

CARE ANALYSIS

Creating enabling outdoor environments for residents

Contact with the natural world is difficult for older people to achieve if their care needs require that they move into a residential environment. In such settings, activity programmes address a person's need for fresh air, sunshine and green plants by providing opportunities for outdoor activities such as gardening.

Although the benefits of 'people-plant' connections are well known (Lewis, 1996; Marcus and Barnes, 1999; Linden and Grut, 2002; Milligan et al, 2004), in reality the difficulties of doing an activity can undermine success. Many factors must line up, such as good weather, residents' health, desire and willingness to participate, transport, availability of equipment, resources, supplies and the absence of scheduling conflicts or staff shortages.

The responsibility for success falls to the management, activities director and care staff. For the resident with physical disabilities or cognitive impairment, non-participation in activities may mean a decline in his or her contact with the natural world (Kwack et al, 2005).

Importance of nearby nature

I asked a resident living in a dementia care unit why she liked to go outside:

'Well the sunshine is good for everybody, isn't it? And, uh, well I just think it's a...a pleasant thing to do. You know, you can sit in the garden, you can garden, or you can potter in the garden, or go and visit somebody and enjoy being out with people, you know, it's got a lot for it...sunshine.'

The resident went on to say:

'I don't think I could live in a house that didn't have a garden.'

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What is an enabling outdoor environment, why does it work and what are the design principles that determine success? Garuth Eliot Chalfont explains.

When I asked why not, she replied:

'Because there's something so nice to look at or fetch in from outside, you know.'

I then asked her what sort of things she would like to bring in:

'Hmm, the roses I think. The roses are nice. And, uh, I can't think of anything else. I know there's something else but I can't think...'

I asked her what she liked about the roses:

'The smell of them I think...well, they smell sweet, don't they?'

Ecology of the built environment

Engaging in their domestic outdoor environment contributes to people's daily lives in many ways, as this lady explained. But for people like her who are physically or mentally frail, the environmental effects are profound (Lawton et al, 1984; Mooney and Nicell, 1992). The design of the built environment and how the building is actually used by staff, residents and visitors are important factors in facilitating contact with the natural world for the residents (Parker et al, 2004).

This article reports on an ecological design approach that explores the unique interplay of the person and his or her environment (Reimer et al, 2004). This approach is being tried and evaluated in the dementia care unit in which this resident lives. Since the outdoor area is accessible to all residents of the home, as well as to day centre clients, the design principles are applicable generally to older people in residential care.



The term 'ecology' means 'the relationships between organisms and their environments'. Therefore, an ecological design approach considers the human and physical factors enabling or challenging a person's success in a range of activities.

Resident involvement in nature-related activities or simply going outdoors can be facilitated through the design of the physical space. For many reasons, outdoor spaces intended for use by residents in a care setting often go unused (Cohen-Mansfield and Werner, 1999).

Understanding the relationships between human and physical factors can result in a space that enables people's use of it.

Enabling environments for people with dementia

The INDEPENDENT project is a 3-year consortium research project funded by the Engineering and Physical Sciences Research Council, which is looking into the use of assistive technology for enjoyment by people with dementia in different living accommodations. Uniquely, the project is being

led by the desires, interests and opinions of people with dementia themselves, as well as those of staff and family carers.

Consortium partners include the Universities of Sheffield and Liverpool, Bath Institute for Medical Engineering, Dementia Voice, Huntleigh Healthcare, Northamptonshire County Council Social Services and Sheffcare, a care housing provider. Interviews with residents and family carers identified nature and the outdoors as important to wellbeing, but there were many impediments. Some had to do with the symptoms of dementia, such as memory loss and confusion, but others had to do with the human implications of the design of the physical environment.

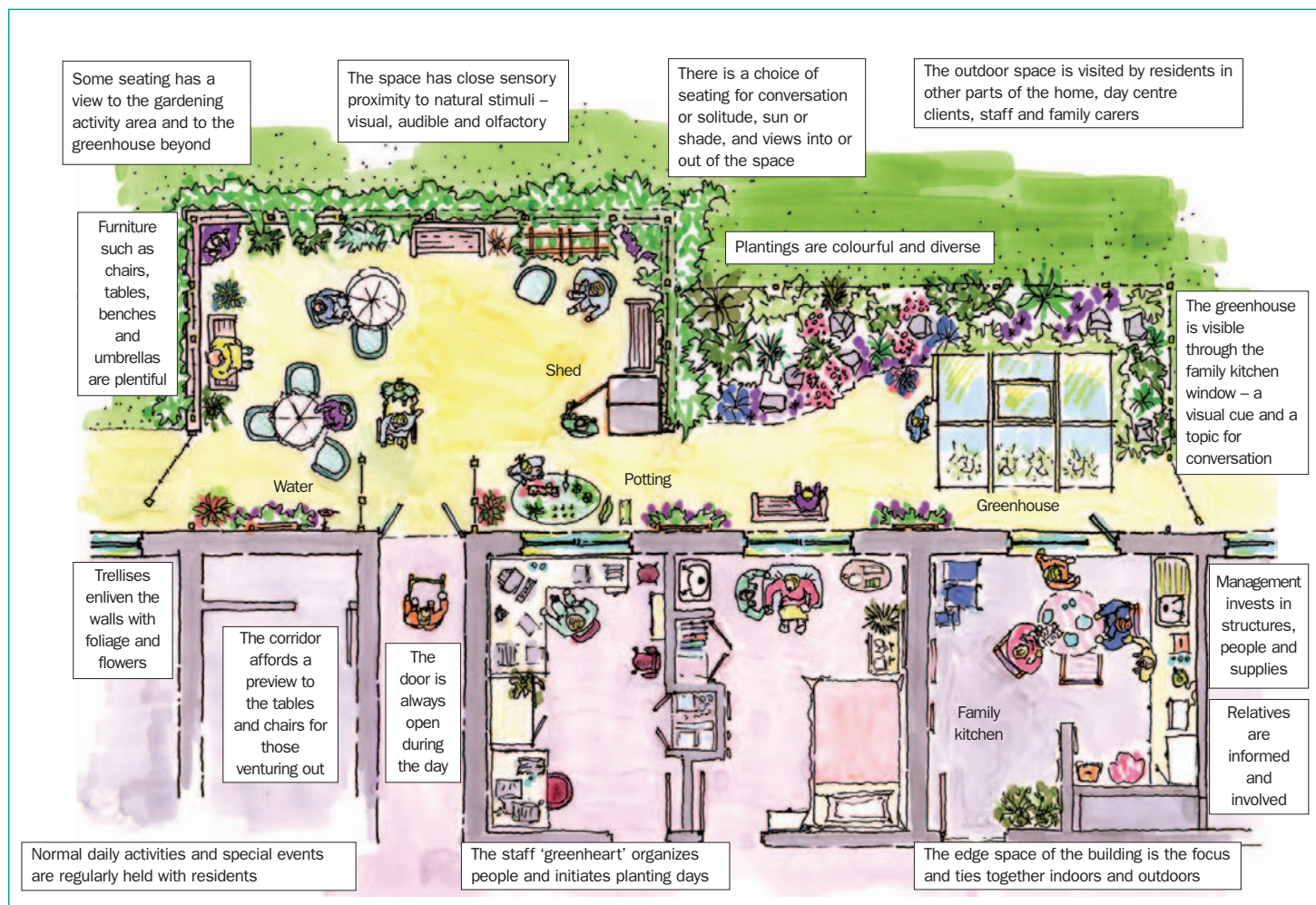
What is an enabling environment?

Theoretically, an environment affords the person something (Gibson, 1986; Heft, 1999). A chair may afford sitting, but a chair near other chairs, under an umbrella on a sunny day, near the building entrance, with a table to put a drink on or with a view to colourful flowers, increases the probability that interactions will occur.

The concept of an 'enabling environment' is by design, one that provides not just resources and access, but the probability that beneficial, enjoyable interactions will occur. Once the built environment is constructed in such a way, a small amount of effort and thought on the part of the car-



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ers and management can have the most effect.

Design project enabling contact with nature

As an experiment in creating an enabling environment, a project was undertaken to increase residents' contact with the natural world, the benefits of which include a positive influence on mood and stress (Rodiek, 2002). Was it possible that an environment that lowered stress and improved mood might facilitate people's engagement with it? If so, what spatial aspects could enable such engagement?

The willingness of the staff, family carers and management, plus some additions and modifications to the space, provided a significant change in the 'feel' of the environment. The results showed an increase in use, evidenced by observations and carer feedback. While the area is accessible from the ground floor dementia care unit, it is also visited by people living elsewhere in the

home. Therefore, these design principles are relevant to the diversity of older people who live in a residential care environment.

What additions and modifications were made?

Elements added to the existing patio area included a greenhouse, tool shed, potting table, trellises, plants in pots, hanging baskets and a rockery (Figure 1). A gate was removed and a length of fencing added.

Placing a greenhouse into the outdoor area was inspired by conversations with residents about parental involvement in the gardens of their childhood. Integrating it required the following:

- Placement close to and visible from the patio area. As Stoneham and Thoday (1994) said:

'Greenhouses tend to be placed as isolated features in the landscape rather than integrated with associated features; for example, a nearby shed for storing tools and materials.'

Figure 1. Features of an enabling environment.

- Placement next to the building wall. It is directly outside the window of the 'family kitchen', an earlier project to enhance family involvement.
- Matching existing paving pattern and material: Paving material matches the patio area and extends right up to the greenhouse door.
- Elimination of a threshold: **'The greatest barrier to going outdoors for many disabled and elderly clients is the process of going through the door... Thresholds should be avoided wherever possible.'** (Stoneham and Thoday, 1994).
- Cutting out the lower trip rail at the greenhouse door, making a level-entry door.
- Location near the tool shed and the potting table: It was possible to accommodate users of walking frames and wheelchairs, while also placing the tool shed,

potting table and greenhouse within a few steps of each other. Finding a critical spatial balance enabled the use of all three elements.

Design principles for outdoor enabling environments

1. Make the place meaningful: Make an area to go to that is comfortable, pleasant and beautiful. A gardening task can be on offer nearby for those who want to participate. Let gardening be not the aim, but a consequence of social time. Serve routine drinks and snacks outside on sunny days. Walk or wheel a resident outside just 'to see what's going on'.
2. Make spaces relate to each other: Make transitions effortless by interlocking the pieces – potting table, tool shed, greenhouse, chairs and tables, hanging baskets, trellises and plant pots. Locate different kinds of activities in close proximity so people can observe the action, comment on it and develop a desire to participate. Locate outdoor features and activity areas adjacent to the building edge and visible from indoor rooms (Chalfont and Rodiek, 2005).
3. Find and support 'green' staff who might care for the indoor plants, enjoy growing things from seed or pot up young plants outside. Encourage them by funding trips to the garden centre. Invest in a tool shed so watering cans, compost, trowels, gloves and pots are near to hand.

Conclusions

The success of outdoor nature-related activities in residential care settings is confounded by multiple factors over which the organizer has little control. The built environment, however, can be a positive presence.

A care environment, for example for people with dementia, is designed to be therapeutic and supportive (Teresi et al, 2000; Zeisel et al, 2003). But environments can also be catalysts (Rapoport, 1990). Complexity contributes to dynamic places and the probability that interaction will occur. In a case study of an existing outdoor area, complexity was increased by arranging elements in physical and visual proximity and overlapping patterns of use. The goal was place-making and spatial integration. The outcome was enjoyment of outdoor space.



A number of design features were annotated on the site plan and three principles for creating enabling outdoor environments were identified:

- Make the place meaningful
- Make spaces relate to each other
- Find and support 'green' staff.

Work upcoming includes design research into principles and features of enabling environments. From a study of exemplars, designs can be drawn to enhance the homes and engage the people who live, work and visit in residential care. **NRC**

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KEY POINTS

- Many factors affect a resident's ability to encounter the natural world.
- To make a place meaningful, listen to the people who live there.
- Human engagement can be enabled through design of the physical space.
- Complexity and proximity increase the probability that interactions occur.
- Make gardening not the aim, but merely the result of an enjoyable time.