



Dementia Green Care **DESIGN GUIDE**

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Dementia Green Care- DESIGN GUIDE

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As a contribution to the growing body of knowledge and expert guidance on the design of outdoor spaces for people with dementia, this Guide addresses the growing need for spaces to be actively used by residents and service users for therapeutic benefit. It was developed together with a booklet that gives more information about the 'Therapeutic Dementia Care' research and design project (funded by the HIEC- Health, Innovation and Education Cluster) from which they both resulted. In this project we paid particular attention to the needs of people with dementia and distressed behaviour. Hence, the focus is on care environments for nursing, residential and enhanced day support.

Both documents are available on these and other websites:

NHS Central Lancashire
Age Concern Central Lancashire
Alzheimer's Society
Lancashire County Council
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Taking care outside

For an outdoor space to provide therapeutic benefit to residents and service users with dementia, certain requirements must be met in terms of the layout, circulation, elements and features. It is an advantage to consider the location and position of the building in the early stages of planning or renovating your site, as the indoor-outdoor connection will impact actual use of the garden and therefore therapeutic potential. Beyond the physical requirements, a beneficial connection to nature must be facilitated more broadly by involving staff, families, friends and volunteers in the ongoing use of the space. This short Design Guide will help you create the outdoor spaces that support this approach. It gives a clear design brief about the physical spaces required for therapeutic outcomes, explaining with images from practice how they are intended to be used and providing sample plans that address them.

The Project Booklet, a companion to this Design Guide, provides further insight into a 'Dementia Green Care' approach for this client group - the principles, practice and theoretical basis, insights into operations and staff training, as well as findings from the research project. The Project Booklet will be of interest to managers, owners and operators of care homes, nursing homes and day care facilities, as well as all those involved in the provision of dementia care services.

Both publications build upon Design for Nature in Dementia Care (Chalfont, 2008).

Intended Audience

This Design Guide is written primarily for design professionals - landscape architects, architects, landscape designers and garden designers. It will also be of interest to those involved in the design and building of environments (as well as the planning or commissioning of services) for dementia care.



A domestic back garden at a human scale, Charnley Fold

1. Design Brief for Dementia Green Care

2. Designing for Use

- ◆ Passive Space
- ◆ Active Space
- ◆ Risk-Free and Risk-Assumed Gardens
- ◆ Courtyard Gardens
- ◆ Design Criteria to Promote Activity
- ◆ Horticultural Therapy
- ◆ Risk-Free Gardens
- ◆ Risk-Assumed Gardens

Design not to limit or control, but to interest and engage.

Designing a garden for therapeutic benefit of the people using it is not a new concept and probably something you are already doing, but applying this to dementia care is a recent phenomenon. Research supports this approach by evidencing the multiple benefits for people's health and wellbeing.

By designing nature into the daily lives of people with dementia you will be contributing to the emerging 'dementia green care' movement. Here are some of the achievable aims:

- ◆ Reducing needs through an enabling environment
- ◆ Maintaining and improving skills
- ◆ Improving quality of life for people with all levels of need and ability
- ◆ Identifying a set of goals and a way to measure progress towards them

A primary focus of your designed environment will be to provide nature as a therapeutic tool with which to engage a person with dementia. She or he can become involved in the garden environment either by themselves or with someone – usually a friend, family member or paid carer. The interaction that occurs between people in the garden is actually helped along by nature stimulation, because plants, animals, earth, water, sun, sky, season and climate give people something to talk about.



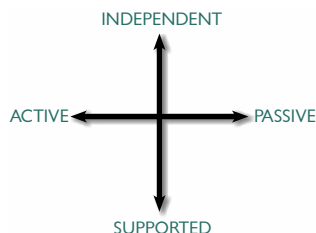
Apples and flowers



Hanging up a handmade bird treat

Support and enable people into movement and activity

Care environments are becoming increasingly complex in terms of the diversity of needs and abilities they must support. Consider areas for both active use (stimulates and enables active participation) and passive use (supplies entertainment or respite). Different areas can be designed to accommodate each. Likewise, some people will want to use the garden independently, while others need to be supported and encouraged.



Obviously a wide range of uses requires attention be paid to safety and risk. But one size does not fit all and it will actually erode the therapeutic benefits you are aiming for. A wide range of needs and abilities calls for different areas to be separated but integrated.

Passive Space

A passive space is one that encourages calm restfulness where residents can enjoy some peace and quiet, a sense of freedom, some fresh air and a chance to get away from other residents. One type of passive space is a *sitting-out space*. It should be a comfortable seat or seating area that residents can go to and use on their own. The person passively receives stimulation from the natural world, so plants and daylight must be abundant. Green is the most calming colour, but blue and white blossoms will add to the restful effect. The sound of water can be added with a water feature that gives an audible quality to the space.

Passive space has certain qualities that support a therapeutic experience:

- ◆ Comfortable furniture to encourage resting surrounded by sensory nature
- ◆ Peaceful views to help a person calm down and relax
- ◆ A glimpse of wildlife encouraged by the nearness of a tree, bird bath or bird feeder
- ◆ Enclosure or shelter – an arbor seat or a structure with seating, a roof and a view out
- ◆ Trees, shrubs and flowering plants to interest and delight



A peaceful green sanctuary with flowers in cool colours. The soft gurgling of a water feature resonates within the space



A warm spot next to fragrant textural planting with a rock water feature nearby

Active Space

To encourage an active lifestyle for people with dementia in a care setting, promote movement and activity by including these aspirations in your design brief:

- ◆ Enables frequent trips outdoors for fresh air, sunshine and connection to nature
- ◆ Enables people to be actively engaged outdoors in a variety of ways
- ◆ Enables safe movement by accommodating for physical and perceptual limitations
- ◆ Offers opportunities for staff to calm, distract and redirect interest (eg 'a sensory stroll')
- ◆ Supports activities that can be recorded, measured and compared to resident outcomes



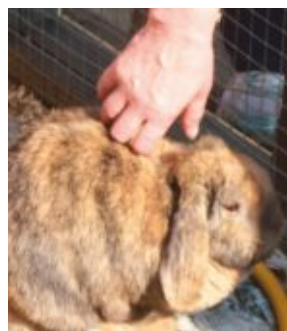
A walk before tea



Interacting with volunteers

To create active space, these therapeutic activities need to be enabled through design:

- ◆ Feeding, exercising, petting or caring for animals
- ◆ Starting and tending to seeds and plants
- ◆ Doing 'proper jobs' like mowing, raking and sweeping, or pegging out laundry
- ◆ Frequent or routine involvement in useful, meaningful garden work
- ◆ Harvesting fruit, veg, herbs & flowers for cooking or decorating inside the home
- ◆ Playing with racquets, bats, golf clubs and balls (swing, hit, aim, catch, kick or throw)
- ◆ Exercise, sports or green gym (for aerobic exercise, repetitive movement, balance, coordination and use of strength.)
- ◆ Playing on playground equipment (choose items that kids of all ages can enjoy).



Reaching into the pen to stroke Fluffy



Prompting activity near the games lawn

Risk-Free and Risk-Assumed Gardens

The concept of a Risk-Free Garden or a Risk-Assumed Garden avoids the fate of many care home gardens that are so low-risk they are useless therapeutically. This concept prevents all outdoor spaces in the home from being designed with the lowest possible expectation for resident involvement.

Risk-Free Gardens are outdoor areas that a resident with dementia could use independently (on their own, by themselves). This space is of special value to residents who are physically able, highly mobile and walk constantly. These gardens need to be visible from indoor rooms so staff can see people using them. A balcony is an example of a Risk-Free Garden as residents will be able to access it as and when they want. A Risk-Free Garden would have an open-door policy.



Having a drink in a Risk-Free garden in the sunshine

Risk-Assumed Gardens are outdoor areas that a resident with dementia will only use when accompanied by a responsible person.

These are the key characteristics or design criteria:

- ♦ Part of the garden (perhaps all of it) may not be visible from indoor rooms.
- ♦ It is intended as a special destination that will enhance and extend family visits by providing areas with meaning and purpose.
- ♦ This is where much of the therapeutic activity will happen between staff and residents.



Seating near vibrant colour and fragrance

'Family Garden' is the name used to identify an area that is Risk-Assumed because it will be frequented by families and will include all-ages play equipment.



Mowing the pavement counts!

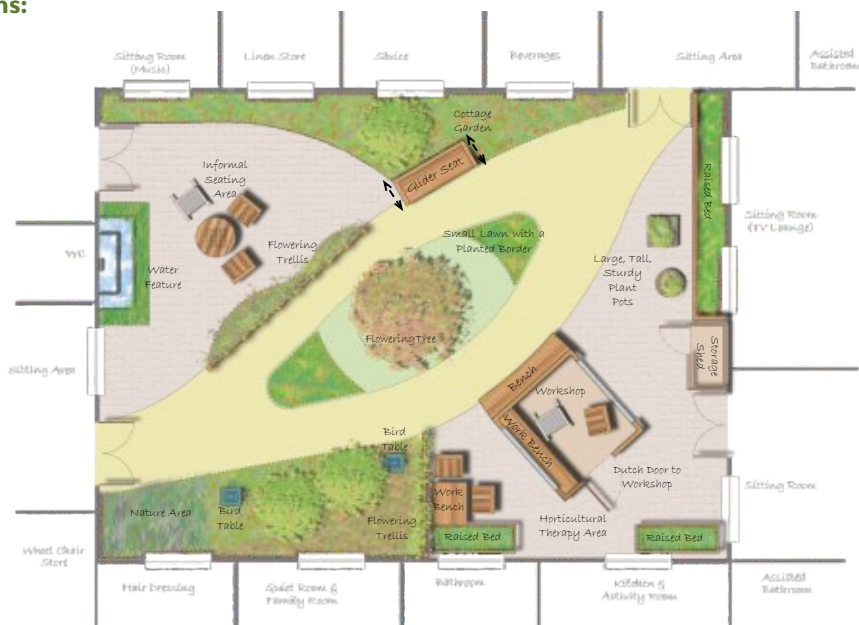


Ladies enjoying a drink in late August

Courtyard Gardens

As these are visible from internal rooms, and because an internal courtyard is an enclosed space, they should at least be **'Risk-Free'**, with an open door policy for residents to access the space unassisted. Depending on the home's ability to facilitate engagement, to know and understand the residents and to manage the risk, a courtyard can also have some **'Risk-Assumed'** items like water features, a glider or swing seat and a piece of exercise equipment.

Here are two examples of a courtyard garden showing visibility from indoor rooms:



Example 1- Courtyard Garden (Risk-Assumed)

This courtyard space has a central lawn with a planted border of fragrant, colourful plants. It acts as the focal point to the main access paths from the building, providing a zone for active movement. The central flowering tree anchors the space, and gives residents interesting seasonal experiences both from inside the building and from within the courtyard. An informal seating area in close proximity to a water feature will create a space where residents can sit, and enjoy the sensory qualities of water. Planted edges to the courtyard provide not only a privacy buffer to the interior spaces, but also make the courtyard into a pleasant green garden, with planting variety. Trellis arrangements provide a variance in height to the structure of the space, a place for flowering climbers to grow and places where people can sit and feel protected. The horticultural therapy area is a place where residents can undertake activities and have ownership of their courtyard garden.



Example 2- Courtyard Garden (Risk-free)

Block paving provides a safe, smooth, non-slip walking surface throughout. Areas of sun and shade are provided for use by individuals, couples or groups. Plantings include edible plants, vegetables, traditional cottage garden as well as native plants, trailing vines, herbs, fragrant plants and colourful annuals. A garden work area contains a work bench and a shed for organised horticultural activities or simply pottering about. Raised beds, tall pots and trellises bring plants within reach. Diverse plantings add colour and fragrance to trigger memories, provide meaningful occupation, stimulate the senses and lift the spirit. Wildlife is encouraged by providing food, forage, shelter, and perches with the native wild area, pergola, arch, tree, trellises and bird feeders. Awnings provide shade on the sunny side of the space.



Photos of courtyard as built



Cottage garden



Fragrant honeysuckle climbing the pergola



Colourful sunny border

Design Criteria to promote activity in a therapeutic garden

1. Potting shed, workshop (or a bespoke combination of the two), or a purpose-built polytunnel for doing garden projects, planting up, woodwork or tinkering with tools.
2. Tool stores, cabinets and equipment storage for tools, games, cushions, etc. to encourage people to use the outdoors. Familiar things to carry, push or kick give meaning and purpose to the movement.
3. Electric outlets in the workshop for powertools, lights, a radio, a heater, a kettle, etc. to make the place usable and comfortable (i.e. Shed Therapy approach).
4. A lawn area useful for play and games, sports, grass cutting, building snowmen, etc.
5. Wildlife area with habitat plants, feeders, bird tables, nesting boxes and a bug hotel.
6. Water taps and/or a water butt for watering plants, topping up the water feature and cleaning and refilling the bird baths.
7. Different types of fencing and trellis to support hanging baskets, bird feeders, silly signs and decorative elements. All joinery should be comfortable to the touch and sanded smooth, then preserved with paint, stain or oil. The joiner can advise on what to use for which wood and the maintenance required.
8. Horticultural activity spaces for small groups or one-to-one work in a focused space (see below).



Raised bed and ground level planting beds are in close proximity to shed and garden room



Covered porch and raised bed outside the garden room



In the potting shed

Social and Therapeutic Horticulture (STH) is practiced with many different client groups around the UK. By engaging in the practice of STH, an individual can gain personal health and well-being through gardening. The horticultural activity proposed here for dementia care gardens draws on this practice of using plants, a person-centred care philosophy and social interaction to achieve results. To be most effective with this client group a designed space must work well for both staff and residents.

Example 1- Horticultural Therapy Area

Paving throughout in a unified colour and pattern makes this space easy to use and navigate around. A large canopy from the lounge provides a transitional space between the indoors and outside, a space that can be used in all weather conditions for outdoor seating and activity. Large sturdy pots with a variety of bulbs and fruiting plants provide easy access to nature and do not create obstacles as smaller pots would. A variety of seating options allows the residents a choice in where they sit in the garden and variety in what they can view from that space. A glider seat provides gentle rocking motion which can be comforting to users.

A flowering trellis creates a separation between the horticultural therapy area and the rest of the garden; it also provides a nice backdrop to a seating zone, when it is planted with fragrant climbers with different coloured blooms. Raised beds at different heights provide spaces where residents and carers can do activities, even those who need to sit can be involved. A workshop space and green house provide additional indoor environments for horticultural therapy, where potting and nurturing plants can happen.

Additional stores also provide added storage spaces for tools and gardening equipment. A place is provided for animals to be kept, as this can also provide a therapeutic experience for residents. Outside planting and growing is encouraged with the provision of a small plot for vegetables and an orchard of fruit trees. The process of growth through to harvesting would be enjoyable for staff and residents alike.



Example 2- Horticultural Therapy Area

Here again a large canopy provides shelter and transitional space between the garden and the indoors. Seating of various kinds can be placed in this area to make a space residents could use for a variety of activities in all-weather situations. Varying the colour and texture of the block paving significantly in the central space, signifies that this area is a zone of horticultural activity, and something different to the surrounding paved space. A work shop and adjoining greenhouse are located close to the building allowing residents of all abilities easy access to it. Inside, work benches, seating and storage for tools and garden equipment can be found. Views out from the green house on to the nature area would provide an important sensory experience for residents.

The provision of a bird table and bath encourages nature into the space adding yet another important experience for the resident. A flowering trellis again creates a separation between the horticultural therapy area and the rest of the garden, but also encourages residents to look beyond this space by creating a curiosity factor. Raised beds at different heights provide spaces where residents and carers can do activities, even those who need to sit can be involved. The raised beds can be easily viewed from within the lounge, allowing residents a daily inspection of the plants progress, and giving them ownership of their garden space.



Risk-Free Gardens

These are areas that a person with dementia, even with distressed behaviour, can use independently and unassisted, the following design criteria apply:

- ♦ For rapid movement and limitations in spatial awareness, make path surfaces uniform in width, colour and texture
- ♦ If a poured surface is used ensure proper fall lines so there is no standing water on the path. Also make the final surface texture not too smooth (slippery) and not too rough (friction)
- ♦ Make no sharp turns in the path that would allow a person to walk off the path into a bed. Turns or curves require the addition of a handrail or better yet, use a structure to guide people along the path, like the edge of a raised bed, a section of picket fence or the back of a bench
- ♦ Furniture is largely 'fixed' and static; moveable furniture is heavy and robust making it difficult to push over
- ♦ Pots and planters are at a size and height to be clearly visible to a person while walking quickly. (Anything lower than the waist will not be seen and may be walked into or tripped over)
- ♦ No structures are to be placed against the perimeter fence if they could be used to climb on (eg raised beds and benches)
- ♦ Trellises if they enclose space are to be diagonal with small holes (impossible to climb)
- ♦ Create no ambiguous openings a person may try to squeeze through – make them large enough to walk through or close them off
- ♦ No plants with prickles or thorns and nothing poisonous
- ♦ Use toughened safety glass for windows in a shed, greenhouse, summer house or potting shed
- ♦ No water bodies (eg. ponds and fountains with a water surface and depth of water)
- ♦ Create a lawn that is flat and level with no curbing or upstands between the lawn and the beds
- ♦ A continuous path leading away from the door and returning either to that door or some other way back inside
- ♦ Allow for visibility from inside windows of the home. Make sure people outside can be easily seen from indoors, even when in a workshop, gazebo or other structure. Consider placement of windows in these structures for sun and visibility both into and out of them



Wide handrails support walking and hold pots up at eye level - structure is multi-purpose



View over the garden fence

Garden Features that can be made safe and used in a Risk-Free Garden:

Garden Feature	Adaption for use in a Risk Free Garden
Potting Shed or Workshop	<ul style="list-style-type: none"> ♦ Put windows on 3 sides and a door on the fourth side with a window in it. ♦ Position the structure where it can be seen from inside the home.
Shed	<ul style="list-style-type: none"> ♦ If contents are harmless (chicken feed, straw, bird feed, soil, pots, etc.) then put the shed where it can be seen from inside the home and leave it unlocked. ♦ If it contains tools, keep locked and use when staff are outside with residents.
Water Feature	<ul style="list-style-type: none"> ♦ Use the bubbler type with water flowing over a stone and gurgling down through small rocks into an enclosed reservoir. There is no water surface in this type. ♦ To have a water surface so the fountain actually makes a splashing sound, you can fit a metal grate to span across the water surface of a pond, just a couple of inches below the surface. This is easier to build if the pond is square or round and has solid walls (brick or concrete). The grate prevents someone falling in.
Pots, Planters and Ornaments	<ul style="list-style-type: none"> ♦ Small low pots, planters and ornaments in a normal garden can be tripping hazards if a person does not see them in time to avoid them. Such items can be placed against a wall or in a planting bed. ♦ For pots in the paved areas, use large, tall, sturdy pots (can be round or square) that are table height, easier for people to plant and highly visible.
Pergola, Trellis, Arch or Tree	<ul style="list-style-type: none"> ♦ Any person in a care environment would struggle to take their own life but it is still possible to achieve! A pergola, trellis, arch or tree will have what are called 'ligature points' and hence they are often ruled out in clinical/hospital mental health settings. For people with dementia and distressed behaviour these structures could still be lethal if a person is intent on suicide. But a garden with no vertical structures or trees is lethal to the soul. So do not rule them out altogether. Instead, use these structures in garden areas visible from indoors. Most importantly, know your residents. If anybody is at risk of self-harm, go outside with them until they are no longer at risk of injuring themselves. Structures can also be designed ligature-free.

Example 1- Risk-Free Garden

This garden provides numerous opportunities for activity, exercise, human interaction and quiet seating areas. Block paving around the edges of the central lawn leads residents around the outer garden space easily and clearly. A variety of seating spaces are provided, giving many options for either quiet personal space or sitting with others. Plant beds are scattered around the garden, providing buffers, areas of seasonal interest and sensory experience. The horticultural therapy area can be clearly seen from the lounge, allowing for natural surveillance of the space. Non-slip resin bound surfacing is used here, so that any soil or garden debris can be swept away easily without damage to the surface. Raised beds of various sizes are provided for residents to plant. An adjoining allotment area is located to the rear of the garden providing some where residents can spend time nurturing edible crops, which may be reminiscent of activities from their past. The potting shed would have views out into the small orchard of fruit trees, where they can watch seasonal changes happen and birds feeding. The games lawn is a central space where games and exercise can take place. It can also be used as an events space for summer gatherings of residents, staff and family.



D. Risk-Assumed Gardens

These are areas that a person with dementia and distressed behaviour is assisted to use. It provides a whole series of normal yet high-quality experiences common to the real world, ones they may not be able to safely enjoy on their own.

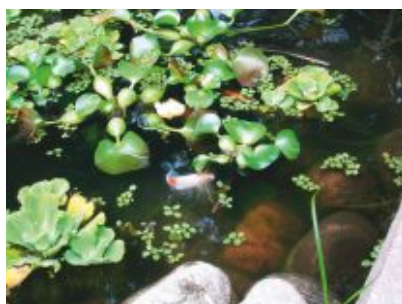
Garden Features of a Risk-Assumed Garden include

- ◆ A small set of steps (2 or 3) with a handrail at each side to promote agility and balance
- ◆ Pathways enlivened with short slopes and ramps to promote exercise
- ◆ Fish pond and recognisable water features, like a fountain that splashes onto a water surface
- ◆ Different surfaces for various walking experiences (eg. cobblestones, sand and rubberised surface)
- ◆ Rose garden close enough to people for blossoms to be touched and sniffed
- ◆ Play equipment such as a spring rider, a see-saw or a slide
- ◆ Green gym and senior exercise and playground equipment for strength, flexibility and fun
- ◆ Glider, rocking chair or swing seat
- ◆ Allotment and compost piles for normal cultural expectations and memories
- ◆ Outdoor toilet would be helpful if garden is a distance away (a modern composting toilet does not require plumbing)

Water features in use at care environments:



Nursing home pond in Stuttgart, Germany



Small fishpond at a nursing home in Stockholm, Sweden



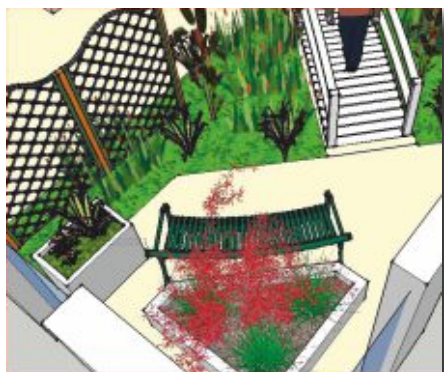
Cleaning the flowform at Charnley Fold is an activity

Example 1- Risk-Assumed Garden

This garden is made up of a sequence of spaces for various activities. A covered seating space is provided; connecting the Lounge indoors with the garden, making this a sheltered space outdoors which will act as the transition space between the two, encouraging people to step out into the garden. There are numerous opportunities for seating; including benches, seats beside tables for group gatherings, a circular bench with a central tree, seating beneath a pergola, a work station bench, and a moving swing seat. There is ample storage space in the small units provided at various places in the garden, here staff and residents can store garden tools, work materials, games and sports equipment. To the south of the garden, a wild life pond delivers a more naturalistic garden feature; marginal planting and boulders would make this a pleasant place to sit. The games lawn is a space for active games, as well as outdoor gatherings for picnics and events. Play features such as a small grass mound and sandpit have been added here to provide visiting children some active play space. The horticultural therapy area sits to the east of the garden, providing opportunities for residents to plant and grow in their garden space.



Garden concepts designed for Vida Hall, Harrogate by Chalfont Design





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