



MODEL PROGRAMME
for residential facilities
for the elderly with autism

Preface

This Model Programme for residential facilities for the elderly with autism is an obvious next step on the long journey to improving conditions for people with autism. The past 40 years have seen much work to improve the plight of people with autism—beginning with the creation of special schools and later residential facilities, workplaces, nurseries etc., and most recently the start-up of training schemes for young people. This has considerably improved living conditions for people with autism from pre-school to the age of 50, while there has been far less focus on the over-50s with autism.

This is due to efforts having been concentrated more on diagnosing children and young people, since early intervention has proved to have a crucially positive significance. Only now are those children and young people diagnosed 30-40 years ago reaching an age that makes new demands of their residential services because of ageing. Similarly, a

large group of people with autism has gone undiagnosed, having been placed in institutions and residential facilities for the mentally retarded (i.e. non autism-specific services). Thus, the needs of this group have not been visible, and their life expectancy has also been shorter.

The aim of the Model Programme is to provide inspiration and hands-on input for the planning of future projects to set up residential services for the elderly with autism. This can be in the context of new building, conversion and extension of existing residential facilities as residents get older. Furthermore, we hope that the Model Programme will contribute to heightening awareness around the special requirements of the elderly with autism other than the normal age-dependent loss of functions.

The Sofiefonden Foundation was instrumental in setting up some of the first residential services for people with autism in Denmark, and in collaboration with Autism Denmark has thus wished to launch initiatives to im-

background

- 1 ◦ preface
- 3 ◦ about the Model Programme
- 4 ◦ about autism
- 7 ◦ what can we learn from others?

design principles

- 13 ◦ about design principles
- 14 ◦ general layout
- 15 ◦ building & surroundings
- 23 ◦ the dwelling
- 29 ◦ communal areas
- 37 ◦ staff areas
- 43 ◦ culture
- 47 ◦ realization process
- 49 ◦ overview & scenarios

space allocation programme

- 55 ◦ finances
- 56 ◦ introduction
- 57 ◦ dwelling groups
- 8 ◦ communal areas
- 59 ◦ staff areas
- 60 ◦ support room
- 61 ◦ references

prove residential facilities for the elderly with autism. It is very gratifying, therefore, that it has been possible to put in place this collaboration with Realdania on the Model Programme, which Realdania has supported both financially and with expertise from other model programmes.

Denmark currently has a great competence base within the field of autism, and the Model Programme has benefited greatly from this in the form of interviews and workshops with a reference group consisting of a number of representatives from existing facilities for people with autism, relatives, the Centre for Autism, the National Centre for Autism, workplaces for people with autism, educational establishments, the Children's and Adolescents' Psychiatric Service and others. A number of other specialist skill-sets have also been involved in the reference group through workshops, including architects, engineers, economists and stage designers, in order to provide innovative solutions and add interdisciplinary breadth to the Model Pro-

gramme. Sincere thanks are extended to this committed reference group, which has made a great contribution to the Model Programme with interesting points of view and discussions. Great thanks also go to the steering group and SIGNAL Architects for their relentless and inspirational work on the Model Programme.

We look forward to the Model Programme for residential facilities for the elderly with autism being widely used for inspirational purposes when creating new residential facilities for the elderly with autism and for converting existing facilities to cater for the special needs that people with autism develop as they grow older. The Model Programme is accessible to everyone and can be downloaded free of charge from www.realdania.dk, www.autismeforening.dk and www.Sofiefonden.dk.

We wish you an enjoyable read!

Thomas Holm
Chairman of the Steering Group
February 2010

The Steering Group

Thomas Holm
 Chairman, Sofiefonden
 Foundation

Morten Carlsson
 Chairman, Autism Denmark and
 Vice-chairman, Disabled People's
 Organizations Denmark

Bente Groth
 Board member, Sofiefonden
 Foundation

Marianne Kofoed
 Project Manager, Realdania

The Model Programme was

**compiled by SIGNAL
 architects**

Gitte Andersen
 Managing Director, Member
 of the Federation of Danish
 Architects, MAA

Esben Neander Kristensen
 PM, Member of the Federation
 of Danish Architects, MAA

Consultant assistance

Maria Vedel
 Consultant at the Centre for
 Autism

The Sofiefonden
 Foundation



www.sofiefonden.dk



Autism
 Denmark
www.autismeforening.dk



Realdania
www.realdania.dk



SIGNAL Architects
www.signal-arki.dk

About the Model Programme

This Model Programme has been compiled on the basis of a needs identification exercise consisting of workshops, interviews and visits to residential facilities. In this needs identification, managers, employees and residents of residential facilities, representatives from

know-how and excellence centres, psychologists, doctors, architects, political stakeholders and relatives have been involved through their participation in the Model Programme's reference group.

The participants in the reference group were

Jannik Beyer
National Centre for Autism

Charlotte Holmer Jørgensen
National Centre for Autism

Johny Ruud
Højtoft Residential Facility for
Adults with Autism Spectrum
Disorder

Jan Nielsen
Højtoft Residential Facility

Ole Brasch
SOVI Foundation (providing
sheltered employment for
adults with ASD)

Janeth Koblauch
SOVI

Mogens Kaas Ipsen
Sofie School

Per Bøgh
Hinnerup Kollegiet Residential
and Work Facility

Marianne Fisker
Hinnerup Kollegiet

Gunvor Ravn
Ribelund Residential Facility
for Physically and Mentally
Developmentally Disabled
Citizens

Pia Siert
Strandberg care home and

residential facility for young
people with autism or an autistic
spectrum disorder

Charlotte Banja
Runebergs Allé Living Centre

Vibeke Holm
Foundation Living Centre

Berit Skovmand
Bakkevej Children's/Foster
Home

Hanne Frandsen
Spurvetofte Residential
Facility

Bente Baggesen
Sofie-Marie Residential Facility

Erik Høst-Madsen
Autism Centre South

Henrik Sørensen
Architect, A78

Lars Kjeldgaard
Region Midtjylland

Hanne Margrethe Albinus
Central Denmark Region

Flemming Hansen
Consultant, elderly matters,
Local Government Denmark
(LGDK)

Susanne Palsig
Committee on Psychiatric and

Disabled Matters, Gladsaxe
Municipality

Margrethe Kähler
DaneAge Association

Ole Sylvester Jørgensen
Child and Adolescent Psychiatric
Consultant

Torben Isager
Consultant at Child and
Adolescent Psychiatric Centre,
University Hospital of Copenhagen,
Glostrup

Yvonne Abel
Department of Psychiatry,
Glostrup

Kate Jensen
Relative

Allan Jensen
Relative

Ellinor Kjeldsen
Relatives' Board, Hinnerup
Kollegiet

Aage Sinkbæk
Danish Asperger Association

Jette Lehmann
Production designer

Claus Hammerby
Lighting and IT Specialist

about

autism

It is now more than 45 years since the Sofie School was built, being the first special-purpose school in Denmark for children with autism. Back then such children were called 'psychotic children', even though autism had already been described in 1943. The focus has since been on diagnosis and possible courses of action in relation to autism spectrum disorders (ASD). ASD is an umbrella term for four diagnoses within the autism spectrum, i.e. infantile autism, atypical autism, pervasive developmental disorder - not otherwise specified (PDD-NOS) and Asperger's syndrome. It is estimated that approximately 1% of the population has ASD.

Nowadays more people with ASD have grown older and are being affected – just like their peers – by a deterioration in sight, hearing, memory, attention and motor skills. Residential facilities are therefore beginning to experience a change in needs in terms of the design, layout and styling of the residential unit (which we shall call a "dwelling" to differentiate it from a "home" as in "care home" etc.).

The target group

The target group for the Model Programme is people with infantile autism, who make up some 0.3% of the population (in the Model Programme the target group will be described as people with autism, even if what is meant is people with infantile autism). People with

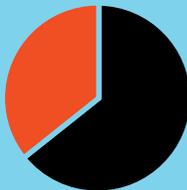
infantile autism have had ASD since birth, and this target group needs a residential facility with round-the-clock staffing, though they are basically not so motor-disabled as to need extended physical care.

The target group is broad. Some are of average intelligence, others show signs of moderate or severe mental subnormality. Some have great behavioural problems, others not. A certain proportion have accompanying disabilities like ADHD (Attention Deficit/Hyperactivity Disorder), Tourette's syndrome (involuntary tics or noises) or obsessions and compulsive actions.

A common factor in individuals with autism is that they have difficulties in relation to social understanding, interpretation of communicative signals and impaired imagination. People with autism can find it very hard to sort and select the meaning-bearing information in the sensory impressions to which they are exposed every day. At the same time, they find it hard to interpret communicative and social signals. That means that it can be difficult for people with autism to understand the world, and misunderstandings are no rare occurrence. Secure, comfortable physical settings and clear visualization can help to sort that information by accentuating the meaning-bearing and creating recognizability and predictability. The social understanding of other people in everyday situations per se is not achieved from the actual interaction, but has to be learned from the way that togetherness is organized. Although people with autism are not that good at initiating, retaining and nurturing social contacts, they can certainly

1 %
of the population has
autism spectrum disorders

About **1**
out of **3** of
these has
infantile
autism



75 % of people
with infantile autism are
developmentally
disabled



OLE SYLVESTER JØRGENSEN
PSYCHIATRIC CONSULTANT

experience social enjoyment, for example, by partying with others or by playing on a computer next to someone else who is also playing on a computer.

Most people with autism generally have a special behaviour (motor patterns that are repeated many times) or can become preoccupied with things or interests with unusually great intensity and expertise. For some residents that special behaviour or those special interests mean that they have enjoyable, appropriate and relaxing activities, while others can lock down and become tormented in their own choice of activity, and they can react to that with inappropriate or self-harming behaviour. The Model Programme's target group therefore needs competent and able staff who can support the target group in developing and maintaining skills and appropriate interests all their life, even when they start to lose some skills with age.

The future

The past 20-30 years have seen a focus on diagnosing children, young people and adults with autism. That has been followed up by creating special-purpose nurseries, special schools, residential facilities, workshops and youth training schemes. But since there used not to be that many people who knew about autism and about diagnosing

autism, many elderly with autism now live in residential facilities for people with general mental retardation without autism. In these residential facilities the staff are becoming increasingly aware of the special needs posed by residents with autism and are expressing a desire to find a suitable residential facility for these people. It is only natural, therefore, that there will be increased pressure to set up residential facilities for elderly people with autism in the years ahead.

Only few have been published on autism and age-related problems, but it is known that between 20 and 30% of individuals with autism develop epilepsy at some point in their life, and that this condition – and other conditions that often go hand in hand with autism – can have a bearing on when those symptoms of ageing start. The uncertainty that accompanies the loss of skills will probably be reinforced in people who do not understand why their balance, sight or hearing are deteriorating. So it is also obvious to imagine that a person with autism will need a wheeled walking frame earlier than a non-autistic person of the same age who is used to consciously engaging with the problems arising in connection with age. For the person with autism the wheeled walker may possibly present the sense of security lent by being sure of not falling.

"We normally talk about retired life as a new situation of one's own choosing, in which working life is replaced by the freedom to manage one's own time. People with autism are in the **opposite situation**. Working tasks are part of the structure of their everyday routine and the point is that they should not be changed on the grounds of age."

Demitrius Haracopos
Danish Centre for Autism



HINNERUP KOLLEGIET

what can we learn from others?

Residential facilities for elderly autistics and the combination of old age and autism generally are still a very new field. The needs identification exercise which served as a basis for the Model Programme therefore helps to explore the area and obtain new knowledge. Based on this needs identification, for instance, it is clear that the design of the physical setting is of great importance to residents, relatives and employees at such residential facilities.

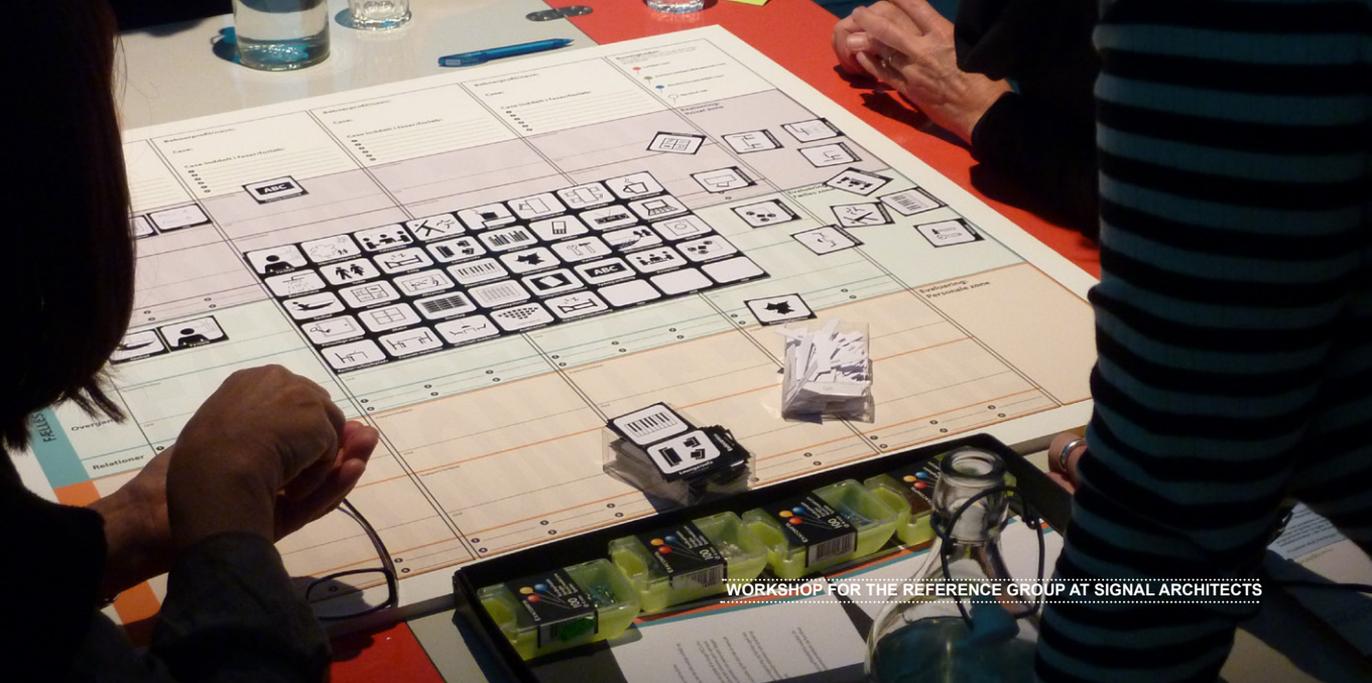
Above all, the purpose of the Model Programme is to create a better quality of life for elderly autistics, relatives and employees at residential facilities by describing what a good residential facility can look like and how the physical setting can promote well-being for the elderly with autism.

Extension of the family

It is important for everyone who deals with the planning of elderly autistic residential facilities to be aware that the staff at the facilities will be acting as an extension of the residents' families, as the residents will often have very few relatives as they get older. For the residents the facility will form an extension of the network they have had throughout a whole lifetime – people with autism have often followed one another around for 30-40 years. The relatives of an autistic person will often leave that person without any family when they themselves die, and the quality of the place and its attitude towards the residents is altogether crucial. The relatives are obviously keen to ensure that the autistic person is given a good, inspiring and secure framework, even when they themselves are no longer here. That translates largely into demands on the styling of the residential facilities.

Case / Spurvetoften Residential Facility

Spurvetoften is a residential facility for 34 adolescents/adults with autism and other related developmental disorders. The level of development among residents is equivalent to the early stage of development from under 1 to about 4/6 years. Everyone is reliant on practical help and support in their everyday life as well as specifically customized communications. The age spread is currently from 24 to 62. Spurvetoften is in the throes of planning a new physical setting, which is scheduled for completion by 2011. The new residential facility will be in the immediate vicinity of the existing buildings. At Spurvetoften the new setting is being based on the existing structure supplemented with the continuous experience accumulated over the years. The size of the dwellings is one of the essential changes in the new proposal – it is wished to give the residents a better, larger and more up-to-date setting, which is closer to having their own flats in functional terms. Another area of commitment has been the communal areas, where 7-8 dwellings are typically divided into two clusters. Each cluster has its own communal area, and two clusters share a kitchen.



WORKSHOP FOR THE REFERENCE GROUP AT SIGNAL ARCHITECTS

Homeliness

There is an obvious expectation in people with autism and their relatives that the dwelling must clearly both appear and function as a home. The two scare scenarios highlighted in the needs identification exercise involved, firstly, the fear that the dwelling would end up functioning more like a college dorm room, with few functions of the resident's own and a high dependence on communal areas. Secondly, the fear was whether the dwelling would take on an institutional character so that the resident would be unable to express his or her personality and have his or her unique wishes catered for.

Calm

The target group's need for a calm environment cannot be exaggerated. For most residents peace and quiet is one of the most important provisos for creating a good, smooth-functioning everyday life. This is of great importance

in planning, designing and appointing the residential facility, as peace is to be understood as referring to all the senses. Visual peace and positive, calming stimuli of the sense of smell, such as the fragrant smell of fresh flowers or freshly baked bread, are aspects just as important as preventing noise.

Distinctness and continuity

Residents need the physical setting to convey distinctly the different affiliations and functions of the rooms. The elderly autistic have an expectation that the residential facility will be characterized by simplicity and clarity of layout; and this is significant, for example, to the way staff areas are positioned in relation to dwellings, or how the transition from private to communal areas is marked. The need for continuity is also pronounced in people with autism. The elderly autistic finds his or her greatest security within a structural framework and a peaceful, timetabled daily routine. That



WORKSHOP FOR THE REFERENCE GROUP AT SIGNAL ARCHITECTS

means, for instance, that it is important not to focus too much on old age in such residential facilities, but to still attach importance to health in the day-to-day lives of the elderly, since the residents have been used to that focus throughout their lives. The need for continuity should also be accommodated by letting the elderly have a chance to live in the same residential facility for as long a period as possible.

The size of residential facilities and dwellings

One important experience from existing residential facilities has been that small premises

may generally be partly to blame for creating conflicts and insecurity purely on account of their size. The conflicts can arise, for instance, because two residents are not fond of sharing communal areas with each other, or because there is a lack of space for relatives to come and visit – for example with young children – without inconveniencing the other residents. The size of residential facilities can also have a bearing in terms of the possibility of having rooms offering overnight accommodation for relatives. However, the elderly with autism do not necessarily always express a desire for

more space, and the point of increasing the size of the dwelling is actually debatable. Yet based on the conflict situations mentioned above and the needs identification exercise underlying this Model Programme, there is no doubt that residents have a genuine need to be able to be themselves as well as to have an opportunity to receive visits from family without having to depend on communal areas. The need for a larger dwelling also has to do with the need for dignity and self-esteem. A larger dwelling with own entrance and proper facilities affords the resident heightened value as a person in his or her own eyes as well as those of his or her surroundings.

Since the facilities at the residential home as a whole can eventually constitute the residents' local environment when their mobility becomes impaired, the size of such residential facilities must be above an unspecified critical point. Residents need to be given access to those services necessary for their quality of life at the residential facility. Retaining the relevant expertise and a high professional standard may also be contingent on the size

of the residential facility, though there are also many examples of small residential facilities with a high professional standard.

Flexibility

Experience shows that creating flexible rooms and layouts with plenty of space should be a focal point for a good residential facility. Flexibility is important not only in the dwelling, where residents have very different requirements of layout and rooms, but also in communal areas, which must be capable of playing host to widely divergent functions right from the individual resident's special interests to large-scale events, such as a New Year's party. In staff areas, flexibility is important in order to facilitate the interdisciplinary breadth that will be necessary in future to be able to accommodate residents' needs.

Symptoms of ageing

Elderly with autism, like other elderly, have a general need to experience dignity and quality of life in their old age. It is important, therefore, that they should have the same conditions as other elderly. That requires the elderly to be

Case / Højtoft Residential Facility

Højtoft Residential Facility was created in 1975 as the first residential facility in Denmark specially organized around adults with autism. Højtoft functions exceptionally well with a centrally located entrance and communal and staff rooms, but currently the problem is primarily the size of the rooms: They are too small and lack their own bathroom and toilet. At the same time, there is too little space in the communal areas - and what space there is, is difficult to divide into smaller zones. Højtoft's wishes for their planned new physical setting is, first and foremost, a division into three smaller clusters, each with 4-6 people. The reasons for this are partly a wish to cut noise, and partly the fact that social life functions better with fewer residents in one unit. Smaller units, distinctness and homeliness have been a clear wish on the part of the residents; the residential facility must be simple to take in at a glance and convey Højtoft's focus on a homely environment. Højtoft's wish for larger dwellings must give the residents the option of opting into or out of social activities. Social life really takes it out of the individual, and time is therefore needed to recover in one's own dwelling.

taken seriously, shown respect and assisted in maintaining good hygiene. The physical setting must prevent accidents and behaviour that can impact negatively on surroundings and residents alike. For example, it can be difficult for visually impaired people to get their bearings in a room with white walls and ceilings. Lighting can also be a problem, as too little light gives rise to dark or dim surroundings, and uneven lighting can create shadows and unchecked dazzling, inhibiting residents' perception of the physical surroundings.

Parallel communities

The needs identification exercise shows that sense of community must be assigned high priority at the residential facility, but either in smallish units or in parallel communities, where each resident can have his or her own activity yet still experience a social link through physical proximity to others. That calls, in communal areas for instance, for the availability of different offerings with scope for flexible spacing between one another. One example may be a desk with three computers in a row, cooking in the kitchen or three exercycles next to each other. The parallel communities are vital

in enabling residents to enjoy a sense of community, even though they may not be good at initiating, maintaining or nurturing that contact with others. Parallel communities therefore need to be underpinned in the physical setting, as experience shows that social competences grow weaker with age.

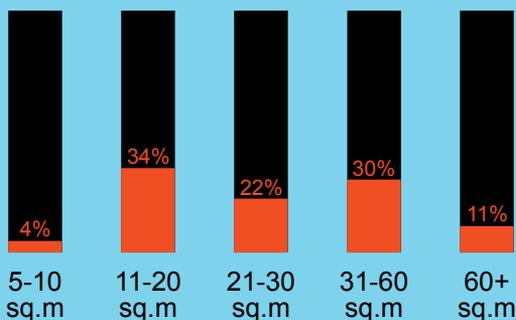
Relocating or rebuilding – a fresh chance

Despite continuity and peace being important factors for residents' quality of life, a number of employees at residential facilities point out that the actual process involved in moving a resident to elderly accommodation or converting an existing dwelling can provide a unique opportunity to redefine habits and routines on the part of the individual resident. So one should not underestimate the ability of changes of physical setting to play a part in positive transformation where, with the aid of manageability and clarity, the quality of life can be improved for the individual resident – given the right planning, of course.

Interdisciplinarity

In future the staff at residential facilities will face new challenges by virtue of the fact that

Dwelling sizes for residents at residential facilities:



62% of dwellings have only one room

65% of dwellings have their own bathroom

43% of dwellings have their own kitchen

FIGURES FROM "OUT-OF-DATE DWELLINGS – A SURVEY OF RESIDENTIAL FACILITIES FOR ADULTS WITH A DISABILITY", NATIONAL FEDERATION OF SOCIAL EDUCATORS, MARCH 2009



SKOVBO - INSTITUTION FOR PHYSICALLY AND MENTALLY DISABLED

residents' autism will be supplemented by common symptoms of ageing. That will engender a situation in which new skill-sets and specialized staff such as social and healthcare assistants, nurses and physiotherapists have to be recruited to the residential facility. There will be different models enabling the residential facility to achieve skill-sets in that field, as it may also be able to form partnerships with other institutions that have the specialist professional approach needed in any given situ-

ation. There will also be different models for distributing knowledge within the residential facility – is there an even distribution, where everyone has a certain basic level, or do individual employees have cutting-edge competences in particular areas? Regardless of whether the new competences are put in place by means of appointments or external collaborations, it is important that the physical framework should allow good, effective cooperation that cuts across disciplinary divisions.

about

design principles

This section includes our take on the most important considerations when it comes to designing the physical setting for elderly autistic residential facilities. The design principles in this section can be used as a tool in formulating that vision or when working on a planning and building programme for a new residential facility or converting an existing one.

The section shows how the physical setting at the residential facility should be laid out – both in overall terms and in more detail within the individual areas. By way of introduction an overall layout is displayed for the residential facility's various areas and their interrelationships, subsequently focusing more on the individual areas. Each area of the residential facility has been described in text, diagrams and reference images. As the section proceeds, a number of design principles appear,

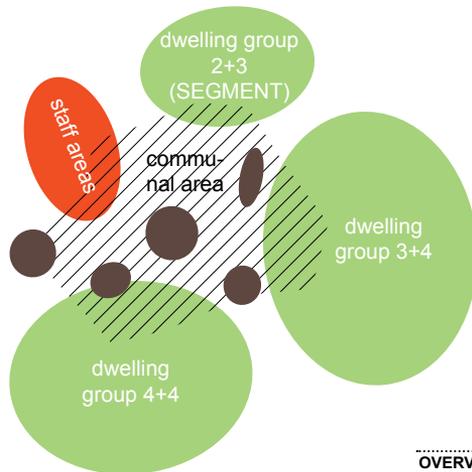
formulated in brief sentences with matching icons, summarizing the section and providing a quick overview of the Model Programme.

The design principles are based on a series of prerequisites underlying the physical framework of a residential facility. One of the prerequisites is that the residential facility is divided into dwelling groups of varying size that can cater for the needs of different residents in terms of group sizes, personal chemistry and care requirements. Another of the prerequisites is that residents have access to both communal areas and communal amenity areas that belong to the dwelling group only. As a starting point the residential facility has been described as a unified newbuild – but at the end of the section two scenarios are shown for dispersed building and conversion of existing building stock, respectively. The detailed styling of the residential facility will always depend on specific local conditions like location, finances, conversion or newbuild, process organization and choice of consultants.



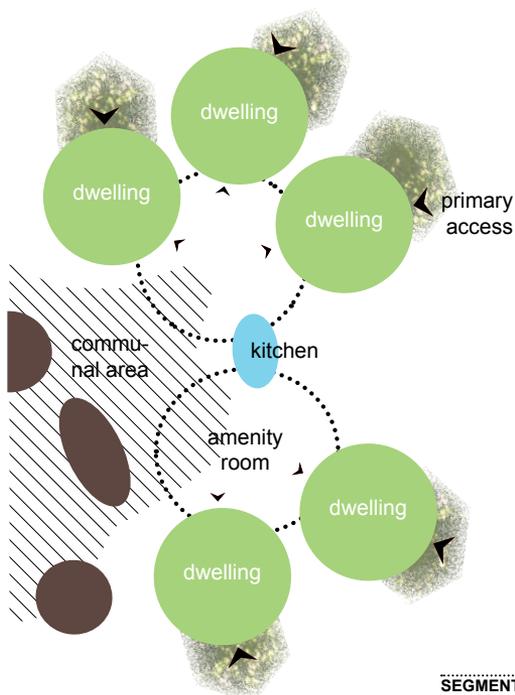
general layout

The two diagrams on this page show, respectively, an overview of a residential facility as a whole and a segment around a group of dwellings. The overview shows the overall layout of the residential facility, and the segment an example of a dwelling group, subdivided into two clusters of two and three dwellings, respectively.



 The dwelling is the resident's home. Primary access to the dwelling is from the outside. A secondary entrance provides access to a shared amenity area.

 Private outdoor space for each dwelling.



 Amenity area in dwelling group. In this example two amenity areas are shared between, respectively, 2 and 3 dwellings in a dwelling group of 5.

 Communal kitchen in the dwelling group. The kitchen in this example is shared by a dwelling group of 5 dwellings.

 Communal areas are those areas in the residential facility freely accessible to residents, employees and visitors. Communal areas in this example can be outdoors as well as indoors.

 Functional rooms are areas in the communal area containing specific functions, like music room, IT room, library or wellness room.

 The staff area is an area where staff, management and administration can carry out work that does not call for proximity to residents.

building & surroundings

This section describes the general conditions that apply to the residential facility's physical setting and surroundings. The recommendations hold good for the building in general as well as those subareas described in the following sections.

In as far as possible, the physical constitution of the building must be flexible and multifunctional. All rooms must be appointed with the focus on well-being, function and flexibility. The rooms must support residents' needs for privacy and intimacy, while at the same time enabling residents to live a social life with one another and the relatives who come to visit. There must be ample room for the various activities, and rooms with tall floor-to-ceiling height are preferred, as this has a positive effect on well-being. Small rooms can seem

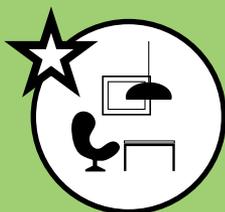
claustrophobic to people with autism as to everyone else. Although flexibility of the physical setting is important, that internal flexibility must nevertheless not be a nuisance to the everyday lives of those elderly who may feel a sense of insecurity from constant changes.

As a basis, single-storey building is preferred for reasons of accessibility. If that is not possible, it will be appropriate for dwellings to be at ground-floor level and to ensure sufficient acoustic insulation in the suspended upper floor. Staff areas and administration might beneficially be situated on the 1st floor.

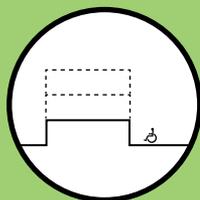
It is important to strive to avoid an institutional feel to the residential facility and create a homely atmosphere that places the individual at its centre, for example with the aid of the rooms' styling, design, materials, and fixtures and fittings.

Siting and surroundings

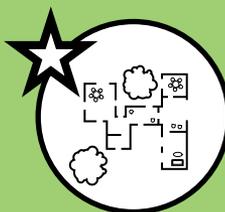
The ideal siting for a residential facility is amid peaceful, green surroundings, located cen-



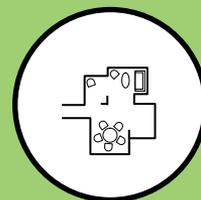
Prioritize the dwelling and avoid an institutional feel.



Single-storey building is preferable for reasons of accessibility for residents and visitors.



Avoid small rooms, which can create conflicts and seem claustrophobic.



Create manageability and calm at the facility to promote a feeling of security among the residents.

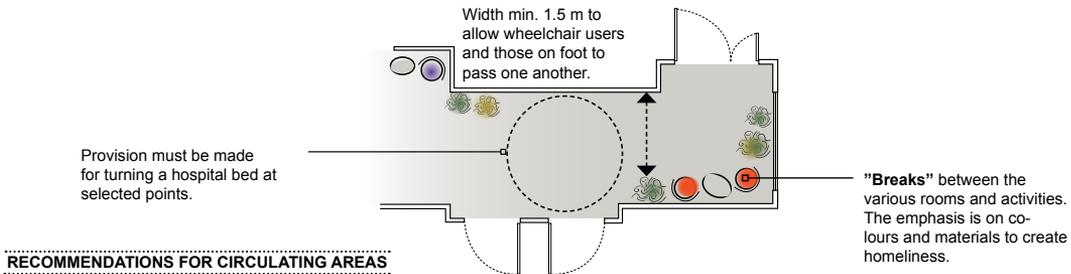


FROM HINNERUP KOLLEGIET

trally in relation to transportation, shopping and activities – preferably in a smallish local community. Fulfilling all these wishes can be difficult, but great emphasis is given to not siting the residential facility in large city centres, where there may be problems with noise and disruptive goings-on. A location near employment at workshops and daytime services is preferable, so that the resident does not experience too many changes in surroundings.

Easy access to local services like a primary care centre, nurse, podiatrist, reflexologist and massage must be considered. This can be done, for instance, by means of a wellness room at the residential facility.

It is important to devote thorough work to screening and privacy in relation to the surroundings in order to avoid disruptive noises and visual impressions, for example with the aid of planting, like trees and hedges.



Arrival

The initial encounter with the building must be easy to take in at a glance, both for the residents and for the relatives, and there must be easy access to employees and administration.

The main entrances are the entrance to each of the residents' own dwellings. In addition, a joint arrival area for visitors, employees and relatives can be positioned centrally relative to communal and staff areas. The shared entrance must be sympathetic and have a homely touch, an adjoining outdoor green area and a seating option for those that linger. The arrival area must be clearly marked, but at the same time not too grand, as it may be felt to be frightening.

Carparks and access to public transport via a footpath or pavement must be located close to residents' own entrances and the joint entrance. In connection with the joint entrance a short-term parking bay must be put in place for buses, taxis or relatives' cars. Parking spaces should be positioned so as not to screen the view from the building in dwellings and communal areas. In general the residential facility must be designed with the same accessibility requirements as close-care ac-

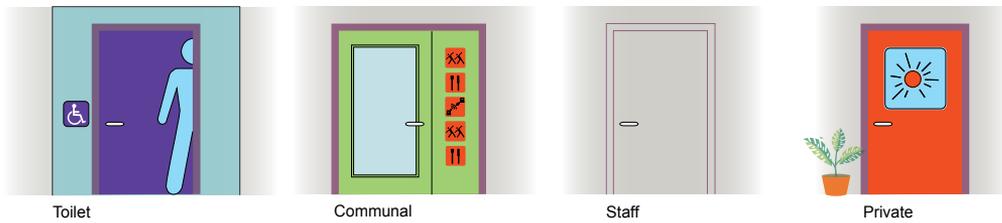
commodation. This means that allowance must be made for wheelchairs, mobile lifts and hospital beds both in the individual dwelling and throughout the rest of the facility.

Circulating and transition areas

Short or organically designed circulating areas are striven for, as long corridors and hallways can appeal to monotonous rambling and problematic behaviour with ensuing disturbances to other residents. Circulating areas must be wide enough to allow some furnishing for brief stays, without being used as a dumping area for technical aids. For reasons of accessibility, doorsteps and sills must be avoided, and all exits and entrances must be clearly marked with a specific colour or choice of material, according to function. All circulating areas must comply with general rules concerning accessibility, as many of the residents and relatives have various degrees of walking impairment.

Distinctness and pictogrammes

All communication relating to the physical structure of the building must be clear. What function the rooms have must be clearly marked, partly by means of support systems (such as diagrams and schematics), pictogrammes and signage, but also in the form



EXAMPLE OF DISTINCTNESS: VISUALIZATION OF ROOM FUNCTIONS

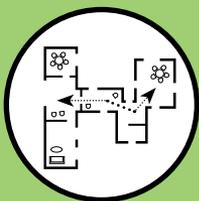
of spatialities, colours and materials. Distinctness has a great effect on residents' behaviour and can be conducive to good routines and habits, for example in connection with hygiene.

The number of rooms to which residents have access should be limited. If it is necessary for residents not to have access to a room, the door to that room should be painted the same colour as the surroundings, so as not to encourage use by the residents or have a distracting effect. Doors to common rooms, on the other hand, should be clearly marked. Toilet doors must also be marked in some special way, particularly for the sake of el-

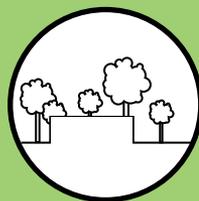
derly with incontinence and reduced mobility. Doors to residents' flats can be made recognizable with individualized colour coding and a personal touch.

Consideration can be given to using doors with glazed panels, so that the function or activity of the room can be seen; however, there should be curtains that can be drawn for the sake of privacy.

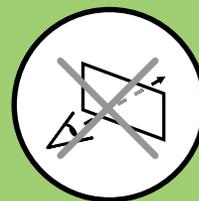
Signs must be uniform in terms of typeface (font) and graphics. Information must generally be readily understandable. It is important that signs be placed appropriately, so as also to be visible to wheelchair users, visually



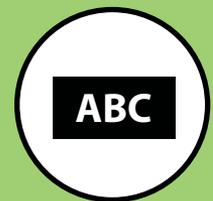
Attach importance to making corridors short or organically designed. Create niches and alcoves in circulating areas.



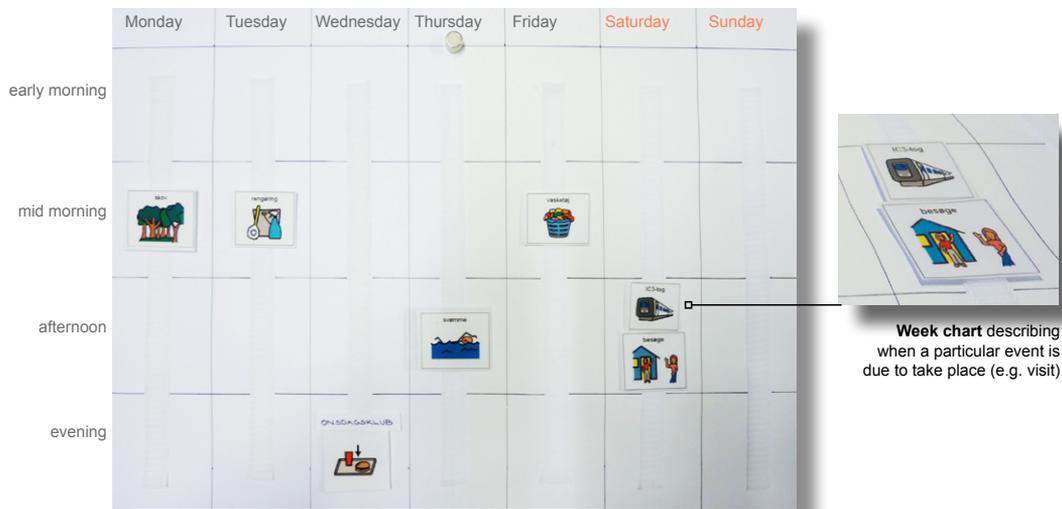
The ideal siting for a residential facility is in calm, green surroundings, centrally located in relation to transportation and shopping.



Focus on screening and privacy in relation to the residential facility's surroundings.



Make signage simple and easy to take in. Avoid unnecessary signage.



EXAMPLE OF BOARDMAKER USED AS A SUPPORT SYSTEM

impaired people and elderly people who walk with a stoop due to a bent back.

Support systems

Day charts, week charts and descriptive images are important tools for the elderly with autism so that they can understand their surroundings and structure their everyday life. The systems should be integrated into the physics of the building from the outset and made as simple as possible with the aid of optimal spatial, light, colour and acoustic conditions where they are installed – in both dwellings and communal areas. It is recommended that these systems be extended, rethought and digitalized wherever possible. It is important, for instance, to have room for a board at a central point in the building, showing which staff are on duty and when. This information will save residents having to expend a lot of energy guessing who they are supposed to be with, and when. Another

board might show guests for the week ahead.

Surfaces and materials

Striking a balance between homely and practical materials poses a challenge. Function, safety and accessibility need to be given top priority, of course, but it should also be endeavoured to have residents perceive and view the place where they live as homely – preferably with colours, pictures and suitable lighting.

Colours are an important topic when dealing with people with autism. Objects must contrast with their background, as finding one's way around the room or building is made easier if the colours on large expanses stand out from one another. Ceilings, walls, doors and floors should feature distinct contrasts of colour with other surroundings and must make it possible to sense and intuit the size, mood and functionality of the room. Shiny

surfaces should be avoided owing to the risk of reflections, which may prove confusing. Warm shades are preferable, as they can more easily be perceived by people with impaired vision.

Floors

It is important to avoid overly sharp and contrasting transition areas between materials and other lines in the floor, such as doorsteps, as some people with autism can perceive lines and dashes on the floor as a frontier that can be hard to cross. Floors in rooms that abut should be the same colour, as the difference can otherwise be perceived as a difference in level or a deep hole. All floors must be skid-proof and ensure ease of cleaning. Floors should not feature patterns, as these can be perceived as spots or objects.

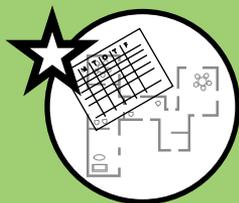
Quality of components and materials

It is important to factor quality and durability into all components and surfaces. This may be in relation to hinges and handles, for example, where heavier wear and tear and

a greater load are to be expected than in a normal building. Above all, it needs to be realized that primary functionality and general aesthetic appearance must be documented in the requirement specifications for the residential facility. For example, cheaper types of safety glass may be badly reflective and hence bothersome – this can be avoided with the aid of precisely formulated material requirements.

Light

Great emphasis must be given to the incidence of natural light, as natural light is extra-beneficial to people with autism and elderly people in general, exerting a positive effect on overall clarity and the mental state as well as promoting well-being in the daily setting. Daylight also affects residents' circadian rhythms positively and makes them sleep better, among other things. Artificial lighting must be adapted to the individual room and cater for residents' individual lighting level requirements as best possible. Apart from



Design central and logical positions for support systems – in both communal areas and dwellings.



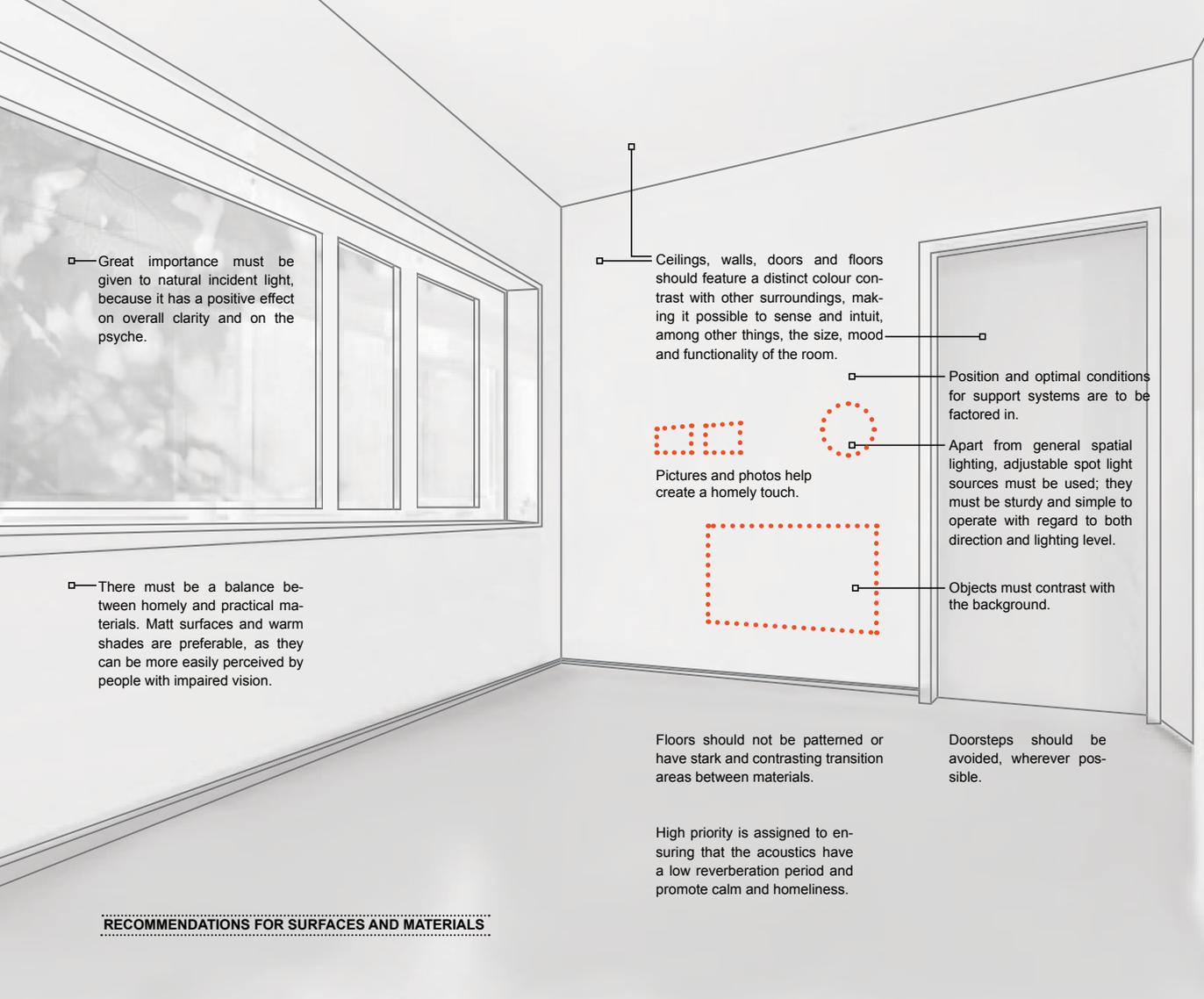
Use differences in colours and materials to separate and bring out walls, floors, ceilings and doors from one another.



Avoid lines and contrasts in the floor, e.g. at transition areas in materials, grilles and doorsteps.



Avoid floors with patterns that may be perceived as disturbing spots and objects.



Great importance must be given to natural incident light, because it has a positive effect on overall clarity and on the psyche.

There must be a balance between homely and practical materials. Matt surfaces and warm shades are preferable, as they can be more easily perceived by people with impaired vision.

Ceilings, walls, doors and floors should feature a distinct colour contrast with other surroundings, making it possible to sense and intuit, among other things, the size, mood and functionality of the room.

Position and optimal conditions for support systems are to be factored in.



Pictures and photos help create a homely touch.



Apart from general spatial lighting, adjustable spot light sources must be used; they must be sturdy and simple to operate with regard to both direction and lighting level.



Objects must contrast with the background.

Floors should not be patterned or have stark and contrasting transition areas between materials.

Doorsteps should be avoided, wherever possible.

High priority is assigned to ensuring that the acoustics have a low reverberation period and promote calm and homeliness.

RECOMMENDATIONS FOR SURFACES AND MATERIALS

general room lighting, this is done by using adjustable spot light sources, which must be sturdy and simple to operate – with regard to both direction and lighting level.

Acoustics

High priority is given to acoustics supporting calm and homeliness and therefore having a low reverberation period. Since the floor-to-ceiling height may be great, allowance must be made for the need to control the acoustics

so as to eliminate problems of noise. Allowance must also be made for limiting disruptive noise from ventilation, kitchens or engineering rooms.

Conflict management

In conceptual terms the safety of residents and employees must be incorporated in the building at an early stage. It may therefore be worth considering whether all rooms should have two exits. This may help to ensure that

the employees can step outside and nip any conflict situations in the bud before they escalate.

Transition between indoors and out

It is of great importance to residents' well-being that they should have access to outdoor areas, and it is therefore important to have good access – including for the mobility-impaired and wheelchair users. The transition areas from indoors to outdoors can be made gradual, for example by covering in the terrace.

The local area

The local area is often an important part of everyday life for residents of a facility for people with autism. It is important to have good contact with the surrounding world and involving the local area is therefore recommended to whatever extent possible, also to demystify autism. For example, open-house events can be held for neighbours, thereby paving the way for good, natural relations

with the locals. There is also the likelihood that residents will make more use of local offerings like swimming baths, gymnasiums and shops if they feel comfortable moving around outside among neighbours and locals they know.

Transport

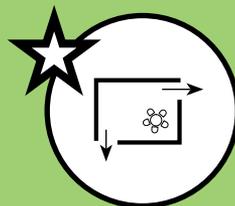
It is important that residents – whether alone or assisted by staff – have easy access to transport, in the form of either good parking facilities or good public transport. The route leading to these must be safe in terms of other traffic, bearing in mind that people with autism need visual and acoustic calm – otherwise there is a risk that residents will not use it.



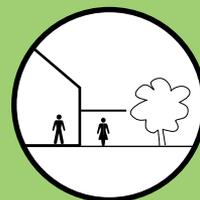
Factor quality and durability into all components and surfaces. The load or strain will also be greater than in other buildings.



Prioritize proper functioning of acoustics, supporting calm and homeliness.



Conceive safety and conflict management in terms of residents and employees. Consider whether rooms should have at least two exits.

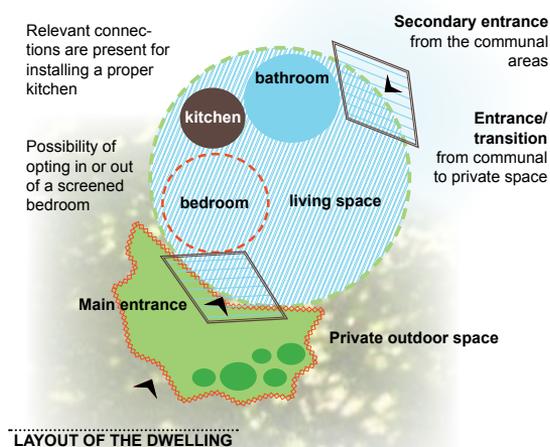


Consider creating gradual transition areas from indoor outdoor spaces with the aid of covered-in areas, projecting overhangs and surfacing.

the dwelling

In terms of the residents' welfare and well-being the dwelling is the most important part of the residential facility. The unit is more of a self-contained apartment than a room, and the dwelling should therefore be viewed as a step in the direction of further autonomy on the part of the resident too. The individual dwellings are instrumental in creating a demarcation of the private space, and that needs to be clearly accentuated both physically and visually – including in relation to staff.

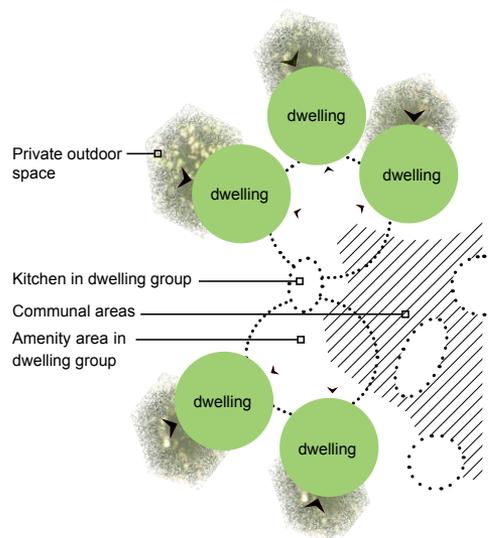
The dwelling has two entrances and comprises an area that can be divided between an entrance hall, living-room or amenity room, bedroom, kitchen and bathroom. In connection with the entrance from the exterior, a private outdoor area is created, which is screened off in keeping with residents' individual preferences.

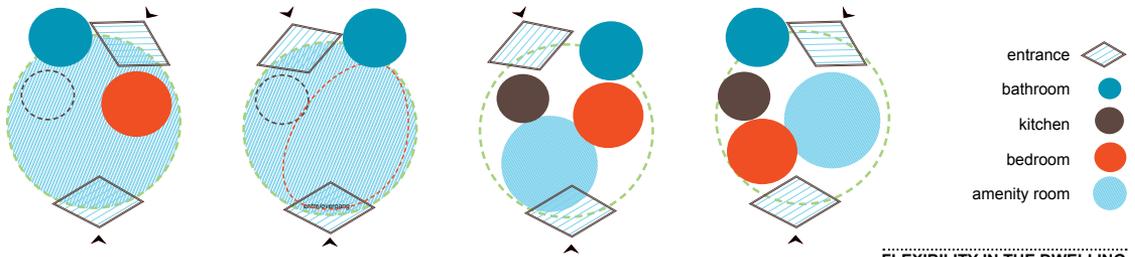


Owing to the future resident's financial situation as a rent-paying tenant, planning of residential facilities will include giving consideration to the size of the dwelling and the communal areas, given that the resident's housing benefit also helps pay for a proportion of the communal areas. In this Model Programme we recommend a range of dwelling sizes that will be capable of promoting the particular requirements of a dwelling for elderly autistics. This is explained in more detail in the section entitled *Space allocation programme*.

Flexibility

The dwelling makes great demands of flexibility in terms of the room's interior decor and functions. Flexibility in the dwelling is key, as people with autism have very different wishes and needs. It may be advantageous, for example, to be able to divide the unit into two or more smaller rooms to highlight the rooms' different functions, such as sleeping, eating and working. On the other hand larger rooms





FLEXIBILITY IN THE DWELLING

can also be in demand, as one of the problems in the present generation of dwellings is that the rooms are really too small to have visits from family and friends.

Flexibility can also be about internal changes at the residential facility – it may be necessary to move residents between units, or support needs can vary and impact on the requirements made of the physical settings. Flexibility is a keyword in terms of enabling residents to put their personal stamp on the dwelling. Residents must be able to create for themselves a secure and familiar world with the emphasis on simplicity and recognizability. There must be space for special in-

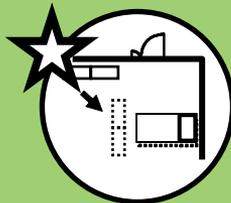
terests, therefore, as well as other things that are instrumental in supporting the resident's identity. This may take the form of scope for storing collector's objects – for instance, it is possible to envisage installing wide windowsills or shelving with room for personal belongings, but there will often be a need for closed storage too, so it is important to position, say, doors and power sockets so as to leave sufficient wall space.

Access

The dwelling must be appointed with two entrances: an entrance of the resident's own from the outdoor area and a secondary entrance from the communal areas. The en-



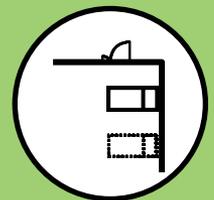
Two entrances must be created: a resident's own entrance from the exterior and a secondary entrance giving onto the communal areas.



Create flexibility in terms of the dwelling space, fixtures and fittings, and functions.



Provide room for special interests and a personal touch to the dwelling.



Create scope for visiting buddies or overnight family visitors in the dwelling.

trance from the outdoor area helps signal that the resident is an adult and an independent person with his or her own homely preserve. This will also make it possible to gain access to outdoor spaces and the world outside without the resident having to make his way through communal areas. The resident therefore has a chance to be himself, to come home in a leisurely fashion and opt into using the communal areas when he feels like it and needs it. The doors to the dwelling must clearly communicate that one is now entering a home that belongs to an individual with his own history and his own distinctive features. At the entrance from a communal area, a small niche can beneficially be created; this may soften the transition area from the communal and the private space.

The entrance from the outdoor space must be openable from the outside and automatically lock for reasons of safety and security – how to effect locking is a matter for individual evaluation, but it is important that such options are present from the outset. In conflict situations this door will also be capable of acting as an escape route for the employees.

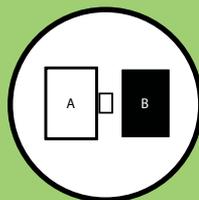
It is important that the door is given the nature of a proper door, not just a terrace door. The door, therefore, must either be fitted with or prepped for a doorbell, letter slit and name plate. The doors can be equipped with a proximity-activated locking and opening system to make operation easier. This system can also control other residents' access rights, for example.

Kitchen

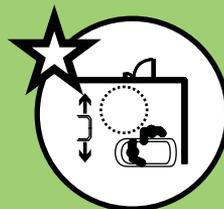
For the majority of residents, mealtimes are a meaningful and important part of everyday life, which will often rank among the highlights of the day. In addition to the offer of cooking and eating in the communal area, the same function must also be on offer in the dwelling. The kitchen may not be used every day, but it is important that the option should be available if the family is on a visit and it is wished to eat together or if, for example, the resident wants to bake a cake together with an employee. As a general rule, therefore, there must be an opportunity to install a proper kitchen in the dwelling. Depending on requirements, the dwelling can be fitted out with a kitchenette, but it is important that



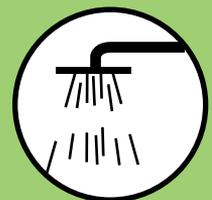
Fit out the kitchen in the dwelling according to the resident's needs, but with all relevant plumbing and wiring connections.



Create distinctness in the transition area between communal and private spaces.



The bathroom must be large and easy to use – including for people with declining skills.



Support residents' hygiene by making the bathing experience a sensuous and positive experience.



installations have been made ready if that requirement should change later on – this might be, say, the relevant plumbing and wiring connections.

Bathroom

The bathroom should have the same dimensions as in a close-care dwelling and must therefore be larger than ordinary bathrooms. Thought must be given here to the residents' declining skills at an early stage. The bathroom must therefore be appointed with an eye to both self-sufficient residents and residents who require additional support – in the form of a wheeled walker, wheelchair, mobile lift or helpers. It is important that turning radii are documented and accessibility is factored in as an important parameter. Thought must be given to how the resident will be using the bathroom, how the resident can turn and position himself to get to the washbasin.

The bathroom must contain a paging system to give the resident the possibility of contacting the staff.

In close-care dwellings gratings can be seen near the door, acting as a drain to protect the floor outside the bathroom. For people with autism this grating can be perceived as a boundary which it is unpleasant to cross, and

it is therefore recommended to continue the flooring from the bathroom a couple of metres out into the adjacent area.

It is important that the bathing experience be made a positive and stimulating experience for residents, and one that is instrumental in encouraging a high standard of hygiene – for example through the use of colours and materials.

In order to avoid possible scalding, it is important to place a sensible limit on the maximum temperature of the water. Sanitary appliances, toilet seat, towel and sundry accessories should contrast in colour with the background. The principle of distinctness, for example, can be put to advantage by integrating sensors and lights showing when a bathroom is supposed to start and finish.

Fixtures

The starting point for the fixtures and fittings in a dwelling must always be the residents' own furniture and preferences in terms of the interior decor and functionality of their dwelling. The dwelling must be adaptable to flexible solutions, for example with movable partitions or room-dividers (which can also incorporate storage), flexible shelf and cupboard modules, and room to install sufficient,



but not unnecessary aids. Consideration can be given to introducing replaceable doors on fixtures, which can provide scope for adding extra personal touches.

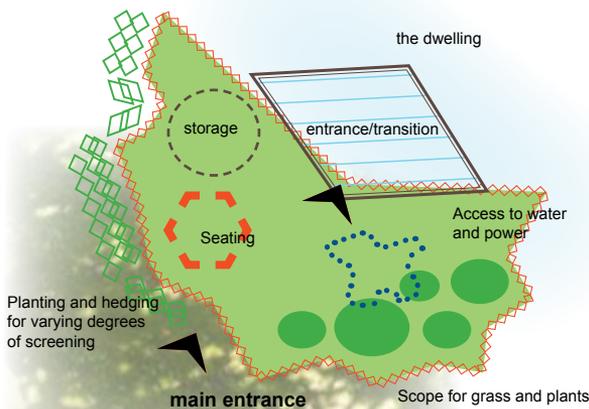
Private outdoor space

Private outdoor space acts as an arrival area, screening and garden. In particular, outdoor space can be important as an observation post, allowing the resident to keep up with life around the dwelling without feeling exposed or watched. That makes demands on planting and hedging in terms of the view and screening.

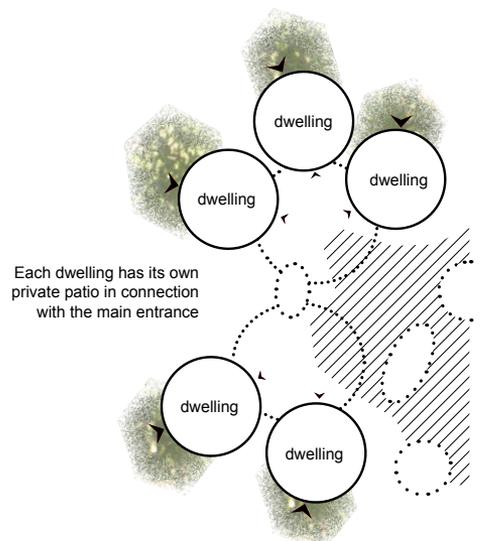
Different residents may have different needs

and wishes in relation to outdoor space, and it is therefore important to take into consideration during the planning phase that the outdoor space can be modified according to interests and according to the residential facility's scope for maintenance. For instance, a water feature may be a great attraction for some residents, whereas others will appreciate a garden with herbs and other plants. The need for screening will also be an individual thing.

The outdoor space must be designed with access to water and electricity and can include a shed for special interests and storage. It is essential to accommodate the need



LAYOUT OF PRIVATE PATIO AREA



Each dwelling has its own private patio in connection with the main entrance

for a sense of security in the outdoor space, for example by integrating a paging function to reach staff.

Aids

It will be beneficial to factor storage space for aids such as a wheeled walker and a wheelchair into the dwelling or immediate vicinity of the entrance, without turning circulating areas and outdoor spaces into parking areas. One might, for example, conceivably have a small covered-over patio outside or an integral cupboard in the communal areas near the dwelling.

Technology

A 'Smart Home' system can beneficially be conceptualized as part of the overall building complex. The system can be multifunctional, for instance to control light, heating, ventilation, alarms and fusing. That can have both a preventive and a supportive function by assisting residents, but also an alarm function for reporting accidents such as a fire. The system can include, say, fire alarms (smoke

detectors), magnetic switches on doors to flats, cooker surveillance, fall alarms and automatic lighting control, for example in the form of lights illuminating the route when a resident has to go to the bathroom at night. The system will also make it possible to use lights that gradually increase the light intensity in the morning and wake the resident gently. This system must be embodied as an integral part of the staff's and the residents' other information and communication systems.



Factor storage space for technical aids into the building. Avoid turning circulating areas and outdoor spaces into parking areas.



Set up a private outdoor space in connection with the dwelling, which will function as arrival area, screening and garden.

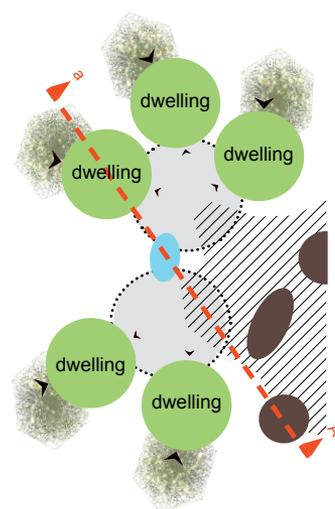
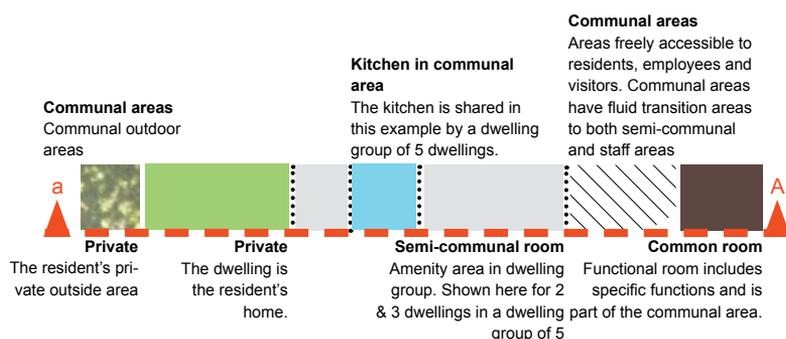
communal areas

In residential facilities for elderly people with autism the communal areas are an important supplement to the services on offer in the private dwelling. The sense of community in the residential facility can evolve here and a fertile setting created for good, collective experiences for residents and employees. Communal areas must give residents room not only to be alone but also to be together with others on whatever level they themselves wish. Under these conditions, feelings of great pleasure and stimulation will usually be associated with residents' social life, so it is important that the requisite space is available to promote and retain positive habits.

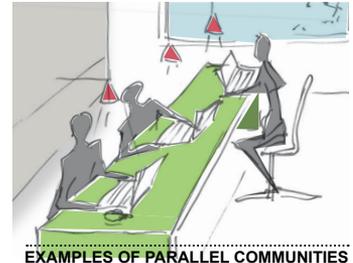
It is important to anticipate that common rooms in the residential facility will enjoy much use, since residents' limited mobility can mean that they can no longer attend work, daytime employment and leisure interests. Some individuals may also harbour a

desire to have more time for leisure interests and hobbies, and they will therefore withdraw from, say, external daytime services and workshops. That makes increased demands on the quantity and quality of an offering available in the communal areas. Once again, flexibility is an important parameter here, since offerings must be based on both the staff's experiences and the individual's wishes.

A distinction is made between two kinds of communal area here. One kind of communal area unifies 2-4 dwellings around it into a cluster and basically belongs to these dwellings only. The amount of dwellings around this communal area depends on the residents' personal preferences, the chemistry with other residents and care requirements. This area is relatively small and is used mostly as an amenity room or a place outside the home where special interests can be allowed to develop. Two of these clusters can benefit from sharing a kitchen or other facilities in a dwelling group.



LAYOUT OF COMMUNAL AREAS – SECTION THROUGH ZONES



EXAMPLES OF PARALLEL COMMUNITIES

The other kind of communal area is communal to all residents. This is a larger area containing amenity rooms and rooms with special functions like exercise, health, library, IT and music as well as staff areas.

It is important that these communal areas, which are shared between several groups, have direct access to the groups' own areas. In other words, situations have to be avoided in which one group's area turns into a communicating room for another group. That applies equally in the context of corridor zones, which connect the individual dwellings with the communal areas.

Parallel communities

Communal areas must be able to offer residents a chance to be part of parallel communities, in which each resident – as previously mentioned – busies himself with his own special interests, yes, but still achieves a feeling of communality by dint of closeness to other residents. The parallel communities, as mentioned, can allow residents to benefit from a sense of community even though they may find it difficult to instigate, maintain or develop contact with others. It is important, therefore, to put in place a variety of offers with the possibility of flexible mutual spacing.

One example, as mentioned, may be a desk with three computers next to one another, a large screen in a TV room or three exercycles alongside one another.

Flexibility in common rooms

Common rooms must have a plan arrangement that allows diversity of use for the rooms. The rooms must be able to handle situations where residents wish to be either communal or alone, and it is therefore important that the shape and surfaces of the rooms can accommodate the needs of different users functioning in parallel with a varying degree of screening. For an autistic person, having to share an open common room can be disturbing or unpleasant—unless 'safe' zones are marked, which are instrumental in defining a room in the communal space that is the resident's only, where the resident feels the necessary sense of security. This can be done, for example, with signage, colours, fittings or dividing walls. Here it is possible to work with movable screens that can be changed around as required.

The most important attribute of common rooms is that they must promote calm and cohesive experiences by contrast with the confusion that can arise from many simultane-

ous, unscreened activities. Other important attributes are clarity of layout and distinctness. The function, division and ownership of the room must be clearly communicated to residents so that they know what to expect. Here colour coding can be used on screens, indicating the reason for its position. A colour code can show, for instance, that a resident needs a sanctuary of his own, and another can indicate an ongoing visit by family or some other sizable group.

In addition to the day-to-day use, there is also a need for communal areas to be able to be used for larger assemblies, for example during festivals and celebrations.

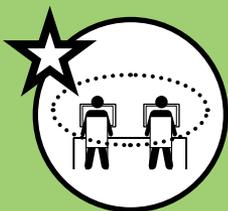
Kitchen in the communal area

The size of the kitchen must allow an employee to help the individual resident with kitchen work, so it is important to fit out the kitchen with a view to having different screened function stations for different activities and tables that can be lowered and raised, as required. The amount of function stations will be adapt-

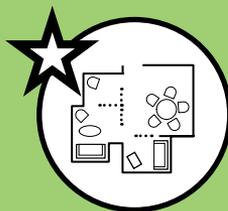
ed to the amount of dwellings sharing the kitchen.

The residents' need for distinctness and manageability can be catered for with the aid of clear signage and transparent doors on kitchen units. It is also important that colours, materials and lighting clearly help to communicate the function of the room and are instrumental in making the kitchen a sensory experience, because a well appointed, inspiring kitchen can be conducive to reinforcing sound routines and enhancing dietary and nutritional knowledge.

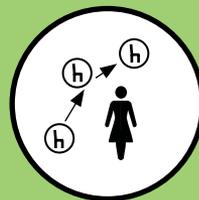
To a large extent, residents can be involved in planning and making food both in their own and in the communal kitchen. In order to prevent self-determination leading to overweight and malnutrition, it is conceivable, for instance, that the content of fridges should be planned by having the option of fridges with limited access in the vicinity of the kitchen, e.g. in a larder.



Communal areas must make residents' parallel communities possible.



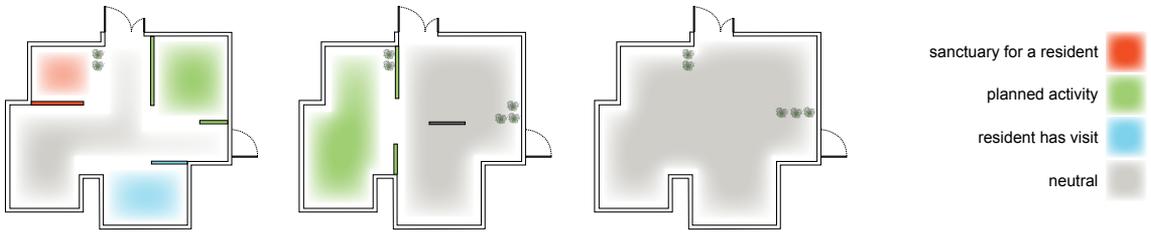
Create scope for diverse use of communal areas with the aid of screens and fittings, which can be changed around as needed.



Arrange seating with suitable spacing in communal areas in order to support the ability to move around without a wheelchair.



Appoint the kitchen with a view to different, screened function stations for different activities.



EXAMPLE OF FLEXIBILITY IN COMMON ROOM WITH THE AID OF SCREENING

Technology can also be largely instrumental in consolidating use of the kitchen by increasing its user-friendliness. One can envisage a touch-sensitive digital screen or surface, for example, employing a readily accessible user interface to visualize recipes and allowing the resident to operate lights, plugs, windows, ventilation, white goods and adjustments to table and cupboard height. This screen must be positioned so as to be accessible to wheelchair users too. This intelligent system can also recognize the resident, for example, and adapt table and worktop heights, lighting and other functions accordingly.

Fittings

When choosing fixtures and fittings, the focus must be on conveying a feeling of homeliness, simplicity and quality. At the same time, however, it is important to stress that the fittings are going to be used by elderly people – they must be comfortable and easy to use. So it is important to seek qualified advice for the fittings processes.

Creating seating

Seating arrangements in common rooms should be flexible enough to cater for different forms of socialization and intimacy. It is good to plan several small, screened-off

seating groups, including one or more separate groups with TV.

It is important to create seating with suitable spacing in places populated by residents. If there is a lack of seating, it may lead to residents with declining skills giving up moving around on foot and using their wheelchair instead to ensure that they can sit down.

Most residents will prefer to sit close to a window and natural daylight if the light is diffuse and not dazzling. So it is a good idea to establish seating next to windows, which can act as vantage points, but large, unscreened sections of window should be avoided.

Functional room

As part of the communal areas, smaller rooms can be created to perform specific functions. These can be about, say, music, library, IT or other topics. In connection with these rooms it is important to show clearly what function the room is performing, e.g. by specially marking walls, floors or doors in relation to the other communal areas. These rooms must be divided according to their specific function and must not be communicating rooms.

In connection with the common room a laundry room can be set up with worktops for one or two residents, washing machines and tumble-drier. Here it is important to create distinct workstations, helping the resident to keep the washing process under survey. Alternatively, washing can be done in a resident's own dwelling, with or without help from an employee.

Exercise room

Increasing the focus on daily exercise will be crucial to remedying any impaired body-awareness and medical complications residents may have, such as poor posture due to intensive use of a computer and diabetes as a result of too much food and too little exercise. Here technology could also be a motivating factor, for instance with play consoles like Nintendo Wii. To a great extent, there is scope for working out even more if motion-promoting console games are incorporated by timetabling them as a regular activity.

Exercise must be made into an attractive offer for residents. Here it is important that residents themselves should basically choose whether they wish to take advantage of the offer, and exercise must therefore be organized largely as a positive, attractive and stimulating experience that can form part of a regular routine, with targets or goals and clear expectations. That applies both indoors and out.

Exercise is done primarily in a dedicated exercise room or gym with robust, safe appliances, like exercycles, stepping machines and rowing machines. An area with mats, wall bars and benches can create a good setting for relaxation and stretching.

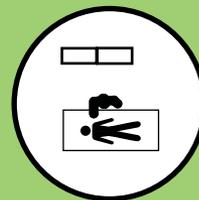
It is also possible to envisage having the odd lightweight appliance out in the communal areas in order to make it as simple as possible for residents to avail themselves of the appliances as part of their daily round.



Choose comfortable and readily accessible fittings that can be used by elderly people.



Make exercise an easily accessible and attractive offer for the residents.



Set up a treatment room, which can promote routine tasks in collaboration with external doctors, for example.



CHRISTIAN X'S ALLÉ RESIDENTIAL CENTRE

Treatment room

A treatment or wellness room can beneficially be installed, where routine therapeutic and diagnostic tasks can be performed, thus saving residents long, stressful transports and unfamiliar surroundings. The treatment room can be used by doctors, nurses, physiotherapists and other staff, and must be positioned for ease of access to both communal and staff areas. A medicine room can beneficially be

placed alongside the treatment room.

The treatment room can also be used by opticians, hairdressers and massage therapists, possibly even functioning as a spa room.

Communal patio

Contiguous with the residential facility, an attractive communal patio is being created, focusing on sensuousness, activities and movement options. The patio is interlinked

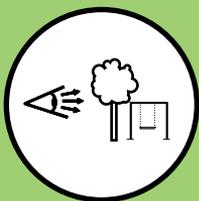
by a system of pathways, which also provide access to the private patios and arrival areas of each individual dwelling. The paths are designed as circular lines which always lead back towards the residential facility. In the patio area it is important to use vegetation actively to divide the space into suitable pockets and areas. That can be done, for example, with raised beds and hedges – of a height suitable for wheelchair users – where activity and sensuousness may consist, for instance, of residents being able to weed the beds, smell the flowers in the garden and taste berries, fruits, herbs and nuts. The garden can also beneficially have room for small animals, such as rabbits, which can be looked after by residents and staff. Others in the local area can also benefit from this, for example a nearby kindergarten.

With patios it is important always to factor purpose and/or distinct aims into the physical embodiment. A green area will work better, for example, if there are points that can be

used as destinations for excursions – e.g. a pavilion, a bench, a swing or a tree. This way, people with autism can know what they are heading for and what to expect, and look forward to it. At the same time, the destinations can be communicated as photos or icons if they differ from one another enough in terms of colours, materials and location.

With the aid of paving the patio paths must promote easy access for wheelchairs and other mobility aids. Covered-over patios and conservatories are popular and increase the general use of the patio, and must therefore be accessible to wheelchairs and the walking-impaired as well. It is important for the resident to have an impression of freedom of movement in spite of any disabilities.

It can be advantageous to install a waiting area with benches in spots where residents, for example, are often picked up by buses or relatives in a car. This can help avoid a sense of insecurity and inappropriate behaviour in the waiting situation.



Design the communal patio with points that can be used as destinations for excursions. Give them their own visual and tangible identity.



Patio paths must promote easy access for wheelchairs and other mobility aids.



Focus on the senses in the outdoor space with the aid of raised beds and edible plants like herbs and spices, berry bushes and fruit trees.



EXAMPLE OF DISTINCT DESTINATIONS IN THE OUTDOOR SPACE

When choosing vegetation, it will be advantageous to focus on edible plants like herbs and spices, berry bushes and fruit trees like apples, pears, cherries and cherry plums. As mentioned, this can underpin the function of the patio as a sensory space and make it interesting for the resident to use and get involved with. Hands-on tasks can be set, for instance (like collecting a pound of blackberries), which can give the resident some recre-

ation and satisfaction. The employees should keep an eye on residents' behaviour in the outdoor space so as to avoid any damage to flowers, trees and so on.

Staff areas

In order for staff to be able to provide the best care and nursing for elderly people with autism, it is important that the constitution of the building should support their different work requirements. The staff areas must therefore promote the work with residents, team and solo work, and knowledge-sharing in the form of meetings and conversations.

In this Model Programme, staff areas should be understood both as a dedicated work area and the communal areas where the staff's presence is necessary.

Access

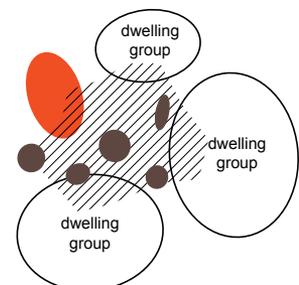
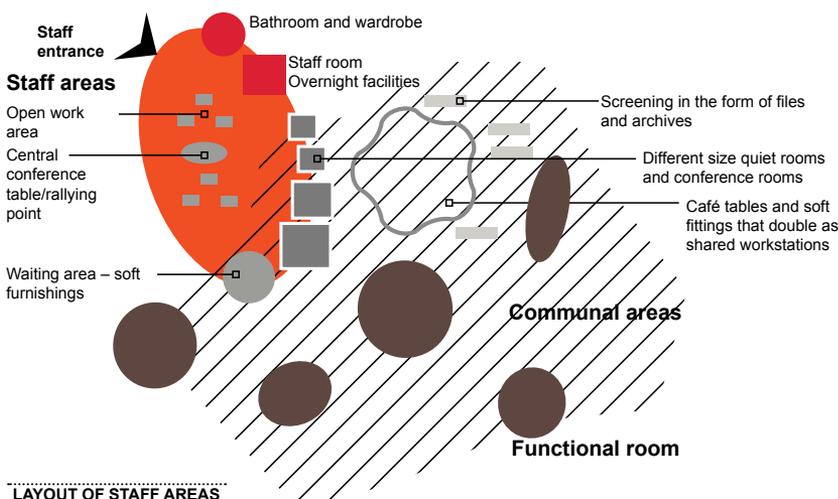
A separate entrance must be created for employees and guests in order to minimize visual and acoustic disturbances, which can cause unrest among residents. In connection with this entrance there must be good parking for cars and bicycles.

Interdisciplinarity and work areas

The challenge posed by working across disciplinary divisions is only set to get greater in a future when the competences of existing residential facilities will have to be supplemented by new knowledge from without – whether that knowledge comes through new employees or external collaborations. There is great potential in modelling physical settings innovatively, so as to promote knowledge-sharing to a greater degree through informal chat and short or long meetings, while at the same time providing good settings for high-concentration solo work. Such an interior design – which embraces both interaction and autonomy – can be instrumental in enhancing the quality of the work in relation to the residents, as access to relevant information is made easier.

Appointment of the staff area

The staff area has been divided into different types of workplaces, supporting different working tasks. How to design the border





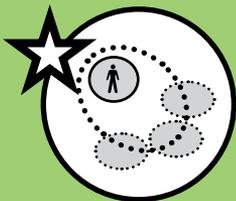
between staff and residents' areas poses a particular challenge.

Here it is a case of balancing the regard for residents' need for privacy and calm with the need for employees to be accessible and on hand for residents. However, since residents can become insecure about having to call for help, this distance must not be too great, yet at the same time it must act as a screening device for staff.

The employees' work takes place both in work zones in the communal area and in a core connected to the employees' entrance. Given their accessibility to residents, in work zones in the communal area consideration

must be given to the importance of colours, surfaces and the amount of sensory impressions, which can create confusion and insecurity. In this area great heed must be paid to homeliness and calm – it must be a place more reminiscent of an amenity room than a work room. Here residents can find employees they know and feel secure around when they wish to seek them out.

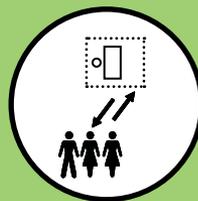
The work zones' immediate physical and visual link with communal parts in the residents' area can be made softer with the aid of screening and fittings of different height. They must be furnished with the focus on homeliness – a café table freely set up in the area can show residents that the employees are



Divide the staff area into a core area and work zones in the communal area.



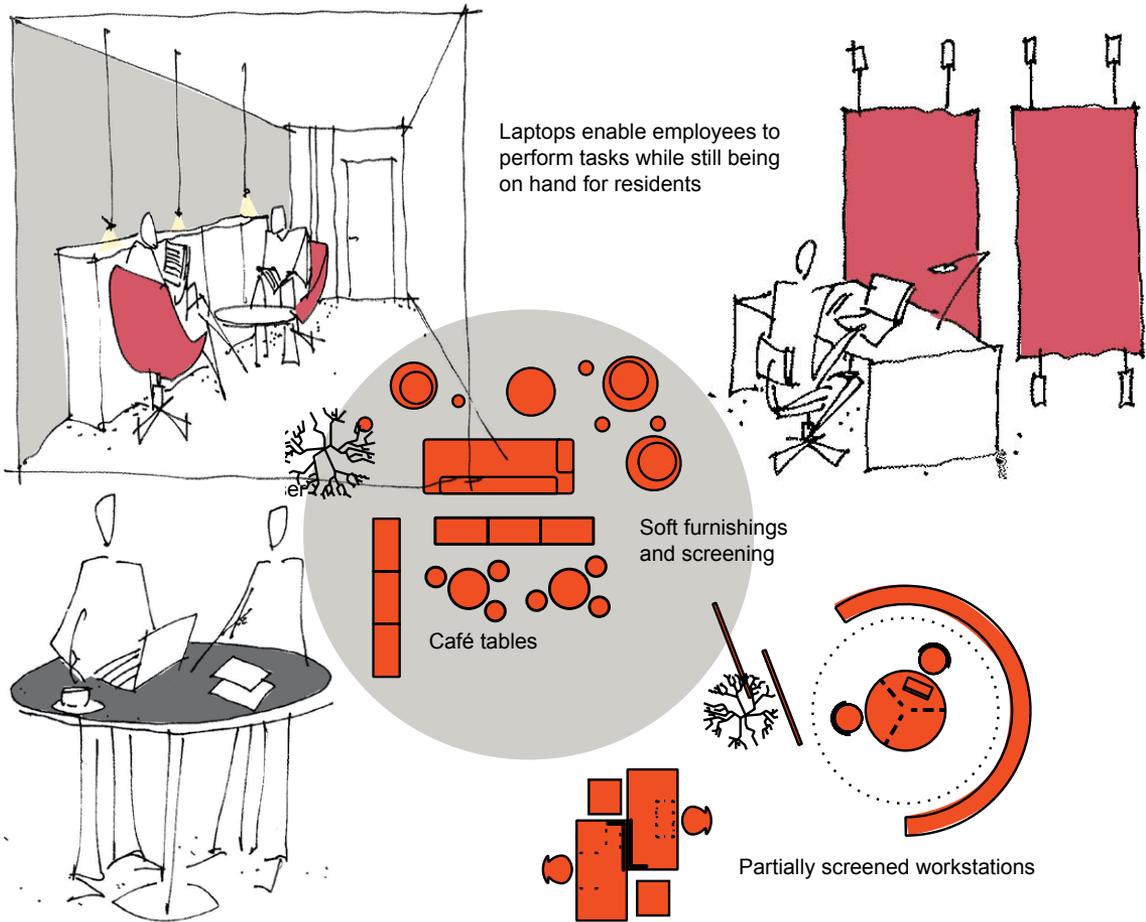
The staff area must promote knowledge-sharing and an interdisciplinary approach. Work areas are based on teams and few personal spaces.



Appoint shared work-places to those staff groups with less need for desk work.



Make technology like computers and telephones cordless or wireless, so that flexible areas can be used for work.



EXAMPLE OF WORK ZONES IN THE COMMUNAL AREA

accessible to them. Workstations are shared between employees and screened, for example by tall filing racks.

A number of meeting and quiet rooms are made accessible from both the communal area and the more active core in the staff area. The rooms vary in terms of size, screening and fittings, and amongst other things must be conducive to high-concentration solo work, telephone calls, informal meetings and

confidential conversations or interviews. If the plan arrangement permits, the rooms can be used to screen off the communal area and the core in the staff area from each other in terms of acoustics and visual impressions.

The core of the staff area is an open work area with an active, outgoing feel to it. There is ample space around the workstations and walking lines, which combine to give an impression of an open and inviting work area.



The core is located in the immediate vicinity of an employee and guest entrance, which links up with an open and accommodating waiting area with soft furnishings and an item of freestanding "welcome" furniture, where guests can stand and wait to be received. The employees must be able to survey the entrance and receive guests and associates at all times of the day and night.

It is an open, team-based working environment, in which the various specialist groups sit together with the management and administrative staff, placing great emphasis on supporting knowledge-sharing and interdisciplinarity among the employees.

The workstations in the core are a mixture of "competence spots", where relevant em-

ployees sit together in groups, and isolated workstations, where people can sit on their own and work. The spacing and design of workstations must vary and support the individual disciplinary groups' specific needs and characteristics: How often is a person present? How does a person typically knowledge-share? How do people work together? Some employee groups will be able to benefit from sharing workstations, since desk work makes up a relatively small part of their overall workload.

Central to the core is a raised conference table, which can be used for lunch, tea and coffee breaks, and short meetings and briefings. More remote from the core, a seating group with soft furnishings is positioned; this can be used, for instance, for informal meetings and small reading assignments.

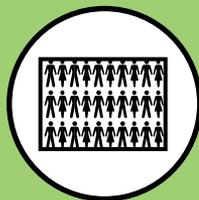
A larger conference room can either be created separately or by having two smaller conference rooms divided by a folding wall that can be opened up. This conference room

must be conducive to networking and staff arrangements, courses and themed days – for example when collaborating with other related specializations in the local area or to enhance social and professional skill-sets. In this connection it is important to plan access conditions and location in relation to dwellings and communal areas so as not to have a disruptive effect on residents or impact negatively on residents' use of communal areas.

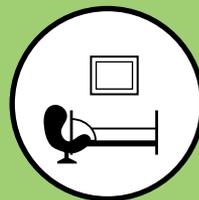
A staff room must afford employees the chance to withdraw and relax for a short while. This room is also used by employees staying over and is therefore placed in the immediate vicinity of the employees' toilet, changing area, shower and wardrobe. However, a staff room may be needed for spending the night closer to the dwelling groups if these are very spread out.



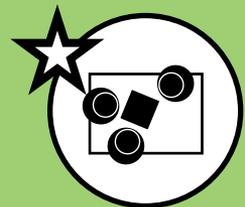
Design a central and logical rallying point for the employees.



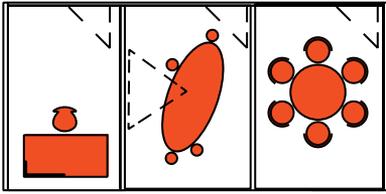
Provide space for large-scale functions by fitting out a large conference room.



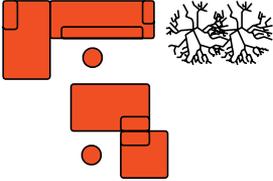
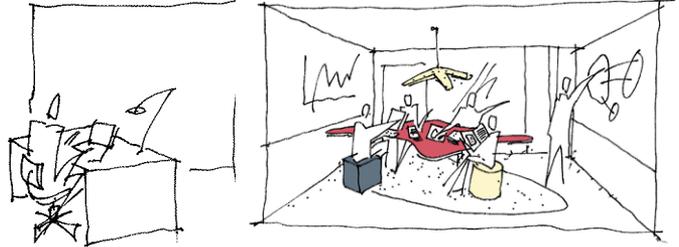
Design a staff room for unwinding, chilling out and staff staying over.



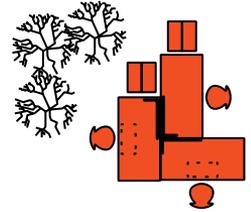
Design several meeting and quiet rooms, differing in terms of inward view, fittings and size.



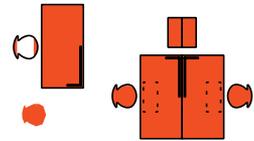
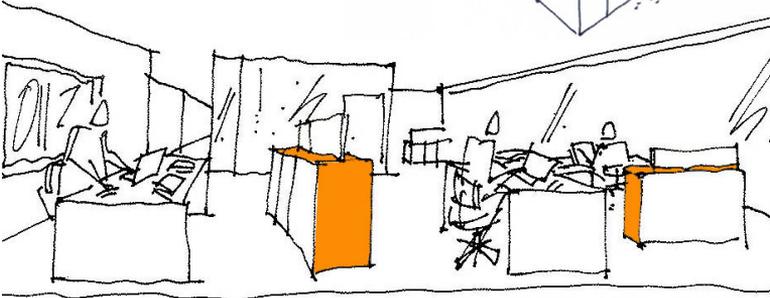
Quiet room and conference room



Surveyable waiting area



Central rallying point



Open work area

EXAMPLE OF WORKSTATIONS AND FITTINGS IN STAFF AREA CORE



culture

As a basic point of departure the Model Programme deals with the physical setting at the residential facility. In this section we have attempted to describe the topics which may not relate directly to the constitution of the building perhaps but have nevertheless proved pertinent to the work on the Model Programme. For the residents these are topics which are at least just as important in their everyday life, and must therefore be conceptualized and factored into all aspects of elderly autistic residential facilities. The topics have been conceived as an aid to better understanding the non-visible aspects which such residential facilities must also embrace.

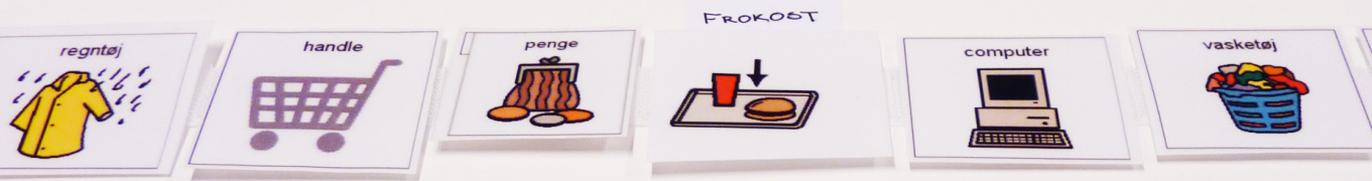
Networks

A residential facility for people with autism must be able to reinforce networks for residents and employees alike. That places great demands on the way people live and treat

one another. Residents' family and friends must feel welcome, and the building must support that – indoors and out. For example, there must be scope for holding large-scale events and functions like birthdays, and overnight facilities must be available for those relatives travelling from afar. The residential facility must not be regarded as a closed universe but must be an open house for the pleasure and benefit of everyone in the resident's network.

An important point for the resident is that social relations with other residents, typically built up over a great many years, can carry over into the new setting. In spatial terms this can be supported by providing residents with an opportunity for different kinds of communities with other residents, friends and family. It is important for employees to be reliable and familiar with the elderly people's life-history as part of their working toolkit for delivering good treatment that also instils a sense of security. Therefore, it is important that the





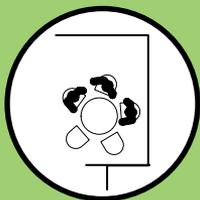
DETAIL FROM DAY CHART ASSEMBLED FROM BOARDMAKER

constitution of the building should take into account and make space for the elderly people's memories, such as photographs, furniture and paintings – both in the dwelling and in the communal areas.

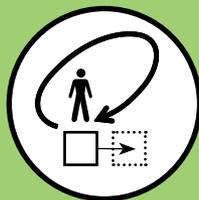
Activities

The everyday reality for people with autism usually consists of a regular routine, but also comprises many other special activities, of course. It is important that these special activities are able to take place under secure and safe conditions, supported by the physicality of the building. These may be special events in conjunction with, say, feasts and festivals, so it is important to make room for

these activities. Many activities also take place outside the residential facility – with or without staff – and it is therefore important to factor in the whole process, right from leaving the dwelling, passing through the communal areas, through the outdoor space and, where required, getting to public transport. All this must be done in tranquil surroundings that do not make residents feel insecure.



The physical settings at the residential facility must support activities in the resident's network.



Involve residents in the moving process early on.



Remember that residents are very different, with great variations in abilities and personalities.



Factor conditions for dying residents, their relatives and the other residents into the residential facility.

Death

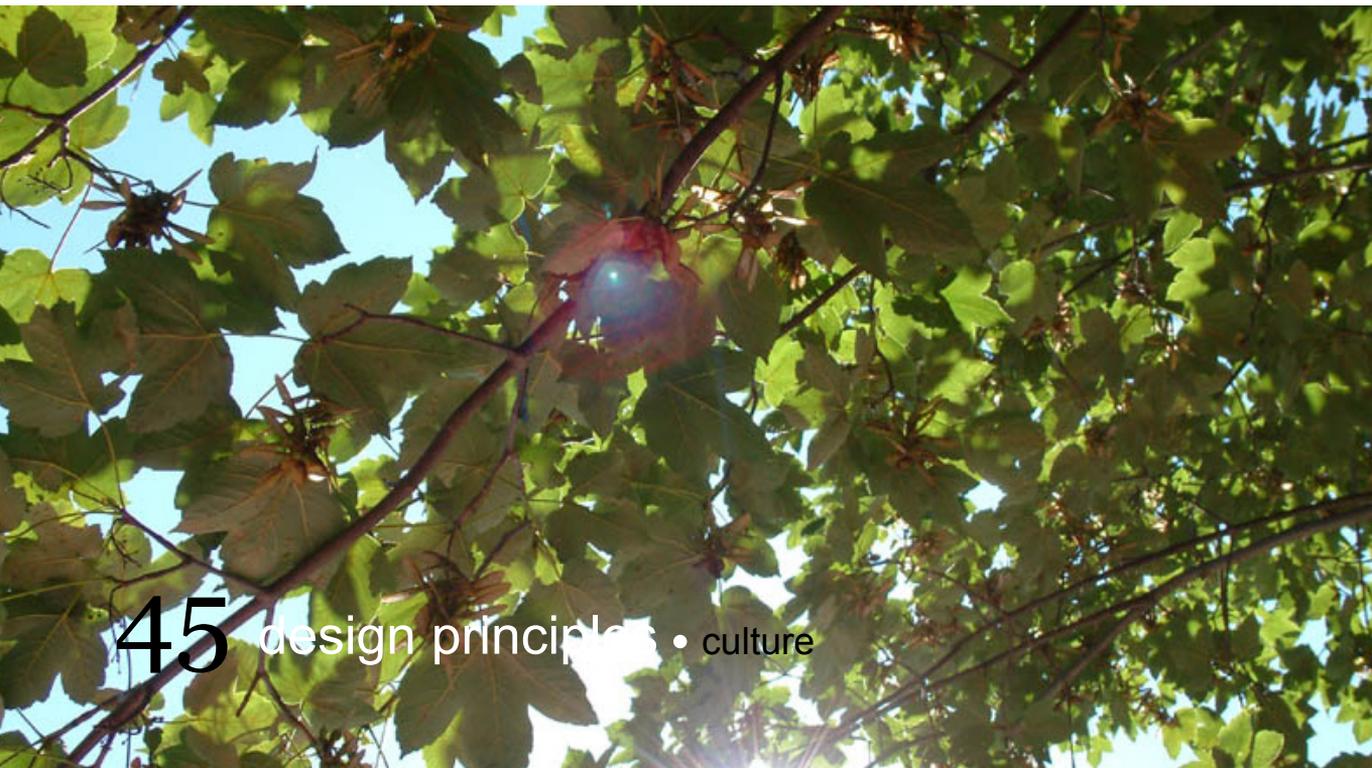
It is important to relate to death when dealing with elderly people. Death must be seen both in relation to the fact that the elderly often lose their parents and relatives while living at the residential facility, and in relation to the residents themselves, as the vast majority of residents remain in residence until they pass away.

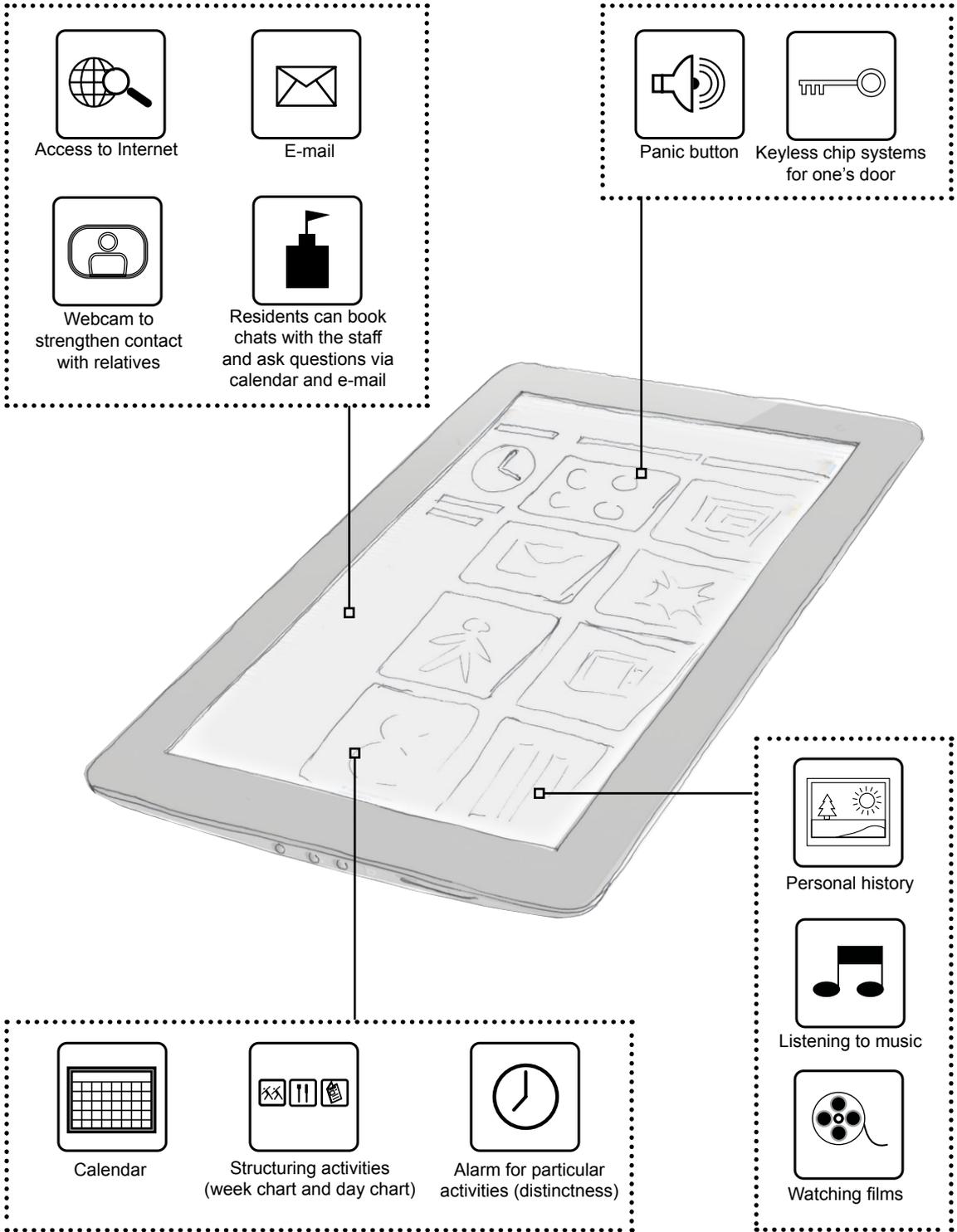
The constitution of the building therefore needs to embody the absolute need for extra caring, grieving and treatment for both the dying and their relatives – including during the after-period. The residential facility must be able to host doctors, priest/chaplain, staff, relatives and paramedics. In this connection, for example, it is important to consider how a coffin can be carried out of the residential facility in a way most appropriate for residents, guests and staff. At the same time, it is important to establish a plan within the staff group

as to how to handle deaths at the residential facility. How, for instance, will the decease be marked vis-à-vis other residents?

Technology

The needs identification exercise demonstrated that younger people with autism often find it easy to familiarize themselves with technology. That is not necessarily the case for the generation approaching old age. Nevertheless, even at the present point in time, an obvious step would be to make use of digital communication systems; but it is important that staff have been trained to handle new technology, and it should become part and parcel of everyday life for the individual employee and for the residents. A system can be implemented, for example, by using existing mobile technology; but importantly, the breadth and robustness of the system should be great enough for residents, relatives and staff to benefit from it.





EXAMPLE OF MOBILE TECHNOLOGY

realization process

The chart below shows one vision of the ideal realization process for a residential facility for elderly people with autism. The focus of the process has been on establishing a set of values that derive their impetus from the

local vision for the residential facility, with all the wishes and particular circumstances that entails. The value set is used as a benchmark during the process, ensuring that success criteria, choices and priorities in relation to the original vision are kept under constant review. In this context the Model Programme can be used both as a checklist and as a

Set out an overarching value set on the back of the Model Programme and local wishes

Clarify funding: Danish Act on Social Housing?, Section 108 of Services Act? Municipally? Regionally? Privately?

Draw up list of stakeholders

Secure backing of authorities

Generate awareness! (specialist journals, local papers, communications plan)

Visit reference projects

Visit residents' current facilities – contact relatives (everyone involved)

Workshop: evaluation of value set

Work up collaborative relations with other institutions in area

Needs identification exercise (residents, relatives and staff)

Place value set in relation to local settings (local plan etc.).

Clarify form of tender and any form of competition

Translate value set, needs identification exercise and Model Programme into concrete building programme/tender material

Evaluate building programme with reference group

Prequalification of consultants/contractors (consultants take stance on value set and Model Programme)

Plan residents' briefing

Secure funding

Hold competition/tender

Generate awareness! (specialist journals, local papers, communications plan)

Dialogue meetings with neighbours – use reference group or staff as spokespersons

Involve reference group in evaluation of project and process in relation to value set, success criteria, building programme and Model Programme – will adjustments be needed prior to construction?

Quality-assure funding

Sign agreement with construction team

Activities

conceptual phase

planning

project design

Stakeholders

Assemble **board of directors**
Set up **project steering group**
Involve any future management
Set up **reference group** (sparring partners, with experience from similar processes)
Bring in **specialist consultants**
Select **client/developer** for project and process management
If converting: involve **staff and movers & shakers** in local environment

Authorities
Board of directors
Project steering group
Client/developer
Staff/movers & shakers
Reference group
Architects/engineers
Financial/legal advisers
Relatives

Authorities
Board of directors
Project steering group
Client/developer
Staff/movers & shakers
Reference group
Architects/engineers
Financial/legal advisers
Relatives
Neighbours

source of inspiration for the value set. It is important to convey the value set to everyone along the way during the process. This can be done by asking potential consultants to relate to the value set directly during a pre-qualification round. In addition, the value set and this Model Programme can be used for subsequent evaluation and adaptation of the

finished residential facility.

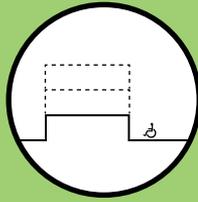
The two cases (Højtoft and Spurveften) in the section What can we learn from others? show examples of deliberations that may be instrumental in offering a starting point for such a set of values.



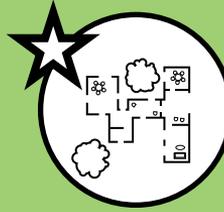
Building & surroundings



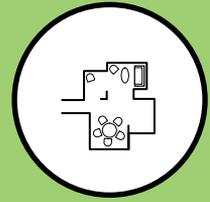
Prioritize the dwelling and avoid an institutional feel.



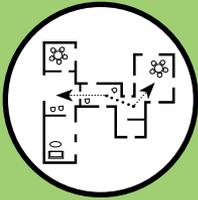
Single-storey construction preferred for the sake of accessibility for residents and visitors.



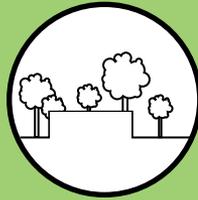
Create manageability and calm at the residential facility in order to promote a sense of security among residents.



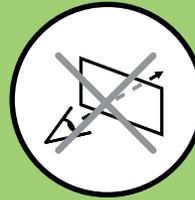
Avoid small rooms, which can create conflicts and seem claustrophobic.



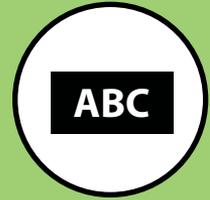
Attach importance to making corridors short or organically designed. Create niches and alcoves in circulating areas.



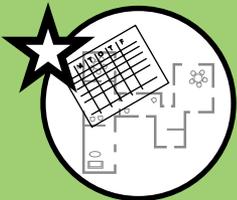
The ideal siting for the residential facility is amid peaceful, green surroundings, located centrally in relation to transportation and shopping.



Focus on screening and privacy in relation to the residential facility's surroundings.



Make signage simple and easy to take in at a glance. Avoid unnecessary signage.



Design central and logical locations for support systems – in both communal areas and dwelling.



Use differences in colours and materials to separate and emphasize walls, floors, ceilings and doors from one another.



Avoid lines and contrasts in the floor, such as transition areas in materials, gratings and doorsteps.



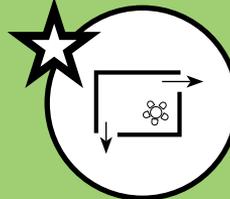
Avoid floors with patterns that can be perceived as disturbing spots or objects.



Design quality and durability into all components and surfaces. The load or strain will be greater than in other buildings.



Assign priority to making the acoustics functional and conducive to peace and homeliness.

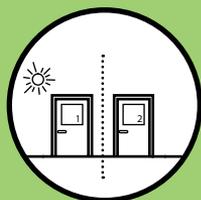


Think in terms of safety and conflict management for all residents and employees. Consider whether all rooms should have at least two exits.

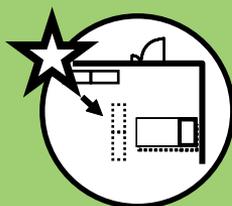


Make transition areas from interior rooms to outside spaces gradual with the aid of covered-in areas, projecting overhangs and surfacing.

The dwelling



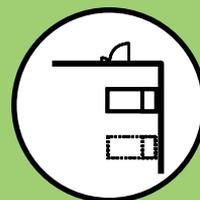
Set up two entrances: a resident's own outward-facing entrance and a secondary entrance giving onto the communal areas.



Create flexibility in relation to the dwelling's rooms, fittings and functions.



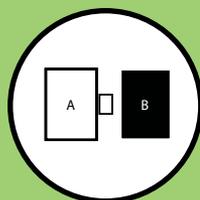
Provide room for special interests and a personal touch to the dwelling.



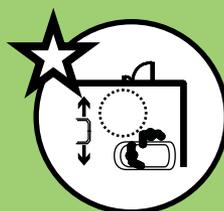
Create scope for visiting buddies or overnight family visitors at the dwelling.



Appoint the dwelling kitchen to match the resident's needs, but with all relevant plumbing and wiring connections.



Create distinctness in the transition area between communal and private space.



Make the bathroom big and easy to use – including for people with declining skills.



Support hygiene among the residents by making the bathing experience into a sensual and positive experience.



Design storage place for technical aids into the building. Avoid turning circulating areas and patios into storage areas.

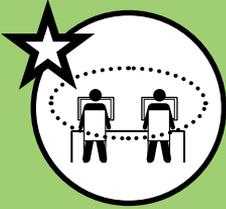


Create a private patio in connection with the dwelling, to function as arrival area, screening and garden.

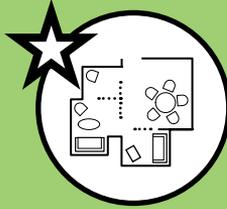


particularly high-priority design principle, which should be considered in relation to value sets for the residential facility.

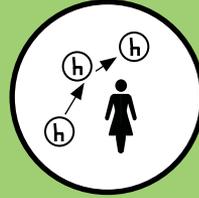
Communal areas



Ensure that communal areas make residents' parallel communities possible.



Create scope for diverse use of communal areas with the aid of screens and fittings that can be modified to suit needs.



Arrange seating with suitable spacing in communal areas to support the ability to move around without a wheelchair.



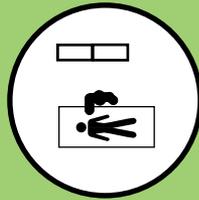
Fit out the kitchen with a view to different screened function stations for targeted activities.



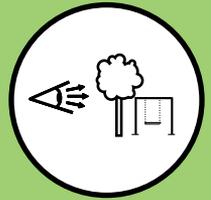
Choose comfortable and easily accessible fittings that can be used by elderly people.



Make exercise into a readily accessible and attractive offering for residents.



Set up a treatment room to promote routine tasks in collaboration with e.g. external doctors.



Design the communal patio with points that can be used as destinations for excursions. Give them their own visual and tangible identity.

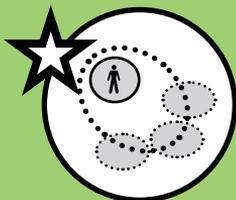


Patio paths must promote easy access for wheelchairs and other mobility aids.



Focus on the senses in the outdoor space with the aid of raised beds and edible plants like herbs, berry bushes and fruit trees.

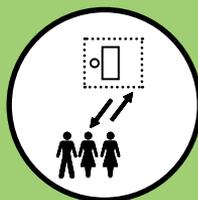
Staff areas



Divide the staff area into a core area and work zones in the communal area.



Ensure that the staff area promotes knowledge-sharing and interdisciplinarity. Work areas are based on teams and few personal spaces.



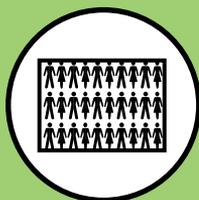
Appoint shared workplaces for those staff groups who have less need for desk work.



Make technology like computers and phones cordless or wireless, so that flexible areas can be used for work.



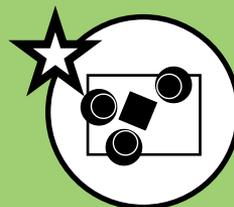
Design a central and logical rallying point for the employees.



Provide space for large-scale functions by fitting out a large conference room.

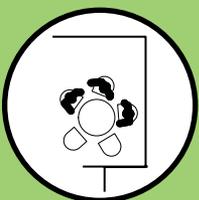


Design a staff room for unwinding, chilling out and staff staying over.

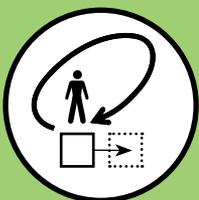


Design several conference and quiet rooms, differing in terms of inward view, fittings and size.

Culture



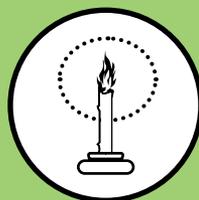
Ensure that the physical setting at the residential facility underpins activities in the resident's network.



Involve residents in the moving process early on.



Remember that residents are very different, with great variations in abilities and personalities.



Factor the conditions for dying residents, their relatives and other residents into the residential facility.

scenario:

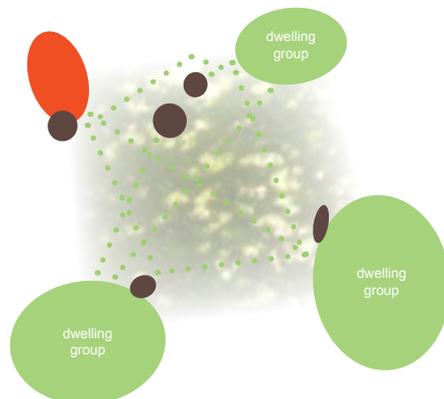
dispersed building

In this variant of the Model Programme the residential facility has been laid out as a dispersed complex.

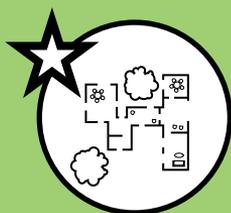
Here the dwelling groups and staff area have been laid out as isolated buildings in a cohesive scenic complex of parkland and pathways. In this scenario functional rooms and communal areas will link up with the dwelling groups and the staff area or be freestanding in self-contained buildings. The challenge is

therefore to create cohesion and connection between the various functions.

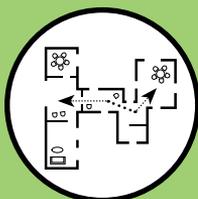
This scenario actually reflects what is described in the Model Programme, as the proposed brief here is that the communal area can be either indoors, outdoors or both.



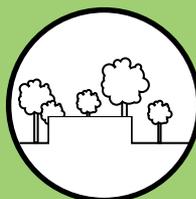
Design principles which are challenged in the scenario:



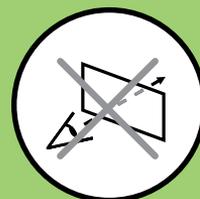
Create manageability and calm at the residential facility in order to promote a sense of security among residents.



Attach importance to making corridors short or organically designed. Create niches and alcoves in circulating areas.



Site the residential facility amid peaceful, green surroundings, located centrally in relation to transportation and shopping.



Focus on screening and privacy in relation to the residential facility's surroundings.

scenario: conversion

In this variant of the Model Programme the residential facility is incorporated in an existing building.

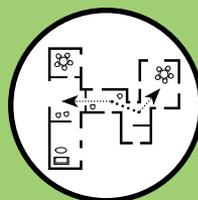
The challenge here will typically be to find the right building with rooms and sequences that suit the particular requirements made of a residential facility. Compared to a newbuild, it is only to be expected that it will be harder to accomplish the vision described in the value set for the residential facility. In this context it

will be of the utmost importance to prioritize and to be just as precise in describing the opt-outs as in terms of wishes and opt-ins.

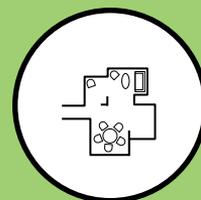
When converting existing residential facilities the challenge is typically the small dwellings, which will often be without a kitchen, bathroom and toilet of their own.



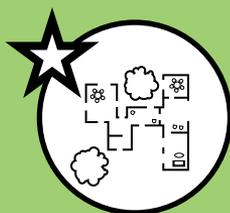
Design principles which are challenged in the scenario:



Attach importance to making corridors short or organically designed. Create niches and alcoves in circulating areas.



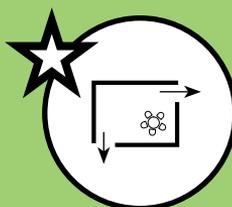
Avoid small rooms, which can create conflicts and seem claustrophobic.



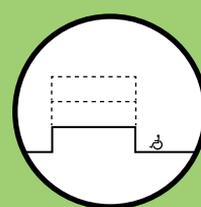
Create manageability and calm at the residential facility in order to promote a sense of security among residents.



Assign priority to making the acoustics functional and conducive to peace and homeliness.



Think in terms of safety and conflict management for all residents and employees. Consider whether all rooms should have at least two exits.



Single-storey construction preferred for the sake of accessibility for residents and visitors.

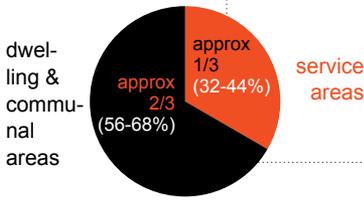
finances

● A rough distinction is made between two types of funding for residential facilities:

● In the case of facilities coming under Section 108 of the Danish Services Act, the client/developer is responsible for the entire funding.

● In the case of residential facilities under the Social Housing Act (elderly dwellings), the client/developer defrays only a minor proportion of the funding.

● In the case of facilities constructed as social-housing dwellings, the facility is divided into:

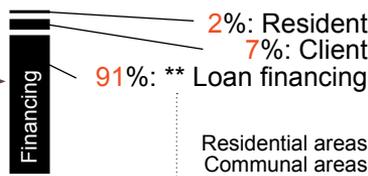


● Housing allowance is granted up to

65 sq.m

or 75 sq.m in the case of walking-impaired residents. This is a gross figure, which includes the resident's share of communal areas.

● The actual ratio is defined in the individual project after considering the finances of residents' future expenses, building, running etc. Communal areas, for example, can be included both as service areas and as dwelling and communal areas.



● If residential and communal areas get much bigger than this, the facility may risk becoming too expensive for the residents.

● The figure in brackets indicates the percentages in the space allocation programme example.

● Loan financing is done through non-profit housing associations. The maximum sq.m price* is therefore:

20,110 dkk

In this case the client can consider financing part of the communal areas as service areas – that is to say 100%.

* Figure for elderly dwellings in the provinces with undertaking from July 2009. In the metropolitan region it is DKK 25,710 and a number of local authorities have other ceilings – for updated figures, please see the Danish Ministry of Social Affairs' webpage. ** Figure from 2009.

● In the example in this space allocation programme the residential facility's net area is between

● This gives a gross area for the facility of between

● The net size differential derives mainly from the varying size of the dwellings and only to a lesser extent from variations in the other areas.

1,370 sq.m
og

1,915 sq.m
og

● Since the facility in the example has 20 residents, housing allowance can be obtained for 65 sq.m for each resident. This makes a total housing allowance basis of 1,300 sq.m.

1,645 sq.m

2,300 sq.m

- in the case of a facility with 20 residents.

- in the case of a gross/net factor of 1.4.

1,300 sq.m

space

allocation programme

In this functional space allocation programme, an account has been given of types, number, sizes and other requirements for rooms in the facility. No account has been given of the extent of corridors, staircases etc., as this typically varies from one project to another.

All rooms must meet current statutory requirements and instructions at all times – in this Model Programme that means Danish building regulation BR08.

All rooms are net areas. Experience shows that this must be multiplied by a factor figure of 1.3 – 1.5 in order to arrive at a final gross area. In this example calculations are based on a factor of 1.4. The ratio between gross and net area may vary, depending whether it is a newbuild or a conversion of an existing building. An existing building will often have been built for other fit-outs and usage patterns

– which often means there is a greater area of wastage for circulation and corridor zones etc. than in a newbuild, where from the outset the possibility exists of working optimally with main logistics and distribution zones. This may be, for instance, buildings constructed from the outset with a depth of house that gives rise to the occurrence of dark zones in the middle, which cannot be utilized for work areas owing to lack of daylight.

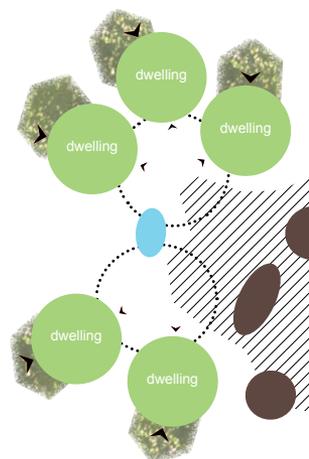
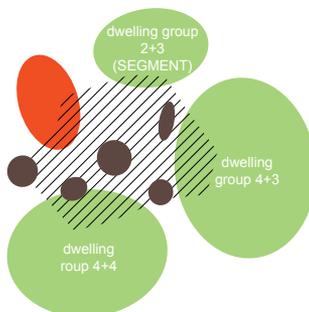
All areas to which residents have access must be disabled-friendly. Turning radii must be documented on all drawings.

In general a pleasant indoor climate must be ensured, including the possibility of extra air exchange and opening windows. Light attenuation should be provided between dwellings – also in connection with the ventilation plant – and good acoustic control generally ensured.

We recommend mobile lifts, but in the event of a ceiling lift being fitted, it is important to conceal and integrate this in the building.

The example here shows 3 dwelling groups with 5, 7 and 8 residents, each divided into 2 clusters. Experience from residential facilities shows that 8 or so residents make a good group size in terms of the residents' preferences and planning of staff.

-  Dwelling/dwelling group
-  Private patio for each dwelling.
-  Amenity area in dwelling group.
-  Communal kitchen in dwelling group.
-  Communal areas.
-  Functional, treatment and exercise rooms
-  The staff area



dwelling groups

955-1,185 sq.m in total
between 1,335 and 1,660 sq.m gross

Number	Room type	Estimated net area per room (sq.m)	Description and functional requirements
20	Dwelling	38-45 sq.m	<p>Housing allowance is granted for 65 sq.m gross incl. communal areas. In the example we have chosen a dwelling size of between 38 and 45 sq.m net.</p> <p>Independent dwelling with own entrance from the exterior. Secondary entrance from communal areas. Dwelling area divided into entrance hall, amenity room, bedroom, kitchenette and bathroom.</p> <p>The dwelling is fitted out for disability-friendliness, prepared for mobile lifts and possibly even a hospital bed.</p> <p>Consider to what extent the dwelling can be fitted out as a flexible area with movable walls or other room dividers.</p> <p>If the dwelling is fitted out with a kitchenette: provide scope for installing a proper kitchen later on if the resident so wishes.</p> <p>Bathroom in disability-friendly fit-out with durability in light of declining skills.</p> <p>See also description in the section 'The dwelling'.</p>
2 per dwelling group	Living area in dwelling group	Min. 25-30 sq.m	<p>Local amenity room, shared between each cluster in the dwelling group.</p> <p>Fitted out to suit residents' preferences - for example, settee, armchair, café table, dining table. Possibility of screening off seating.</p> <p>See also description in the section 'Communal areas'.</p>
1 per dwelling group	Communal kitchen in dwelling group	15-20 sq.m	<p>Disabled-friendly kitchen, shared between two clusters in the dwelling group.</p> <p>See also description in the section 'Communal areas'.</p>
20	Private patio for each dwelling	-	<p>Private patio for each dwelling, which can be adapted to the individual resident's wishes and needs.</p> <p>See also description in the section 'The dwelling'.</p>
1 per dwelling group	Possible laundry room in dwelling group	10-15 sq.m	<p>Possible laundry in dwelling group as an alternative to stackable appliance units in dwellings.</p> <p>See description in the section 'Communal areas'.</p>

Number	Room type	Estimated net area per room (sq.m)	Description and functional requirements
1 or more	Communal amenity rooms	Min. 50 sq.m	<p>Rendezvous point for residents, relatives and staff. Flexible settings that support activities of varying size, type and screening requirements.</p> <p>Fittings must allow for parallel communities, socializing and intimacy.</p> <p>Work zones should be appointed for the employees with fittings that express homeliness and calm - for example, café tables or armchairs.</p> <p>Shared workstations to be provided with smallish desks and positioned, for instance, in connection with tall shelving to conceal a seated employee from the residents.</p> <p>Disabled-friendly.</p> <p>See also description in the section 'Communal areas'.</p>
3 or more	Niches and breaks	Min. 25 sq.m	<p>Several smallish informal rendezvous points and niches with varying degrees of screening.</p> <p>Room for armchairs, sofa groups, café table etc. Can beneficially be used to break up circulation and distribution areas.</p>
1	Treatment room	10-15 sq.m	<p>Rooms appointed with focus on homeliness and security for the residents. Scope for routine treatment and examination tasks.</p> <p>The space must be fitted out with a massage couch, desk with chairs, washbasin and pleasant sitting furniture. The space should be located very close to the staff area.</p>
1	Exercise room	25-30 sq.m.	<p>Fully equipped gym for the residents, with emphasis on sturdy and safe appliances.</p> <p>See also description in the section "Communal areas".</p>
Min. 1	Other functional rooms	15-20 sq.m	<p>Room performing specific functions like IT, library, music or others. Included in needs identification.</p>
-	Communal patio	-	<p>See description in the section "Communal areas".</p>

Number	Room type	Estimated net area per room (sq.m)	Description and functional requirements
1	<p>Joint staff area (core)</p> <ul style="list-style-type: none"> - The size depends on the number of residents and their care requirements - This example has been based on 20 residents (1.25 employees/residents). - Manager, assistant manager & 2 administrative employees have permanent spaces (4) - Others have shared spaces (ratio approx. 25% - 1 workstation for 4 employees). 	<p>Approx. 18 sq.m per workstation</p> <p>- (11 workstations in this example)</p>	<p>Communal open, team-based work environment for staff, management and administration, with work groups of varying size and access to conference, study, telephone and printer/copier rooms.</p> <p>Possibility of entire staff group being able to hold short meetings centrally in the area.</p> <p>Varying transparency in relation to other areas in the residential facility - the area is primarily for those types of work that do not require proximity to the residents. Scope for controlling view in and out.</p> <p>Estimated filing requirement per workstation 1.5 running metres. Manager 2.5 running metres. 10 running metres' remote archives (figures to be verified).</p> <p>Conference and study room to be sited in connection with open work environment, with acoustic regulation and scope for controlling view in and out.</p> <p>Estimated sq.m per workstation includes conference, study, telephone and printer/copier room in the total area/workspace. The number of workstations depends on the specific residential facilities. Conference, study and telephone room: 7-12 sq.m each (estimated).</p> <p>See also description in the section 'Staff areas'.</p>
-	Work zones in the communal area	-	See communal areas.
1	Staff entrance	-	Separate entrance to the communal staff area with good connection to bicycle and car parking.
1	Largish conference room	-	Largish conference room sized 25-30 sq.m – can be made up of smaller meeting and quiet rooms, which can be combined with the aid of folding dividers.
1	Waiting area	5-10 sq.m	Smallish waiting area with space for waiting guests and relatives. Space for settee or chairs.
Min. 1	Staff room	10-15 sq.m	<p>Room with bed and facilities for staff staying the night. Space for settee/chairs/café table.</p> <p>Positioned in the immediate vicinity of toilet, changing area, bathing facilities and wardrobe.</p>

support room

75 – 95 sq.m in total
between 105 and 135 sq.m gross

Number	Room type	Estimated net area per room (sq.m)	Description and functional requirements
1	Janitor's room	10 sq.m	Office and workshop for handyman. Contains office workspace and space for minor repairs as well as tools. Filing requirement approx. 8 running metres.
1	Changing and bathing – women	10-15 sq.m	Changing facilities for staff. Incl. toilet and shower.
1	Changing and bathing – men	10-15 sq.m	Changing facilities for staff. Incl. toilet and shower.
2 or more	Toilets for staff and guests in communal areas	7 sq.m	The toilets must be designed for disability-friendliness.
1	Medicine room	5-10 sq.m	For joint storage and dosing of medicine. Locked and undisturbed.
1	Depot/ repository	15-20 sq.m	-
1	Remote archives	10-15 sq.m	-
-	Parking for cars and bicycles	-	Parking for staff, visitors and relatives – as per requirements under current local plan.
1	Refuse room etc.	-	In connection with the facility there should be a separate building or room for rubbish, garden implements and so on.

references

Et Helt Liv [A Complete Life]
Hinnerup Kollegiet & Central
Denmark Region
Ed.: Jensen, L.A. & Kallmeyer,
V.

National Autism Plan
National Centre for Autism

Indretning af plejecentre – for
svage ældre og mennesker
med demens
[Fitting out care centres – for
frail elderly people and those
with dementia]
Terkiltsen, M.

Trivsel & plejeboligens
udformning
[Well-being & the design of
care accommodation]
Møller, K. and Knudstrup, M.

Ældre med autisme
– en debatbog
[Elderly people with autism
– a debate book]
National Centre for Autism
Ed.: Overø, K. & Haracopos, D.

Autismebladet 1:2009
[The Autism Magazine]
National Centre for Autism

Communication (magazine)
National Autistic Society

Plejeboligens rumlige sfærer
og betydningshierarki
The spatial spheres and
semantic hierarchy of care ac-
commodation]
In: Arkitekten, 3, 2008
Mortensen, G.L.



