Assisted Living Workshop: INFRASTRUCTURE AND OPERATIONS
Ageing In Place - Key factors for success in developing appropriate models
Managing Seniors Living – Service models & resources

a presentation by
TECTURA ARCHITECTS
Tectura introduction

Tectura is a Melbourne based, multi-disciplined design practice with over 20 years of expertise in health & aged care service planning, health master planning, campus master planning, facility planning, architecture, interiors, urban design and project management.

WHAT WE CAN OFFER:

- Extensive experience in the planning, design and development of assisted living, aged care & health care facilities
- A philosophy based on innovation, liveability and sustainability
- Ability to deliver quality designed facilities on time and within budget
- Expertise in providing a range of aged care models for urban and rural communities
An ageing population

Many nations such as Malaysia are facing the challenges of developing and financing appropriate services for an ageing population.

There are similar issues in this regard for Malaysia and Australia.

This presentation reviews aspects of the Australian experience for consideration by Malaysia as she considers its national strategies for its assisted living and aged care service development.
Australia’s policy response to Ageing

- **Encouraging active, independent ageing:**
- Encourage caring and volunteering activities
- Encourage increased labour force participation rates and defer retirement to (current) age 65, moving to 67 years (persons 50-59 years in employment increased from 61 per cent in 1984 to 71 per cent in 2004)
- **National effort to raise the focus on preventative health:** Preventative health care is one of the five national health priorities.
- **National system of aged care services based on assessed need**
Service demands of an ageing population

Our ageing population increases cost and capacity pressure on the general health system:

• Longevity means increased levels of chronic disease.

• Older age groups are the most frequent users of the health care system.

• Our lifestyle generates increased disease factors such as diabetes and obesity.

• Increased urbanisation and employment participation separates extended family members from traditional family intergenerational structures which increases demand for accommodation and care services for the elderly.
Future Health Costs

Health expenditure is projected to nearly double as a proportion of GDP over the next 40 years.

This is two-thirds of the projected increase in total spending as a proportion of GDP over this period.

e.g., from 2009-10 to 2049-50 real health spending for

- those aged over 65 years is expected to increase around seven-fold
- those aged over 85 years the increase is expected to be twelve-fold.

Source: Intergenerational Report 2010
**Public and private elder assisted living facility types**

**Private facilities**

- Historic ‘Granny flat ‘ attached to the family home
- Retirement villages/resorts- some with assisted living arrangements
- Special residential services – (high value – luxury supported living) and (low value – rooming houses )
- Residential low care and high care services

**Public facilities**

- Independent living units
- Residential low care and high care services
Accommodation demands of an ageing population

- Remaining at home with support and care staff attending in the clients home
- Retrofitting homes – modifying bathrooms & access ramps – often costly
- Down sizing to smaller homes to free up assets for lifestyle changes
- Independent living units – low cost small homes with support available if required - usually single people - close to residential aged care facilities
Accommodation demands of an ageing population

- Accommodation models such as retirement homes/villages/resorts are desirable where social and leisure amenities and services are available

- Transition from independent living to assisted living with capacity to purchase increasing level of support and care as required – ie ageing in place

- Residential aged care with support and care provided by qualified nurses
Benefits of ageing in place

- An ageing in place policy at the facility is beneficial for couples planning for a move from the family home as it may enable them to remain together even if their care needs significantly change over time.

- It also means people can maintain the relationships they have developed with staff and residents if they move from low care to high care.

- The staff will be qualified and trained to support older people needing varying styles of care, including nursing, if needed.

- The ageing in place homes are designed to cater for people with a variety of care needs.
Tectura’s Philosophy for the design of services and facilities for our elders is based on the **Eden Philosophy**, which aims to create a **Elder Person Centred Approach** to care and in particular to address the issues of boredom, loneliness and helplessness.
Ageing in place – design requirements

• Focus on providing design for elder well being, comfort and social interaction and inclusion

• Natural light and natural ventilation to intimate and beautiful bedrooms and comfortable living spaces. Also large living spaces for larger group interaction

• Corridors wide enough for wheelchairs and walking frames

• Large enough bathrooms to allow a carer to support the resident with ergonomic and aesthetically designed support systems or capacity to retrofit with ease

• Level surfaces with access to external spaces

• Larger easily managed fittings such as door handles, taps, light switches

• Capacity to install lifting equipment in the ceiling or sufficient space for
Aged Care: Our Approach

Tectura provides innovative aged care solutions by focusing on:

**PHILOSOPHY**
- Our person centred approach is translated into a feasible design.
- We confirm the design objectives with our client.
- How has Tectura implemented Best practice in this area?

**MODELS OF CARE**
- What are the development model options that provide the most effective outcomes?
- How can these models be adapted to local conditions?
- Who will staff it, who will pay and how many people will be accommodated?
- What locations will be used, what will be the building form?
- What are the long-term cost effective and socially beneficial solutions?

**CONSTRUCTION, ESD & TECHNOLOGY**
- How does innovative planning, construction and ESD impact on liveability and cost effectiveness?
- What are some techniques that can be used to ensure that ESD architecture is achieved?
- What are construction and engineering methods that assist with such a vision?
Aged care: Our Approach

TECTURA PROVIDES INNOVATIVE AGED CARE SOLUTIONS BY FOCUSING ON:

- MODELS OF CARE
- CONSTRUCTION, ESD & TECHNOLOGY
- PHILOSOPHY
Community engagement & Connection to others
TECTURA PHILOSOPHY:
ageing is a slice of life
Liveable, inclusive communities

Facilitate the Supply of Appropriate Aged Care Housing by:

- Encouraging a range of aged care housing types across metropolitan areas
- Supporting the development of aged persons accommodation, including medium and high care
- Locating housing close to facilities and services, including jobs and public transport, in more compact mixed use development
- Providing access to social and economic opportunity
- Improving the quality of the public domain
- Improving public health outcomes
- Redressing spatially concentrated social disadvantage
- Enhancing access to cultural, sporting and recreational activity
Social Objectives: Eden Philosophy

- Provide quality of life
- Maximum independence and dignity in a home environment
- Provide a home that resembles their own
- Provide elders with ownership and control of their lives
- Prioritise social & emotional needs as much as physical needs
- Allow choice and individualised routines
- Reduce behavioural issues, depression and medications
- Provide a reason to get out of bed each day
- Interaction with the community at large
- Improved overall health, appetite and weight gain
- Cater for different social and economic groups in one facility
Design Objectives: Eden Philosophy

- Intimate and communal internal and external spaces
- Interlinked accommodation units/houses with their own internal courtyards
- Accommodation units/houses individualised by form and facade treatment
- Communal courtyards and gardens allowing residents to wander freely
- Enable choice which prevents feelings of boredom and loneliness
- Provide a full spectrum of lifestyle facilities and services such as wellness centres, natural therapies, sporting facilities and social and community development programs
Inclusive Aged Communities

Innovative Design Solutions
Private, semi-private and communal areas
Inclusive Aged Communities

Sense of participation and inclusion

Mentally and physically active
Inclusive Aged Communities

Independence and interaction

Social fulfilment and connection to nature
Wellbeing of Residents
Wellbeing of staff and residents
DEVELOPMENT MODELS FOR ASSISTED LIVING
Development Models

MASTERPLANNING MODELS
1) LARGE SCALE SINGLE LEVEL DEVELOPMENTS
2) MEDIUM DENSITY SUPPORTED CARE CLUSTERS
3) HIGH DENSITY URBAN DEVELOPMENTS

RETIRED LIFE STYLE VILLAGE

ASSISTED LIVING

RESIDENTIAL CARE

SPECIALIST HOSPITALS
Masterplanning for these Communities

WANTIRNA
HEALTH
Masterplanning for these Communities

WANTIRNA HEALTH
Planning for retirement communities

SALE Victoria

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Retirement communities

[Image of retirement community with a natural setting]
Retirement & Assisted living
Specialist rehabilitation in urban communities

KINGSTON
Residential care in urban communities
Masterplanning for these Communities

STAWELL
Planning for rural communities

ALEXANDRA Hospital and Integrated Community Care
Planning for elder integration in new Communities

MASTERPLANNING IN TURKEY

Integrated Eco-City for 300,000 people including aged care facilities in residential precincts
Retirement Lifestyle Village

- For older people who are still fit and well
- Higher economic status individuals
- This is medium density Housing with close assistance / care available
- Lifestyle opportunities-exercise-catering
- Choosing to live close to supported care and move into it
- Higher support facilities on site
Retirement Village Lifestyle
Health Support Services for Aged Care

- Supported care with professional and semi-professional care, i.e. can no longer care for themselves at home
- Increasing level of support available from staff
- Dementia Care
Residential Aged Care
Residential Aged Care – rural communities
Sustainable aged communities

Wilson Lodge Sustainable Design principles:

• Harnessing of geothermal energy
• Natural Light
• Solar Power
• Water Conservation
• Thermal Mass
• Insulation
• Natural ventilation
Single level residential high care

CASEY DOVETON
Specialist Hospitals

• Specialised in Medical problems associated with ageing such as dementia.
• Special clinics for incontinence, memory loss, balance and falls
• Rehabilitation, assessment and support services
• Dental and podiatry services
Integrated Health Service
Integrated Health Service
Wantirna Health
Specialist Hospitals
Specialist Services

“a physical environment that promotes wellbeing and encourages efficient work practices”
Residential care in existing and heritage buildings

OPTION 8 SHADOW DIAGRAM
SUMMER SOLSTICE (DEC 21)

DATE: DECEMBER 21
(SUMMER SOLSTICE)
TIME: 9AM

- 30 INDEPENDENT LIVING UNITS TOTAL
- 4 STOREY MAIN BUILDING (15m HEIGHT)
  (6 I.L.U.'S PER FLOOR)
- 6 I.L.U.'S IN RE-FITTED NAPIER STREET BUILDING

DATE: DECEMBER 21
(SUMMER SOLSTICE)
TIME: 12PM

- 90 BED TOTAL AGED CARE
- 3 STOREY BUILDING (12m HEIGHT)
- 2 x 15 BED WARD PER FLOOR

DATE: DECEMBER 21
(SUMMER SOLSTICE)
TIME: 5PM

- 90 BED TOTAL AGED CARE
- 3 STOREY BUILDING (12m HEIGHT)
- 2 x 15 BED WARD PER FLOOR
Refitting existing & heritage buildings for aged care
Day Centres: for people with disabilities

- Teaching and learning areas
- Purpose-designed amenities for people with disabilities.
- Designed for community groups to utilise the facilities after hours
Construction, Sustainability & Technology

Our Objectives

- Maintain a fresh and comfortable environment for users, staff and visitors
- Assist in minimising the recurrent operating cost of our building projects
- Produce less impact on the environment, in particular through lower greenhouse gas emissions, water conservation and reduced energy use
- Provide modular, cost effective design solutions that can be easily adapted to different local conditions
- Design for universal access and flexibility of use
**Wantirna: Sustainable Specialist Care**

**SUSTAINABLE DESIGN METHODS**
- Thermal mass from reverse masonry construction
- Enhanced insulation & hydronic floor substrate
- Ventilation chimneys
- Solar hot water & Rainwater harvesting

**SUSTAINABLE DESIGN OUTCOMES**
- Excellent indoor climate
- Significant recurrent cost savings in energy
- A reduced impact on the environment
Tectura developed Victoria’s first ‘green’ aged care facility in 2004, which was used to develop the Department of Health’s Capital Development Sustainability Guidelines.

**WILSON LODGE ESD PRINCIPLES:**

- Harnessing of geothermal energy
- Natural Light and Solar Power
- Water Conservation
- Thermal Mass, Insulation & Natural ventilation
ESD, multi-storey, high density aged care housing

ENVIRONMENTAL BENEFITS:
- Cost Effective to build
- 50% reduction in water usage
- Planned lifespan of 100 years
- Reduce consumption by 30% of the household average
- Generate its own energy, and export an average of 250kW per day in to the electrical grid.
- Each unit is exposed to direct sunlight daily, and a central green space unites the development.
High rise engineered timber structures

ENVIRONMENTAL BENEFITS:
• Cost Effective to build
• Earthquake resistant
• Produced in modular elements to be installed onsite
• Embodied energy
• Fire resistant properties
The technology of the future is already here

Robotics at home to assist the elderly
- Robotic pets that show empathy, stimulate our affection and provide companionship
- Home monitoring – remote data gathering, monitoring and review, access to emergency services
- Home care to assist people remain in their homes
- Staying in contact with family, friends and health care providers
The technology of the future is already here

Electronics at home to assist the elderly: Telehealth
Telehealth
Stepping into the future

- Malaysia can successfully plan for the needs of her elderly citizens

- Malaysia can successfully resolve the current and future needs of her elderly citizens by planning now
Stepping into the future for Malaysia elders well being