

# Turning gardens into multisensory experiences

Gardening is an active hobby, but all can enjoy the pleasures of a garden. With forward planning, gardens can be designed to provide all-year-round enjoyment. This article looks beyond the provision of a basic garden in care homes and encourages an approach that will provide a safe outdoor environment that stimulates all senses.

## Importance of a garden for people in residential care

Most people enjoy gardens either actively or passively, perhaps as a place to reflect, to reminisce, to contemplate or to simply to look out onto. A garden should be an integral, interesting part of a care home environment, no matter how small the area available.

Today, we are far more aware of the physical difficulties that prevent full enjoyment of a garden. To enable people of all ages and abilities to participate and to enjoy basic facilities without the need for adaptations, the concept of inclusive design should extend into outdoor spaces.

## Redesigning a garden

There are many books and articles on designing gardens for a wheelchair user, ambulant disabled person and visually impaired gardener and their principles can be applied to ensure inclusive design. Some features are provided in *Table 1*.

Seating areas grouped together, with spaces for wheelchair users, can encourage social interaction. Before planning seating, ask several staff and residents to journey through your garden, pinpointing areas of sensory stimulation or relaxation.

Libraries have books on designing or redesigning any type or size of garden. Local gardening clubs or colleges that run gardening courses may be interested in a

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'live project' to help you redesign a garden area. Cowley (2004) describes how in 2002, BUPA approached Thrive, a national disability and gardening charity, to help create sensory gardens enlisting the help of volunteers and community groups.

Many care homes prefer simple, low-maintenance attractive gardens. Books on gardening for busy people can provide a wealth of ideas to be used in care homes. Pavey (1999) helps the reader to create an 'outside room' that is 'a place of relaxation – a bolt-hole from the pressures that life



throws at us all'. He describes redesigning a garden in stages, particularly if there are budget constraints.

TV programmes such as *Ground Force* and *Garden Fronts* provide inspiration for low-maintenance gardens and gardens designed for a wheelchair user. There is a sample of a low-maintenance wheelchair-

**Table 1.**

### SOME FEATURES WITHIN AN INCLUSIVE GARDEN

Entrances and exits:	<ul style="list-style-type: none"> <li>No thresholds at entrances to garden</li> <li>Large external and internal mats to wipe feet and clean wheels/walking aids on</li> </ul>
Paths and surfaces:	<ul style="list-style-type: none"> <li>Pathways wide enough to permit passage by a wheelchair and ambulant disabled person with an attendant or passing places</li> <li>Straight paths with focal features that will aide orientation of residents with visual impairments, e.g. sculpture or water feature that emits sound</li> <li>Concrete or brick edges to prevent wheelchair tipping over the edge</li> <li>Gradients of less than 1:10</li> <li>Even surfaces that are easy to manoeuvre over</li> <li>Hard landscaping rather than a lawn area, using decking or large slabs</li> </ul>
Seating:	<ul style="list-style-type: none"> <li>Lots of resting places set back from a path (avoids being a trip hazard)</li> <li>Seating by focal points in the sun and the shade, e.g. bubble fountains, bird tables, sensory gardens, under trees</li> <li>Tables with spaces to park a wheelchair alongside</li> </ul>
Raised beds:	<ul style="list-style-type: none"> <li>Can be made of brick, concrete or treated wood (e.g. railway sleepers)</li> <li>Plants that are harmful if touched or ingested should be avoided</li> </ul>

friendly garden online at [www.bbc.co.uk/gardening/design/des\\_ins/leaf\\_pages/23.shtml](http://www.bbc.co.uk/gardening/design/des_ins/leaf_pages/23.shtml). The BBC website contains a free download of 'virtual garden', which takes the user through designing to creating a garden in a two-dimensional and three-dimensional format. Different forms of seating, fencing, planting and ground cover can be experimented with, although there is limited choice of features and foliage.

Themes can be used, such as an English tea garden, Mediterranean garden, Japanese garden, herb garden and nature garden (perhaps a courtyard garden surrounding a patio area). Plants grown in containers add interest to a bare wall, although ideally they should be planted in the ground.

Chalfont (2005) provides a visual template for a garden within a dementia care setting, encouraging users to venture outside 'just to see what is going on', and suggests that gardening spaces should relate to each other so that 'people can observe the action, comment on it and develop a desire to participate'.

### Providing a year-round garden

Visual impact is important and ideally, gardens should be pleasant and viewable from inside the year through. This is particularly important in a care home setting, when

several residents may not venture outside. Conservatories and strategic lighting will extend the hours that a garden can be enjoyed.

Stebbings' (2005) book lists over 500 plants and thousands of companions that help create an attractive garden through the seasons. It provides planting combinations and a useful cross-referenced profile of plants, such as identifying which season they are in bud, flower or leaf. Stebbings says:

**'Rather than be defeated by the changing seasons, we should rejoice in the variety that they bring and make the most of each time of the year.'**

### Sensory gardens

Although sensory gardens specially aim to stimulate all of the senses of sight, smell, touch, hearing and taste, all gardens have some sensory stimulation in them. Sensory gardens encourage exploration and interaction with objects; therefore, beds should be small and approachable on several sides to facilitate access. Sensory gardens can target one sense – for example, a fragrant garden – or have several separate sections aimed at specific senses. Or, the whole area can be multisensory.



### Visual stimulation

English gardens are very colourful in spring, summer and autumn. Plants full of nectar attract butterflies and pollinating insects. In late autumn, winter and early spring there is little colour apart from evergreen shrubs and trees. Therefore, rather than focus on colours, incorporate plants that have unusual shapes; 'architectural' plants will provide an interesting view all year round.

Shaw (2005) describes architectural plants as having 'a strong shape, an exotic appearance, an evergreen presence or an unusual quality that can visually improve its surroundings'. Her book is full of ideas for conservatory and outdoor planting, including sections on palms, ferns, grasses, climbers and trees with unusual bark colours and shapes.

Small sculptures, wooden structures and water features will add interest; for example, pagodas, arches, gazebos and bubble fountains. A simple zen garden can be made of three large rocks on a bed of stone with a dry slate stream.

Plant, bark and leaf colours can complement or perhaps contrast against the surrounding walls, screens or fences. Bird feeders will encourage birds into the garden and can be placed at wheelchair height to allow access by a wheelchair user.

### Olfactory stimulation

Scented plants fragrance the air without the need to touch, such as curry plant, evening primrose, honeysuckle, lilac, lily-of-the-valley, mock orange, roses, night-scented







stock, sweet peas and wisteria. Many smells evoke memories of bygone days; even subtle fragrances, such as daffodil and violets. Sunny areas allow the more fragrant flowers to grow. Herb sections, such as thyme, fennel, mint and rosemary, add fragrance and are useful in home cooking.

Scent arises from other sources; for example, during a barbecue when logs, charcoal, herbs and food are added. Aromatherapy oils and scented candles will blend with the more natural smells of cut grass and add to visual impact.

### **Tactile stimulation**

Many plants are wonderful to touch, with silky or fragranced leaves activated by brushing against them or by slightly crushing – for example, coriander, lemon balm, mint and scented geranium. Tactile plants can be places in pots near a path.

Different surfaces can be used for raised beds and concrete containers can be made more interesting with a pebble top or the edges brushed with yoghurt to encourage moss growth. Residents may enjoy cutting flowers or arranging them. Plants can be dried as used in craft activities.

### **Auditory stimulation**

Auditory stimulation by natural or activated sounds can be used. Natural sounds arise from birds and other wildlife. Rainwater can trickle down from a container and will attract the birds to drink and bathe. Plants and trees provide rustling sounds in the path of a breeze.

Activated sounds include wind chimes attached above arches to created gentle noises and water features, such as a mini-waterfall, water urn or bubble fountain with a flow of water.

### **Taste**

Tabor (2002) provides chapters on identifying herbs that are visually effective, useful for the kitchen, provide fragrance and can be used in crafts or just for cut flowers. But some plants are dangerous if ingested, and it is important to realize that severe reactions in residents can arise.

### **Other senses**

Additional to the main five senses, there are many more sensory pathways that can be stimulated in a garden. We perceive changes



in temperature and gardens should provide areas of sun and shade, essential if residents have sensitive skin. Several websites contain lists of plants to stimulate various senses, such as Noahs Arc Wildlife Gardens ([www.noahsarkgardens.co.uk](http://www.noahsarkgardens.co.uk)), which states:

**'A sensory garden is an area purposefully set out in separate beds that provide a wide range of sensory experiences in close proximity. Such an area provides a valuable site that can be used for relaxation, stimulation or even education, and a seating or rest area would normally be included in the design.'**

### **Dangerous plants**

Thorny, prickly plants and weeds, like roses and brambles, can hurt if a fall occurs or

limbs become entangled, but several garden plants, fruit and herbs can cause considerable harm if touched. It is surprising how many herbs, fruit and vegetables can cause problems if ingested. Therefore, it is safer to avoid plants that can cause harm if touched and care is required if there is a likelihood of a resident ingesting a poisonous plant, perhaps mistaking it for edible berries.

Monkshood is a very dangerous plant and all parts, particularly the root, are poisonous and fatal. Collins' (2001) useful book provides photographs of poisonous plants that 'have adverse effect on humans whether through contact or ingestion'. Tabor's (2002) chapter on useful herbs has a section on toxic herbs and identifies many side-effects of the common herbs grown in many gardens for culinary purposes. *Table*



2 contains extracts from Collins (2001) of some of the most dangerous plants.

## Conclusion

Gardens can be conceptualized as outdoor rooms and there is an increasing number of retail outlets that sell foliage and structural items. Several companies specializing in assistive equipment stock tools to enable disabled people to tend gardens more easily. Equipment will be explored in a later article.

Gardens are places to 'sit and watch the world go by' or to enjoy actively. By planning a garden, enjoyment can be provided all year round to residents, staff and visitors and become an integral aspect of care. **NRC**

Chalfont GE (2005) Creating enabling outdoor environments for residents *Nurs Res Care* 7(10): 454–7

Collins C (2001) *Plant Alert – A Garden Guide for Parents*. Guild of Master Craftsman Publications Ltd, East Sussex

Cowley D (2004) Building community ties through gardening. *Nurs Res Care* 6(7): 321

Pavey GA (1999) *Creative Gardening for Busy People*. Andre Deutsch Limited, London

Shaw C (2005) *Architectural Plants*. Collins, London

Stebbins G (2005) *The Year-round Garden*. Collins, London

Tabor R (2002) *All About Herbs*. Frances Lincoln Ltd, London

### Useful information

■ Virtual Gardens: BBC gardening information ([www.bbc.co.uk/gardening/how\\_to\\_be\\_a\\_gardener/comp\\_garden.shtml](http://www.bbc.co.uk/gardening/how_to_be_a_gardener/comp_garden.shtml)).

■ Royal Horticultural Society: 80 Vincent Square, London SW1P 2PE. Telephone: 020 7834 4333, [info@rhs.org.uk](mailto:info@rhs.org.uk), [www.rhs.org.uk/access/links\\_societies.asp](http://www.rhs.org.uk/access/links_societies.asp).

■ Thrive: The Geoffrey Udall Centre, Beech Hill, Reading, Berkshire RG7 2AT ([www.thrive.org.uk](http://www.thrive.org.uk)). Telephone: 0118 988 5688; blind gardeners helpline: 0118 988 6668

■ Gardening for Disabled Trust: Hayes Farmhouse, Hayes Lane, Peasmarsh, Rye, East Sussex TN31 6XR ([www.gardeningfordisabledtrust.org.uk](http://www.gardeningfordisabledtrust.org.uk))

**Table 2.**

**INFORMATION ON SOME OF THE MOST DANGEROUS PLANTS (COLLINS, 2001)**

Plant/fruit	Hazardous part	Symptoms
Delphinium and larkspur	Seeds and leaves if ingested.	Sudden death. Paralysis, difficulty breathing and weak irregular pulse.
Foxglove	All. Contains digitalis that affects the heart, causing sudden death.	Ingestion causes vomiting and diarrhoea and small amounts affect the heart.
Hellebore (Christmas Rose)	All parts.	Delirium, convulsions and respiratory failure. Death.
Laurel	All, especially leaves (contain hydrocyanic acid) and kernels of fruit.	Convulsions and respiratory distress.
Lily of the valley	Whole plant.	Cardioglycosides act on the heart, causing low, irregular pulse, severe abdominal pain, vomiting, dilated pupils. Clammy skin, delirium, coma and death.
Lupin	All parts especially the seeds.	Slows down the heart rate and respiratory system if ingested. Stomach pains, diarrhoea and vomiting.
Sweet pea	Seeds.	Ingestion causes vomiting, diarrhoea and temporary muscle paralysis.
Tobacco plant	Leaves contain nicotine. Very poisonous and easily absorbed into skin.	Fatal if ingested.
Celery and parsley	Sap if in contact with the sun in daylight.	Irritation and blistering.
Globe artichoke	Sap.	Skin irritation and dermatitis.
Rhubarb	Leaf blade contains oxalic acid. Stem is safe if removed 5 cm below leaf.	Ingestion can cause muscle and kidney damage, coma and even death.
Thyme	All. Oil is poisonous but small quantities may be safely used in cooking.	Ranges from headache, dizziness, nausea, stomach pain, convulsions, cardiac and respiratory problems. Soreness and inflammation from skin contact.
Tomato	Root, stem and leaves.	Gastroenteritis, constipation, weakness and paralysis.



## KEY POINTS

- Gardens are integral parts of a care home.
- Inclusive design ensures that all ages and levels of ability can enjoy a garden.
- Good garden design and architectural plants gives all-year-round pleasure.
- Sensory stimulation enhances a garden's therapeutic value.
- Care is needed to minimize the potential dangers of some plants.