The **NANA** project:

a new architecture for the new aged
that advocates a better built environ-
ment for older people

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Guy Luscombe was awarded the Byera Hadley Travelling Scholarship in 2014
Cover image: Chickens made by residents, used as room identifiers for Residencia Dona Isobel in the chicken farming region around Alacer do Sal, Portugal; see 'The Chicken Walk' project in the appendices. Photo by Guy Luscombe

In search of new approaches to aged care, the NANA Project studied 13 residential developments in Portugal, Spain, Switzerland, Germany, Denmark and Netherlands.

The traditional 'nursing home' and 'retirement village' are not only outdated, they can actually foster separation and 'otherness', isolating people from their family, friends and interests. The aim of this project is to explore how architects can design better environments for older people that improve their enjoyment of life. It starts with rethinking some of our design language.

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1

Introduction

For over ten years I have been working, writing and lecturing on design for the aged and as an architect I have often been appalled at the environments that people age in. Not only are the traditional 'nursing home' and 'retirement village' a little outdated, they often create separation and foster 'otherness', isolating people from their surrounds and loved ones. They don't tend to be places we want to be in.

This is unfortunate because with the likelihood of 25% of the Australian population (around 9 million people) older than 65 by mid-century, the designed environment will need to respond. Places that are appropriately designed, that aid health and wellbeing, promote participation by an increasingly elderly workforce and make cities and neighbourhoods more 'age friendly', will not only benefit individuals but would have bottom line benefits for the economy, potentially decreasing the projected demand on health services and providing a whole new group of active citizens.

Architects are the key professionals who influence the way our environments are designed and they have a responsibility for the effects these environments have on people. The aim of this project is to try and readdress how we as a profession approach designing for older people to improve the outcomes for us all.

Built environments for the aged, while proficient, have in the past, been driven by regulation and largely relegated to the fringes of architectural practice. They were generally uninspired and came from the same mould. No doubt this has been partly due to a general antipathy to ageing and a consequent denial and invisibility. But with the projected increase in the number of older people who are healthier, wealthier and more educated than ever before,

this will change. The world will become increasingly an 'old persons' world and we need to rethink the way we look at aged environments. This unprecedented phenomenon will influence the way we live and innovative solutions are required from architects, developers and builders.

Further, the so called baby-boomers have always been a generation that has questioned the status quo. From the protesting and rebellious 1960s through to the brave new world of the information age, they have had more influence and have changed the world more than any other generation and this is unlikely to change as they age. They will demand better outcomes.

This research proposes three objectives, and eight features to inform a new architecture for the new aged. The three objectives include:

- Happiness
- Normality
- Equality

The eight features include:

- Windows to the world
- Space grace
- The great outdoors
- Small is beautiful
- Freedom to choose
- Belonging
- Integration
- Something to do.

Tertianum, Basel, Switzerland, by Herzog & De Meuron. A special viewing box for residents is part of the aged living environment, which is integrated with the local football stadium.

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Ageing?

In order to better understand building for the aged it is necessary to try and understand a bit about ageing itself. However this is more difficult than it appears. What is actually meant by 'ageing'? Clearly we are 'ageing' from the day we are born so what is the common meaning? The dictionary is of little help, typically proposing that it is to 'grow old', 'old' being defined as the 'latter part of one's life' or 'far advanced in years', but with an average world age of around 23 years, a thirty-year old could be considered 'old'.

Indeed the World Health Organisation (WHO) takes up this issue and tends to define it in cultural terms. *"...in contrast to the chronological milestones which mark life stages in the developed world, old age in many developing countries is seen to begin at the point when active contribution is no longer possible."*[1] In Australia that may be quite old and with advances in medical science and health research and the necessity for people to work longer this 'useful age' will likely only increase.

And while a bit grim, science provides definitions like the one geneticist Professor Linda Partridge proposes: *"Ageing is the result of an accumulation of damage to molecules, cells and tissues, leading to loss of function and increased risk of death"*[2]. Again, in one study, it was suggested ageing actually starts at around 35 years when this 'accumulation of damage' starts to take effect.

In terms of design, it also usually refers to physiological change. Designing for age means designing for less physical capacity, for when our bodies aren't as powerful as they were at a 'young' age.

However the general understanding is that being 'aged' is being over 65 as this relates to the pension age in most Western countries (or whatever that may be in the coming years). Again, this is further complicated by terms like 'seniors' which can mean someone over 50 or 55.

In many respects it doesn't really matter, just like when are children not children? (when they can work at 14? Leave school at 16?, or 18?, or 21 or, as my mother would say, they are always children!)

So rather than being restricted by definitions, NANA looked at ageing by looking at buildings for the aged. What do these buildings say about ageing? Indeed in most of the facilities visited for this study, the average age was given as over 70, and in many cases over 80. This actually corresponds with the Australian situation where most retirement villages would not have many people under 70 and residential aged-care facilities not many under 80.

Ageing suffers from bad press
Ageing is a pejorative term. Unlike wine or cheese, to be an aged person is not seen as a good thing for those who are not aged.

Is there a better way of describing ageing? What are the 'new aged' to be called. There are no good alternatives. 'elder', 'senior' or 'older person' are all similarly burdened or connote different meanings. The 'Grey Wave' or the 'Grey Gen' still has grey in it. 'Silvers' and even 'golden' as an adjective have been used. The 'third age', as some people are calling it, is attractive but does this mean there are 'third-agers' or perhaps 'thirds' (like' teens') or 'dagers' in contracted form?

Ageing tends to be seen primarily as a health care issue with, for example, the ageing of the population often cited as a reason for increases in costs of healthcare. While there is no doubt that improvements in medicine are a major reason for increased normality, longevity and quality of life, these interventions should not be the only things that define the older person.

An interesting description for the aged may be what German social scientist, Herrad Schenk describes in 'New Approaches to Housing for the Second Half of Life' as the 'Go-go-s' (approx. 55–70 years), the 'slow go-s' (70-85) and the 'no go-s' (85+).

Whether any of these stick or other smart marketing terms appear, the term 'older person' will be the main term used to describe the cohort of people who form the subject of this study. The term 'aged' is also used but generally any term for older people is used interchangeably. This naming issue is no more exaggerated than in the terms used for buildings that house the aged. 'Retirement Village' 'Nursing Home' and even worse 'RACF' (Residential Aged Care Facility) are ghastly but again despite some attempts, (eg 'Lifetstyle Resort', 'Care House') no one has come up with better alternatives.

'Retirement villages' and 'nursing homes'?
Up to now, buildings for the aged could be broken down into two basic types: Retirement Villages and Nursing Homes. Today in Australia these may go by different names, typically Seniors Living, Independent Living or even Lifestyle Resorts for the retirement villages and Residential Aged Care Facilities (RACFs) which are generally 'High Care' but can be 'Low Care' or 'Assisted Living' etc. for Nursing Homes. Whatever the name the distinction still exists.

They are generally distinguished by how they are funded. If there is a care component (meaning that a person has been assessed as needing care and/or a provider gets funded to provide a care 'bed'), it is regarded as aged care. For the most part it is funded by the Common-

wealth and regulated under both Commonwealth and State legislation.

Where people have not been assessed as needing care but are living in a place for older people, it is regarded as retirement or independent living and is generally self-funded (or sometimes attracts affordable living assistance). It is regulated by State laws.

Ageing is over medicalised
Ageing tends to be seen primarily as a health care issue with, for example, the ageing of the population often cited as a reason for increases in costs of healthcare.

While there is no doubt that improvements in medicine are a major reason for increased normality, longevity and quality of life, these interventions should not be the only things that define the older person. But it does often seem like that this is all that ageing is about. This over medicalisation means that people are often only seen as their physical and/or mental issues, as a combination of problems and symptoms, and treated as such. Something is always wrong with the aged person. Ageing is treated like a disease.

The reality is, of course, that everyone ages and it is completely normal. Unlike a broken leg or measles, ageing is not an injury or a disease. It is a natural process of living. Being old is not an illness.

This way of thinking affects the buildings that house the aged. Currently buildings for the aged tend to focus on 'disability' and this could be one reason they are not attractive. They are too confronting. We are confronted

Aged-care buildings are necessarily beset with constraints and regulations, some good, some outdated. However, many of the regulations put in place to 'protect' older people are very often seen as key design features of the building. They become the 'end' product. Buildings are seen as either compliant or non-compliant, rather than, say, promoting wellbeing and liveability.

with our incapacity when we step into one of these places. They may be perfectly healthy environments but, like a dentist's surgery, they are not places you want to stay in.

Hospitals for the most part are designed for acute and sub-acute conditions, to get people in and out as quickly as possible, even if this is for a few weeks, but when someone moves into an aged care facility it will be, more often than not, the last place in which they will live. This makes residential aged care facilities primarily places for living, not getting better from an illness. There is no cure for ageing. Hospitals and aged care facilities are fundamentally different animals.

Aged Care buildings are necessarily beset with constraints and regulations, some good, some outdated. However the very regulations that have been put in place as a means to 'protect' older people are very often seen as the key design features of the building. They become the 'end' product. Buildings are seen as either compliant or non-compliant, rather than, say, promoting wellbeing and liveability.

Recent increased and renewed interest into the effect of space and design on promoting 'wellness' in health care environments though Evidence Based Design, Environment-Behaviour Studies or even Salutogenic Design would arguably have far greater impact on a residential (as opposed to an acute) care situation.

Part of the purpose of this study was to investigate the aspects of an aged environment beyond the regulations. What are the successful features that people need and appreciate? Is there a different lexicon that can be applied when designing buildings for the aged?

(Not just) Aged Care
There is also common misconception that buildings for the aged are just aged care buildings. However most older people in Australia will never enter a residential aged care building (or a retirement village for that matter). As the perspicacious Betty Friedan pointed out in The Fountain of Age, "Why the increasing emphasis by professional age experts and the media - and public acceptance - on the nursing home as the locus of age when, in fact, more than 90 percent of those over 65 continue to live in the community?" (this is more like 95% in Australia).

Indeed the 2013 Productivity Commission Report *An Ageing Australia: Preparing for the future* found overwhelmingly that people would prefer to stay in their own homes as they aged.

Our homes will be this 'locus of age'. The question is 'how appropriate are our homes, and can we make them more age appropriate?'

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Scope and methodology

Due to the length and breadth of the ageing process, NANA was configured to look at a range of buildings for the aged rather than any specific typology. NANA was deliberately structured so that it didn't just look at 'Aged Care' or 'Retirement Villages'. The buildings visited did include aged care buildings but arguably more importantly included housing types like multi-generational housing and a seniors housing cooperative. It also looked at innovative dementia specific environments and 'the most accessible office building in the world'.

So the project looked at architecturally significant buildings and places and more relevant accommodation models in order to provide resources, examples and precedents for architects and others to propose solutions for an ageing society.

The 'backward' process
The intention of this research was always to analyse the buildings from an experiential point of view, in order to determine what effect (if any) the architecture had. This could only be done by visiting the buildings as occupied and gathering direct feedback from the people who had direct involvement with the buildings: the operators, architects and residents.

To try and capture the diverse nature of the buildings visited and people interviewed, a checklist was developed to aid the process of information gathering. Several models were considered and the checklist methodology is a common tool of Post Occupancy Evaluations (POE). However, while useful, the visits were never intended to be POEs, mainly because that process is far more formal, onerous and rigorous but also because filling out a long

checklist would have distracted from the main purpose of actually experiencing the building.

Needs
To develop a more qualitative, experiential 'checklist' it was convenient and practical to use an understanding of human need and to analyse the buildings in terms of how they met identified needs. While some research was carried out into needs theory, the main purpose was to identify features of need that may be important and could be sought in the places and people visited.

Most needs analysis theories seems to have the notion of basic, physical type needs, social and relationship type needs, and more personal development type needs and so for this study, these needs were identified in design terms as:

Physical and physiological needs
This includes shelter and comfort but for the older person would also include 'accessibility' and physical wellbeing. It is the basic function of all building and is important but in terms of ageing, the ergonomics and comfort factors of space are fairly well known and documented and so did not form the primary focus for this project. Broad comments and features have been included where appropriate.

Safety and security needs
Because older people are more vulnerable, safety and security are arguably more important for older people. Indeed there has been a lot of research into safe design issues like fall prevention, a critical concern for the elderly; and the principles of Crime Prevention Through Environ-

mental Design (CPTED) provide a valuable resource for designing secure environments. Not so well documented is the negative effect creating a secure environment has on older people. Loneliness caused by isolation, and anxiety caused by locking people in are the downsides to providing a safe and secure environment.
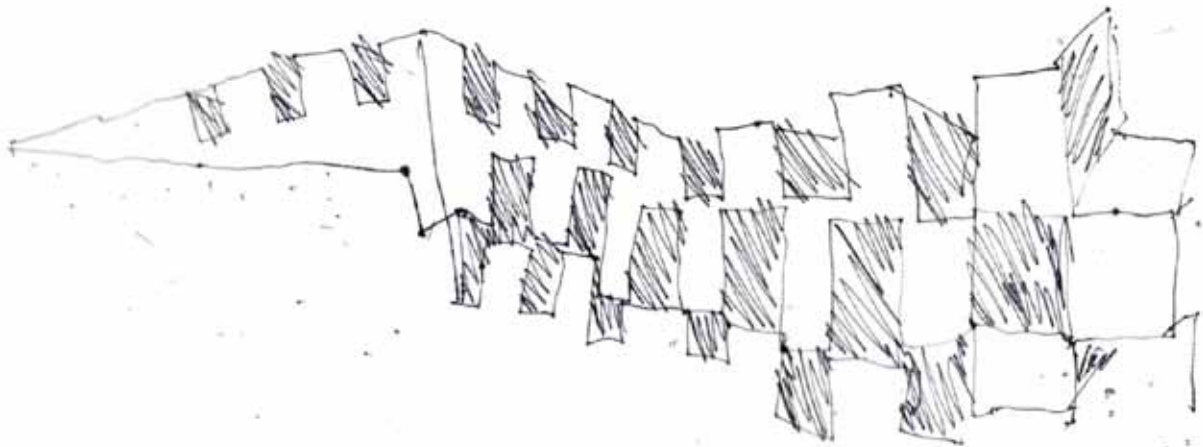
Social/ belonging needs
Most theories identify a strong need for human contact and relationship. This includes family, friendship, belonging and love and acceptance. It is most commonly expressed as the notion of 'community' or 'home' in design terms. Designing a home or community is far less empirical than designing for function as it is more specific to time, place and person.

For older people this is extremely important because they spend more time in one place. As people grow up they are constantly spending longer periods of time away from their 'home', going to school and work, holidays etc but when they retire they don't have the demands and tend to spend far more time at home.

Esteem and respect needs
This is the need to feel valued and important. Less definable and therefore more difficult to measure or determine, nevertheless they are still seen as an essential part of human need, especially for the aged. The term 'person centred care' used by many aged care providers is an attempt to address this need. 'Designing for dignity' is another term that has been used. It respects the individual and gives them choices. The high priority given to 'privacy' by the Commonwealth Certification Guidelines can also be seen as addressing this issue. But it could go further than that. Well designed and appointed buildings for the aged in desirable locations could mean that the people living there actually feel proud.

Personal growth needs
Typically these include 'self actualisation' type needs: meaning, self fulfilment, cognitive, aesthetic and transcendental needs. They are the most abstract, least generic and least physical needs. Consequently they are the most difficult to encapsulate in design terms. One question this study wanted to consider was whether it was possible to identify if these needs were important (for older people and the people who look after them) and if so how were they expressed?

Questions were developed to try and identify these 'higher' needs especially.The checklists were mainly used as a guide to interviews and discussions and as a prompt for debriefing documentation after the visit. They formed the basis of the information gathering. See Appendix 1 for checklist form.

Results
The checklist responses were all compiled on a spreadsheet (not included here) so that all the buildings visited (see appended projects sheets) could be compared with each other and common themes could be readily identified. Other visit and interview notes and the photographs were consulted for correlation. The process was developed to try and identify common design features but it soon became clear that themes were emerging that encompassed many of the features. These common themes have been grouped together as design 'objectives' alongside the design 'features'.

Three
objectives

The three objectives of this study arose from the information-gathering process and were developed because they spanned, and seemed to underpin, a number of the individual features and could not be categorized independently. Even though they are fairly basic concepts that our society takes for granted (and perhaps overlooked for this reason) they form, I believe, an integral underpinning role to a fuller understanding of the features of positive aged environments.

Subsequently, and quite independent to the findings, recent moves in health care design towards a more 'salutogenic' approach, that is an approach which suggests that spaces can actually aid recovery by promoting 'coherence', enhancing and stimulating the sense and state of wellbeing, also align with these principles.

1. HAPPINESS
Happiness is important, it promotes well-being and combats depression. Happiness is infectious and having happy staff and visitors is reinforcing.

Happiness was mentioned a few times as one of the best things about a place and is at the core of a lot of the principles of the designs visited. Translating what aspects of the design made a place happy was more difficult.

Normality (another principle) was highly associated with happiness. Having places to meet and connect with people made people happy. It was identified as about being in smaller groups, being close to family, being more relaxed and being engaged and active. Happiness was associated with 'bright' spaces.

Happiness formed the basis for establishing the highly influential Humanitas Group in the Netherlands with founder Dr Hans Becker stating that he was 'in the business of human happiness'. The Humanitas Bergweg complex is a riot of activity, community and interest. Its large central atrium is surrounded by 'apartments for life', serviced apartments that can access a range of services. The central atrium has a restaurant open to the public, a bar, sitting areas, a fish pond and always has something going on. It has a large mural on the end wall. Focussing on, but not exclusively occupied by people with dementia, it has a number of day-care centres themed to the demographic served, and 'memory museums' where people can go an reminisce about their previous life in Morocco, for example, or the South Pacific.

2. NORMALITY
"It isn't easy to do normal" Eloy van Hal, De Hogeweyk

Why highlight normality? Normal is just normal. And yet it isn't. We are told there is no normal and yet we know it when things aren't normal. The aged, as previously discussed, are treated as if something is wrong with them, as if they are not normal and, despite being a completely normal process, ageing is somehow considered otherwise. So it is not so surprising that normality features highly as a key principle. Normality is also associated with happiness, above, but deserves to be highlighted. In environments for the aged it is considered especially important because the places are often very different from what the residents would consider normal. It is considered critical for dementia environments.

There is no normal means just that: normal varies. De

From what was seen a 'normal' environ-ment is cast against its nemesis, the 'insti-tutional' environment. It is about making people feel comfortable, about creating environments that are familiar, which fit with a person's background situation.

● 11

Hogeweyk, a facility dedicated to putting normality at its centre, could very well be seen as an artificial village environment. But it had purposefully created a very real experience. The manager, Eloy van Hal said in fact that "it isn't easy to do normal". The shop, restaurant and café are all authentic, like you would see in a small neighbour-hood shopping complex. The staff are just people in nor-mal clothes hanging around. The houses have real front doors that open to the outside meaning residents some-times have to trudge through the snow to go to activities or meet someone for coffee.

From what was seen, a 'normal' environment is cast against its nemesis, the 'institutional' environment. It is about making people feel comfortable, about creating environments that are familiar, which fit with a person's background situation.

3. EQUAL OPPORTUNITY
Equality was not overtly mentioned much but in terms of respect and dignity becomes an important concept. In a similar way to freedom, we accept equality as a core value of our society. Equal Opportunity is embedded within the way we live. Places that prevent people from living are not providing equal opportunity. This is most obviously expressed in terms of availability and acces-sibility to places, facilities, and services.

The whole concept of 'accessibility' is better seen as an equality issue according to Jesper Boesens, ex CEO of the newly completed *Disabled Organisations House* (HOH), the 'most accessible office building in the world', in Copenhagen. He believes disability is an abstract con-cept for someone who is able-bodied but everyone un-derstands 'equal opportunity' because it is value based.

HOH went to great lengths to have 'no barriers' (includ-ing having different types of toilet suites to suit different needs). Demanding consensus so that not one disability was favoured over another, they identified seven types of need and designed the building so that it accommo-dated all people with any of those needs. Where there was apparent conflict, solutions were sought that gave consensus – there was no 'horse trading'. This meant in-novative solutions were often arrived at.

An example is the acoustic paneling in the main foyer which became necessary to accommodate the needs of both the limb restricted (sound absorbent carpet can be restrictive) and the hearing impaired (hard surfaces re-verberate) and gives the main foyer much of its character (see over for photo).

While the ageing process generally means a lessening of ability, if not total disability, the 'equal opportunity' ap-proach is a more positive and affirmative approach that starts to move away from the negative connotations as-sociated with ageing.

Handicapped Organisations House (HOH),
Copenhagen, Denmark

5

Eight
features

1. WINDOWS TO THE WORLD
Keywords: natural light, views, connection to outside

Perhaps unsurprisingly, the most common feature that was mentioned as being the best thing about a building were the large windows. Natural light was highly appreciated, providing a 'bright' and 'happy' interior and, equally importantly, enabling extensive views outside, connecting people to what was happening.

They made the buildings more open and signalled to the outside world that the people were not 'hiding' inside. It was not the actual windows that were appreciated but what they were doing, what they represented and how they made the space inside feel for the residents.

Nearly all the buildings visited had large, often floor to ceiling windows and it was the size and extent of these windows that was a bit surprising, not least (or perhaps in spite of) being in cooler, greyer skied Europe, but also because large windows are more commonly associated with a more modern architecture.

A lot of facilities for the aged in Australia tend to prefer a more traditional architectural language with smaller windows. It is worth mentioning that all the windows in the facilities visited were at least double glazed, whereas single glazing is still the norm in Australia and is a contributing factor to the size of windows here.

However the magnitude of unsolicited response in favour of large windows would suggest that large windows should be the norm in buildings for the aged, certainly in public areas.

Top: Centro Sociosantario Santa Rita, Minorca, Spain.
Bottom: Residencia Rainha Dona Isobel, Portugal.

CASE STUDY: WALLENSTEIN 65
At 'Wallenstein 65' in Nuremburg, three of the eight houses were built with windows around an open courtyard providing an abundance of natural light. The intention here was to provide an environment for people with sight impairment.

Useful light: Another less common but important comment about light was more about function, challenging the accepted approach of providing constant minimum light levels. Most places, including Australia, have minimum illuminance levels for buildings of various functions. This was challenged in favour of being more thoughtful, purposeful and creative with the use of light, not only using it for specific tasks but using it for way finding, creating different moods and even helping people with cognitive problems recognise day from night to assist them with sleep.

2. SPACE GRACE
Keywords: openness; adaptability, movement, circulation

Often mentioned in the same breath as windows was space and in a similar way the specific aspects of 'space' mentioned were both qualitative, 'openness', and quantitative, 'adaptability'.

While adaptability in Australia is usually considered in terms of an Australian Standard (AS4299) and is somewhat regulated through instruments like the NSW State Environmental Planning Policy – Housing for seniors and people with a disability (SEPP SPWD), when considered in the sense of providing openness, spaces were valued because they allowed a freedom and an ability to be used in various ways. Most people expressed the need for more space rather than less. This was interesting because openness, or open plan, challenges the traditional understanding of home and is, again, a feature of modern architecture.

The Santa Rita Centre on Menorca had lots of indoor open space which, although originally designated for one function, was now being used in a different way to suit the changing profile of residents and their needs, and the increase in numbers the facility has to cater for. However, in this case, there was almost too much space with not all of it being used actively and a large energy bill.
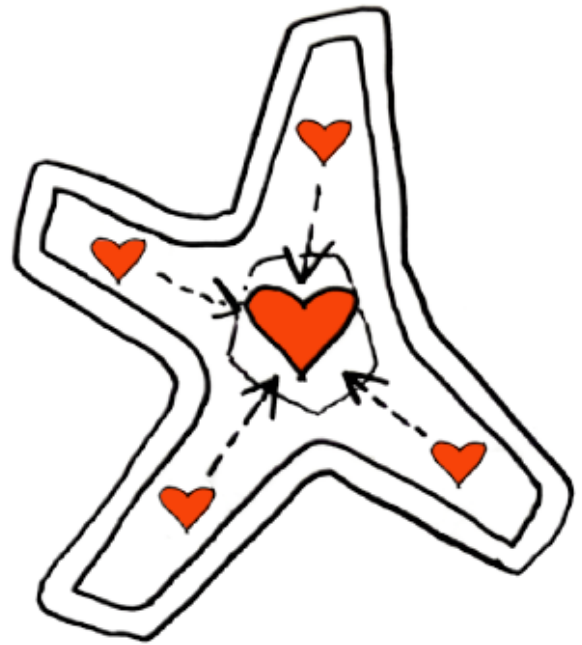
In the Wohnfabrik Solinsieme in St Gallen, Switzerland each apartment is slightly different but uses the same approach, a large open space with a service core containing the bathroom, separate toilet and sometimes the kitchen and a closable room along one side. The rest, like an open 'loft', could be furnished the way the resident wanted. In this case the large (double glazed) windows faced south and the concrete floors used the captured solar gain to keep energy costs down.

Efficient circulation
Older People with mobility issues and other disabilities, naturally, find long distances more difficult than able-bodied people, and building designers need to recognize this. Designs need to reduce the distance travelled. This is as much to do with staff as residents. Care facilities, especially, need to be efficient for moving people around so that there is more time for care and treatment, staff are also pared back during the night shift (while the residents are sleeping) and consequently need to oversee more residents. An efficient plan makes staff rostering easier and reduces ongoing costs.

In the case of Santa Rita on Menorca, mentioned above, the principle of reducing the distance by making the main access way the inner circumference of an external courtyard garden sounds good but was impractical. In practice the main access used was the internal outer circumference route which made for long distances for staff and time penalties. An efficient plan for care shortens distances to a central location. The upshot is often reduction in corridor length. (see later) The principle was central to the design of the 'most accessible office building in the world' in Copenhagen, the Handicapped Organisations House, demonstrated by its unique starfish shaped floor plan that meant no office was very far from the central atrium.

Above: Reduced travel distance to central location at HOH, Copenhagen, Denmark. Below: large spaces at Santa Rita, Minorca, Spain.

Above and previous page: Flexible space at Wohnfabrik Solinsieme, St Gallen, Switzerland.

3. THE GREAT OUTDOORS
Keywords: outdoor space, communal and private

Another aspect of space that was highly favoured was outdoor space, only a little surprising because of the climate. Outdoor spaces that were liked were both private (balconies, loggias) and more communal (gardens and places to gather).

Private outdoor space allowed for individual expression with plants and seating. The inboard balcony was seen as an important outdoor room offering both inside/outside interaction while maintaining privacy and protection. It was seen as a place that could be used most of the year for reading, sitting and watching the world, providing heat and ventilation when needed.

Outdoor space was seen as so important for places for people with dementia that *de Hogeweyk* near Amsterdam, for example, has a 50/50 split for indoor and outdoor space with all the outdoor space being seen as just as important as the indoor space. Each out door space is unique, with a specific function and character.

Outdoor space was also appreciated for the sense of 'normality'(one of the three 'objectives') it afforded.

Wallenstein 65 in Nurnberg had a relatively large garden for dementia, running the length of the building but it was thought that it would have been better if it was bigger.

Individual balconies, Can Travi, Barcelona, Spain.
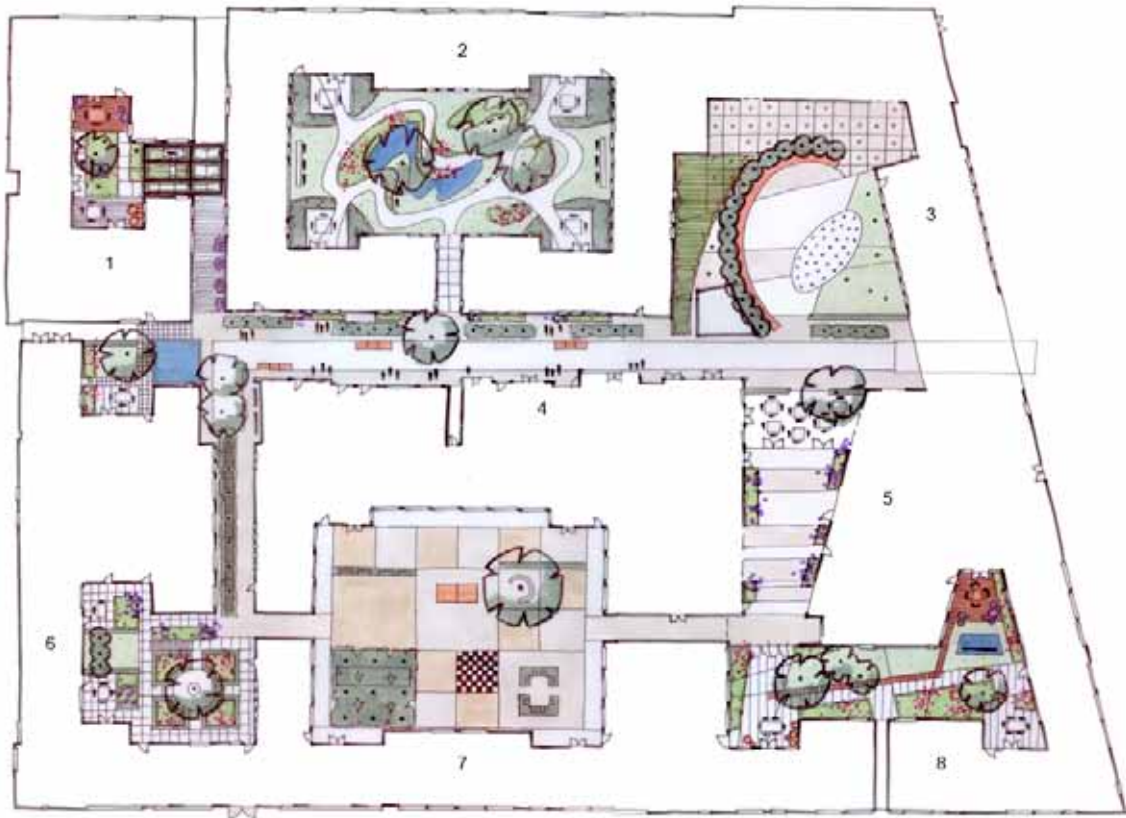
Top: 50/50 outdoor/indoor space at de Hogeweyk, Weesp, Netherlands. Bottom: Large private 'loggia' at Ruggachern, Zurich, Switzerland.

4. SMALL IS BEAUTIFUL
*Keywords: intimacy, scale, grouping*

Intimacy, keeping things small, reducing scale and 'dein-stitutionalising' were also seen as important, if not widely seen as the 'best thing'. Low 'domestic' scale buildings in small groupings were especially seen as beneficial for dementia. Other evidence into the effects of space on people suffering from dementia supports this. (eg: Zeisel; or Judd et al; or Fleming).

Typically the desirable number of rooms in an aged care grouping, especially for dementia, was between 6-12. Most people suggested the lesser the number the better acknowledging that this may be difficult financially but the advocates of the lesser number state that viability can and needs to be made to work with the numbers, it is that important.

Small groupings need more thoughtful planning. The 'house' model suggests domestic 'house' type plans with limited corridors. Long corridors, when seen, were single sided with windows on the non-active side. It was interesting no 'horridors' (as some call long double sided corridors) were seen in any of the facilities visited. In line with modern apartment building design, doors off a corridor were limited.

Even the multi-storey Torre Julia in Barcelona had a concept of smallness as one its central purposes. The tower a given but the architects felt that older people might find this intimidating so they took steps to reduce its scale. Each floor had a maximum of six apartments and the 15 storeys were delineated by colour into three groups of five, each with its own community room and laundry. Not only good for the residents, staff enjoy working in smaller groups and visitors prefer the more homelike environment.

A plan of Hogeweyk was developed around small groups because evidence shows that smaller groups have a positive effect on care for people with dementia: on the brain/agitation; exercise and social contacts (Lawton, 1997); on appetite, through pleasant surroundings (Zeisel, 1999); fresh air; and daylight (van Hoof et al., 2009). Source: de Hogeweyk.
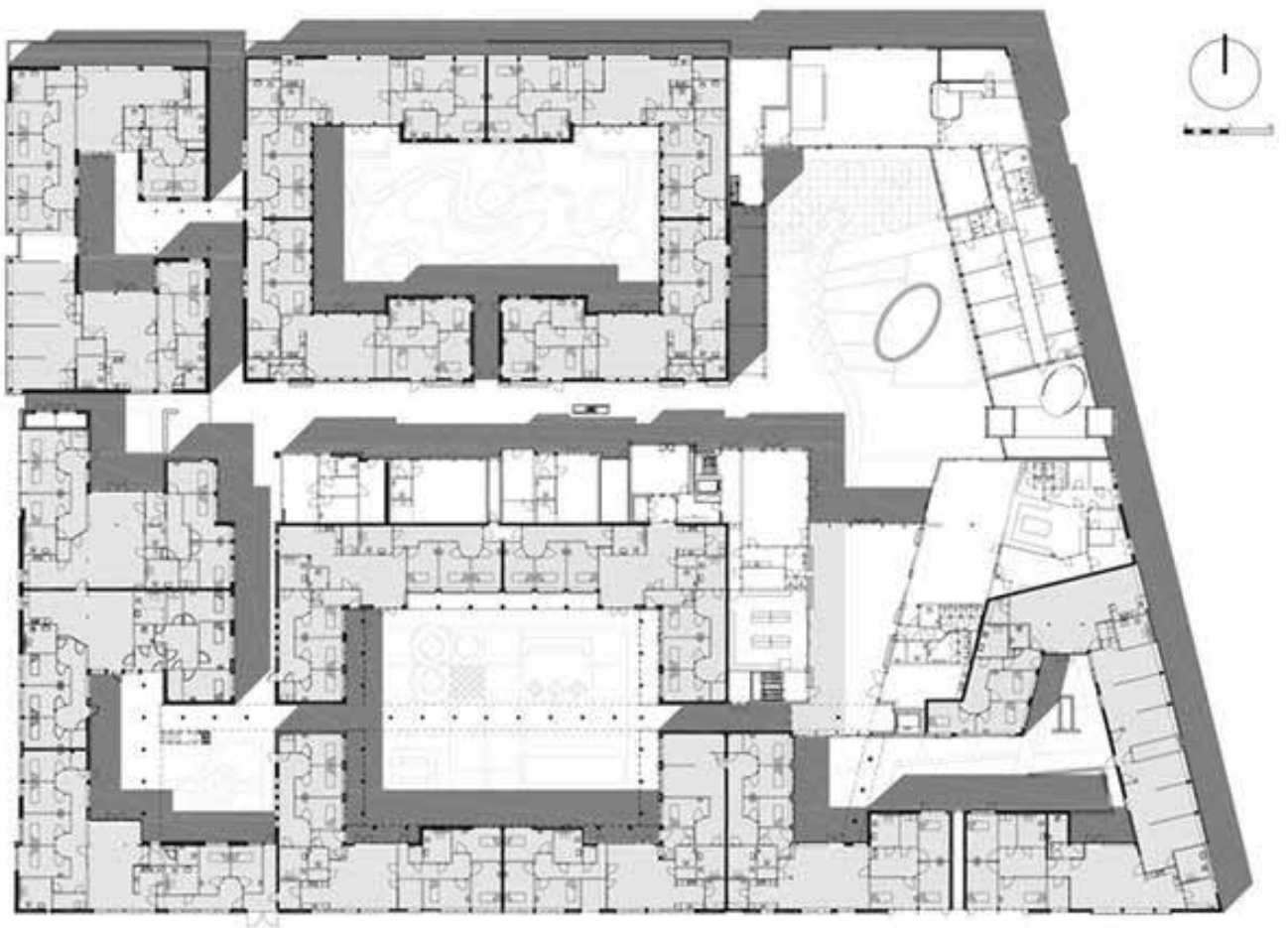
5. FREEDOM OF CHOICE
Keywords: understanding, respect, variety, choice, individuality, self help

One central theme that kept recurring during interviews was giving people choice about their accommodation. It took me a little bit by surprise as it was not a consideration originally. But when raised, it was evident in many places. It makes sense. We take for granted our 'freedom' to fashion the world around us and only notice it when it is not there. It is not 'normal' and as a person ages it is only 'normal' to maintain some freedom of choice.

Freedom to be able to choose was seen as the most important aspects of designing for the aged generally, and dementia specifically, by Eckhard Feddersen, distinguished architect and author who has been working in this field for over 40 years. Freedom of choice should be at the basis of every design decision from concept through to lighting and furniture selection.

His *Wallenstein 65* (Dementia Competence Centre) in Nuremberg has 8 different 'Group Houses' within its compact 3 storeys. The three different floor plans use different floor, wall and ceiling textures, colours, lighting and furniture. Even the doors have different configurations and hardware. This was intentional and highly appreciated by residents, staff and family alike. The operators indicated that there had been a reduction in medication use which they put down to this approach.

De Hogeweyk similarly indicated, for example, a 75 percent drop in medication use by residents, pre and post living in its unique environment. In this case they identified seven different demographic profiles of residents drawn from the surrounding Dutch population. These profiles included Upper Class, Christian, Tradesman, Indo-asian, etc. and the 23 'houses' (group homes) were designed to suit these profiles. Each house did have six bedrooms and a similar floor plan, but they were individually decorated and had their own individual external front door entry from one of the seven unique courtyards.

So, while people were sorted into one of seven profiles, every house was slightly different and, where possible, people could choose the house they wanted to live in. While some have questioned this 'sorting' approach and how it works for someone who doesn't fit a profile, providing different environments has been very successful in practice.

Providing variety and a number of different options can also aid way finding and 'legibility' as distinctive and unique markers are recognized and become points of orientation reducing stress and agitation.

The three basic layouts of Wallenstein 65, Nurnberg, Germany.

6. BELONGING
Keywords: community; happiness, meeting people

The notion of 'community', as it is here for many opera-tors, was at the heart of most interviewees' goals in the places visited and used by them to describe what had been created. It is a term gaining 'motherhood' status and is certainly not exclusive to an aged or architectural situation. The sense in which it was generally used was to describe people feeling like they belonged. It was the counter to loneliness and isolation, common issues for older people as they retire, lose friends and partners and live in places that are inappropriate. Creating a designed community is no easy task but some of the examples ob-served showed that, while it cannot be forced, commu-nity can be encouraged.

The multigenerational *Ruggachern* in Zurich purposefully mixes people of different life stages in order to create a more authentic community than the more typical age restricted communities we see in Australia. The operator, a Swiss community housing provider, takes a selection of people from different life stages; singles, couples, young families and older people. They only accept people who express a commitment and willingness to be a part of the community.

Their model has been successful on a number of levels. It is a more sustainable community as people at different life stage have different needs at different times. If everyone's needs were the same, they argue, it would put a drain on shared facilities like the laundry or car park. Community creation in this case has an element of control.

Of the 14 buildings, one is specifically for older people if they choose, but older people are peppered throughout the other 13 buildings as well. The older people's building has most of the communal facilities on its ground level; library, gym, community room and these rooms are pri-marily run by them.

De Hogeweyk has created a village like 'community' complete with shops and facilities and outdoor spaces and gardens in order to encourage people to feel normal and to get out and interact with others and their sur-roundings.

The *Solinsieme Wohnfabrik* was set up by four friends to create a place of their own choosing to grow old in. The ultimate community of 17 is much more loosely defined and communality is purely discretionary, with communal functions and responsibilities carried out on a voluntary basis "if people want to be involved".

Not all community creation initiatives are successful. The double height communal rooms which form part of the tripartite division of *Torre Julia* in Barcelona into smaller 'communities', weren't really being used. This was put down to the fact that the manager preferred to run all the programs in the ground floor communal room. Inter-estingly it seemed the communal laundries near these communal rooms were becoming the meeting place for people (women) as they did their washing. This accords with 'activities of daily life', normal functions forming a part of the approach of many operators.

Ruggachern, Zurich, Switzerland.

7. INTEGRATION
Keywords: Community connection, familiarity, nearby family

The other aspect of 'community' is connection to the broader community, seen as another antidote to isolation and loneliness. Being close to and overlooking people and activity is good. A number of facilities were adjacent schools and rather than being an annoyance it was seen as a positive.

The operators of Ruggachern in Zurich conducted a survey with their residents in order to verify their community based approach with an overwhelmingly positive response to the principle of a mixed age community with the older people responding 88 per cent in favour of (the noise associated with) having children around for example.

At de Heikant in Tilburg, Netherlands, the new building actually forms one side of a new, regenerated town square, its height will be a feature, a marker for the square.

Proximity to transport and facilities might seem like an obvious feature of an integrated community but it was an unsolicited comment from several places (where people were more mobile), indicating perhaps this was not their previous experience.

Clearly important, this fact is mentioned here because it is considered good and normal planning practice in a more densely populated Europe, but is not as common in a far more spread out and car reliant Australia. While we are coming to terms with a more necessarily denser built environment in the future, it makes sense that as people age and less able to get around whether on foot or by car, being close to transport, shops and services becomes even more essential and more urban and connected models will need to be considered.

The Tertianum is a six-storey residence built into the football stadium at St Jakobs Park in Basel. Designed by Herzog and De Meuron, it sits above a podium which has shops, restaurants and offices. It has tram and bus stops at the front door with a frequent service into the centre of the city a few kilometres away. The people in Basel are so strongly connected to their football team, Tertianum is knitted into the fabric of local community.

8. SOMETHING TO DO
Keywords: vibrancy (activity)

A number of comments were made about activity. It was regarded as one of the most important things to design for. The benefits of being active were essential. It seemed there were two ways to design for activity: Incidental activity, where people were active just living their daily lives and doing things; and designed activity where activities were organized by others to engage people.

Activity was particularly seen as an important part of providing outdoor space, but the spaces needed to have a function: gardening, walking, going up stairs. Torre Julia in Barcelona made the necessary stairs of its fifteen storeys into a feature. A space in themselves, they are places for sitting, meeting and enjoying the views over Barcelona. Apparently successful in this regard, the building is incredibly permeable and open.

In Denmark, Jakob Appel and Maria Krag from Copenhagen Living Lab, innovation consultants, described designing for activity as being one of the most important aspects of buildings for the aged. They had been involved with a number of aged care facilities and had written the 'Model Program for Aged Care Homes' for the Danish Government. But they said it had to be relevant to the user and not forced. A project they had consulted on in a farming community in Jutland (not visited) was designed around community gardens and was developed only after a consultation process with the local community so that it would engage them as much as the residents. This was seen as a more sustainable approach as it embedded the activity in an ongoing community resource.

Torre Julia, Barcelona. Image courtesy Dezeen.com.

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Other observations: what else do we know?

During the course of the travels, there were a number of other interesting observations that would be useful and appropriate in an aged context. They didn't form the focus of the study but are included here because they are pertinent and relevant.

USEABILITY & ACCESSIBILITY

Ramps
While ramps are a necessity to get elevation over a short distance, the use of ramps for older people must be considered carefully. Long ramps are not only difficult for people in a wheelchair anyway and for older people especially but take up a lot of room and, according to accessibility guru, Jesper Boesens from Disabled Organisations House, should be discouraged, the preference being (double-sided) lifts.

Stairs
Stairs and steps are often seen as the main barrier to accessibility but the HOH proudly highlights them, even though they are adjacent the lifts. They are not all bad. They can suggest connection and communication between floors and are spaces themselves for meeting, as in the Torre Julia in Barcelona. They also provide exercise. For older people, it is suggested that the profile be lower and longer so they are easier to climb and are safer.

Common bathroom
There were a number of places that had common bathrooms for separate rooms. In one sense they are 'home-like' (like at home) but almost without exception, the desire was for one bathroom per bedroom, especially where there are separate entries to each room serviced.

Rounded corners / curved plans
Seen as better for vision impaired and people in wheelchairs because of the smooth transition around corners, they also help with corner protection (see maintenance)

Door handles/hardware
Mentioned a few times. The critical issues were that they were lever type handles with a return and a contrasting colour to door for accessibility and that they could be varied in design to aid recognition, way finding and choice.

Accessible fire escape
The HOH in Denmark had created a 'fire lift' so that it could be accessed by people with a disability readily. Essentially it was fire isolated from the rest of the building and part of the fire stair. It is believed to be the first of its kind in the world.

Lift calls
Foot operated lift call buttons automatically call all floors. Only appropriate for low rise. The other option seen was an automatic lift that operated between two floors with no button pressing required, all done by motion sensing. The potential for lifts to recognise a smart device and automatically go to the right floor could also be used.

Two-height joinery
Reception desks, storage, cupboards, coat hooks and rails. One designer coat hook piece made a feature of the different heights. This is done here but making all cupboards like this and making a feature out of it is not common.

Although not specifically designed as a building for the aged, the 'Figure 8' building in Copenhagen by BIG, uses an accessible ramp as its main form generator. Although whimsical and complex, it was refreshing to see a ramp being used in such an interesting way to create the main street, a bit like an artificial hill town, rather than being a necessary but often awkward and added on element to provide accessibility.

Tactile aids

Tactile ground surface indicators (TGSIs) and handrails buttons indicators. TGSIs in the public sphere, on footpaths and stairs were often not contrasting in colour (being tactile!) but contrast was more evident internally. In the HOH, handrails button indicators were used to not only indicate the end of a path or handrail but the location of a corridor or amenity (lift/wc, etc). Tactility was also used more creatively for way finding and sensory stimulation.

Grated tiles

Grated drains were used to provide level access thresholds (like here). However grated tiles do the same thing and provide an alternative for showers and where gates are undesirable.

Power points

Fairly common in Australia, service outlets are also placed higher (minimum 500mm above floor level) so that residents don't have to bend down as far to use.

WAYFINDING & ORIENTATION

Use of colours

Rather than the normally bland environment that many environments for the aged have and the perception that older people like muted colours, strong colour and pattern were commonly seen. Contrast and differentiation are important and used not only for way finding and identification but also for variety and interest.

Art and mementos

A lot of places used mementoes, photos and artwork in an active way. Most overtly these are like 'memory museums' to help people with dementia connect with something familiar. In other cases, large images of local characters or scenes were used to individual areas and provide markers and features. In rural Portugal, where some residents have never learnt to read, they made individual stuffed fabric chickens as 'name tags' to identify their rooms (as pictured on the cover of this report).

Signage

Too much signage can be confusing and institutional, so smarter and more appropriate wayfinding techniques (like colour, surface changes and tactiles) can be more useful and effective.

Different surfaces ground/wall

Visual and tactile differentiation has a number of benefits for, as mentioned before, finding your way and providing variety but perhaps more importantly, appropriate stimulation of all the senses is seen as good for the body and the mind.

SAFETY & SECURITY

General

Surprisingly, this was not overbearing and most operators tried to keep places as open as possible and generally in line with 'normal' security expectations.

Handrails

Handrails in corridors were present in most aged care facilities visited. While necessary, their presence was questioned for a number of reasons. More people who need assistance these days are using mobility aids (frames, scooters, etc) because a certain amount of strength is re-

quired to prevent a fall and the reliance on handrails can decrease strength and confidence. They are also seen as institutional and coming from a hospital environment.

Some handrails will always be necessary but they should be used with thought and purpose and not indiscriminately.

MISCELLANEOUS DETAILS

Blind maps/viewing points
A few vantage points had included a touchable physical model version with Braille markers of the view sighted people could see to enable the vision impaired to share the experience of what was being seen.

Hidden doors/door handles
Used for storage to discourage use by residents and keep corridors equipment free and non-institutional.

Bicycles
A number of places visited had storage for bicycles for the residents (staff also had bike racks). This was primarily in places where bike riding was popular and part of the culture. (The Netherlands, Denmark and Switzerland).

Windows to corridors from apartments
A popular feature in a number of facilities visited. It appears to be a good idea, providing a visual connection to the corridor and help discourage isolation, but in nearly all cases, these windows had been screened internally, some permanently.

Timber-slatted ceiling
A timber slatted ceiling in one facility provided the necessary access and mounting for services and lighting but provided warmth and quality to the public space with the appearance of a full timber ceiling when viewed from an angle.

Visitor accommodation
Not common as most of the buildings were strongly tied to their communities, visitor accommodation was provided in some, mostly the Swiss, buildings so that family and friends could stay for a few days. Generally there was a modest fee involved.

Separate laundries
Although not common in Australia, communal laundries are fairly normal in Europe. They provide a number of benefits for the older person and not just the savings in space and better energy use. They get people out of their apartment and are places to meet and socialise. It was noted however that this was, culturally, mostly the women and single men don't participate.

7. Recommendations

1. Reframe the 'problem'
Architects (and society) should start to view older age as the norm not the exception and move away from ageism and seeing ageing as a 'problem'. There are, as Betty Friedan notes, "genuine problems of people over sixty five — problems of food, housing, economic support, intimacy, medical care, purpose and respect — but we can only deal with those once we have stopped defining age itself, the aged themselves, as the problem."

2. Needs-led, not compliance-driven
Designing for the aged should move away from a compliance driven approach to design to a more needs based approach embracing inclusiveness and equal opportunity. Architects, and their clients, should be challenging stereotypes and seeking better more uplifting outcomes from our design.

3. Dementia is an architectural issue
There is a very clear and strong connection between the way a place is designed and the well-being of people suffering from dementia. A lot of work has been done on this already (mostly by non-architects) but we have just scratched the surface. Architects with their superior design and spatial skills should be taking the leading role.

4. Make it mixed
Where possible we should be encouraging multigenerational housing and designs that promote community should be encouraged with more housing and facilities for seniors included in urban centres, connected to facilities and public transport.

5. Integrated design — early and holistic
Architects should be encouraging more places they design to include ageing as part of the brief. This is especially true of housing. Initiatives like the *Livable Housing Guidelines* should be included in all new buildings, but more than that we should be taking an holistic approach that starts from the site design and concept and planning stages should be adopted.

6. Empathy and ergonomics
All architects should be aware of the needs of people at all stages of life and, when taught, students should gain an understanding of the effects of ageing and not just compliance with standards and regulations.

7. R&DI
The profession should encourage more research and support more design innovation for ageing. This may include recognition, awards and research grants. Other fields are already doing this and the architectural profession needs to become the experts and drive innovation.

Tertianum, Basel, Switzerland, by Herzog & De Meuron challenges the idea of how we age, and where we live by integrating an aged living environment with a local football stadium, allowing residents to be part of social events and feel part of the action.

Torre Julia, Barcelona: a vertical village designated into smaller communities by colour.

8. Appendices

Appendix 1: Checklist of criteria used (right)

Appendix 2: Project sheets (following pages)

Questions for operator and/or architect

BRIEF

- What was the philosophy or approach? (care, person focus etc.)
- Were you trying to do something new, innovative or different?
- Why did you select the architect?
- What was the brief to the architect?
- What process did the design go through, how much participation was there from the architect?

FINISHED BUILDING

- Does the design do what was intended, does the building achieve what was intended?
- What are the best features and why?
- What is the learning – Are there improvements, enhancements and things that you would do differently next time?
- Does the building have a 'personality', what values does it portray? Is this important?
- Other comments on how the building has been functioning against expectations?
-

THEMES: How important are these themes and how does the building respond to them?

- Physical access, movement, comfort and well being
- Safety and security
- Sense of Community and belonging, sense of 'home' (isolation and loneliness?)
- Normality and authenticity
- Cognitive, and psychological well being
- Emotional wellbeing and happiness
- Respect and control
- Staff and family issues
- Other themes seen as important?

Design analyses

LOCATION

- Context
- Proximity to and connection with community facili-Ties / programs
- Urban form
- Car parking, transport

BUILDING

- Entry
- Planning: principle, reasoning, realisation
- Circulation
- Residents room(s): daylight, view, privacy, personalisation
- Bathrooms: individual/communal
- Communal areas/kitchen/laundry
- Outdoor areas
- Staff/support areas/BOH
- Storage

DETAILS

- Accessibility
- Universal design
- Social and psychological features

OTHER

- ESD
- Affordability

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PROJECT SHEET
The Chicken Walk
Residencia Rainha
Dona Isabel

ARCHITECT: Aires Mateus Arquitectos
INTERVIEWEE: Dr Antonia Pequeno, Director Anna Bacchetta, Aires Mateus.
LOCATION: Alcacer do Sal, Portugal
TYPE: Aged Care
RESIDENTS: 66 in 42 rooms.
RESIDENTS PROFILE: Over 70 year-olds mixed high needs
COMPLETED: 2010
SIZE OF BUILDING: 3,640 square metres
AREA PER RESIDENT (sqm): 42.5–55
COST: €3,640,000   (1,000 square metre)
COST OER RESIDENT: € 66,200
CONSTRUCTION: Insitu concrete/ load bearing bw + render.
FUNDING: Unclear. Santa Casa Misericordia is a large services provider, Government subsidises if resident can't afford to pay.
CONTEXT: Alcacer is a historic coastal town about 100km from Lisbon. There is a school next door and other community buildings around with 1–2 storey houses.
URBAN FORM: 1–3 storey linear form following slope of land. Strong white graphic form fits with surrounding buildings
BUILDING: Entry not that obvious, the building seems permeable. Most people enter from the end closest the street straight into the main lounge room. The second and more natural entry is in the elbow.
PLANNING: Single loaded corridor, the pathway is the reasoning for the design main communal facilities at one, front, end.
RESIDENTS' ROOM(S): Huge windows, access to a balcony, views out but designed on angle to give privacy. Rooms all have standard furniture, only photos on the bedside table. 'Chickens' outside doors.
BATHROOMS/LAUNDRY: One bathroom per bedroom — mostly double bedrooms.
COMMUNAL AREAS (KITCHEN): At one end, kitchen in corridor hidden in cupboards, can be used by residents.
OUTDOOR AREAS: Balconies and terraces to all rooms. No landscape design to speak of, just grass and a few trees. Sheep grazing on the grass.
STAFF/ SUPPORT AREAS/BOH: Scullery on site but meals made elsewhere. Laundry off-site; loading dock at 'back'; staff change-room at one end.
STORAGE: Loads in bedroom but often obscured by beds if there are two in the room, so perhaps double bedrooms not intentional.
DETAILS / ACCESSIBILITY: All level access and thresholds, handrails one side of corridor only. bathrooms with grabrails, Grated showers. No braille and white environment may not be good for visually impaired. Two lifts.
UNIVERSAL DESIGN: As above but certainly stigmatising for these people. It is a step up.
PSYCHOLOGICAL FEATURES: Positive environment but complete whiteness and lack of contrast, except for windows may not suit some people.
ESD: White walls, deep recesses, double glazing all reduce need for aircon. Natural ventillation excellent (4 years no smell). Solar PV cells on roof.
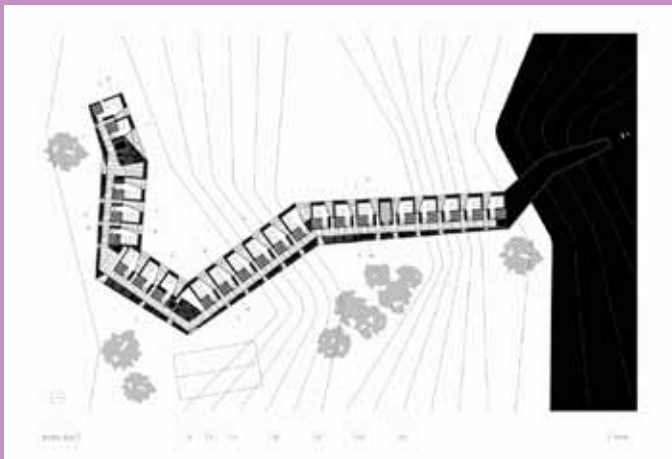
PROJECT SHEET
The Balconies
Can Travi

ARCHITECT: GRND 82
INTERVIEWEE: Joaquim Pascale Sangra, Direcor, Technical
Services, Barcelona Municipal Housing Board
LOCATION: Calle Can Travi, Barcelona, Spain
TYPE: Seniors public housing with communal facilities
RESIDENTS: 81 Apartments 1-or 2-person. Approx 90 residents,
4 separate units for mentally disabled residents. Area provided
for local community social activities not elderly specific Com-
munal areas include reception, activity room, coin operated
washing amenities room, craft room, washing line area
RESIDENTS PROFILE: Independent/ low care
COMPLETED: 2009
SIZE OF BUILDING: 8,492 square metres
AREA PER RESIDENT (sqm): 90 approx
COST: € 6,982,000 (822 / square metres)
COST OER RESIDENT: € 73,500
CONSTRUCTION: New Concrete block infill with breeze blocks
CLIENT/FUNDING: Patronat Municipal de L'Habitage approves
and governs the planning and construction of the elder hous-
ing projects. It operates the projects as rentals for elderly, and
other affordable housing is sold. Run as a business model with
no govt funding. First projects commenced 12 years ago.
CONTEXT: Located in a relatively new urban area built for the
1992 Olympics on the city outskirts but with local facilities and
good transport infrastructure. Close to transport and shop-
ping, schools and univeristy, major road connections and bus
stop adjacent. Police (Guarda Urbana) next door.
URBAN FORM: Surrounded by larger / higher residential
buildings but opted to be good neighbours and not block sun
and views to south from buildings behind.
PLANNING: L-shaped single loaded corridors, windows to
outside. Community room, manager and reception on ground
level. Floors are different colours with front doors all one
colour and have a door bell and number and outside light. The
other side of the corridor on the outside of the building offers
regular views to the outside through long windows that also
create passages of light into the corridor.
RESIDENTS' ROOM(S): 1 bedroom apartments oriented to
south and east (sun and views)
BATHROOMS/LAUNDRY: Ensuites, about 1600 x 2200. Com-
munal laundry, roof drying area.
COMMUNAL AREAS: Just the one – mixed success.
OUTDOOR AREAS: Apartment terraces are the only outdoor
area. No outdoor communal area
STAFF/ SUPPORT AREAS/BOH: Doorman / reception and
manager only. Building has 4 apartments with high-care men-
tally impaired residents with their own staff on lower ground
floor, completely separate.
DETAILS / ACCESSIBILITY: Generally good, lift etc, level ac-
cess and thresholds but smallish.
UNIVERSAL DESIGN: Consciously included but see above.
Certainly no stigmatisation.
PSYCHOLOGICAL FEATURES: A strong, impressive building
that the residents feel good in.
ESD: A principal of the design. Solar hot water with limited
success. Deep balconies mitigate heat gain (and loss)?

The Loop Centro Sociosanitorio Santa Rita

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ARCHITECT: Manuel Ocana.
INTERVIEWEE: Esther de Leon Perez, Manager
LOCATION: Ciutadella de Menorca, Spain
TYPE: High-care residential facility
RESIDENTS: 110 in 68 rooms, all from Menorca. 80% in wheelchairs, average age 80s but from 55-99, mixed needs, all in together, single rooms but have had to make double, couples or single sex.
COMPLETED: 2009
SIZE OF BUILDING: 5,990 sqm (+gardens 6,200 sqm)
AREA PER RESIDENT (sqm): 88 / 54
COST: € 5,990,000 including gardens (868/sqm)
COST PER UIT/RESIDENT: € 88,200/54,500
CONSTRUCTION: Suspended slab floor and roof. Poor quality floor levels etc. Steel support posts and polycarbonate curtain walls with glass windows. Double glazing. Air con constantly, huge energy bill to maintain 24 degrees celcius.
FUNDING: Owned and built by Balearic Islands public authority. Residents pay 25% of costs.(€75/day)
CONTEXT: On the urban fringe of Ciutadella, second largest town on the island. Building on a main road but entry on side road. 2–3 storey residential and industrial around.
URBAN FORM: Low and long and wide, reads as a single story, slightly elevated so hovering above street.
BUILDING: Entry obvious, through driveway from side street, no porte-cochere.
PLANNING: Single loaded circuitous path around 3 contiguous gardens. Like an open-air corridor (except that no one uses it like this, just used for sitting). This path is the reasoning for the design. However the inside longer path is the one that is used, hence concerns about distances etc, especially with most needing assistance in wheelchairs. Laundry and services below and on roof and admin/ staff areas above.
RESIDENTS ROOM(S): Only view to outside bedrooms is through glass door. The other external walls are polycarbonate. Good for privacy and daylight but not so good to make dark and maintenance. Originally all one bedroom now have to put two in because of need. No extra staff. Rooms all have standard furniture
BATHROOMS/LAUNDRY: One bathroom/ bedroom but concertina bathroom doors not easy for wheelchair users. Floor material (poly urethane paint) worn away and expensive and difficult to replace. All laundry done in separate laundry.
COMMUNAL AREAS: Lots of potential communal areas, the whole space around the bedrooms is communal. No resident kitchen, all meals prepared on site.
OUTDOOR AREAS: Lovely gardens but not used a great deal apparently. No funds for gardener (only one day a week) so hard to maintain. Areas for kids (not used much). Well being and exercise area not well used.
STAFF/ SUPPORT AREAS/BOH: All meals prepared on site. Great kitchen and food looked very good! Large back of house service area under.
STORAGE: Not a lot in bedrooms not very thought out or useful but lots of potential space. Had to create a bulk store room below for beds etc.
DETAILS /ACCESSIBILITY: All level access and thresholds, handrails one walls only. Bathrooms with grab rails.
UINVERSAL DESIGN: As above but problems with bathroom
PSYCHOLOGICAL FEATURES: Colours and graphic wayfinding devices are there but not acknowledged – ie: residents don't get it.
ESD: Lots of daylight. Fully air-conditioned to 24 degrees celcius, so high energy usage and big space.

The Share Stairs Torre Julia

ARCHITECTS: Segi Pons, Ricard Galiana, Pau Vidal
INTERVIEWEE: Pau Vidal
LOCATION: Via Favencia, Barcelona
TYPE: Sheltered Seniors independent public housing
RESIDENTS: 77 units 1/2 bed, 120 residents
RESIDENT PROFILE: All independent living, 18 couples
70% female, 30 % male
COMPLETED: 2011
SIZE OF BUILDING: 8,391 sqm
AREA PER RESIDENT (sqm): 109/70
COST: €9,600,000 (1150/sqm)
COST PER UIT/RESIDENT: €125,000 / 80,000
CONSTRUCTION: Side walls were engineered as shear walls to take the design's cantilever. Infill walls on other walls, block with prefinished corrugated sheeting.
FUNDING: A Patronat project. Rent is €500 per month, some residents don't pay anything.
CONTEXT: On a busy bend of the major 'rondo' ring road circling Barcelona that was created for the 1992 Olympics. Stands out but intentionally, planned as a tower always. Its other street is he Via Julia which is a major boulevard from downtown. More pedestrian friendly. Metro is nearby. Aged care building planned next door started but not completed. School next door.. Space for general public use of community room but not used. Some adult fitness equipment outside.
URBAN FORM: 15-storey tower but successfully broken up into sections, not just visually but by the stairs work, traversing several storeys at once so it is not repetitive at every floor.
BUILDING: Reception, manager. Community room (obscured). Lift lobby with visual symbol markers and colours for floors.
PLANNING: Wide lobbies with 6 units per floor. Idea was to leave the doors open at each end for access, to fit with principle, but also let light and fresh air in. Also intended to be places to sit and chat. Not as successful as would like. Only 3 apartments each side of lobby means short distances.
RESIDENTS ROOM(S): Standard 40 sqm rooms.
BATHROOMS/LAUNDRY: Fitted with Patronat brief. Communal laundries with drying rooms and lines. Well used.
COMMUNAL AREAS: See above about communal facilities. Outdoor roof space. Unsure how well used. Only one of the three group areas (ground floor) is used properly.
OUTDOOR AREAS: The most important space is the stairs. The roof has lift access, great views but not well used. Balconies too small.
STAFF/ SUPPORT AREAS/BOH: Two staff as with Can Travi.
DETAILS /ACCESSIBILITY: Level access; lifts; short distances.
PSYCHOLOGICAL FEATURES: People feel proud because the building won an award, but complain when something doesn't work, generally a service, because it is an award-winning building!
ESD: Natural ventilaation proposed for lobbies and drying areas for clothes. Orientation.
OTHER: Won an award for the city for innovation in 2011.

PROJECT SHEET
The 'Gran' Stand Tertianum

ARCHITECT: Herzog & de Meuron
INTERVIEWEE: Cornelia Braun, Director
LOCATION: St Jakobs Park, Basel, Switzerland
TYPE: Low–high care
RESIDENTS: 107 apartments (90 self–care and 17 high–care)
18 x 2 & 3 bedroom apts on 6 floors. No dementia residents.
STAFF: Total staff employed is 60 including admin, care and catering. built:
SIZE OF BUILDING: 15,000 sqm approx. (residence only)
AREA PER UNIT/ RESIDENT (sqm): 140 sqm
COST: € unknown part of stadium project
COST PER UNIT/RESIDENT: € unknown as above.
CONSTRUCTION: Concrete frame with precast waffle panels as cladding.
FUNDING: First privately owned elderly development with no Govt subsidy. Owner is Swiss Prime Site (SPS) a property developer who own the whole site.
CONTEXT: Part of large mixed-use football stadium complex still being developed with shops, offices and other apartments. Families of residents will pop in to visit their older relatives when going to a game. Excellent transport connections from Basel centre only approx. 2km from the centre. The shopping mall underneath is ideal with a direct lift to the shops. Being part of the stadium means there is always activity and lots of people around. The adjacent area is also for sports events and fitness.
PLANNING: Single loaded corridor with 18 apartments in a row. Provides for best orientation for bed and living spaces, but a very long corridor. Windows on the lee (north) side of the corridor give light and view of football stadium. Two lifts about one quarter and three quarters the way along.
RESIDENTS ROOMS/UNITS: Large and light-filled. Windows from apartment to corridor have mostly been blocked up.
BATHROOMS/LAUNDRY: Generally two bathrooms with accessible one as the visitor one. Communal laundry only.
COMMUNAL AREAS: No communal areas excpet restaurant.
OUTDOOR AREAS: Balconies from units are the only outdoor space and are a bit small, ranging from about 1200mm to 450 approx (where the zigzag façade is at its narrowest).
STAFF / SUPPORT AREAS /BOH: Staff have a room like a viewing box for the stadium! Kitchen facilities etc. Storage in basement.
UNIVERSAL DESIGN: Doors were standard and there was one accessible/ universal bathroom, although not to Aust Standards. Thresholds to outside not flush. Kitchens small but in L–Shape. Open and airy, easily adaptable.
PSYCHOLOGICAL FEATURES: The space is positive (light and airy) and it appears upmarket.
ESD: Passive; all units face south; green roof.

The Integrated Community Ruggachern

ARCHITECT: Baumschlager Eberle
INTERVIEWEE: Daniel Leuenberger, Caretaker, Gabriella Wehrli, Accommdation advisor; residents
LOCATION: Zurich Affoltern, Switzerland
Type: Multi generational affordable living.
RESIDENTS NUMBERS: 14 buildings, 282 apartments with one block and 64 units are available for the elderly (55+). 62–90 years old range, 70% women.
COMPLETED: 2005–2007
SIZE OF BUILDING: 36,300 sqm, 50,000 sqm (including underground car park)
Area per unit/ resident (sqm):130 sqm
Cost: 94,000,000 CHF
Cost per unit/ resident: 340,000 CHF
Construction:
Funding: Owned and run by ABZ a Community Housing Provider bought from a developer/ builder Allreal.
CONTEXT: In a new outer suburb, adjacent to a shopping centre and transport (bus and train). Not gated, completely open and permeable.
URBAN FORM: 14 x 4-6 storey brick buildings, arranged around green areas and courts. Ground floor has spaces for lease and some communal facilities (mainly in Seniors building). Whole complex has a consistent language with interest derived from variations in fenestration. Internal streets with some, but minimal (visitor) street parking. Underground car park for 210.
PLANNING: 4 apartments each floor. Dual aspect. Ground floor for lease or public use.
CIRCULATION: Site not gated (important!) everyone can and does pass through as it is adjacent to transport and on path to residential areas.
RESIDENTS ROOM(S): Large, varied apartments to suit lifestyle need with 2-4 bedroom with large windows and living space s. Seniors apartments are smaller and 'functionally neutral' with 2–3 multifunctional 'bed' rooms.
BATHROOMS/LAUNDRY: Two bathrooms per unit. One accessible (the more public one). Laundry areas are usually located in the basement in Switzerland but here they are on ground level so the elderly can look outside, watch the world and chat.
COMMUNAL AREAS: Seniors building had a number of dedicated communal rooms on ground floor such as fitness room, computer room, library, spa and a number of large public space activity rooms which can be rented for events. They also provide physio, podiatry and nails and hair dressing services. Anyone can use them. Guest room provides sleeping accommodation for guests. Activity rooms are located on the corners and peripheral areas of the building where light is the strongest. An older person manages the library. Hobby rooms for sewing, painting. Additional storage amenities are ample as old people have a lot of things.
OUTDOOR AREAS: A large (5x3m) 'loggia' (inboard balcony) for all units can be closed off with blinds if it gets too cold.
STAFF / SUPPORT AREAS /BOH: Seniors building has some support areas. Service providers rent rooms for physiotherapy.
STIRAGE: Storage in units and basement.
UNIVERSAL DESIGN: Normality and community promoted by materials, profiled mix of residents etc.
ESD: Solar PVs on roof, electricity goes to grid and residents buy it back. Hydronic floor heating by gas. There is mechanically assisted natural ventilation no air conditioning.
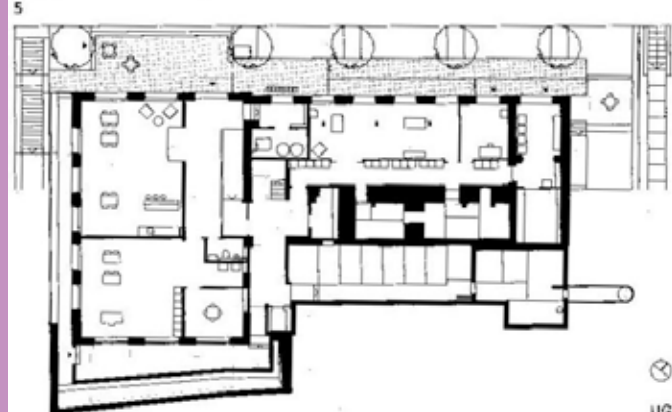
# The Fabric Factory Solinsieme Wohnfabrik

ARCHITECT: Archplan AG, Armin Oswald
INTERVIEWEE: Elisabeth Merkt, Resident
LOCATION: 43 Tschudistrasse, St Gallen, Switzerland
TYPE: Self-funded seniors residence
RESIDENTS NUMBERS: 17 apartments, 22 residents, (66% women) seniors with no wheelchair users or people with frames, 50s up (but most in their 60s/70s).
COMPLETED: 2002
SIZE OF BUILDING: 2,700 sqm approx.
AREA PER UNIT/ RESIDENT (sqm): Two basic unit sizes– 60 and 90 sqm
COST: 6.5 million chf, including existing building cost 'had to be cheap'.
COST PER UNIT/RESIDENT: 380,000 chf
CONSTRUCTION: New concrete structure within existing factory plus new rear addition. Concrete and block structure with ceramic façade system. Double glazing.
FUNDING: Cooperative — private funds for own apartment pooled + 20000 chf each for common spaces. Each apartment owned but common areas shared.
CONTEXT: In a large town, local street, steep site, existing building, indistinguishable from surrounding buildings. Close to town centre. Share car, bicycle storage.
URBAN FORM: Matches existing as it was original. New part different but sympathetic, size, lines.
BUILDING: 4 Storeys. Addition to existing open space ex fabric factory building at rear, to create 6 apartments x 3 floors. Lowest level, communal, services, laundry/ utility room etc. 3 apartments have external entries and 3 internal (for fire escape). One internal stair; one lift.
RESIDENTS ROOM(S): Units all include bedroom; larger ones (90sqm) have closed-off study that can function as second bedroom. Each apartment is the control of the resident and they can do what they like. All dual aspect with outdoor terrace, most of them large 5x3m).
BATHROOMS/LAUNDRY: Larger units have separate WC and bathroom; smaller units combine. Purposely designed not be overtly accessible, but they are sized to be modifiable (none have been); they have baths.
COMMUNAL AREAS: One large community room with kitchen bar facilities, wher they have their monthly get-togethers. Also a communal guest room, meeting room and a leased training room.
OUTDOOR AREAS: One on street, plus a communal roof terrace. Large outdoor areas for each unit is an important feature.
STAFF / SUPPORT AREAS / BOH: Maintenance man/cleaner is the only staff member; has his own room (doesn't live there). Laundry, utility room, large & small storage areas and caot cupboards at ground level, to maximise space in units.
DETAILS/UNIVERSAL DESIGN: Units don't have accessible entries ('too hard with snow/rain') and have steps in them because of levels in existing building. Main entry to building has level threshold.
PSYCHOLOGICAL FEATURES: A very positive initiative with strong sense of wellbeing and choice. Pride in what was achieved.
ESD: SE at back and NW at front so backs do get some sun. Sliding doors can be opened in summer. Solar hot water (original design) with PV put in to power the common areas. Gas-powered radiator space heating.
OTHER: Won 2007 prize for best building for the aged in Switzerland.

The Choice Wallenstein 65 Dementia Competence Centre

ARCHITECT: Feddersen Architekten
INTERVIEWEE: Ines Mueller, Director; Barbara Heitman, Director of Care
LOCATION: Wallenstein 65, Nuremberg, Germany
TYPE: Residential 'Comptence Centre' for Dementia
Residents numbers: 96 room. 8 Groups of 12 bedrooms but currently 101 residents 60–99 age range. 40 full-time staff but 90 employees. Day-care delivered by adding person to one of the houses.
COMPLETED: 2006
SIZE OF BUILDING: 5,564 sqm GFA
AREA PER UNIT/ RESIDENT (sqm):: 60/55
COST: €7,418,045
COST PER UNIT/RESIDENT: € 77,000
CONSTRUCTION: Concrete frame
FUNDING: Owned and built by the Evangelische Lutherisches Diakoniewerk Neuendetteslau. Residents pay depending on means, some get state assistance.
CONTEXT: In a new estate off a main road out of centre of town. Old military site. Estate is mainly housing low cost/affordable for families. There are some offices on the main road and the estate also has a low-care/assisted living building opposite (not owned by the Diakonie but they do the care). There is also a preschool/ child care centre next door that is owned and run by the Diakonie, specifically with joint programs, this is seen as important.
URBAN FORM: Fits in with locale. 3 storeys tri partite form, reflecting its functional break up. Stairs and lifts between. Reads as a low level walk up apartment/ resort type building. High standard of finish. Timber external shading. Balconies.
BUILDING / PLANNING: 3 sections x 3 storeys. A group 'house' in each floor with admin, communal on the ground in the central section. Circulation zones between. 'Group Houses' have single loaded corridor around a central service centre with bedrooms look outward.
RESIDENTS ROOM(S): Rooms all have , large windows and views to the outside, lots of daylight, some personal items, easy supervision.
BATHROOMS/LAUNDRY: Shared but one per room preferred. Some have 3 residents per bathroom which isn't desirabLE. Laundry Service outsourced.
COMMUNAL AREAS Form the centre of the houses with large windows and a balcony coming off it. Home like kitchen where meals (cook chill etc) are prepared
OUTDOOR AREAS: Very important. Not used as much as would like. Grow their own veggies, herbs etc.
STAFF / SUPPORT AREAS / BOH: Nurses offices where medications are kept. Other BOH is generally in the central section in each house with storage.
DETAILS / UNIVERSAL DESIGN: Critical. 50% wheelchair users. No issue with gravel paths. Corners need protection and doors to bedrooms and some lift lobbies too small for beds.
PSYCHOLOGICAL FEATURES: Residents are 'profiled' and placed in appropriate 'house' those who need more light or who have no family (unsure why) are in 'Patio' section. Rooms are identity by photos and names as well as in old script used before 1965. Of the 96 residents, 15 are subsidized by govt and the rest pay privately. Entry is means-tested.
ESD: No solar.

49
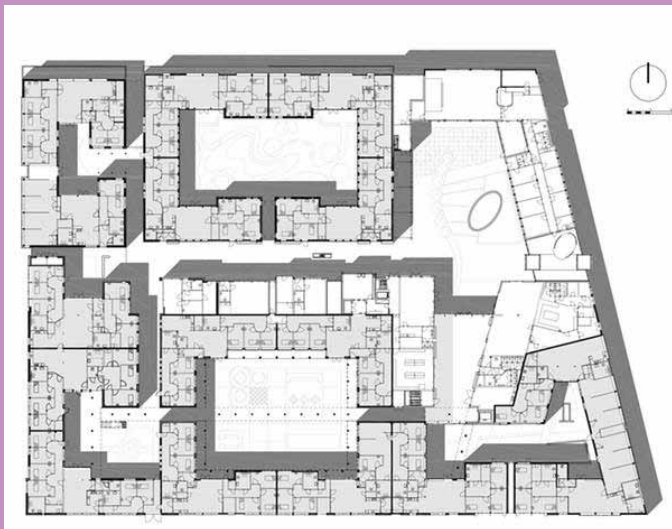
The Virtual Village De Hogeweyk

("the boulevarde")

50

ARCHITECT: Molenaar, Bol,Van Dillen
INTERVIEWEE: Eloy van Hal, Facility Manager
LOCATION: Weesp, The Netherlands
TYPE: Dementia specific, all with higher levels of dementia.
RESIDENTS NUMBERS: 23 houses x 6 residents (152 Residents). 290 staff, Nurses on duty, GPS etc come in.
COMPLETED: 2009
SIZE 0F BUILDING: Total 15.310 sqm, 50% is outdoors.
AREA PER RESIDENT (SQM): 50% inside / 50% outside
COST: €19.3 million (2500/sqm)
COST PER RESIDENT: €126,000
CONSTRUCTION: Suspended slab floor and roof, high quality, double glazing, air-conditioning.
FUNDING: Primarily by the Dutch government (from insurance) providing €17.8 million, plus €1.5million in funding and sponsorship from local organisations. The company (Vivium) get €175–200 per day, approx. €5,800 per month).
CONTEXT: Suburb/town outside Amsterdam, close to town centre but separated from it, but would like to be connected, more however the protected model separates. Mostly low-rise townhouse estate developments around with a few high-rise.
URBAN FORM: Low one- and two-storey compound, walls to boundary connected visually but separated from surrounds. Would have liked more open connection to community.
BUILDING: Entry ramp from street and air lock (secure) to foyer with second airlock to main internal outdoor spaces. All houses have a 'real' front door to outdoors.
PLANNING: Based around different outdoor spaces with village shops and facilities with houses. Each house reflects a different style that is common to and familiar for the people who live in that house. The seven settings provided are urban, aristocratic, trades/crafts, Dutch East Indies, homemakers, cultural, religious.
CIRCULATION: Everything is accessed from the outside areas (like real village).
RESIDENTS ROOM(S): Single rooms generally 3 or 4 off a corridor splayed doors, resilient flooring, beds against walls.
BATHROOMS/LAUNDRY: Shared bathrooms between corridor group of bedrooms (for 3–4 residents). Communal Laundry
COMMUNAL AREAS / KITCHEN: All houses have large communal living/ dining/ kitchen area. Public communal spaces are all accessed form outdoor areas.
OUTDOOR AREAS: 50% of site; this is central to philosophy.
STAFF / SUPPORT AREAS / BOH: Invisible. Main Kitchen hidden, admin reas separated and private.
STORAGE: House storage. Separate hidden bulk storage.
DETAILS / ACCESSIBILITY: Completely accessible with intuitive wayfinding.
UNIVERSAL DESIGN: Interesting and dignified and respectful.
PSYCHOLOGICAL FEATURES: See above.
ESD: None stated.

The Groovy Grannies De Plussenburgh

(the "+" town)

ARCHITECT: Arons and Gelauff
INTERVIEWEE: Liduine van Proosdij
LOCATION: Grote Hagen, Rotterdam, Netherlands
TYPE: Seniors residential apatment building
RESIDENTS NUMBERS: 104 apartments, 16 storeys, no care, mostly single women, community centre, P/T concierge, under ground car park.
COMPLETED: 2006
SIZE OF BUILDING 15,700 sqm
AREA PER RESIDENT (SQM): 150
COST: €5,990,000 including gardens (868/sqm)
CONSTRUCTION: Concrete structure, brick ends and glass façade, high quality, double glazing.
FUNDING/CLIENT: Private developer, SOR — 'Comfortable Living for Seniors'.
CONTEXT: Groovy seniors building in a dedicated aged part of outer Rotterdam. Changing to have more of a mix. Adjacent the town transport and shopping centre. The other buildings are a bit ordinary. There is an aged-care building adjacent but not associated with De Plussenburgh. Has its own community room (bar, dining, games, library, internet —all in one). outside. Very close to shops and transport. Easy to get into Rotterdam centre 15–20 mins. Close to other residential areas
URBAN FORM: Tall and dramatic. One tower block 16 storeys and elevated one lateral block of 7 storeys cojoined.
BUILDING: Entry clear but off the street near visitor parking.
PLANNING: Single loaded corridors to apartments backed to back laterally facing east west. Lift between.
RESIDENTS ROOM(S): Small single bed apartments. Big windows, open space, works well.
BATHROOMS/LAUNDRY: Small bathroom and laundry could be better realised.
COMMUNAL AREAS: All open plan. Resident would have preferred separate kitchen
OUTDOOR AREAS: Balconies to all apartments. Look nice but not very usable. Too narrow.
STAFF / SUPPORT AREAS / BOH: Garbage room at ground floor lobby, mailboxes and concierge. Service rooms in basement.
STORAGE: Some storage but not extensive. Place to recharge scooters but not used as there is no security.
DETAILS / ACCESSIBILITY: Multi-storey with lifts, non accessible door threshold to outside balcony.
UNIVERSAL DESIGN: Meant to be, but there are some issues.
PSYCHOLOGICAL FEATURES: It is the most notable building in the area, so residents like that, but not a big thing.
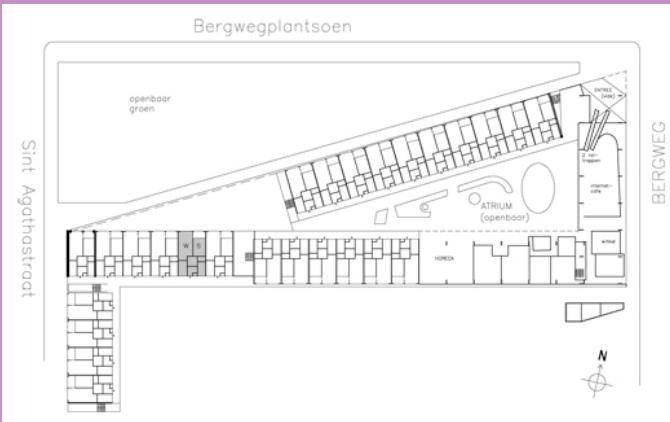ESD: Under–floor heating, cooling, no air conditioning.

The Museum Humanitas Bergweg

ARCHITECT: EGM Architects
GUIDE: Caretaker (no formal interview, some details missing)
LOCATION: Bergwegplantsoen 10, Rotterdam, Netherlands
TYPE: Residential 'Apartments for life'
RESIDENTS NUMBERS: 195 Apartments, small residential dementia unit, several day–care centres for specific groups, a memory museum 'museum care'; services and back of house
COMPLETED: 1995
AREA PER UNIT / RESIDENT (SQM): 68 average unit size.
CONSTRUCTION: Reinforced concrete walls, columns and floors, brick facades, atrium roof is glass and light steel.
FUNDING: Built and run by Humanitas.
CONTEXT: On main high street, part of local community, embedded. Public access to communal area. Dementia day–care programs and centres at ground at rear accessed from surrounding streets. Home–care outreach office at ground level. Tram and bus stops adjacent with easy access to city centre.
URBAN FORM: The dramatic 12-storey wedge on a 4-storey podium makes this a landmark in the street and area. Street level has commercial shops, day–care centres and serviced offices. Above are admin and a communal internal 'market place' surrounded by some of the units under a glass atrium.
PLANNING: Entry is clear but on a corner and up one level. Atrium level with apartmentS around and more apartments in tower over. Atrium balcony or single loaded corridors to apartments. Double loaded to high needs dementia unit.
RESIDENTS ROOM(S): 1.5–bed apartments. Dementia unit with bedrooms and ensuites only. Beds against wall.
BATHROOMS: Centrally in unit plan.
COMMUNAL AREAS: Main focus of the design were large communal areas, including shared outdoor spaces on apartment floors.
OUTDOOR AREAS: New outdoor area created on atrium level. No individual balconies but sun-room 'conservatories', adn communal spaces (as above).
STAFF / SUPPORT AREAS / BOH: Service, admin and staff rooms on ground floor (behind shops and day–care centres).
DETAILS / UNIVERSAL DESIGN: Multi–storey, lifts, some non–accessible door thresholds outside.
PSYCHOOGICAL FEATURES: 'Happiness' very important, fish theme, memory museums, etc.
ESD: None stated.

The Town Square De Heikant
(moor side)

ARCHITECT: Oomen Architecten
iNTERVIEWEE: Ernst Havermans, Director, Oomen
LOCATION: Brucknerlaan/De Heikantslaan, Tilburg North, Netherlands
TYPE: Residential low and high care
RESIDENTS NUMBERS: 186 Care apartments, 30 Nursing Places, 82 Retirement Places.
SIZE OF BUILDING: 35,000 sqm
AREA PER UNIT / RESIDENT (SQM): Average 117 sqm but varies depending on care level.
COST: €1,200 euro/ sqm / €42,000,000
COST PER UNIT / RESIDENT: €140,000
CONSTRUCTION: Concrete frame, aluminium and glass curtain walling, high standard of finish
FUNDING: Two clients — Wonen Breburg, a local community housing provider, and Wever Foundation, an aged–care provider.
CONTEXT: On main street leading to shopping centre, will form part of town centre. Provides spaces for community services at ground level with an outward focus (physio, child care, library etc.)
URBAN FORM: 'Like ships in a sea' Low–level plinth to boundary edge, taller buildings around courtyards. Some car parking at rear.
BUILDING: Prominent, large porte cochere under tower, bit like a hotel, scaled to open to new square. Other entries permeable with entries to rear and sides for community access
PLANNING: 8 Guest Rooms, Restaurant, Café, Meeting Rooms and services/local facilities etc on the outside. Most units are in towers, some are in plinth and open onto terrace overlooking courtyard. At ground level are all the public and community facilities around two courtyards. Ground–level public access, leads to lobbies for residential tower. Care areas are double loaded, but short wide corridors, the upper levels single loaded from a lift lobby at front which provides a sitting space with views. Feeling of modern hotel.
RESIDENTS ROOM(S): Care rooms are designed to double-up or be changed — they are wide and light-framed for flexibility. Lower residential buildings have sky-lit atrium corridors.
BATHROOMS: Care bathrooms one per unit.
COMMUNAL AREAS: The corridors have large pictures of local characters on each floor to aid recognition and wayfinding.
OUTDOOR AREAS: Courtyards unfinished. One is more public and on main pedestrian pathway through complex and has child–care centre opening onto it, will have a playground featuring a long slide accessed from the upper residential floor! The other courtyard is more private and adjacent existing dementia facility.
STAFF / SUPPORT AREAS / BOH: Unseen but restaurant has proper kitchen.
DETAILS / UNIVERSAL DESIGN: Seemed excellent – very flat area and inclusive and inviting, very positive.
PSYCHOOGICAL FEATURES: Effort has been made to make normal and interesting.
ESD: No solar.

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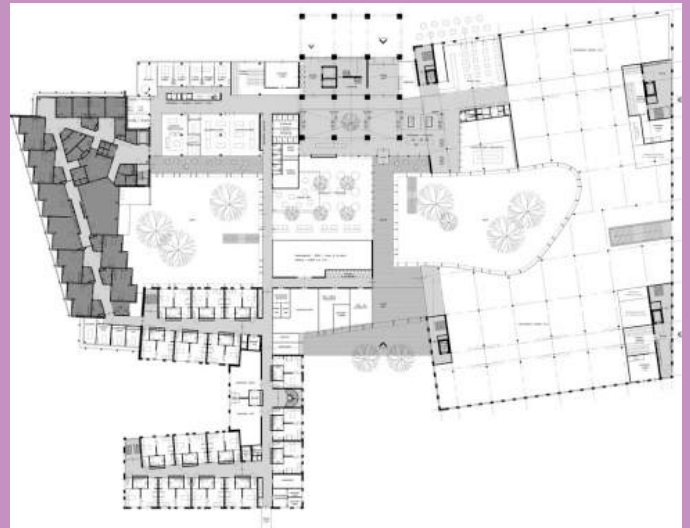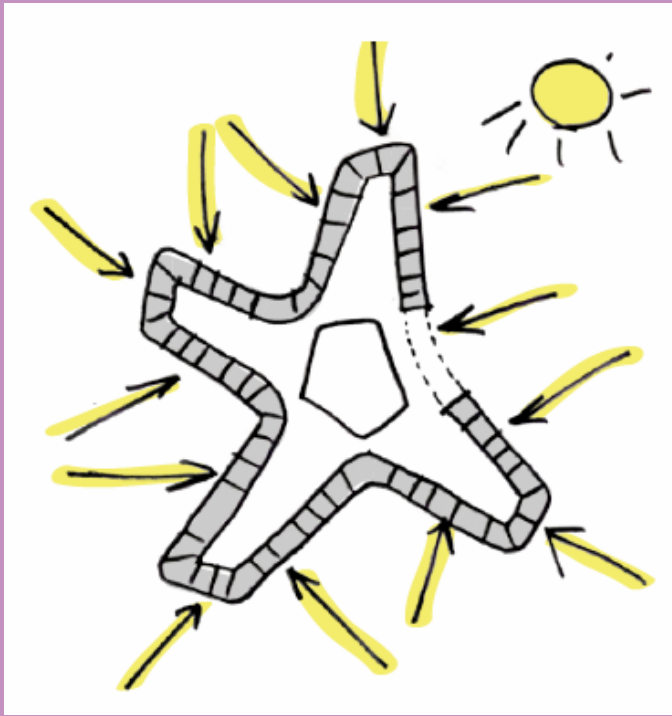
The Starfish: Disability Organisations House

ARCHITECT: Cubo Architects
INTERVIEWEE: Jesper Boesens, ex CEO
LOCATION: Hoje Taarstrup, Copenhagen, Denmark
TYPE: Non-residential office building, all needs catered for not just aged. 7 basic categories.
Numbers: 900 lineal metres of window space required for offices.
COMPLETED: 2013
SIZE OF BUILDING: 13,000 square metres
COST: 16,000DKR/ sqm ($3,200AUD)
CONSTRUCTION: Concrete frame, aluminium & glass curtain walling
FUNDING: Government
CONTEXT: In an outer suburb of Copenhagen. Low- to mid-rise, spread out, low density. Stand–alone building disconnected from surrounds but is its own activity centre, people come to it.
URBAN FORM: 4–storey 'pancake' stacked 'starfish' shaped, stand–alone building. Large car park 100+ spaces at grade with over 50% accessible and closest to entry. Train station 400 metres accessible and navigable path. Regular trains to city centre. Covered bus stop.
BUILDING: 'Entry' starts from train station. Easy path. Level access with tactile visual aids.
PLANNING: Central atrium space with radiating arms for short distances and social inclusion. Ground–floor more public and admin areas. Upper floors office spaces. No dead ends. Way finding cues for visual impaired using centralised layout, tactile signage and cues and colours etc.
RESIDENT ROOM(S): N/A but office spaces were designed for maximum daylight and views to surrounds.
BATHROOMS: Toilets are included to cope with every type of disability.
COMMUNAL AREAS: Designed around sky–lit central atrium space where people meet and connect. It is also used for functions.
OUTDOOR AREAS: Strong demarcation of vehicle and pedestrian garden area. Path to rear garden area. Dog compound for assistance dogs.
STAFF / SUPPORT AREAS / BOH: The whole building is for staff. Kitchenettes designed for inclusivity and specific task lighting. Storage is bi–level and adjustable.
DETAILS: Accessibility and universality are the reason for this building. It aims to be 'the most accessible office building in the world' with no physical and associated psychological including with psychological barriers.
ESD: Another guiding principle. Natural light, triple–glazing, sun screening, solar hot water heating, roof–water collection and greywater re–use for toilets.

The Starfish: Disability Organisations House, Copenhagen: aerial view. The unique shape of the building encourgaes community and interaction among the disparate groups that occupy it.

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About the author:
Guy Luscombe

10

References

Guy Luscombe is an award-winning architect and Director of Architects Johannsen + Associates. He has over 30 years' experience in both private and public architectural practice, most recently as Director of GLAD Studio and before that Head of Aged Design at Rice Daubney.

Over the past 12 years he has focussed on the aged sector and has designed over 40 projects for older people. He has a particular interest in how design can improve the built environment for the current cohort of 'new aged and has presented at both aged and design industry conferences and seminars.

Guy has written extensively on design and ageing, was the principal author of *Creating Caring Communities*, the design guide for a major aged-care provider and was co-editor of the book, *Beyond Beige: Improving architecture for older people and people with disabilities* — published in 2007 for the Australian Institute of Architects as a result of the Sisalation Scholarship.

He has also tutored and lectured at the University of Technology Sydney and at the University of NSW.

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11

Acknowledgements

St Jakob's Park, Basel
Tertianum [TER-TARE-TI-ANUM]
Herzog & de Meuron
Tram 14

14. 4. 14

2 BR.
85 - 100 m2
each.

↑
18 apartments
x 6 floors
+ 1 shop (etc)
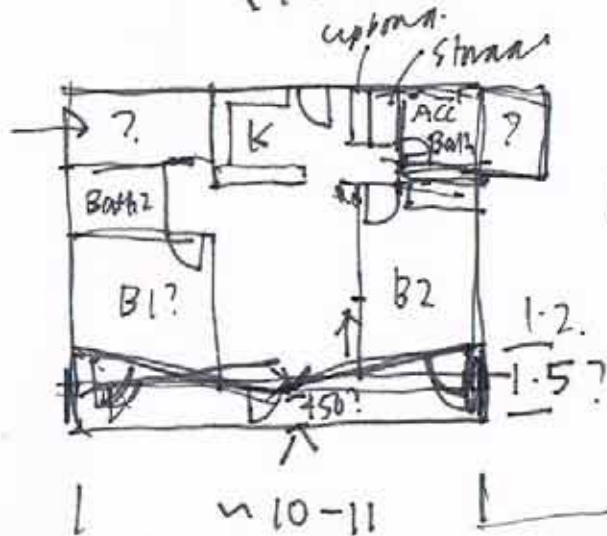+ 18 apartments

RESTAURANTS
& STADIUM ENTRIES

SHOPS

(under)

Konica
clock.

STREET

PARKING
(STORAGE)
(BASEMENT)

3 lifts. - one to shops.
single loaded corridor.
(10-11 m each? - 200m corridor)

K

Bath2

ACC
Bath

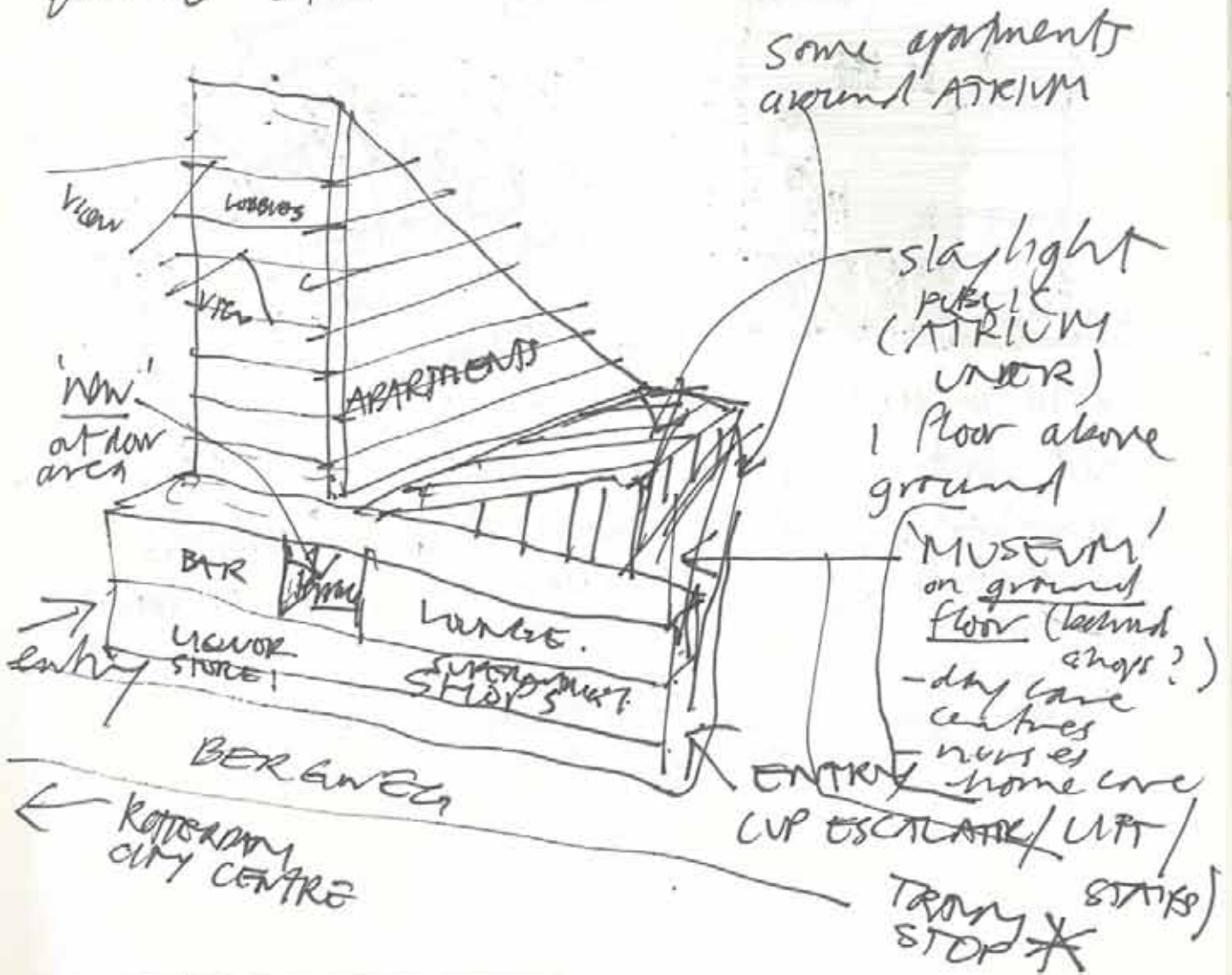Storage

cupboard.

B1?   B2   1-2.
                     1-5?

150?

~ 10-11

Balustrade 1.100 mm

Atrium

SOUTH
(VIEW)
(SUN)

MAIN STREET

3·??·14

Amsterdam
Boulevard Cet.

Some apartments
around ATRIUM

- skylight
public
(ATRIUM
UNDER)
1 floor above
ground

'MUSEUM'
on ground
floor (behind
shops?)
- day care
centres
- nurses
- home care

ENTRY
CUP ESCALATOR/ LIFT/
STAIRS)

view
LOUVRES
view

'new'
outdoor
area

APARTMENTS

BAR

LIQUOR
STORE!

LOUNGE.
SUPERMARKET
SHOPS?

BERGWEG

← ROTTERDAM
CITY CENTRE
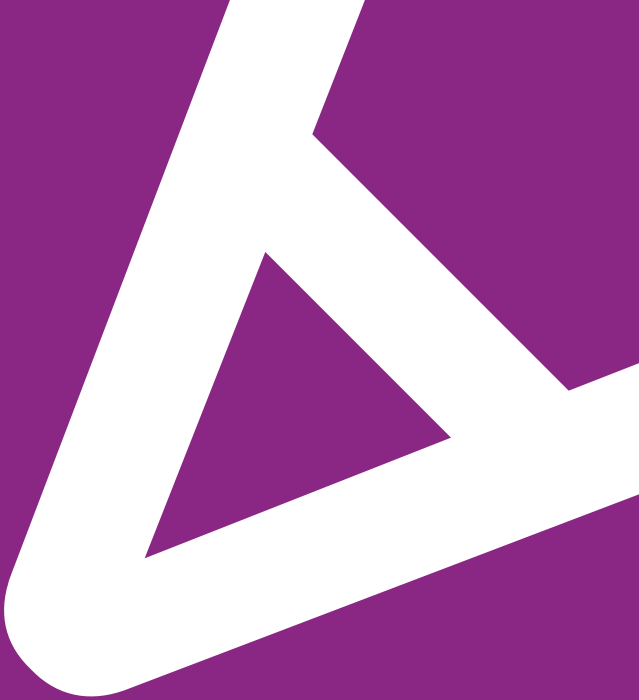
TRAM
STOP *

'Fish' theme — CARP — in pond
— on walls etc.

→ Apartments have windows to corridors & to doors
(obscured in various ways usually
it seems)
— two floors to corridor
— Built on old hospital — still retain one
room of original building preserved
(MUSEUM)

Author's on site sketch of Humanitas, Bergweg, Rotterdam Netherlands, see Project Sheet on page 52 for details and images.

NSW
Architects
Registration
B●ard

A

NSW
Architects
Registration
B●ard

A