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Small dementia design considerations for big impact

Sensitive design interventions for green spaces and dementia gardens

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There is a growing body of evidence to suggest that green space has a positive effect on dementia. Spending time outdoors can relieve stress and boost mental and emotional wellbeing, as well as enhancing physical fitness and functional capabilities, helping to maintain a quality of life and sense of independence for those suffering from dementia. The following article looks at what dementia is and how green space can be adapted for dementia patients, providing them with a safe, stimulating and enhanced environment to promote wellbeing.

Dementia is the umbrella term used to describe a group of symptoms associated with a decline in memory, or other cognitive skills, severe enough to reduce a person's ability to perform everyday activities. The effects of dementia also have a significant impact on the sufferer's family and caregivers. As the physical and psychological symptoms become more severe and increase in frequency, dementia patients lose their independence and become increasingly more reliant on support from their family and carers.

In addition to providing extra support, there is an added emotional impact on families and carers. It is estimated that there are **50 million people** living with dementia worldwide, which is predicted to increase to 152 million by 2050.

In the UK alone it is estimated that 850,000 people are living with dementia, **costing the UK government approximately £23bn per year**.[1]

This is more than the cost of cancer (£12bn) and heart disease (£8bn) combined.[2] With the current rise in life expectancy, it is estimated that in the next 30 years the amount of people living with dementia will double, with predicted costs likely to treble to over **£50bn**.[3]

This predicted increase makes it a key priority for NHS England and the British government.

In 2012 the then Prime Minister, David Cameron, launched his Challenge on Dementia, with a primary focus on improving dementia care across the country and increasing funding for research. Cameron's outline included a commitment to developing dementia friendly communities, whereby any organisations working with dementia patients should consider how they could be more inclusive and supportive.

Dementia is a terminal diagnosis, but when diagnosed, there is much that can be done. For example, increased exposure to green space can help improve symptoms such as agitation, confusion and depression.

The Senses Framework[4] indicates that spaces for those with dementia should be designed to create a sense of belonging, a sense of value, continuity and security, and encourage dementia patients to feel they have purpose. Additionally, these spaces should maximise use of patients' six senses, providing stimulation.

Wilson's theory of Biophilia[5] states that we are attracted to, and feel most comfortable in, natural environments.

Additionally, the National Strategy for Public Health[6] in England addresses the importance of the connection between green / open space and a person's wellbeing. There is also a significant amount of evidence examining the connection between improved health and exposure to nature in urban settings, including research into the benefits of community gardening and allotments.[7]

This all points to a range of benefits including improving people's quality of life, reducing feelings of exclusion and helping people to relax.[8] While none of the research is primarily focused on those with dementia, the findings can be linked with the symptoms surrounding the disease.

So, armed with this information, how can we improve the lives of those living with dementia and their families, friends and carers?

Are we, as designers, able to design and deliver green spaces to help provide unique, stimulating and safe environments?

Memory loss is one of the main problems associated with dementia, therefore it is critical that spaces are always designed with safety and security in mind. There is evidence of the psychological and emotional benefits, indeed mood enhancement, gained from green prescriptions and exposure to nature such as walking in the woods. However, it is unrealistic for dementia patients to be able to venture out independently and walk in the woods, as such it is of importance that green spaces for dementia patients do not overwhelm or lead to getting lost or confused.

The negative effects of poorly planned environments that are hard to navigate affect both the person living with dementia and their carer, who does not want to worry about their loved one or patient getting lost in unfamiliar areas. For this reason, it is important that dementia friendly green spaces provide paths that lead back to the building or central hub, and always have a clear view of their starting point. Not only will this ease the minds of carers, but it will also give patients more freedom and control to venture outside on their own, ultimately giving them a sense of achievement and improving self esteem.

Subtle changes and design considerations

The importance of creating a stimulating and varied environment for patients should not be dismissed. For example, some might like a place to sit and enjoy the view, others enjoy birdwatching.

Other design responses could include providing an interesting piece of art / sculpture, or an element within the environment that people can interact and tinker with, such as an outdoor games table, or some form of activity.

Providing interactive activities for patients challenges their cognitive abilities, which can greatly reduce memory loss and improve independent thinking.[9]

Look to garden therapy

To ensure that patients feel a sense of belonging, green spaces should be designed to cater for all abilities and all stages of dementia. For example, including raised planters along paths allows those less able to be involved with gardening to have plants at eye level to more easily engage their senses. The use of raised planters is a small design consideration that can enable patients to garden with ease, helping establish feelings of value, while also giving patients a sense of purpose and giving back a sense of independence.

Designing activities into the environment also increases opportunity for social interaction. The UK's leading charity for social and therapeutic horticulture, Thrive, uses gardening to help reduce anxiety in people living with dementia and The Journal of Dementia Care[10] notes that garden therapy can "reinforce a sense of self" and help provide "intimacy through group activities", stating that "caring for plants can alleviate feelings of helplessness and dependency on others".

Alongside ensuring that patients feel that they belong, it's important that the garden feels familiar, including old phone boxes or elements that can remind patients of the past, similar to that of the Five Rise Nursing Home in Bingley, West Yorkshire, which has recreated a streetscape from the 1950s to help trigger memories in patients.

Engage the senses

Raised planters can also be used to help trigger memories via scent. Strong scented plants in raised planters facilitate tactility, they allow patients to run their fingers through the environment, releasing the scents from plants to help trigger memories. It has been theorised[12] that gardens can help provide a powerful tool for reminiscing through scent and the act of planting that may have been common when sufferers were younger.

With scent being the sensory feature that takes the longest to reach the brain, highly scented plantings should be placed around doorways and seating.

This idea has been used before, when strongly scented plants such as buddleias, hydrangeas, dahlias, dianthus and delphiniums were all present in the Remember Me Chelsea garden inspired by the 1960s and 1970s.

As the population ages and those in care homes change generation, gardens will need to be updated to ensure that the planting is still relevant to guarantee a sense of continuity in line with patients' memories.

Create interactive and social spaces

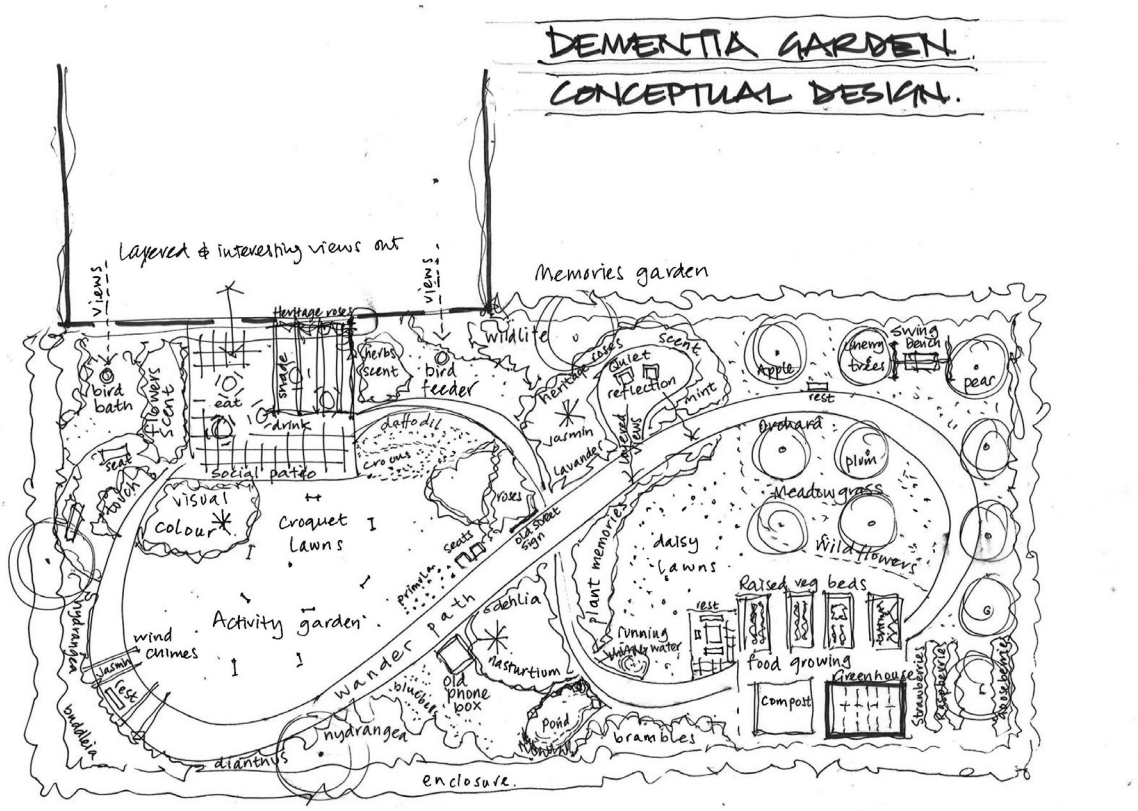
The Alzheimer's Society Dementia 2014 survey[13] reported that 40 percent of people with dementia felt lonely and 34 percent did not feel like they were part of their community, with a similar impact on their carers.

68 percent of those living with dementia were diagnosed with depression. The importance of human connection cannot be understated or ignored.

External spaces, gardens and the crossover sheltered spaces at thresholds to buildings create a unique opportunity to provide ageing populations, dementia sufferers and carers with a safe, social space.

Areas for group activities, on mown grass or decked areas to sit, eat, relax and socialise, are just as important as the areas of planting and gardening.

Well designed environments incorporate areas for group activities but also places for people to sit and enjoy the views, watch the birds, or simply people watch. Sensory stimulation can help to preserve basic skills ensuring patients continue to feel connected and socially significant.



Routes should be visually interesting and accommodating and, to help create a feeling of sanctuary, paths should be wide and smooth to allow people to comfortably pass or to walk along together with upward bevelled edges to avoid wheelchairs rolling off with no trip hazards along the way.

Steps should be avoided and any change in level should be clearly highlighted and addressed through the design response.

Foreground exercise and nature

Interviews with 108 people involved in gardening, walking and other outdoor projects supported by MIND[14] found that 90 percent of participants felt the combination of nature and exercise in an environment is most important to how they felt, with 94 percent saying that green exercise had mental health benefits to them.

Research looking at the connection between nature and green exercise shows that this form of exercise has added benefits over traditional exercise or activity programmes, with a number of studies[15, 16, 17] showing green exercise or activity programmes result in both short term and long term physical and mental health benefits.

Providing places for exercise along with seating without back rests ensures that core muscles do not become weak, further ensuring independence for patients.

Design interventions

- Smooth surfaced, trip hazard free, infinite paths eases carers' minds and gives patients more freedom
- Stimulate the senses with birdwatching, art and interactive elements which can reduce memory loss and improve independent thinking
- Raised planters allow for all abilities to get involved with gardening
- Familiarity of the surroundings ensures patients feel a sense of belonging
- Scented planting can help to stimulate memories
- Areas for socialising / group activities reduce loneliness in patients and carers
- Places for exercise and backless benches to encourage independence

Not only is dementia one of the top five leading causes of death in people over the age of 65,[18] but sufferers are also much more likely to be admitted to hospital for avoidable conditions such as dehydration, urinary infections and sores. This increases the strain on the NHS and caregivers.

The findings of the Alzheimer's Society Dementia 2014 survey in relation to loneliness and lack of community engagement highlight the social impact of dementia on both sufferers and their carers. Economic evaluation undertaken by the NHS Institute for Innovation and Improvement in 2011 suggested that through behavioural interventions nearly £70.4 million is saved in healthcare, reducing risks of strokes and falls.

Improving communities and the lives of people living in them and creating better environments are central to our values and design approach at Ryder.

The evidence discussed in this article alongside our experience creating these environments supports the notion that subtle design interventions and considered, well designed landscape interventions are able to further reduce the cost to the economy whilst improving communities and the lives of those living with, and those caring for, people with dementia.

We would love to hear from you if you are interested in collaborating.

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