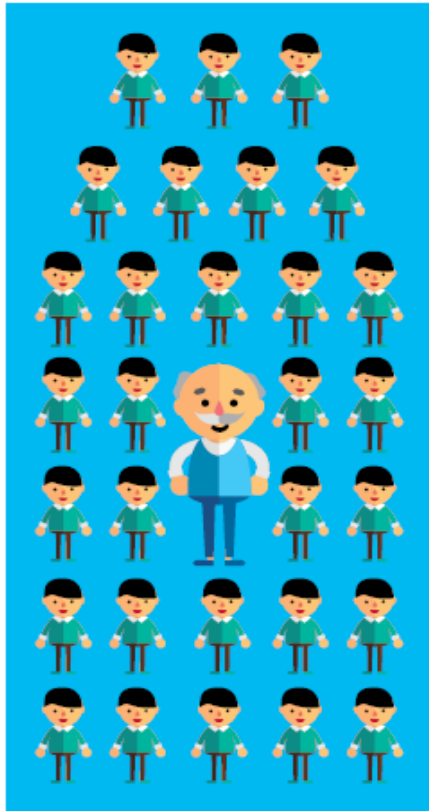


Designing Therapeutic Gardens for Healing in Nursing Homes

Designing therapeutic gardens for healing

1 in 31

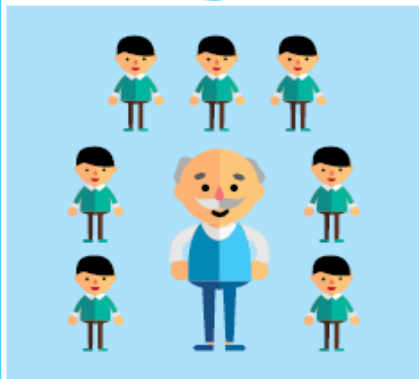


1970

OUR POPULATION IS AGEING RAPIDLY.

In 1970, **1 in 31** Singaporeans was 65 or older.
In 2015, it was **1 in 8**. By 2030, it will be **1 in 4**.
We will have over 900,000 seniors, approximately double the current 440,000.

1 in 8



2015

1 in 4



2030

YEAR



Seniors aged
65 and above



Singaporeans
under the age of 65

Source: Action Plan for Successful Ageing, MOH Publication

The estimated prevalence of **dementia** is 10% amongst the elderly aged 60 and above. With rapid population ageing, the number of people living with dementia will increase.



Source: Looking To The Future, AIC Publication

Creating healing environment to improve **Quality of Life** in the nursing home.

- improve mood and ease anxiety
- reduce agitation in residents with Dementia
- provide sensory stimulation
- encourage autonomy and promote ambulation
- encourage social interaction



Challenges & Strategies:

- **Site/Space Constraint**
 - pocket gardens at high levels
 - 'borrowing' landscape from neighbours
- **Maintenance Concerns**
 - ease of maintenance
 - selection of low-maintenance plants



Designing therapeutic gardens for healing: Tampines Nursing Home

Borrowed Landscape

- Integration into the neighbourhood
 - Shared communal landscape
 - Fenceless design concept



Credit: Forum Architects

1st Storey Plan

MOH HOLDINGS

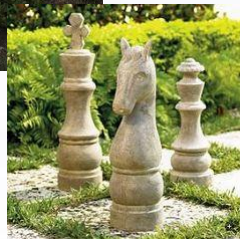
Designing therapeutic gardens for healing: Tampines Nursing Home



Community Garden



Chess Garden



One large common garden to enjoy and interact

Designing therapeutic gardens for healing: Tampines Nursing Home

Sensory Garden – Plant Palette

- **Smell**

- Scented plants are provided like *Aglaia odorata*, *Lantana camara*

- **Taste**

- Edible plants and growing areas for edible plants are provided like *Orthosiphon*, *Ixora*



Ficus auriculata

- Latex applied on cuts and wounds, used in the treatment of diarrhoea and dysentery



Aglaia odorata

- Relieves pain in rheumatic joints, injuries from falls



Orthosiphon aristatus 'Purple'

- Anti diabetic



Lantana camara 'Hybrida'

- Smell, sight



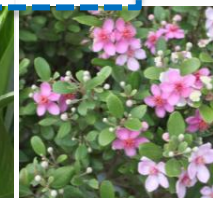
Ixora 'Super pink'

- Taste, reliving childhood memories



Heliconia 'American dwarf'

- Sight, reliving childhood memories



Rhodomyrtus tomentosa

- Touch, furry leaves

- Plants for Smell
- Plants for Taste

Designing therapeutic gardens for healing: Tampines Nursing Home

Sensory Garden – Plant Palette

• Colour

- Therapeutic areas are colourful with a variety of plants at all levels
- Eg. *Lantana*, *Ixora*, *Ficus*, *Agalaia*, *Orthosiphon*, *Rhodomyrtus*, *Heliconia*, *Bucida*, *Flacourtia*, *Schefflera*, etc.



Ficus auriculata
○ Latex applied on cuts and wounds, used in the treatment of diarrhoea and



Aglaia odorata
○ Relieves pain in rheumatic joints, injuries



Orthosiphon aristatus 'Purple'
○ Anti diabetic



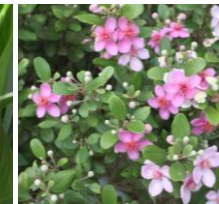
Lantana camara 'Hybrida'
○ Smell, sight



Ixora 'Super pink'
○ Taste, reliving childhood memories



Heliconia 'American dwarf'
○ Sight, reliving childhood memories



Rhodomyrtus tomentosa
○ Touch, furry leaves

Designing therapeutic gardens for healing: Tampines Nursing Home

Sensory Garden – Plant Palette

- **Touch**

- Plants with texture presence like *Ficus auriculata*, *Rhodomyrtus tomentosa*

- **Evoke Memories**

- Plants like *Orthosiphon*, *Ixora* and *ficus* are used, eaten during childhood times, evoking memories. Plants are also not toxic and not thorny



1st Storey Plan



Ficus auriculata

- Latex applied on cuts and wounds, used in the treatment of diarrhoea and dysentery



Aglaia odorata

- Relieves pain in rheumatic joints, injuries from falls



Orthosiphon aristatus 'Purple'

- Anti diabetic



Lantana camara 'Hybrida'

- Smell, sight



Ixora 'Super pink'

- Taste, reliving childhood memories



Heliconia 'American dwarf'

- Sight, reliving childhood memories



Rhodomyrtus tomentosa

- Touch, furry leaves



Plants for Touch
Plants that evoke memories

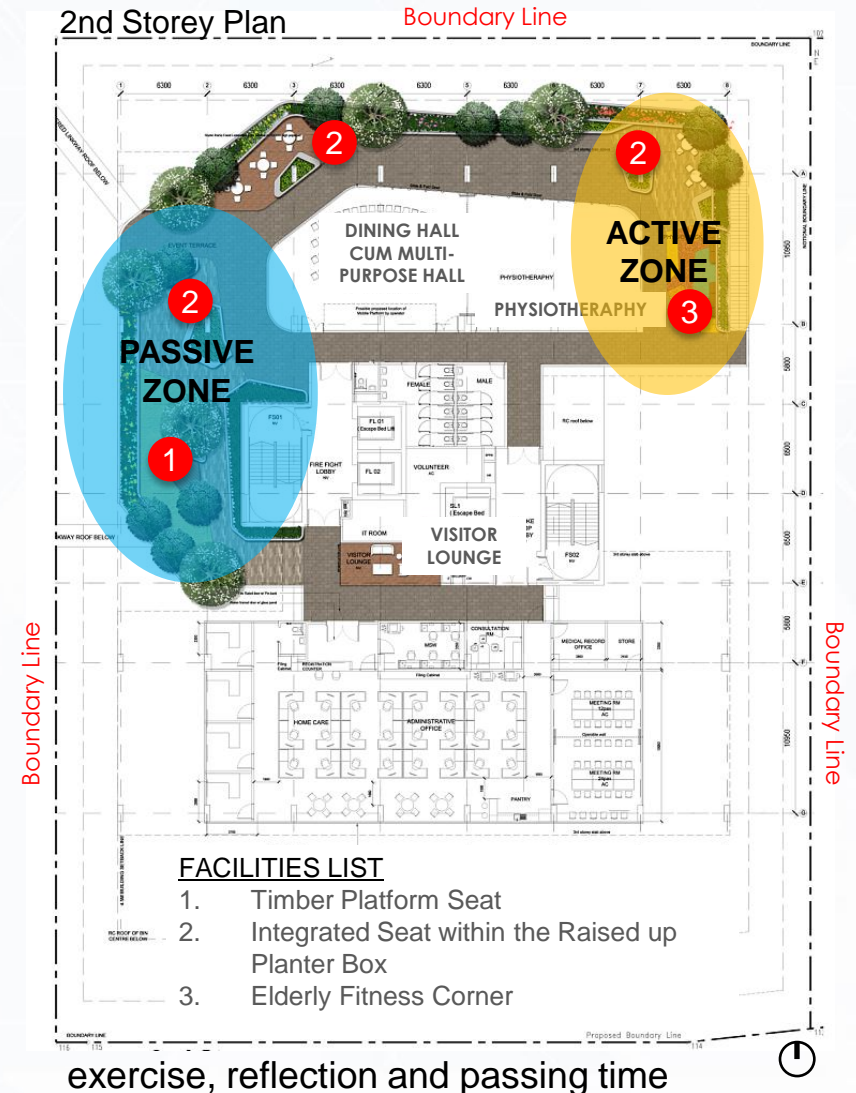
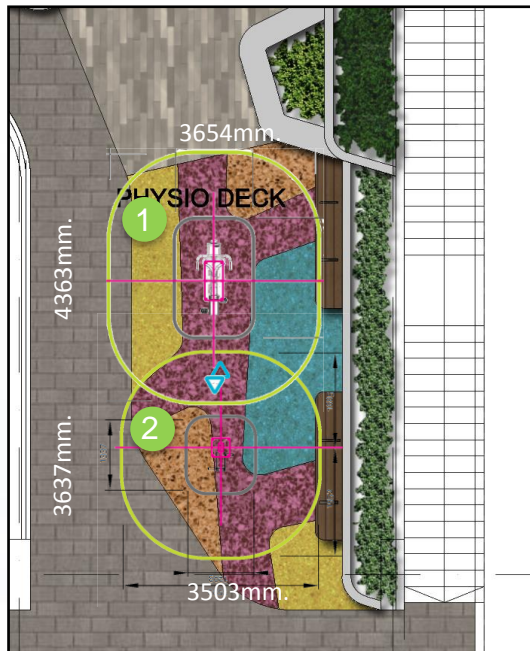


Poisonous
Thorny
Attracts Insects

Designing therapeutic gardens for healing: Tampines Nursing Home

Zoning

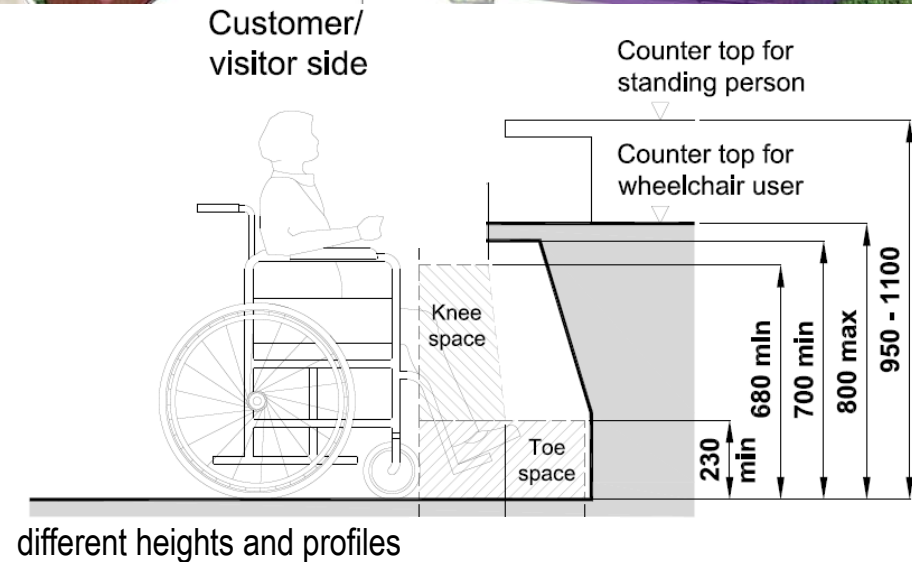
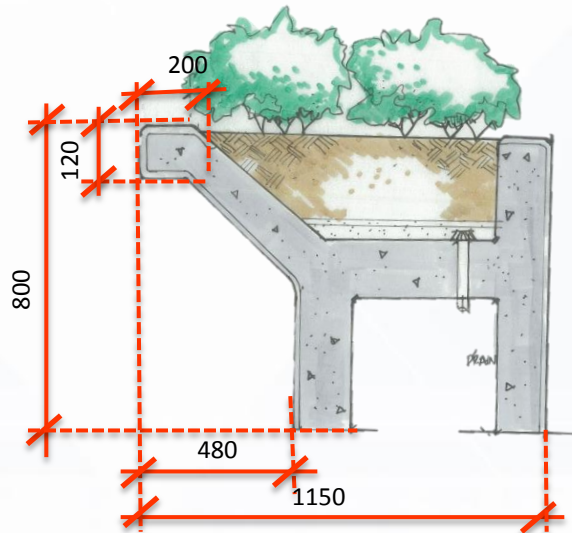
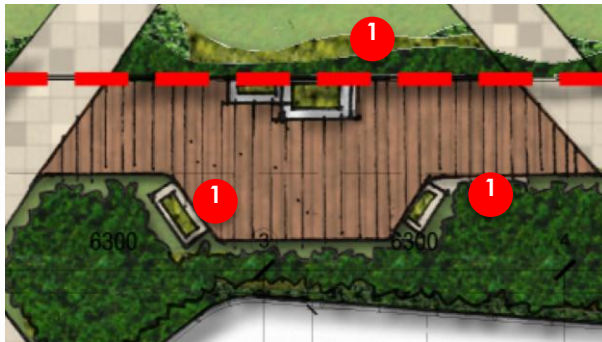
- **Active zone**
 - Elderly-friendly outdoor fitness area
- **Passive zone**
 - Spaces for seating and strolling
 - Seats are placed opposite each other to encourage interaction.



Designing therapeutic gardens for healing: Tampines Nursing Home

Wheelchair accessibility

- Planter boxes within the community garden are designed as such to be accessible by both ambulant and wheelchair-bound seniors



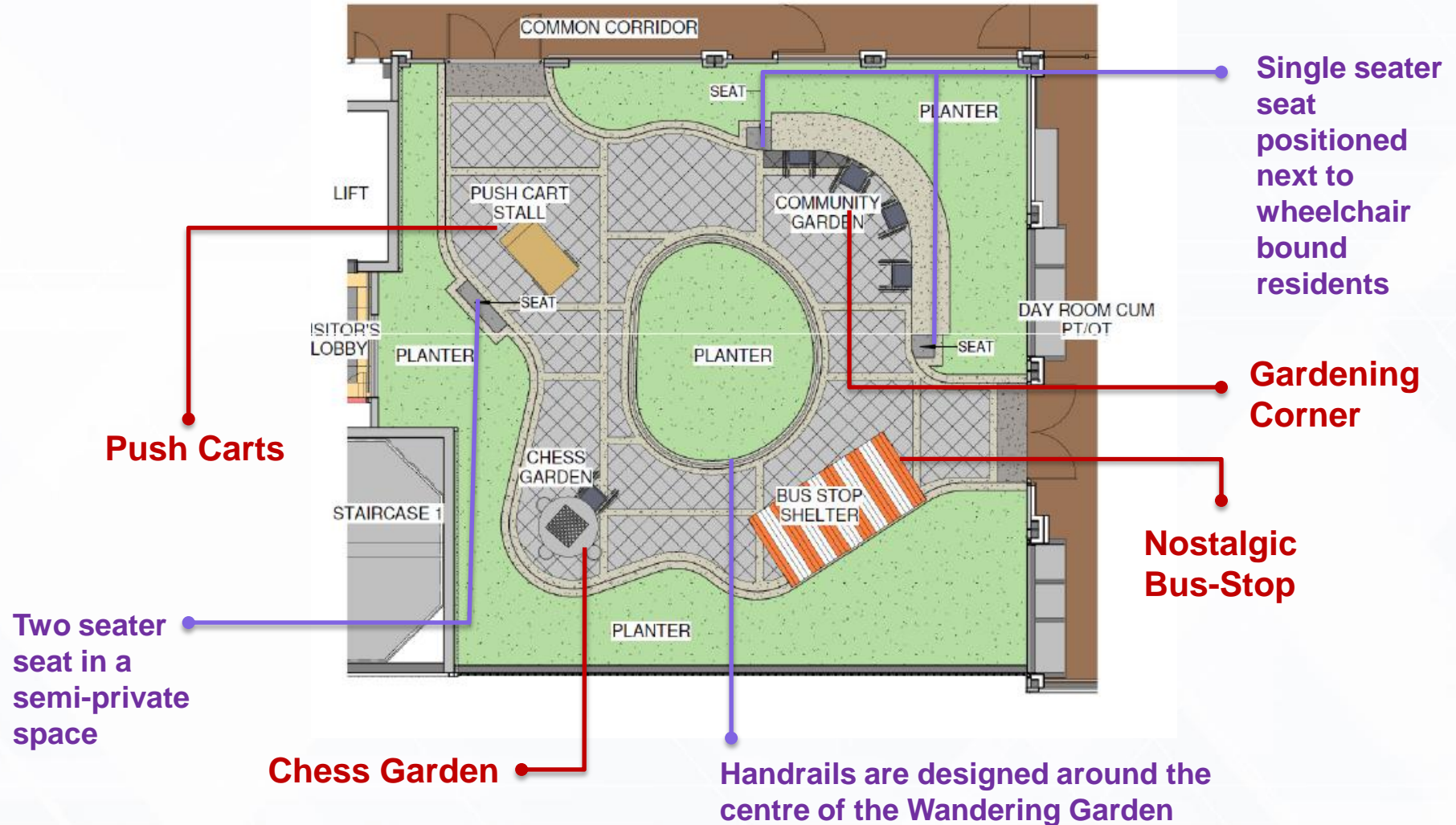
Designing therapeutic gardens for healing: Woodlands Care Home



- Site bounded by roads
- Sheltered linkage to HDB blocks
- Fenceless
- a sense of inclusion

Designing therapeutic gardens for healing: Woodlands Care Home

Dementia-Friendly Design : Empowerment and Autonomy



Making choices with a variety of activity spaces

Designing therapeutic gardens for healing: Woodlands Care Home

DRAFT

Dementia-Friendly Design : Meaningful Participation



Nostalgic bus stop shelter

A bus stop shelter to provide shade for 3-4 residents.



Push cart

An active zone for group activity.



Chess garden

A passive zone space is provided for wheelchair bound residents to be positioned next to family and caregivers.

Designing therapeutic gardens for healing: Woodlands Care Home

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HI·TEC 2017
HEALTHCARE INFRASTRUCTURE
TECHNOLOGY & ENGINEERING CONFERENCE

Dementia-Friendly Design : Meaningful Participation



Gardening Corner

Designing therapeutic gardens for healing: Woodlands Care Home

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Planting Palette of the Wandering Garden

Tree Species



Trees for colours

A Flowering Tree



Plumeria rubra

Trees for shade

B Fruit Trees



Averrhoa bilimbi



Carica papaya



Punica granatum



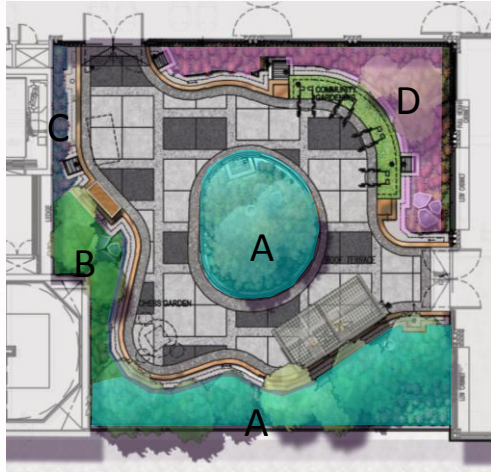
Manilkara zapota

Designing therapeutic gardens for healing: Woodlands Care Home

DRAFT

Planting Palette of the Wandering Garden

Shrub Species



Sensory Stimulation

A-Shrubs for colours



Gardenia jasminoides



Asystasia gangetica



Hymenocallis speciosa



Wedelia trilobata

B- Foliage Shrubs for texture



Osmanthus linearis



Schefflera arboricola



Phyllanthus myrsinifolius

C- Ground cover for texture

D-Community garden planting



Cymbopogon citratus



Murraya koenigii



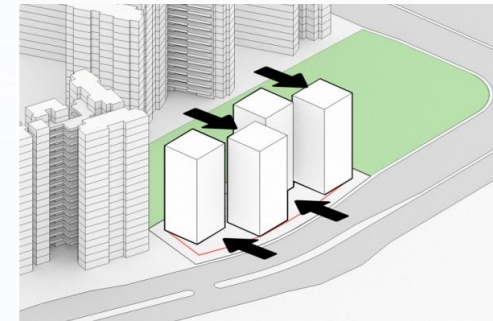
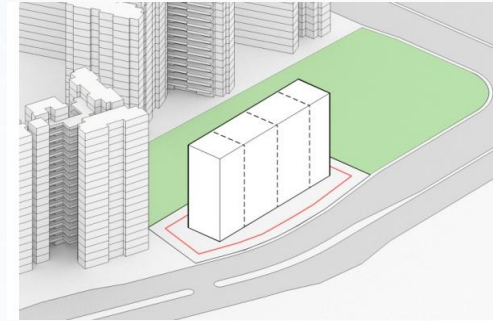
Orthosiphon aristatus
'Purple'



Ocimum basilicum

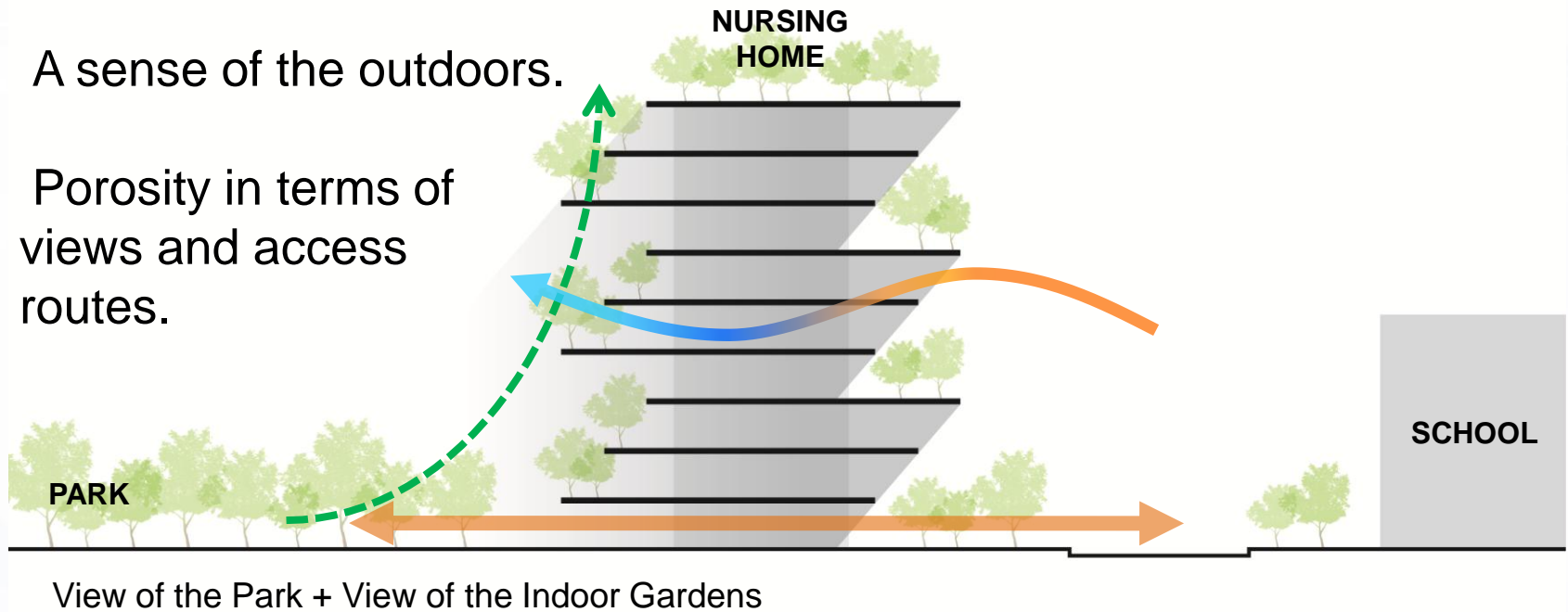
Pocket Therapeutic Gardens on every floor

- A therapeutic environment relies on natural light and fresh clean air. The building form articulated to allow daylight and natural ventilation to pass through the internal volumes.
- Lush planters with shrubs and flowers are sprinkled through the common areas to allow everyone to experience nature as a tamed landscape, with views overlooking the park beyond. It is no longer a sterile facility but a **Home in a Garden**.



A Porous Building

- Balancing intelligent use of passive design with gardens to create a high quality living and working environment.
- A sense of the outdoors.
- Porosity in terms of views and access routes.



Integration Strategies

- Seamless integration with the neighbouring park.
- Landscaped communal plaza for the nursing home residents and the community.
- Connects and extends the Park into the Nursing Home
- Barrier-free accessibility between local park amenities and gardens.
- Simple layout and circulation routes.



Designing therapeutic gardens for healing

Shelter Within Nature

- Sheltered and landscaped communal plaza invites people to take refuge from the rain and still relax and socialise within nature.
- Garden benches, chess table/seats and garden swing offer a choice of destination within the therapeutic gardens, allowing people to connect to nature.



**Integration with
neighbouring park**



Communal Plaza



Contextual Tree Selection



- Echoing the surrounding plant palette.
- Seamlessly borrow landscape.
- Blend with context and invite nature into the building.



'One Big Garden'

MOH HOLDINGS

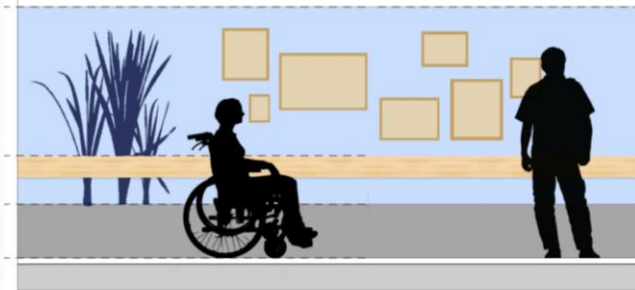
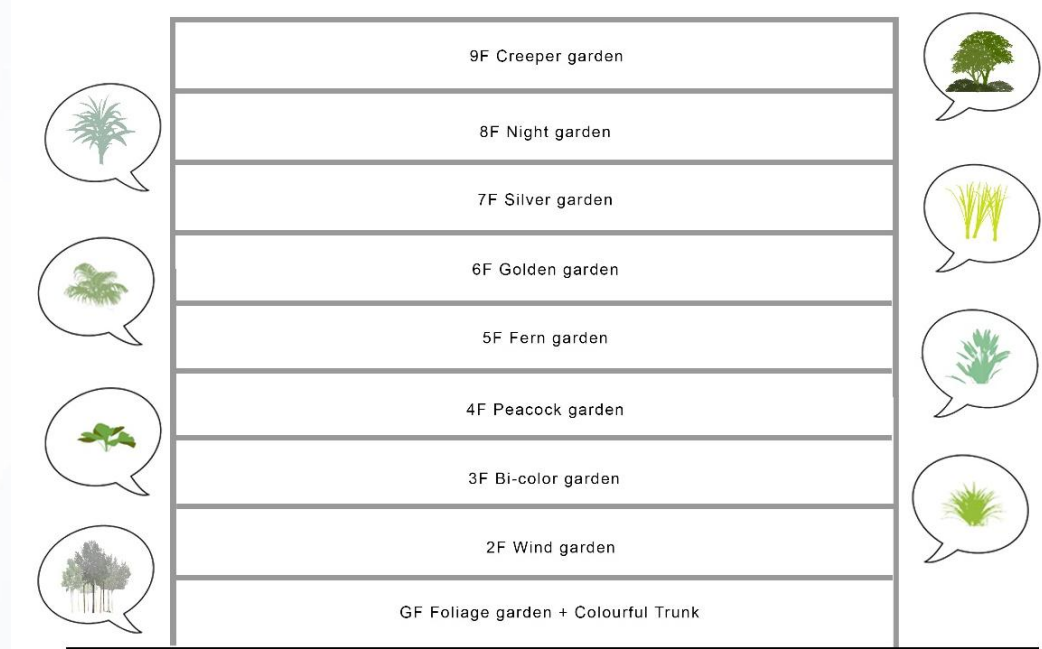
Therapeutic Home



- A lush variety of interesting plants eases the stress of both residents and care workers.

Themed Gardens as a Wayfinding Strategy

- Wayfinding motifs are displayed graphically from floor to floor, reflecting the actual plant species used. Plants are carefully selected to compliment each other as themes.
- A sense of biophilia is encouraged in residents, as they develop a fondness for the certain plant theme that reminds them of where they stay.



Therapeutic Workplace



- Plants help to control the climate within a passively ventilated space and allows a steady, sustainable and consistent environment for living and working in.
- Contact with nature is proven to reduce stress.
- The staff quarters contain plants that are visible and fragrant at night.



Thank You