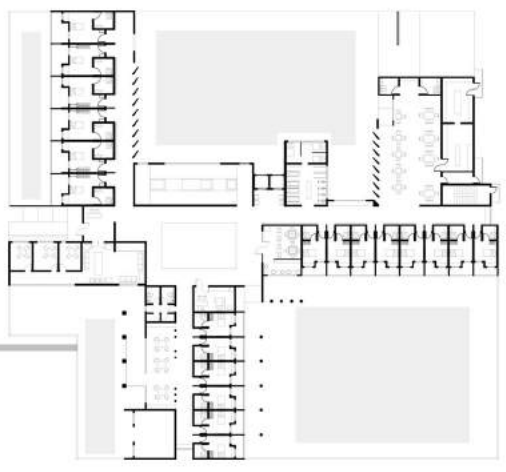
When there are changes in the direction of the path of travel, meaningful reference points are present as a form of landmarking indicative of destination points.

High level of natural light exposure for all common spaces

Continuity of public/semi-private/private spaces





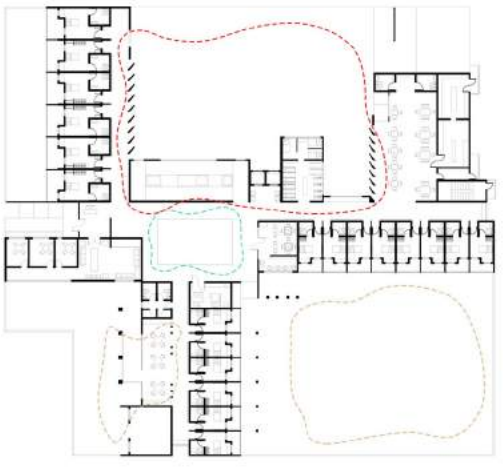


Looped pathways for orientation

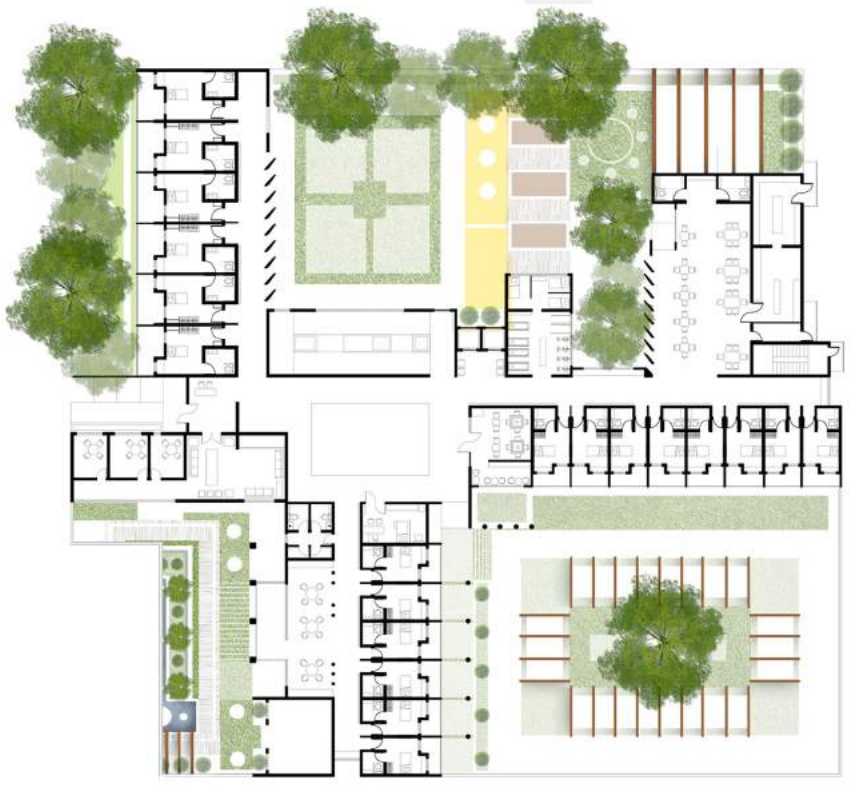
Designed for purposeful wandering.

Source for excersise and explore opportunities.

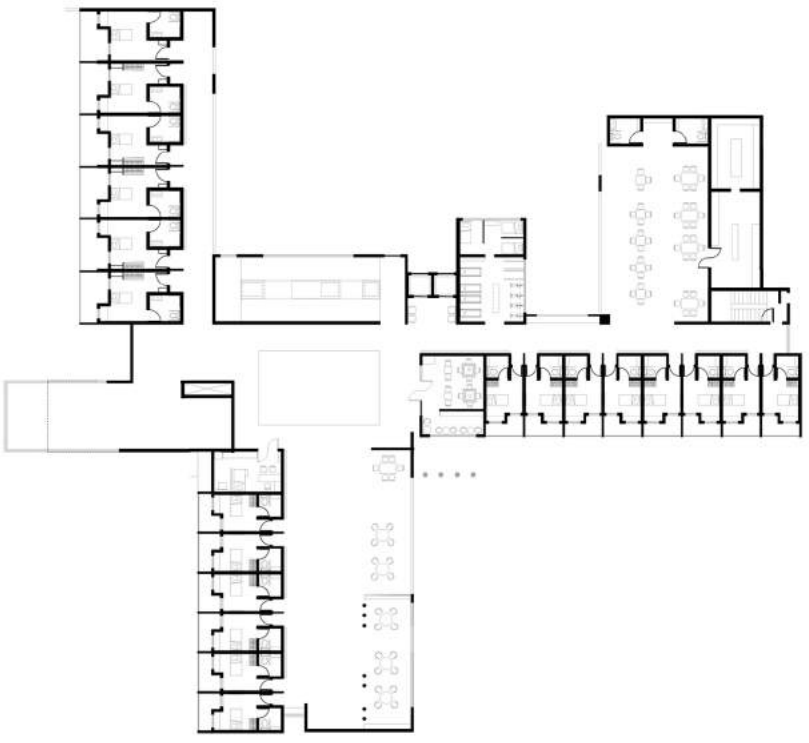
Anchor memory points to minimize confusioin.



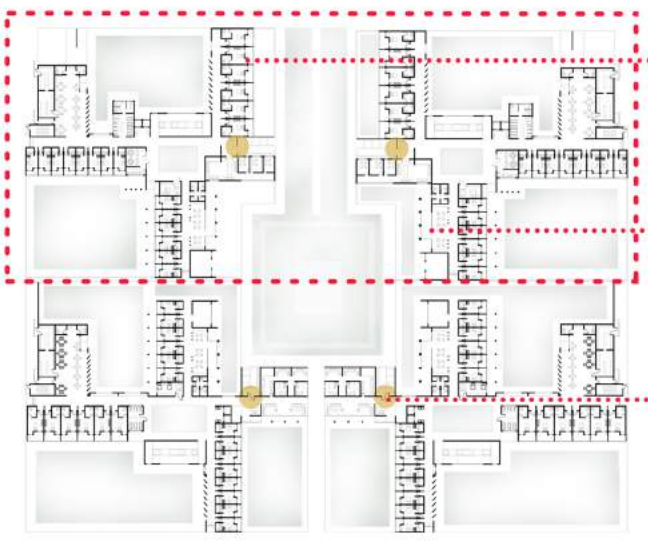
Block - A



Ground floor plan



First floor plan

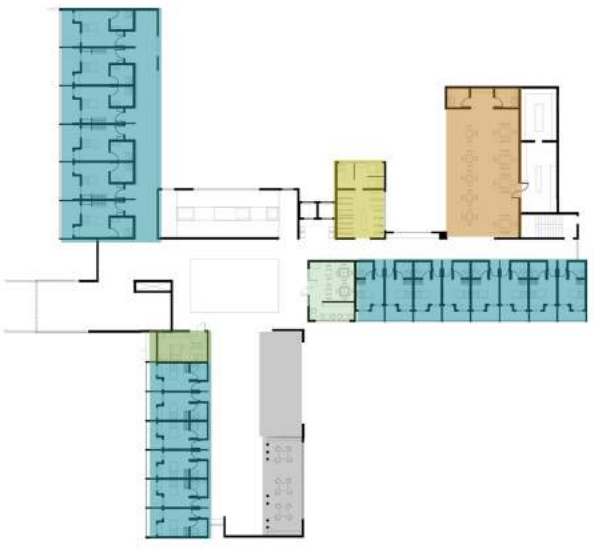


Cluster plan.

Ground floor plan

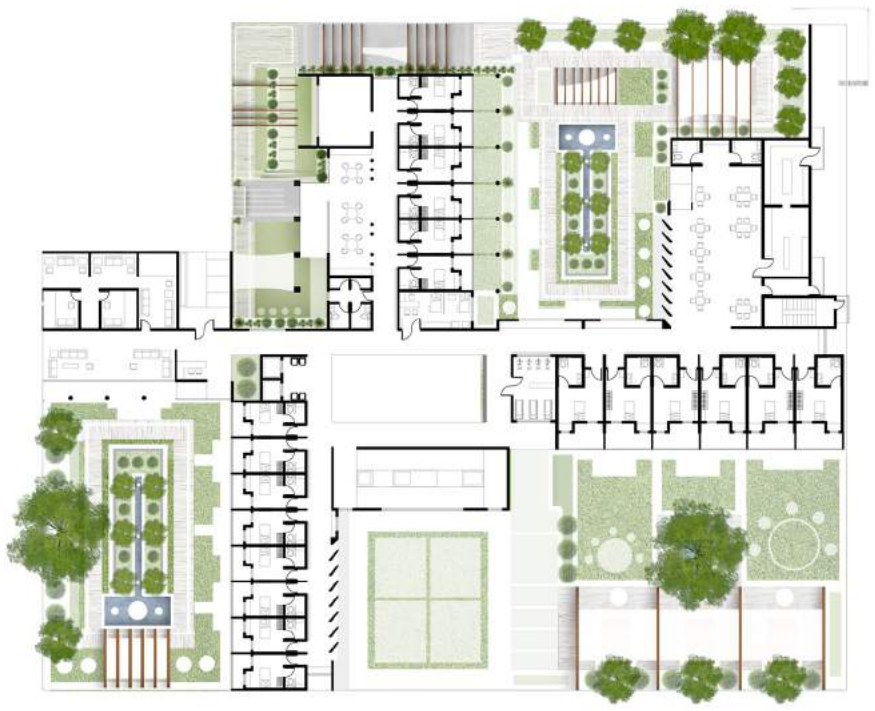
- Rooms
- Dining area
- Reading/Seating space
- Games room
- Physiotherapy room
- Clinic

1 Mini Garden
2 Theraputic garden
3 Sensory garden
4 Combined outdoor space

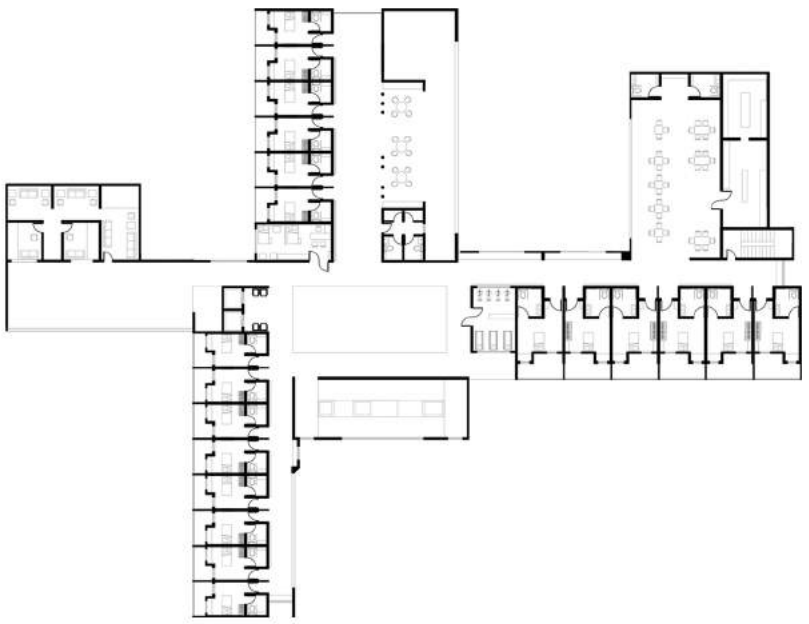


First floor plan

Block - B

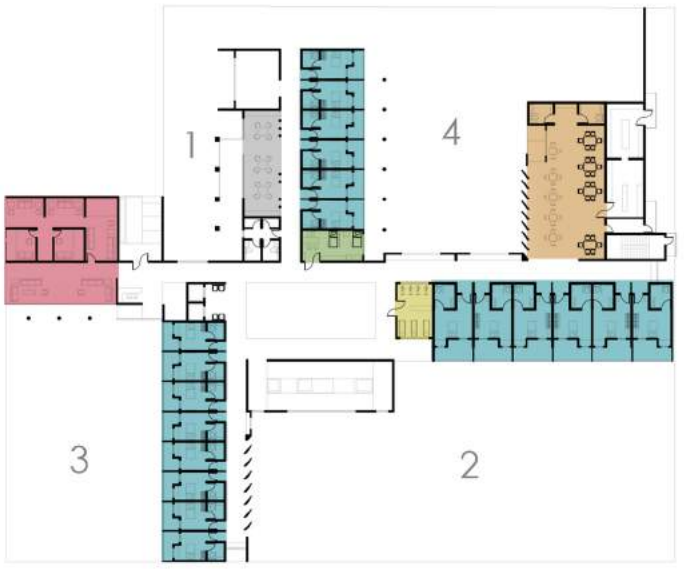


Ground floor plan



First floor plan

Cluster plan.



Ground floor plan

- Rooms
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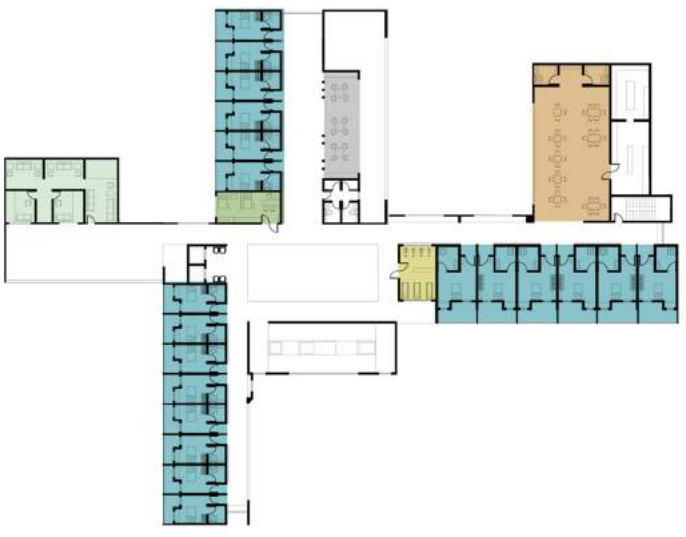


First floor plan

Open spaces for Alzheimer's

Meaningful outdoor spaces.

C o n c e p t

Provide outdoor spaces visible from every room and easily accessible.

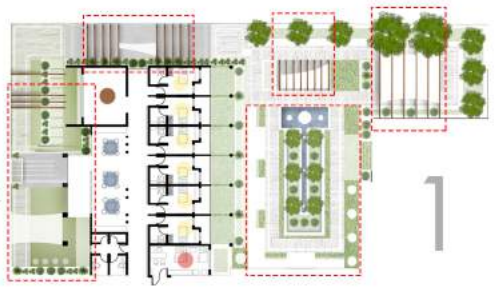
Important factors contributing to a healthy open space.

A good microclimate - well conditioned outdoor space sensitive to light, temprature, wind etc.
Secure environment - Not leading patients into harmful area or towards potential threats.
Easy access - Barrier free access, open from all sides to access.
Easy orientation - once in the garden patients must navigate easily without getting lost

Block B

B l o c k B

- Room
- Reading area
- Meditation area
- Clinic

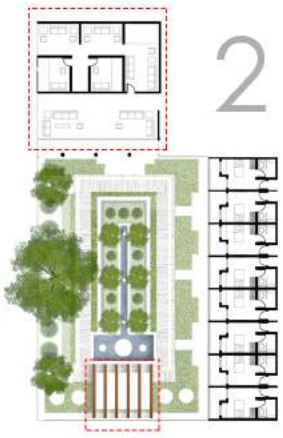


1

Indoor - outdoor space
Benificial for patients for activities like
Painting
Potting plants
Coffee and socialize.

Space accessible to patients who use the library and meditation area, open space, sheltered area, as well as walking tracks given.

Walking tracks, seating space as well as scented plants like jasmin planted central water body is a place to sit and relax,easily accessible by people.

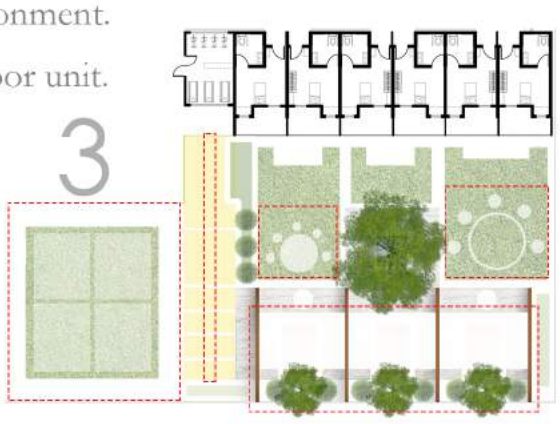


2

Visiting room for family and loved one affected by dementia. Outdoor space connected directly to the visiting unit toallow the users to spend time with the patients in a healthy outdoor environment.

Central water body with numerous seating areas to allow people to sit and talk in a calm shaded and plesant environment.

Indoor outdoor unit.



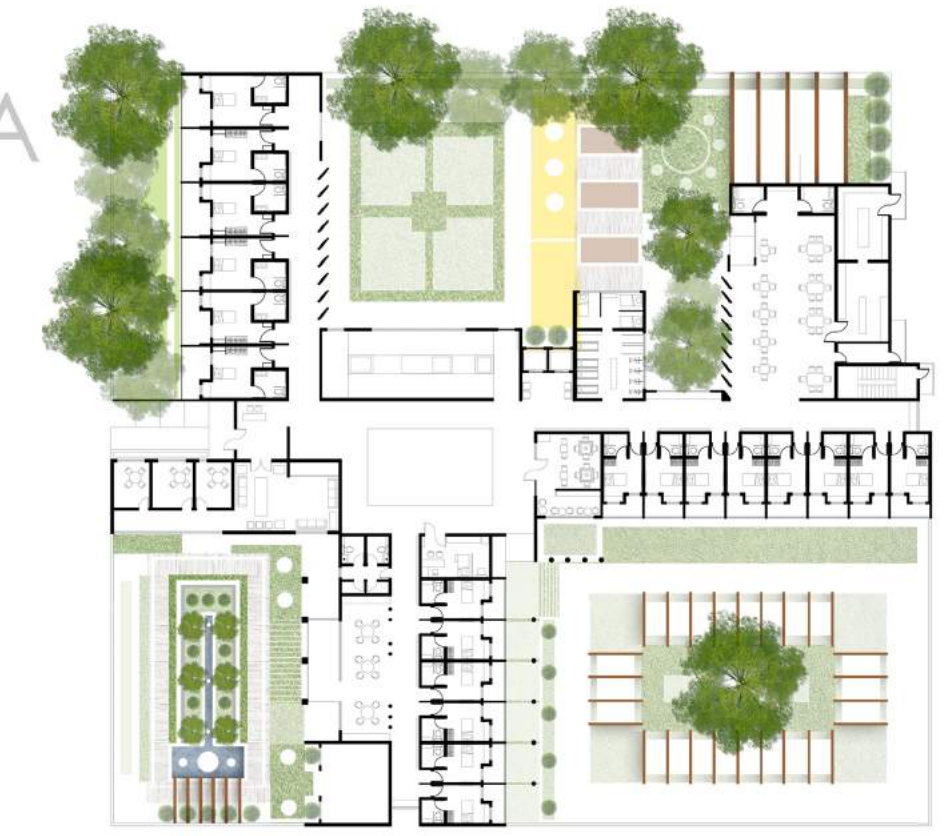
3

Memory games & sense related games are embedded on surfaces to involve patients in socializing.

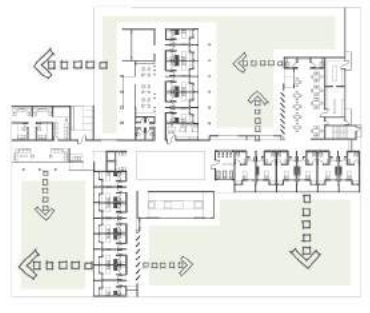
Large central gathering space.

Coloured pathway provided from axis of entry providing navigation anchor for an easier orientation

Mini sheltered garden for potting plants and having a meaningful activity center in the nursing area.

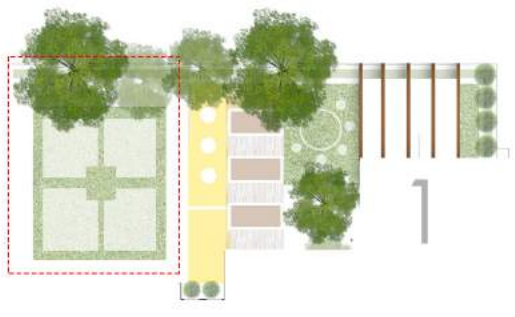


B l o c k A



V i e w s

View to the open space provided from every space, from bedroom as well as corridors and dining.



1

Mini sheltered garden for potting plants and having a meaningful activity center in the nursing area.

Large central gathering open area.

Indoor - outdoor space
Benificial for patients for activities like Painting Potting plants Coffee.

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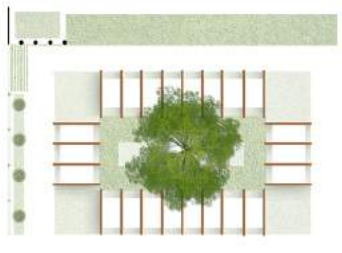
Coloured pathway provided from axis of entry providing navigation anchor for an easier orientation



2

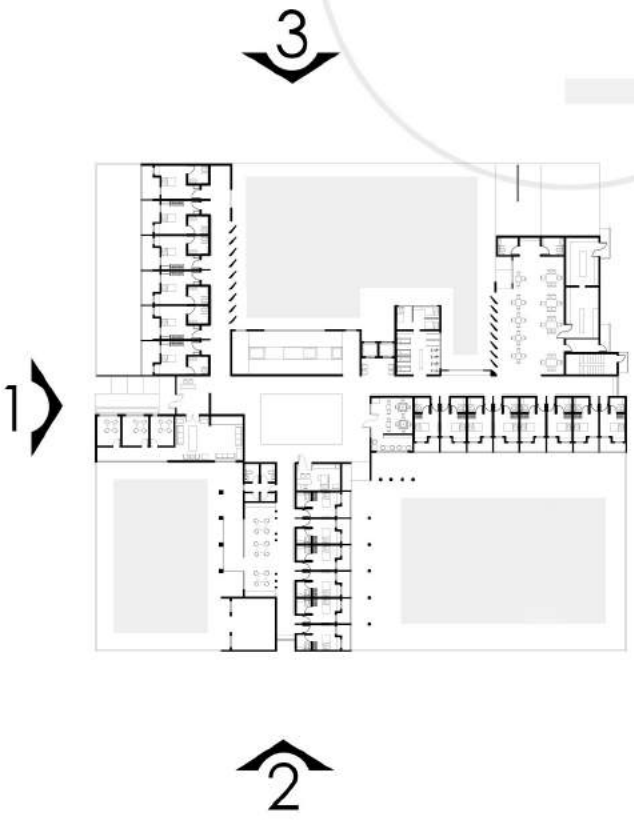
Sheltered seating space and mini courtard garden with odiferous plants and flowers, surrounding is a looped walking track for physical activity & socialization.

Design focused on creating maximum oppurtunities in outdoor spaces and promote a quality of life through

G r e e n S p a c e s

ELEVATIONS

BLOCK - A



MATERIALS

Wood Warm tone

Wood provides stress reducing effects similar to effects of exposure to nature.

White facade stone

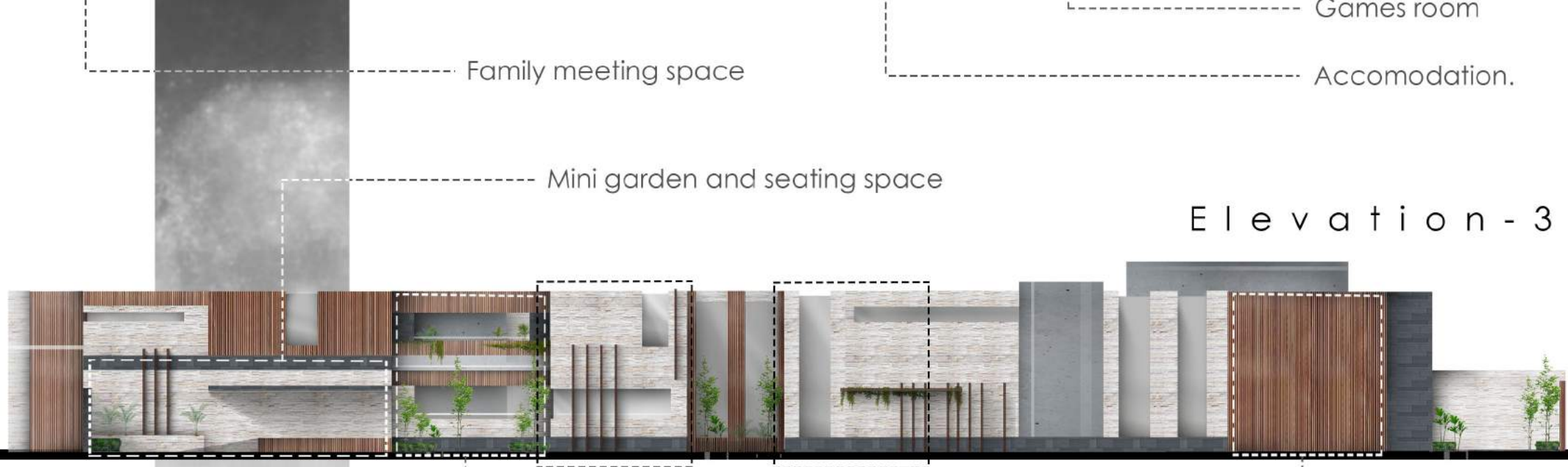
Provide contrast to the warm tone of wood and prevent visual overstimulation.

Concrete

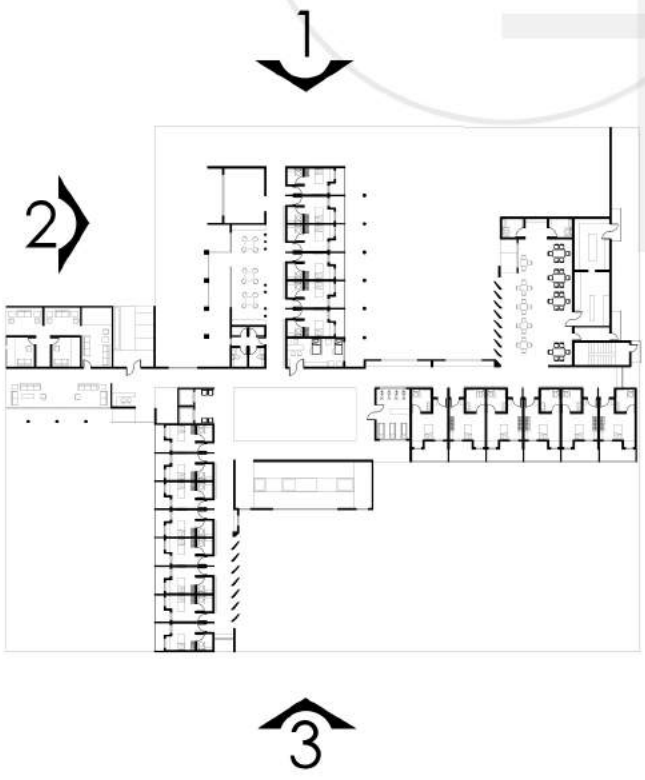
Stone

Elevation - 1

Elevation - 2



Elevation - 3



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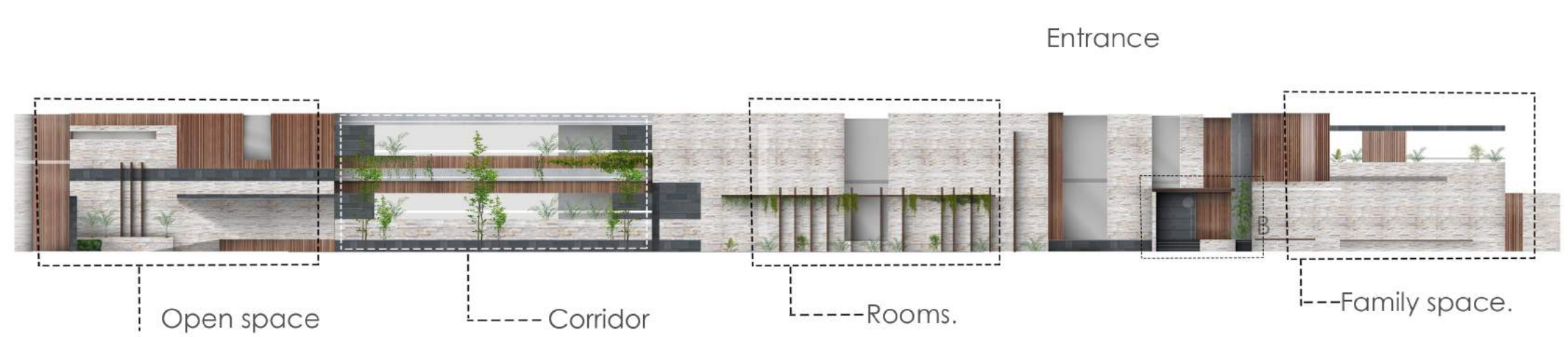


DESIGN STRATEGY.

Design strategies utilized in planning.

Applied design stragy for orientation and navigation through space

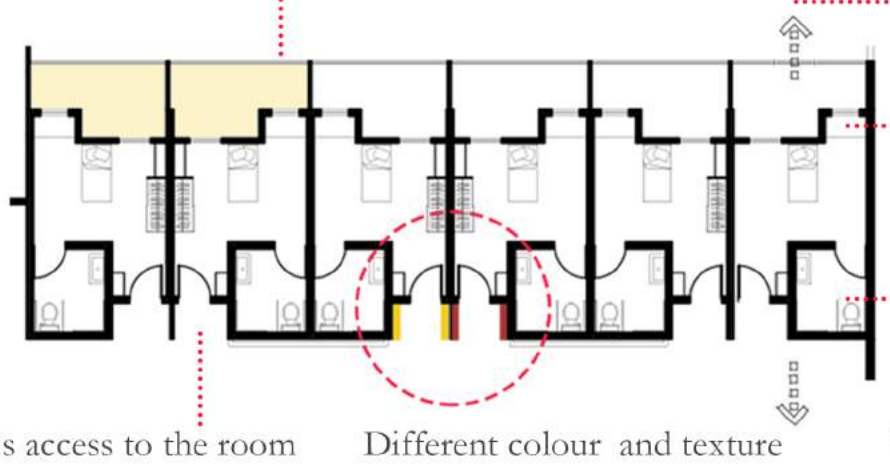
Personal sheltered space as transistion from indoor to outdoor

Different textures for every handrail.

View to the outdoor area

Seating space.

Washroom.

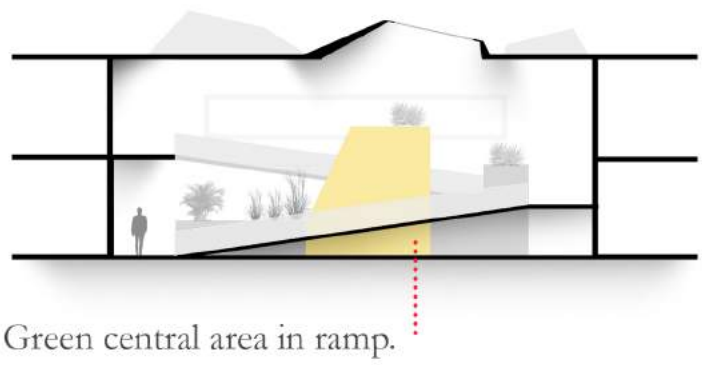


Recess access to the room creating a personalized transnstion space.

Different colour and texture to the every recessed wall. Distinguishes rooms.

View to the outdoor area once opening the door.

Section through ramp.



Green central area in ramp.

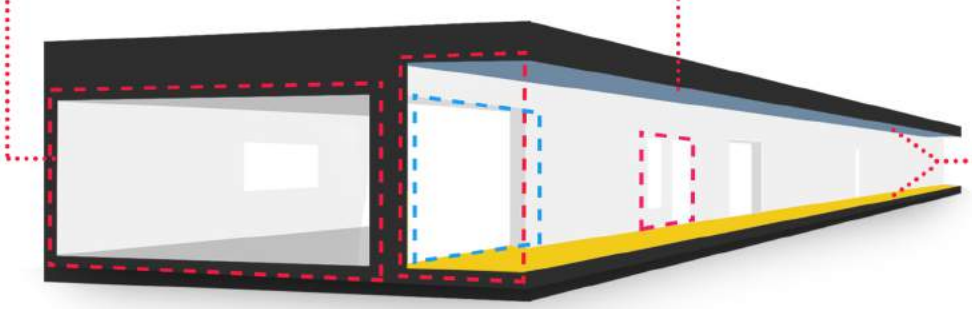
Creating environments for purposful wandering

A central feature Nursing Home is its internal circulation concept based around a ramp that enables residents to safely reach all levels on foot.

Section showing applied design strategies.

Lower height living area as transistion from public area.

No drop in ceiling height indicating public space.



Contrast in colour for all surfaces.

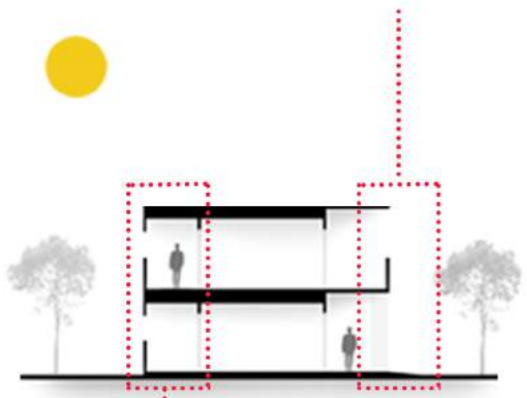
Secondry rooms are coloured in different colour and textured with different material. side light to show a preview of the use and intent of the space.

Units identified by dropped ceiling, providing a recessed entry and a personal space

Circulation through indoors and outdoors

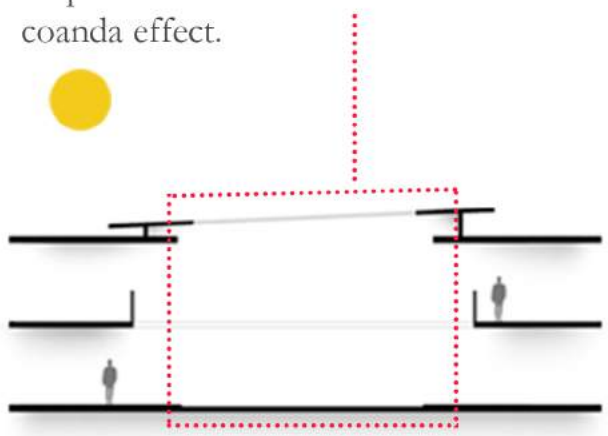
Section showing provision of natural light.

Natural light through all the corridors.



Natural light through the living unit

Sloped roof to aid for air circulation through coanda effect.



Natural light flooding the central gathering space.

Looped pathways for orientation

Each corridor has a different colour and texture for its flooring and walls to aid the patients and make sure they are not lost

Designed for purposeful wandering

.

Source of excersise and opportunities. Memory points to minimize confusioin.

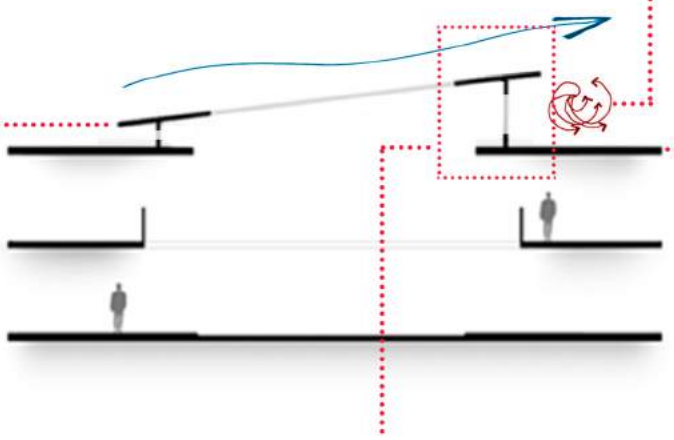
Helping patients navigate their personal space

Design strategies utilized in planning.

Design to assist natural cooling and provide fresh air indoors.

Sloped roof to allow air to pass on it.

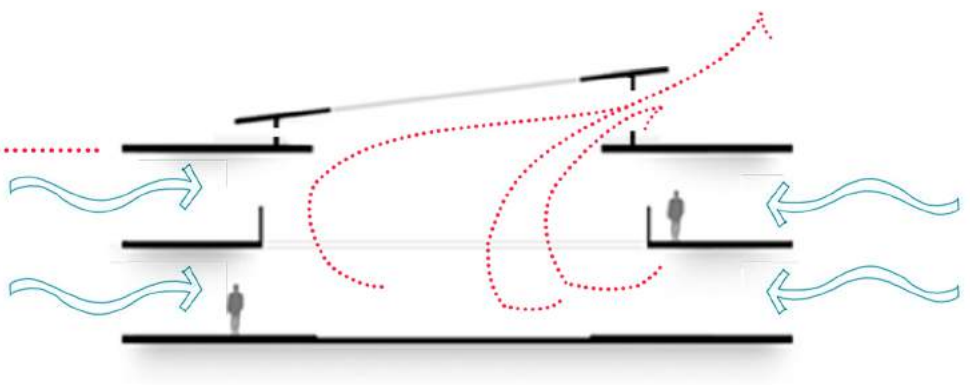
This creates a negative air pressure on the other end of the slope.



Opening on the deep end of the sloping roof.

Section through central courtyard

This forces the stale hot air inside the building to rush outside to balance the negative pressure.



Air from outside the building rushes in through guided vertical louvres placed alongside corridors.

This allows the building to be naturally ventilated at all times, letting the building breathe.

A Breathing Building

The design used to keep spaces naturally ventilated aids in multisensory stimulation of the patients.

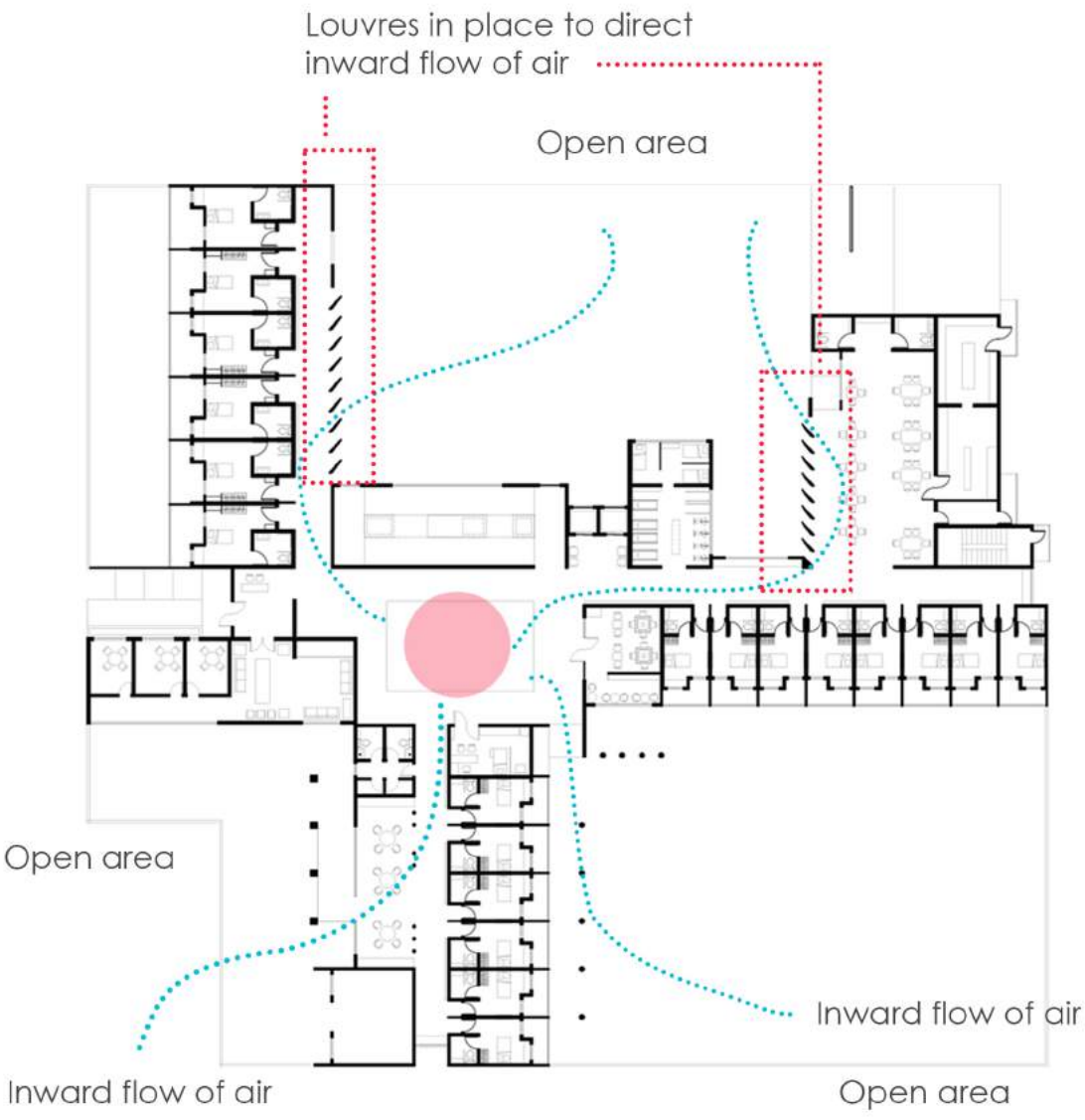
Corridors and openings designed to terminate at the central courtyars to let an outward f low of air fill the entire living space.

Garden used for theraputic healing of patients house vaious odiferous flowering plants.

Air being pulled from these open spaces into the building keeps the space well scented.

This approach helps minimize noise from vents and ducts which are otherwise disturbing specially for these patients.

Passive cooling explained in plan.



Building plan ground floor

M a s t e r p l a n.

Alzheimers and dementia care center.

M a s t e r p l a n

Goregaon - Mumbai

Specialized healthcare unit for mental ilnesses.

Healthcare unit adressing specialized facilities and requirements for patients in the daycare and nursing unit. Open to public as well.

Site reserved for future expansion.

Future of Dementia care and research in country must be stressed upon due to the growing rate of cases, site reserved for a research establishment .

Staff quarters and parking area.

Parking provided in between daycare and health care unit to be accessible to both functions.

Daycare unit

Daycare unit housing temporary patients from the healthcare unit and patients dropped for for daycare facility.

Central water body.

A Large central water body connectd to all three functions. Used as a relaxation space with various sheltered seating spaces as well as mini physical activity areas, complete walkway ofsetting the lake shaded by trees that makes walking a memorable experience.

Nursing center.

Nursing center housing long term care patients.

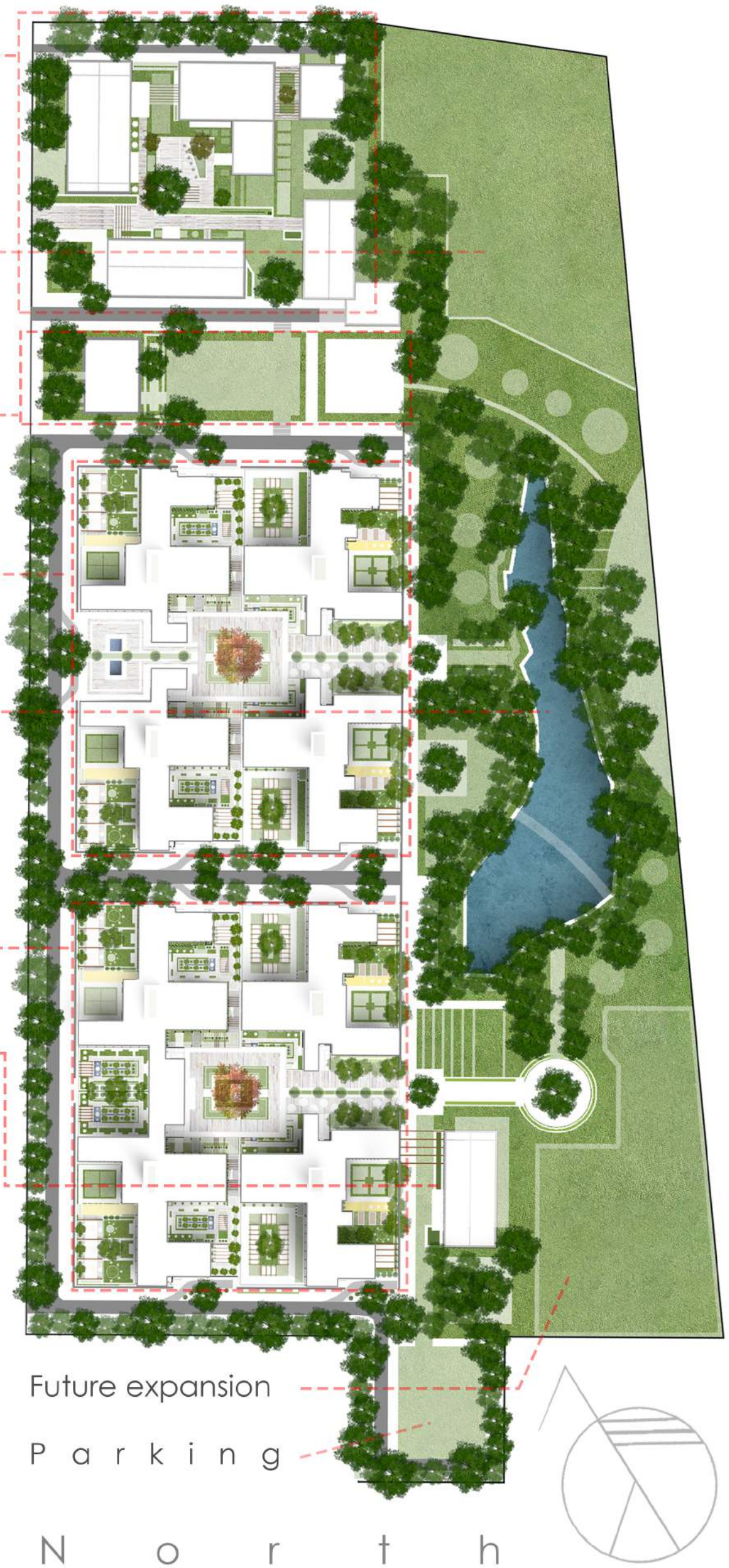
Staff housing.

C o n c e p t

Isolation of activities to make sure their functions do not seep into one another.

Each cluster and activity center is isolated but has a wide range of functions within them and everything connected to the central water body and gathering space.

M i n d a n d S p a c e



C o n t e x t


Mixed use area
Western express highway
Unused land
Unused land
Resedential
Unused land
Service road