



# Designing Alzheimer's Facilities





**Tarkett Design expertise for medical environments**

## FOREWORD

*Tarkett would like to thank Dr Xavier Cnockaert, Professor Cornel Sieber, Professor Bengt Winbald, Professor Suzanne Cahill and Professor Desmond O'Neill for their expert advice and opinions. We would especially like to thank Professor Schricker drawing attention to the use of sensory and functional design in medical environments.*

## Interview with Professor Schricker



The choice of flooring in health environments is an important vector for safety. Floors provide safety underfoot in daily walking movement. Resistance and anti-bacterial properties solve hygiene problems.

Evolution in flooring is based on scientific research results that are certified to meet all standards. In the care of dementia patients, these quality labels symbolise reliability.

Today, the large variety of flooring designs offer many options in colours, structures and visual effects. The aesthetics of floors enter into an emotional relationship with people. Identification and curiosity are life-prolonging and activating factors for ill people living in a healing environment. For them, a “healthy” floor gives hope, encouragement and motivation.

“Qualitative, beautiful and healthy” floors give people composure and dignity, thus contributing to a positive feeling. They stimulate or comfort, and they evoke other sensations, especially in the combinations

between light and sound. Floor design can help people to slow down, to concentrate, to orientate themselves, to have fun or to move freely.

Tarkett’s Design team shows how intentionally choosing a specific flooring can change the influence of the interior space for people. In the sensitive area of providing care for people suffering from Alzheimer’s, flooring can have a remarkable psychological and social effect. Thus, floorings make a significant contribution to shaping the overall therapy thanks to appropriate patterns and colors which can generate a valuable feeling of safety.

# Creating a suitable environment for Alzheimer's patients

Alzheimer's disease has become a public health policy priority for a large number of European countries. Given current projections, it will be a **major challenge** to develop specialised facilities fitted with the appropriate interior design and flooring for patients with this disease. While suitable medical treatment may be central to the quality of the care, a comfortable environment is also closely linked to patient well-being.

This brochure aims to provide an overview of the impact of the overall care environment on Alzheimer's disease, supported by expert opinion. It also suggests some ideas that should be considered in **planning interior spaces** adapted for the care of people with Alzheimer's and, in particular, in the choice of flooring.

As a world leader in flooring solutions, Tarkett contributes its **specific expertise** towards understanding the role that designing interior space can play in the quality of life for patients suffering from this complex disease.

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# Alzheimer's: chronic progressive loss of cerebral function

### Principal characteristics

The symptoms of Alzheimer's disease were first described by the German neurologist and psychiatrist Alois Alzheimer.

It is defined as a chronic progressive loss of cortical cerebral function, leading to irreversible cognitive decline. It is an all-embracing presenile dementia involving memory loss, spatiotemporal orientation problems, aphasia (problems with language), agnosia (problems with recognising and interpreting familiar objects), apraxia (problems in executing coordinated movements) and, above all, problems with executive functions (planning and organising daily activities/life). The disease evolves over 8 to 12 years, leading to death, usually from cachexia (profound weakening of the body).





## A disease on the increase

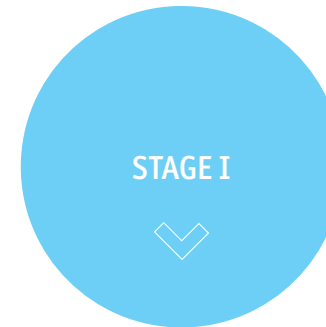
### **Alzheimer's disease: key figures**

Recent figures show that there is a sharp increase in Alzheimer's disease in correlation with ageing populations. According to Alzheimer's Disease International (ADI), more than 35.5 million people worldwide are affected by problems linked with Alzheimer's disease. In 70% of cases it is an Alzheimer's type condition. This figure could nearly double to 65.7 million by 2030 according to the ADI report and even rise to 115.4 million by 2050. In Europe, according to a 22 July 2009 European Commission report, there were more than 7 million cases of Alzheimer's disease.

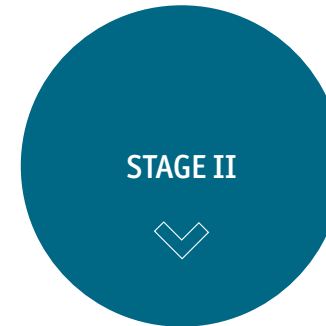
## INTRODUCTION



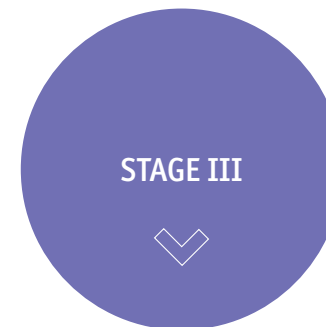
**In general, Alzheimer's disease starts after the age of 60 and evolves over 8 years on average. Classically it involves three stages that provide markers for its development. However, the disease is different in every case and a patient can present symptoms of all three stages simultaneously.**



- Gradual memory loss
- Depression
- Anxiety



- Spatiotemporal disorientation  
(*loss of spatial and temporal awareness – places, levels, date, hour, season*)
- Problems with executive functions and judgement
- Problems with language and recognising familiar objects
- Mood and behavioural changes



- Complete disorientation
- Confusion, hallucination
- Basic behavioural problems
- Urinary and faecal incontinence
- Violence, cachexia



## Managing Alzheimer's disease: a European concern

**According to estimates by the European Commission, 7.3 million Europeans (in the 27 member states) were suffering from different types of dementia in 2009.<sup>(1)(2)</sup> The rise in life expectancy, especially in developed countries, resulted in a significant increase in cases of dementia, with current forecasts doubling every twenty years the number<sup>(3)</sup> of those affected. The management of Alzheimer's disease has become a public health preoccupation for many countries in Europe.**

**Scotland, Portugal and Switzerland** recognise dementia as a national priority.

**Sweden** launched Swedish Brain Power in 2005 as a collaboration between six founding members. With a budget of 100 million krona over five years, its objective is to improve rapid diagnosis, treatment and patient care.

**Norway** adopted a national dementia plan in 2008 based on five major strategies designed to tackle future challenges in care provision.

**In Germany**, since 2008 Federal Ministry of Education and Research has made rapid diagnosis of neurological diseases and Alzheimer's in particular one of six priority areas. The DZNE, national centre for research into neuro-degenerative diseases has also been established with an annual 66 million euros budget.

**France** has launched a national Alzheimer's plan for the period 2008-2012 with a budget of over 1.6 billion euros. As part of this plan, the construction of Alzheimer's units across the whole French territory has begun.

**In Belgium**, the Walloon region allocated a 250,000 euros budget to finance actions to combat Alzheimer's disease – notably research and patient care. The Wallonia Alzheimer's Centre is currently being established.

**In England**, a national dementia strategy was created in August 2011 with a £150 million budget.

**Spain** hosted a world summit on Alzheimer's disease last September bringing together major contributors to research on the disease in order to share advances in the diagnostics of this condition.

**In Italy**, there are nearly 50 organisations working in the area of Alzheimer's disease.

<sup>(1)(3)</sup> Alzheimer's disease: scientific, medical and societal implications, synthesis and recommendations. Collective expert report from INSERM (French National Institute for Health and Medical Research), 2007.

<sup>(2)</sup> First results from the survey of health, ageing and retirement in Europe (2004-2007).

# CHAPTER I



# Advice on planning living spaces for Alzheimer's patients

## Why do we need Alzheimer's units?

Numerous countries have responded to the growth in Alzheimer's disease by establishing Alzheimer's plans involving the creation of specialist units. This reflects the need to provide long-term care for people with this disease who can no longer live independently at home or in the care of relatives. The construction of Alzheimer's units has seen renewed debate about the overall environment of these medico-social units to ensure that they provide the best response to managing the disease.

## Creating an environment adapted to the disease

Alzheimer's units must provide an environment adapted to the needs of the patient and care staff, as well as offering visitor comfort. These units must therefore be designed taking into account everyone's requirements and specific usage. The parameters should include: designs, colours, acoustics, lighting – with rules defined according to the function of specific areas such as bedrooms, corridors, communal areas and treatment areas.

## "Just like home"

Interiors should be clearly organised to make patients feel that they are in a reassuring and familiar environment that's 'just like home'. This makes it easier for them to continue routine activities, keeps them safe and reassures visiting families. The idea of a familiar and comfortable environment is inseparable from the idea of more personalised spaces that enable patients to transpose their own landmarks into the Alzheimer's unit.

## Open spaces that flow

To counteract the sense of being enclosed, flexible multi-functional spaces that offer easy access and enhance movement are recommended. It's important to design light, large areas open to the outside and with numerous points of interest that will encourage exploration and ambulation. And not to isolate the building from the outside world.

*"Until now, interior design has always been developed on the premise of rational and visual consideration. This academic understanding of design and the intellectual attitude in architecture have made it impossible to seriously consider the so-called soft factors of well-being in addition to the calculable hard factors."*

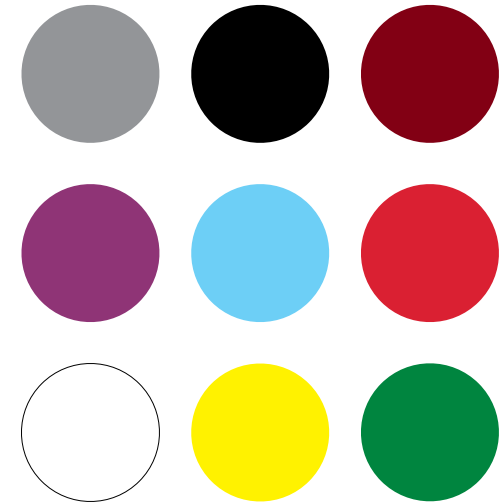
Prof. Dipl.-Ing. Rudolf Schricker, President BDIA



### COLOURS TO AVOID

#### Avoid using:

- Acid and electric colours that can lead to agitation and confusion
- Sombre colours such as dark brown, black and dark grey, that can create a fear of falling or the sensation that there is an obstacle to cross
- Very light colours and white in particular, which can seem blinding
- Grass green at ground floor level, which patients can mistake for outside space like the garden
- Bright red, which can create over-excitement
- Mauve, which doesn't reflect light well and that can be perceived as a gloomy colour
- Turquoise blue that can be mistaken for water



## The role of colour in Alzheimer's disease

**Colour** appears to perform an important function in how Alzheimer's patients perceive their environment. Studies show that certain colours can cause behavioural problems. On the other hand, some colours seem to encourage a sense of well-being and help to create a setting that patients find reassuring. Colour can also be decisive in ensuring that an environment remains familiar to a patient, even as their condition evolves.

*“ Solid and contrasting colours make it possible to distinguish between the different zones of the unit and make it easier for patients to orient themselves – for example, by using an orangey colour for an activity zone. ”*

Prof. Cornel Sieber, Director of the Institute for Biomedicine of Ageing,  
Nuremberg University, Germany

*“ It’s very important to use warm colours for the patient environment in areas such as living, sitting or dining rooms, with cooler or contrasting colours used for the bathroom. ”*

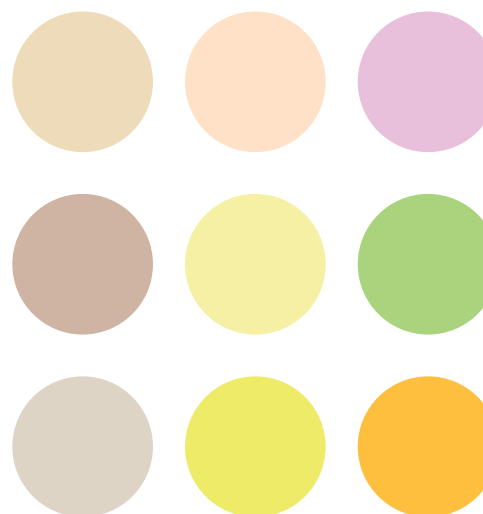
Prof. Suzanne Cahill, Research Director, Trinity College, Dublin, Ireland



#### OUR SUGGESTIONS

##### Colours that can soothe and reassure patients

- Natural colours in mineral and vegetable tones
- Pastel colours
- Varnished colours
- Semi-plain effects
- Saturated colours for orientation and contrast
- Matt finish







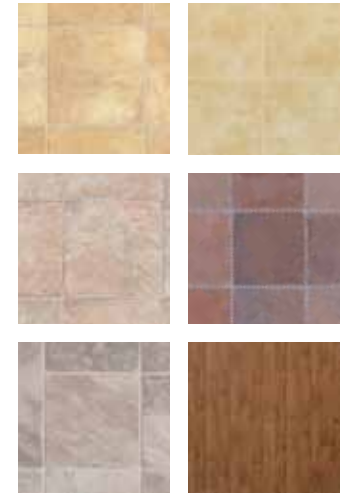
### The role of pattern in Alzheimer's disease

**Patterns** on walls and floors are important in helping to create a comfortable and familiar environment in an Alzheimer's unit. However, some patterns can cause confusion in patients, while others create a sense of well-being by reminding them of daily life.

#### OUR SUGGESTIONS

##### Patterns that prompt memories

We recommend patterns that recall familiar places, motifs that remind patients of home and comfort them. But it is important that designs take into account cultural differences between countries. Imitation wood works well in Nordic countries but not in Ireland; tiles and stone suit France but not Sweden where it suggests the outdoors. On a more general level, warm solid colours, small patterns and dots can be used because they reassure rather than disturb patients, as well as non-figurative patterns because they can't be confused with something real.



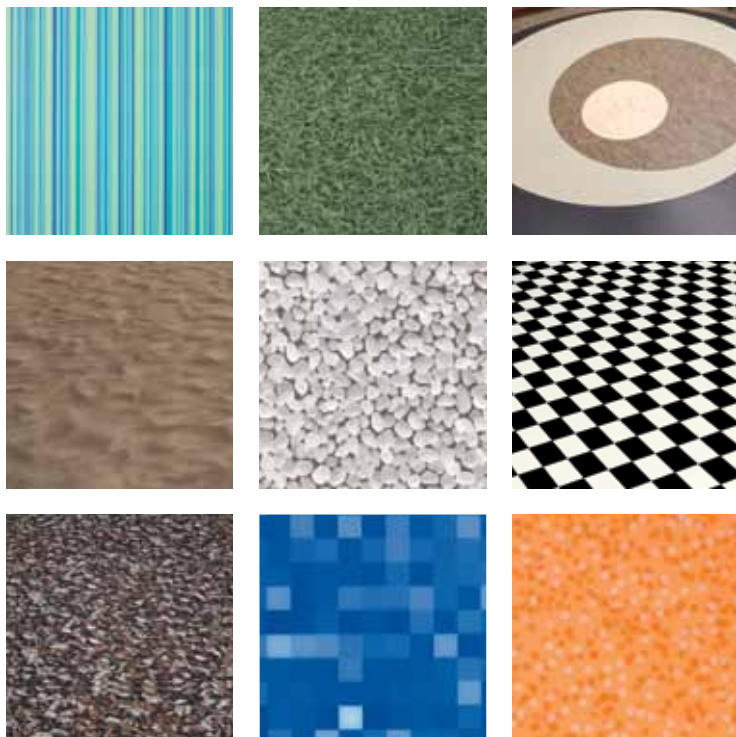
*“ Design for dementia patients has a radical impact on the understanding of interior design. It is no longer cognitive and intelligent interpretations that play the decisive role but emotional moments and psycho-social experiences. Factors of interior space perception, such as orientation, safety, movement, balance and acknowledgement are now to be integrated in each phase of the interior design. ”*

Prof. Dipl.-Ing. Rudolf Schricker, President BDIA

## PATTERNS TO AVOID

Some sources suggest that it is preferable to avoid patterns that could disturb the patients, such as:

- Large stripes
- Repetitive geometric patterns including circles, checks, lozenges, cross-hatching
- Flakes of strongly contrasting colours
- Typographical motifs
- Imitations of natural materials such as grass, pebbles, leaves, straw etc, because these could be confused by a patient as real materials in an exterior environment.



## The role of acoustics in Alzheimer's Disease

### Acoustic quality

is an important element that should be carefully considered in designing an environment for patients with Alzheimer's. Noise can cause problems particularly in the advanced stages of the disease. An environment where sound levels are comfortable and reassuring can favour the well-being not only of patients but also care staff.



### OUR SUGGESTIONS

**We recommend** the use of sound absorbent partitions and flooring to reduce the noise of falling objects and footsteps in particular.

### WHAT TO AVOID

**Background noises should be reduced as much as possible.** They can be a source of anxiety and, according to some studies, lead to behavioural problems in patients with Alzheimer's. Sharp and medium frequency noises can also disturb patients and should be avoided.

*“ Special attention should be paid to the acoustics in communal areas to prevent noise from resonating. It is also advisable to have special rooms available for dementia patients who make a lot of noise. ”*

Dr Xavier Cnockaert, Head of Gerontology, Beauvais Hospital, France





# Flooring: an added value tool in managing Alzheimer's disease

Colour, design, light and acoustics are the essential parameters to consider in designing an Alzheimer's unit. It is important that the architectural design stage incorporates these criteria into the choice of flooring.

## A technical added value

Flooring can be a decisive factor in spaces designed for people with Alzheimer's. It has real technical added value and helps to provide Alzheimer's patients with a suitable environment in terms of acoustics, hygiene and safety.

## A psychological and sensory contribution

The flooring also offers added value at a psychological and sensory level. In particular, colours and patterns can reassure patients and give them confidence, and also help to relieve the upset of a new environment by making them feel "at home".

*"A good floor space for older people, and particularly those with dementia, allows and encourages activities, involvement, loyalty, comfort and ultimately identity in a positive way. People with dementia need to feel that every detail is designed to generate well-being. The floor is key to the environment."*

Prof. Dipl.-Ing. Rudolf Schricker, President BDIA

### Aiding ambulation

**Patients** with Alzheimer's experience disorientation, particularly in the later stages of the disease. Because of this, it is essential to create a sense of familiarity and comfort that will make it easier for them to move between the different living spaces. The flooring has an important role to play in providing patients with spatial markers.

#### OUR SUGGESTIONS

##### Colour contrasted slip-resistant floorings

Different floorings can be chosen according to the type of room or movement, but also the specific needs of the patient and care staff. We recommend the use of slightly contrasting colours in patient rooms, and medium contrasts for communal areas. Pastel colours with little or no pattern should be used to

avoid the risk of hallucinations. Flooring in a single colour is the best way to indicate ambulation areas. A slip-resistant surface is also recommended to reduce the risk of falls, because Alzheimer's patients often suffer from motor problems. Glittering-effect finishes should be avoided as they can give the impression of walking on water.

*“ Markings on the floor can be used as a guide for ambulation and to mark out a route. The areas where the patient can walk and access points should be clearly marked. ”*

Prof. Cornel Sieber, Director of the Institute for Biomedicine of Ageing,  
Nuremberg University, Germany

### A hygiene aid

Urinary and faecal incontinence are a feature of Alzheimer's disease, so it is essential to choose **flooring** that is practical and easy to maintain, particularly in patient rooms and bathrooms.

#### OUR SUGGESTIONS

##### Suitable flooring colours

Certain colours should be avoided, including grey, brown, black and yellow. Light colours such as sky blue or neutrals (like beige) that give an impression of cleanliness are recommended.



## Ensuring acoustic comfort

Certain studies show that **noise** is a major cause of anxiety in patients with Alzheimer's and can even, in some cases, lead to behavioural problems. We therefore recommend maintaining the lowest possible noise level in their everyday environment.

### OUR SUGGESTIONS

#### Acoustic flooring

Flooring is the source of numerous repetitive noises and care should be taken to select an appropriate acoustic quality to reduce sound levels. We recommend the use of acoustic flooring that will significantly reduce impact and ambient noise.

## Emphasising intimacy and memory

**Alzheimer's disease** is characterised by numerous memory problems. Flooring can be used to help stimulate memories and recreate a setting that patients find more familiar.

### OUR SUGGESTIONS

#### Flooring that reassures and stimulates memories

Flooring has a role to play in recreating an intimate space in which Alzheimer's sufferers can feel comfortable and safe. This can be done by using designs that provide patients with familiar references. In practice, designs such as wood, traditional hexagonal tiles or square tiles can be a reminder of home and evoke childhood memories. This can create familiar surroundings that will help to reassure patients.

## Maintaining the wake/sleep balance

**Insomnia is one of the most frequent psycho-behavioural** problems to affect Alzheimer's patients. More characteristic, still, is the inversion of the wake/sleep pattern called the circadian rhythm.

### OUR SUGGESTIONS

#### Clear, luminous, colours

The choice of a suitable flooring can play a part in helping to re-establish the wake/sleep pattern. Improving the use of light, which studies show affect the secretion of melatonin and cortisol hormones, is important in regulating the wake/sleep balance. Preference should therefore be given to light, clear flooring colours that offer better light reflective properties.



*“ Natural light is important in managing Alzheimer's disease. It is essential that a specialist unit is organised in a way that observes our brain's day/night rhythm – where light stimulates certain hormones that make us active and others give us the signal to sleep. ”*

Prof. Bengt Winblad, gerontologist,  
Department of Neurobiology, Karolinska University  
Hospital, Huddinge, Sweden



# Light: an added value in managing Alzheimer's disease

Studies of Alzheimer's disease show that light management has an important role to play in managing the living experience of patients. Its function varies according to the time of day and should be adapted to suit the spaces where patients find themselves during waking hours but also according to the rhythm of their daily habits.

## **Light management adjusted to the function of every room**

At the end of this chapter, we provide some suggestions for lighting and the use of natural light in different parts of an Alzheimer's unit. A unit can be divided into 6 areas:

- 1** Ambulation areas including communal areas, reception and corridors
- 2** The living area – communal spaces such as the sitting room or dining room
- 3** Sleep or rest areas
- 4** Personal areas including the bathroom
- 5** Administrative and logistic areas including risk zones off limits to patients
- 6** Treatment and physiotherapy areas



### The role of light in Alzheimer's disease

**The major light management** issues in Alzheimer's disease are luminosity and maintaining circadian rhythms. Light can also improve patient quality of life and comfort by making the hospital environment seem more familiar.

#### OUR SUGGESTIONS

##### We recommend:

- Using the building's orientation (north-south) to make the most of natural lateral and zenithal light
- Using flooring in patient rooms to reflect light without dazzling
- Leaving on lights in ambulation areas at night
- Lowering lighting at the end of corridors to deter patients from wandering

#### WHAT TO AVOID

Very white or very dark flooring should be avoided because the reflected light can disturb or dazzle patients with Alzheimer's according to the stage of their condition.

*“ It is extremely important to dissociate areas used during the day from those used at night. For example, in my Alzheimer's unit, the lighting is four times lower at night. There's natural light throughout the unit during the day, and night lights are used to lower the level during the night. ”*

Dr Xavier Cnockaert, Head of Gerontology, Beauvais Hospital, France



## Floor and light interactions: technical aspects to consider

**Measuring the interaction between lighting and flooring relies on three main factors: light resistance, reflection coefficient, and luminance.**

### Light resistance

This is the flooring's resistance to natural light (UV). Any floor exposed to daylight (through a window for example) requires a good level of UV resistance. The light resistance of a colour is its ability to withstand the effects of light to retain colour without yellowing or discolouring. There are 8 levels of light resistance.

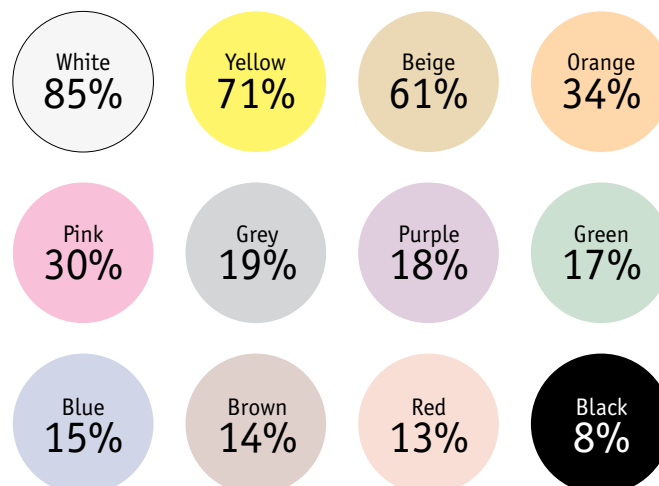
### Reflection coefficient

The reflection index describes the relationship between the quantity of light received and the quantity reflected. The NF X 35-103 standard recommends floors with a low reflection factor (between 30 and 40%) to prevent dazzling. The light reflective index is measured with a photometer and will vary according to the colour.

### Luminance

This is the luminous quality of a material. It depends on the source of light, the colour of the material (plaster reflects 85% of light rays while walnut only 16%), the texture (rough or smooth), the photometric capacity (what it reflects and what it absorbs), and the position of the light source in relation to the material.

### LIGHT REFLECTION INDEX





*“ Good lighting can influence circadian rhythms in people with Alzheimer’s and help to reduce agitation and depression. Studies show that lighting can be beneficial for well-being. ”*

Prof. Suzanne Cahill, Research Director, Trinity College, Dublin, Ireland

### Helping patients to see their surroundings

**Ambulation areas** should be designed to manage the spatiotemporal problems associated with the disease so that patients can move around safely. Personalising areas to be like ordinary surroundings will make the hospital environment seem more familiar to patients.

#### OUR SUGGESTIONS

##### We recommend:

- Luminous markers (luminous routes in the corridors) that help patients orient themselves
- Maintaining constant natural lighting in traffic areas, without shadows or reflections, so that the space is easier to understand
- Uniform lighting to provide an additional safety feature for patients on the move
- Lighting with motion detectors
- Well-distributed lighting that’s never dazzling to assist spatiotemporal orientation
- Ensuring the right interaction between colours and lighting

### Helping patients to understand their surroundings

**In living areas** such as the dining room, lighting should be designed so that it is easy to see the area and any obstacles, while providing visual comfort and a friendly atmosphere for patient well-being. A warm ambience can be created by combining natural light with soft lighting devices.

#### OUR SUGGESTIONS

##### Depending on the specific requirement of the patients in the unit, we recommend:

- Emphasising strong ambient luminosity that won’t dazzle
- Fluorescent lights and lamps that provide good colour rendition



## Ensuring safety at all times

**Risk areas** include doors to the exterior (risk of exiting or wandering), balconies, offices, kitchens and utilities. Protecting patients is a priority in these areas and effective and suitable lighting can help to ensure safety. In addition, the more comfortable patients feel in living areas, the less temptation there will be to wander into risk areas.

### OUR SUGGESTIONS

#### Risk areas should:

- Be kept dark or with lower lighting to discourage patients from entering unauthorised or dangerous areas
- Be equipped with dimmer switches so that lighting levels can be reduced around the perimeters

#### For the bathroom area we recommend:

- Specially designed lighting that will faithfully reproduce colours
- Bright lighting, particularly around the hand basin, to help patients to orient themselves

## Reducing patient anxiety

**Rest areas**, like the bedroom can be more personalised yet must combine safety with serenity. Alzheimer's patients must feel at home there, more than anywhere – especially as it is an area where they relax, meet with others and explore manual activities.

### OUR SUGGESTIONS

#### We recommend:

- Working with lighting and colours to facilitate orientation
- Using uniform and harmonious lighting so that it is easy to see the surroundings
- Favouring natural lighting for manual activities; thus allowing the regulation of light from the television (to reduce dazzle)
- In bedrooms, use lighting devices that reproduce natural daylight and provide multiple sources for different activities (personal care, reading etc)



*“ The design of rooms and their flooring provides support for the main requirements in the care of dementia patients. Despite failing cognitive faculties, the dignity of the patient as an individual can be sustained by an increasing emotional and social interaction. ”*

Prof. Dipl.-Ing. Rudolf Schricker, President BDIA

## CHAPTER IV



# Design recommendations for Alzheimer's units

## Ensuring therapeutic well-being

As we have seen in the preceding pages, there are numerous parameters to consider in the design of an Alzheimer's unit. Colours, patterns, acoustics and light in every area, the routines of patients and care staff must all be taken into account, along with one element that can play a decisive role – the flooring.

## Flooring adapted to the functions of different areas

As the recommendations in the previous chapters show, a number of design approaches and flooring choices can be envisaged, depending on requirements. To optimise the working of the unit, there are six area types that should be taken into account and six different but coordinated flooring designs that fit their use. These designs can help to improve the patient's well-being, strengthen the sense of being at home and so reduce stress and behavioural problems.

## Practical design recommendations

In the following pages we use the recommendations already made to illustrate a variety of designs and ambiance, with possible flooring solutions.

## CHAPTER IV

1

### Ambulation area

Consists of communal areas, reception and walkways.

2

### Living area

Consists of communal areas such as the sitting room, or dining room.

3

### Rest area

Among others, this includes relaxation areas and the television room.

4

### Individual room

The patient's private area - sleeping space and bathroom.

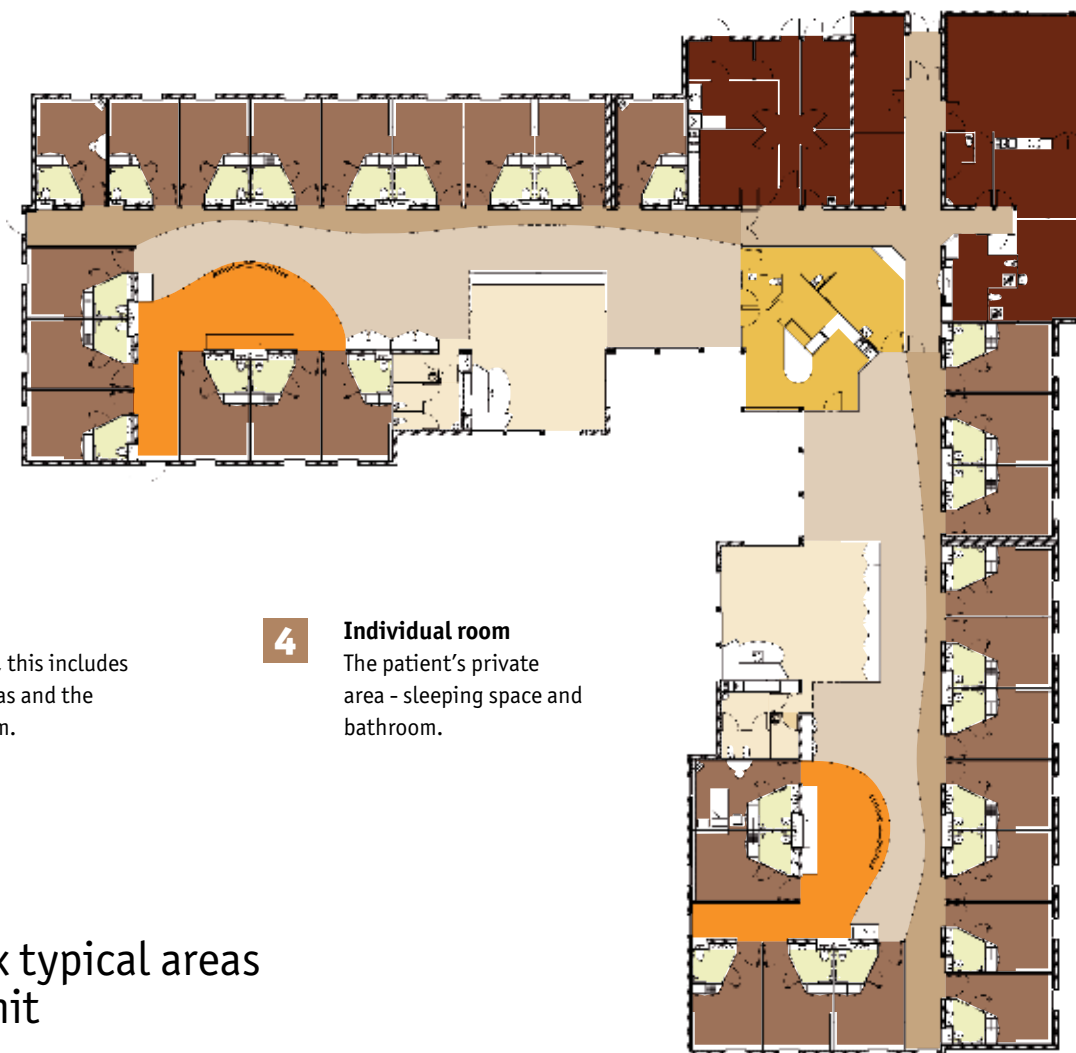
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### Administrative and logistic areas

Including risk areas that are out of bounds to patients.

6

### Treatment and physiotherapy area



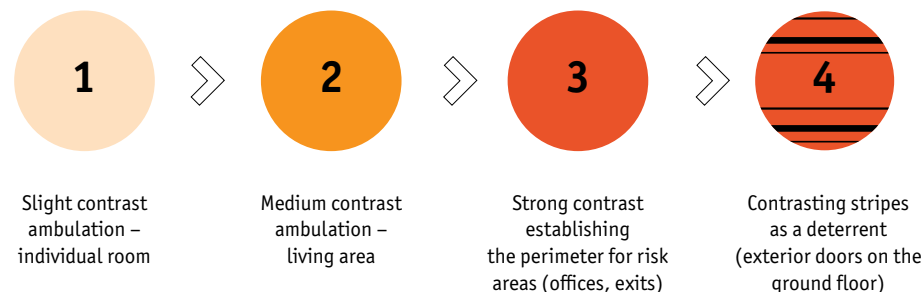
Sheltered living unit Mattaincourt (Vosges-France)  
François Fouchet  
Cabinet Bouillon Bouthier, Architects DPLG at Golbey

## Coordinating the six typical areas of an Alzheimer's unit

**We have identified six areas** that shape the smooth running of an Alzheimer's facility and the orientation of patients in the interior space. Each of the designs in the following pages is based on these six areas and provides a solution adapted to the specific needs of each.



### CONTRAST: AN AID TO SPATIAL ORIENTATION

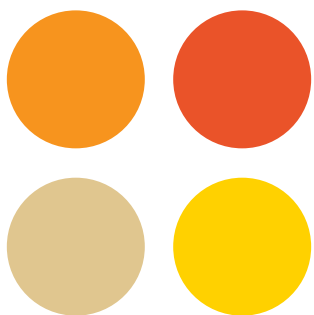


## Helping patients move between different areas

**In the advanced stages of Alzheimer's disease**, patients generally find it very difficult to understand where they are or even become totally disoriented. As a result, they may need clear markers to help navigate between the different areas in the unit. Using colours and patterns that address the problems associated with this disease will also play a part.

It helps to use clearly contrasting flooring colours **between traffic and ambulation areas**.

**Between the ambulation areas and individual rooms**, it is best to use a lighter contrast that is more suitable for a patient living area. It is possible to play with similar shades of colour and distinctive patterns.

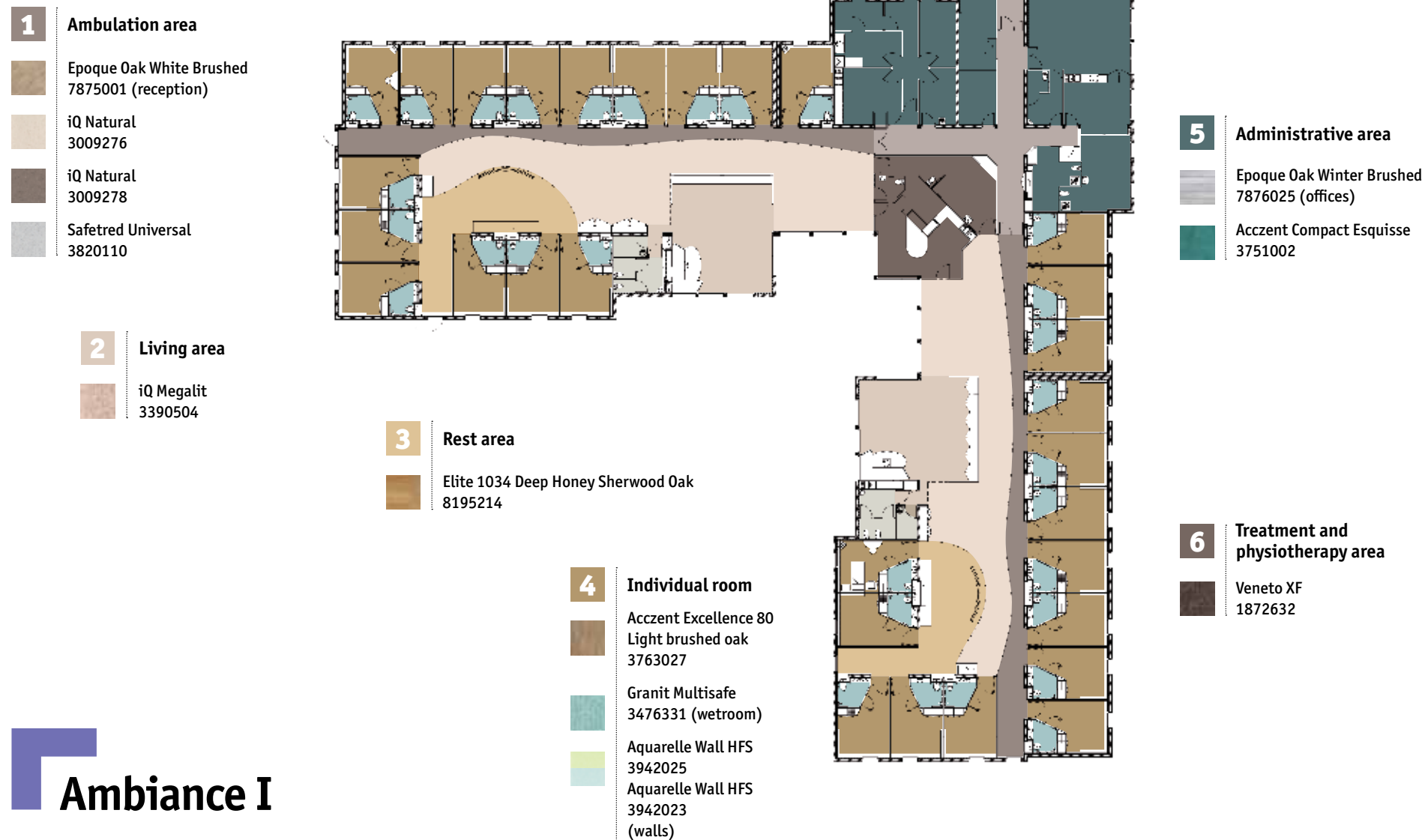


## Improving patient safety close to risk areas

**Strong contrasts should be used to define** the perimeters of risk areas (offices, exits) between communal areas (left) and risk areas (right). Clear and effective signposting can help prevent patients from getting lost or leaving the unit.

*“ It is very important to use colour contrasts and to make a clear distinction between the floor and the walls, without using colours or patterns that are too alike. Choose furniture in colours that stand out clearly from the walls and flooring. ”*

Prof. Suzanne Cahill, Research Director, Trinity College, Dublin, Ireland



# Ambiance I

This design concept emphasises harmonious combinations of soft natural colours in pastel shades.



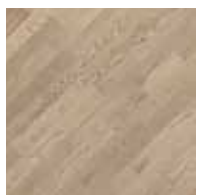
## AREA

**1 Ambulation**

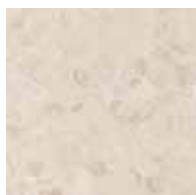
- **For the reception area**, a parquet creates a warm and reassuring atmosphere for families coming to visit relatives.
- **For communal areas**, a homogeneous vinyl flooring in natural tones. Access to bedrooms should be limited during the day so we suggest the use of contrasts that will separate the doorway from the walking area to dissuade patients from isolating themselves in their rooms.

*“ It is advisable to personalise patient rest and living areas – and allow them to adjust their own lighting. ”*

Prof. Desmond O'Neill, President of the Irish Gerontology Society, Ireland



Epoque Oak White  
Brushed  
7875001  
(reception)



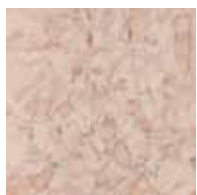
iQ Natural  
3009276



iQ Natural  
3009278



Safetred Universal  
3820110



iQ Megalit  
3390504

## AREA

**2 Living area**

- **For communal areas**, which must look good but also withstand heavy traffic, homogeneous vinyl flooring in a light luminous design.

**INTERACTION BETWEEN FLOORING AND LIGHT IN RISK AREAS**

To complement lower lighting, we recommend the use of a darker flooring which absorbs the light (black, for example, only reflects 8% of the light). This will help to deter patients from entering this area. To deter patients from entering specific areas, we recommend a dark coloured flooring or alternating dark and light bands.



## CHAPTER IV



AREA  
3

### Rest area

■ For communal areas, we recommend wood design laminate flooring that is warm and reassuring for patients and a reminder of their home environment.

Elite 1034 Deep Honey  
Sherwood Oak  
8195214



Accent Excellence 80  
3763027



Granit Multisafe  
3476331



Aquarelle 3942025  
Aquarelle 3942023

### INTERACTION BETWEEN FLOORING AND LIGHTING IN WETROOMS

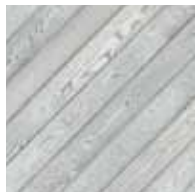
In the bathroom we recommend slip-resistant flooring in light, reflective colours.

AREA  
4

### Individual room (wetroom)

■ We have chosen beige tones coordinated with a pastel blue to give this **private area** a sense of security for the patient. The room uses pastel colours and a neutral pattern. In the shower a slip-resistant vinyl on the floor is combined with a vinyl wall covering, both of which are suitable for use in wetrooms.





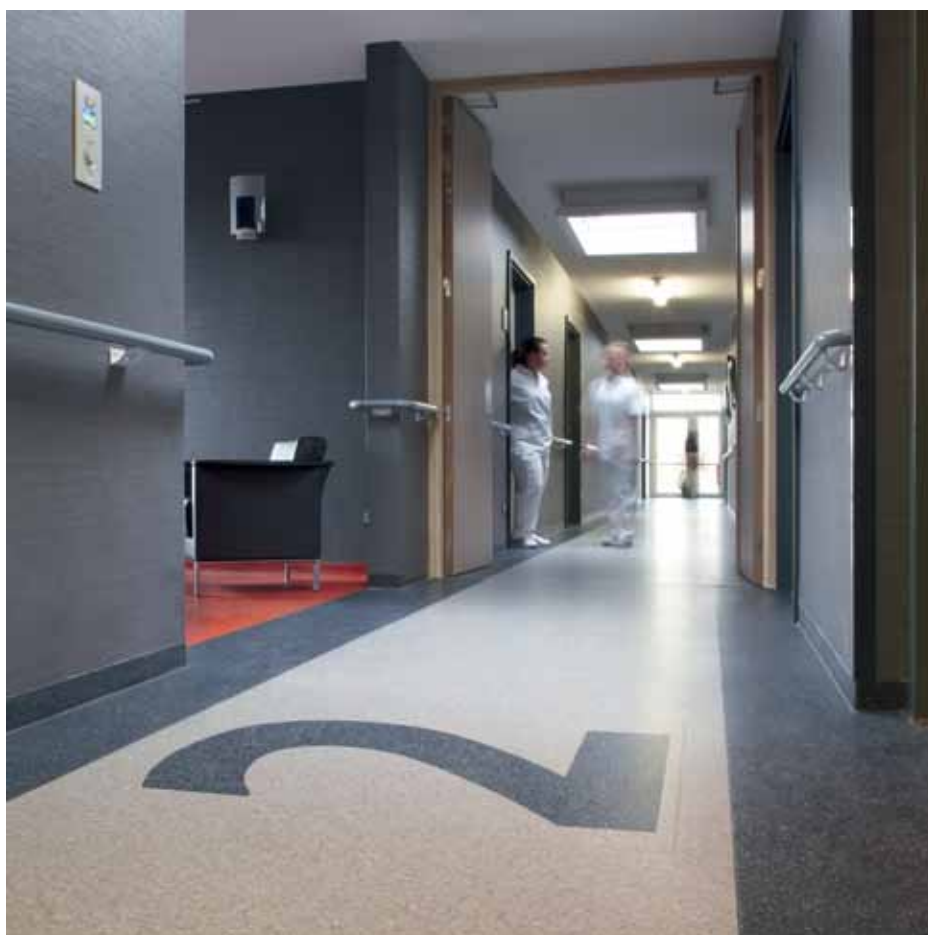
Epoque Oak Winter  
Brushed 7876025  
(offices)



Accent Compact  
Esquisse  
3751002

## AREA 5 Administrative area

■ **For this area – restricted to staff** and off limits to patients – we recommend the use of a strongly contrasted vinyl flooring. Using parquet in the offices will give them feel warmer.



## AREA 6 Treatment and physiotherapy area

■ **In an area designed for health and mobility**, we selected a linoleum in natural tones to create a sense of well-being.



Veneto xf 2.5 mm  
1872632



# Ambiance II

This second approach favours livelier colour harmonies over natural colours and materials.

## AREA

**1 Ambulation area**

■ **For the reception area**, we recommend laminate flooring for a warm homely atmosphere.

■ **For communal areas**, a vinyl flooring suitable for heavy traffic, with a neutral pattern. To deter patients from going to their rooms during the day, a layout has been created with saturated colour that acts as a contrast between the ambulation and personal areas. In wet communal areas, such as toilets, a slip-resistant flooring will reassure patients who are afraid of falling.



Elite 1034  
King Fontainebleau Oak  
8195224  
(reception)



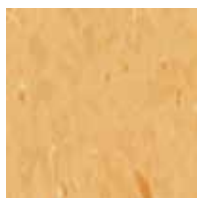
Acczent Excellence  
Esquisse  
3751018



Acczent Excellence  
Esquisse  
3751012



Safetred Spectrum  
3819815

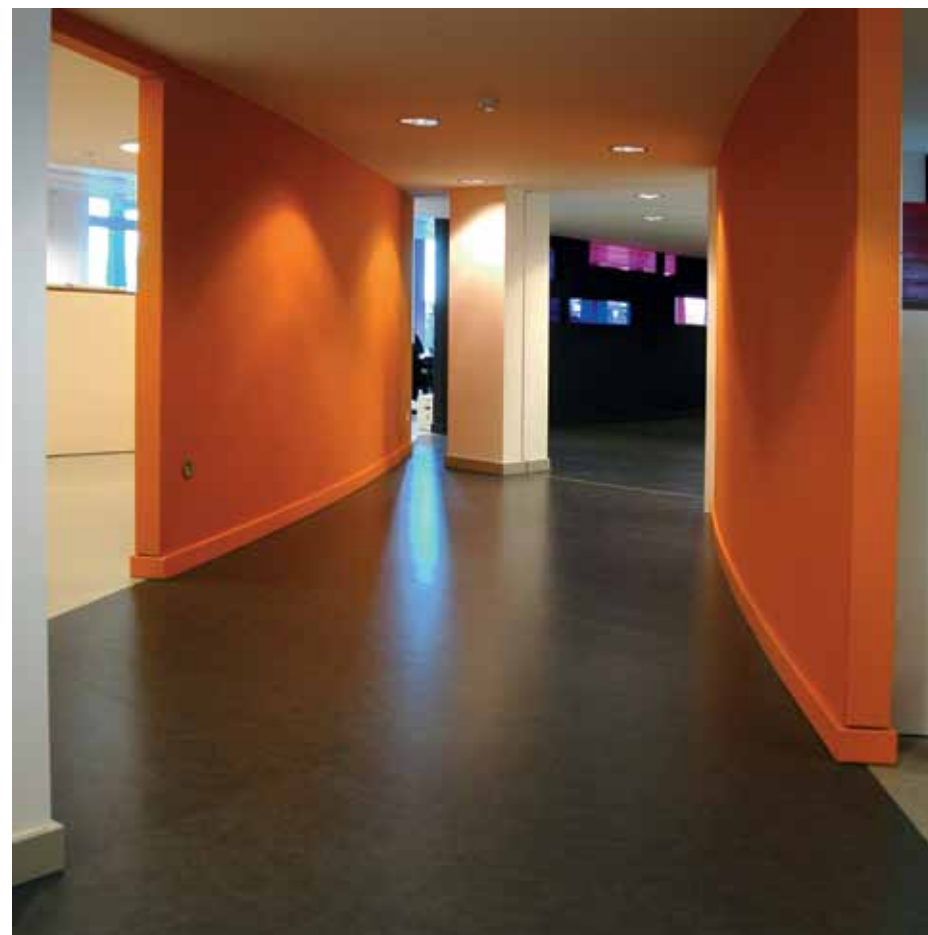


iQ Granit 3040423

## AREA

**2 Living area**

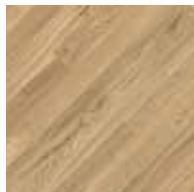
■ **For these communal areas**, we suggest a warm orange to stimulate appetites and encourage group activities.



*“ The flooring colour can be used to separate different areas but the colours must be solid and easily visible. A warm parquet floor could be used with a mirror in a physiotherapy room, for example. This will give the patients the impression of being in a dance studio and will help their movements. ”*

Dr Xavier Cnockaert, Head of Gerontology, Beauvais Hospital, France

## CHAPTER IV



Epoque Oak Nature  
7875002

AREA  
3

### Rest area

■ We suggest a warm wood flooring for these **communal areas** to create an atmosphere of peace and quiet conducive to rest.

AREA  
4

### Individual room (wetroom)

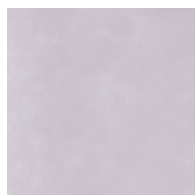
■ A pastel lilac shade soothes and reassures the patient **in their private space**. The bedroom features pastel colours and a neutral decoration. The shower room has a slip-resistance vinyl on the floor and a vinyl wall covering, both of which are designed for use in wetrooms.



iQ Megalit  
3390524



Wetrooms  
Granit Multisafe  
3476333



Wetrooms walls  
Aquarelle  
3942035



## FLOORING AND LIGHTING FOR REST AREAS AND INDIVIDUAL ROOMS

For a soothing atmosphere it is important to reduce the effects of shine and bright reflections between the lighting and flooring, which patients can find disturbing. Soft, diffuse and pleasant lighting from multiple sources, while limiting too much contrast, will reassure patients and make them feel at home. Lighting in personal rooms should emphasise luminosity and varied sources of lighting. Soft soothing colours that will spread non-dazzling light are ideal for rest areas.





Tapiflex Excellence 65  
Uni  
4506023



Smart Pro 832 Mocha  
Sherwood Oak  
8184216  
(offices)

#### AREA 5 Administration area

■ **In zones restricted to staff**, mauve vinyl flooring is used to deter patients from entering this area. In the office area, we recommend a laminated wood design floor in warm tones.



#### AREA 6 Treatment and physiotherapy area

■ An orange shade will help to energise activity in these mobility areas.

Veneto XF  
1872642





## Ambiance III

This third design relies on simplicity with two main colours – blue and beige – accompanied by brighter colours from the orange spectrum for certain areas.

## AREA

**1 Ambulation area**

- **A parquet creates a warm welcome in the reception area** which acts as a transit zone between the exterior and interior.
- **The communal areas** feature a traffic-resistant homogeneous vinyl. Strong contrasts on the threshold between doors and the ambulation area are used to deter access to individual rooms during the day. Slip-resistant flooring is used in humid areas such as toilets so that patients can use them with complete confidence.

*“ A long empty corridor should be punctuated by small intimate touches, for example marked with plants, to break up the length and guide the patient. It is also important to mark the doors, placing objects to provide patients with visual landmarks. ”*

Prof. Cornel Sieber, Director of the Institute for Biomedicine of Ageing, Nuremberg University, Germany



Salsa Oak Nordic White  
7870027  
(reception)



iQ Eminent  
3101091



iQ Eminent  
3101087



Safetred Spectrum  
3819800



Veneto XF  
18722628

## AREA

**2 Living area**

- **These communal areas** with heavy traffic need a hard wearing surface such as linoleum and a bright, luminous design to reassure the patients.

**FLOORING AND LIGHTING FOR LIVING AREAS**

Furniture (tables, chairs etc) can help to reduce the problems caused by interference between flooring and artificial lighting. Average lighting should be around 500 lux. The colour contrasts are designed to provide landmarks and aid orientation. For the living area, use colours in the orange range (ochre, terracotta, orange) for medium reflectivity and a warm ambiance, with traditional designs to remind patients of familiar surroundings.



## CHAPTER IV



Epoque Oak Nature  
7875002

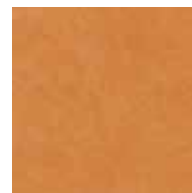
### AREA 3 Rest areas

- We recommend a parquet or laminate floor in warm natural colours **for these communal areas.**



### AREA 4 Individual room (wetroom)

- We suggest a coordinated range of orange tones in the room and shower. The bedroom features pastel colours and a neutral decoration. The shower is finished in slip-resistant vinyl flooring and vinyl wall covering designed for wetrooms.



Tapiflex Excellence 65  
Esquisse  
4500009



Wetroom  
Granit Safe T.  
3052690



Walls  
Aquarelle Wall HFS  
3942030





Elite 1034  
White & Hype  
8195240  
(offices)



Optic Compact Spice  
3747034

**AREA 5 Administrative area**  
■ **This area is restricted to staff** and off limits to patients. Here we use a vinyl flooring in blue-grey. A laminate in very light colours helps to give the offices a warmer feel.



**ZONE 6 Treatment and physiotherapy**  
■ **This area, dedicated to medical treatments,** features a pastel blue with a solid pattern that won't disturb the patients.

iQ Granit  
3040777



## FLOORING AND LIGHTING FOR AMBULATION AREAS

The ambulation zone is exposed to daylight and the flooring should therefore have a high level of light resistance. Shiny surfaces should be avoided because they can be perceived as wet by patients and provoke fear of slipping.







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