



Neighbourhoods for life

A checklist of
recommendations for
designing dementia-friendly
outdoor environments

Introduction

This checklist gives a range of design recommendations to help housing associations improve the quality of life of older people with dementia in the outdoor environment.

We explain how older people with dementia experience and use their local neighbourhoods and make a series of recommendations for ensuring that the outdoor environment is dementia-friendly. The recommendations are listed in a loose-leaf checklist inside the booklet. They are referred to within the text using the abbreviation 'CR' for 'Checklist Recommendation'.

The recommendations are based on the findings of a three-year research project funded by the Engineering and Physical Sciences Research Council (EPSRC). The research was carried out by Elizabeth Burton, Lynne Mitchell and Shibu Raman in the Oxford Centre for Sustainable Development, Oxford Brookes University.

In the research, people with and without dementia were interviewed and accompanied on short walks around their local neighbourhoods. This was to find out how they understand and use the outside environment, how they find their way around, and

which features help or hinder them.

The number of older people is steadily rising, particularly in the 85+ age group. As the likelihood of developing dementia increases with age, reaching a one in five chance over the age of 80, the number of people with dementia is also growing.

Lifetime Homes standards give housing the flexibility to meet the changing needs of ageing residents. Unless streets, places and open spaces also meet the needs of an ageing population, many older residents will effectively be housebound.



Many older people find the outdoor environment difficult to use

This is particularly the case for people with dementia who have orientation and short-term memory problems. These reduce their ability to find their way around, to recognise or understand where they are, or to remember where they are going. Like many other people, they also often experience frailty, sensory

impairment, poor mobility and reduced strength and stamina.

By creating outdoor environments that even people with dementia can use easily and safely, housing developments can become neighbourhoods for life.

Where older people with dementia choose to live

Older people with dementia usually live at home until a crisis causes them to move into care. This is partly due to the limited availability of care facilities, but most older people with dementia prefer to stay at home for as long as possible.

If adequate care is available, remaining in the familiar home environment can contribute to physical, cognitive and emotional wellbeing. For those no longer able to cope, moving into sheltered housing or residential care in the same neighbourhood enables them to continue to benefit from familiar surroundings and social links.

How older people with dementia use the outdoor environment

Older people with dementia continue to go out alone, many daily. Most enjoy going out and feel that it greatly enhances their

sense of independence and self-respect. However, they are far more physically restricted in their independent use of the outdoor environment than older people without dementia. As they no longer drive and often will not use public transport on their own, their choice of destination is limited to places within close walking distance of home.

The most popular outdoor activities for older people with dementia are visiting the local shops, post office and park, and going for short walks. Most prefer relatively easy trips, such as posting a letter, buying a newspaper or taking the dog for a walk. Some continue to enjoy more socially demanding outings, such as visiting friends or going to church or the library.

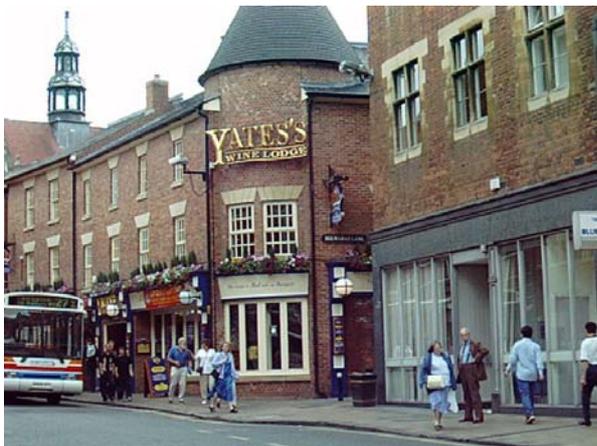


Going for walks in informal open spaces is a valued activity

People with dementia tend to feel more comfortable in informal places, such as streets, parks and small open spaces with plenty of activity. Formal places, such as large public squares with

imposing buildings and an expanse of empty space can feel rather intimidating.

When developing new housing or regenerating existing schemes, an assessment should be made of how close and accessible local shops and other services and facilities are. It is also important to determine whether they could cater for an increase in clientele. Housing associations are advised that facilities and services should be within a 10 minute (800m) walk or a 30 minute bus/train ride of dwellings. This is based on younger adults walking in relatively flat areas. People in their mid-seventies generally have about half the strength and stamina of a thirty year old. They will, therefore, take around 10 to 20 minutes to walk 500m.



Shops, services and facilities should be within walking distance of home

It is beneficial for older people with dementia to live no further than 500m from essential services and facilities, such as a general food store, post office, bank and health centre.

Secondary services and facilities, including a park or other form of open space, library and places of worship should ideally be no further than 800m. This will be easier to achieve in relatively compact areas where the government's target of building 30 to 50 homes per hectare are met (CR1, CR2).

How older people with dementia understand and find their way around the outdoor environment

Many older people with dementia lose their way. This happens most frequently at complicated decision points, such as road crossings and junctions. It can also happen on streets where it is difficult to see the route ahead; when following a less familiar route; or when losing concentration.

People with dementia recognise and remember streets, places, buildings and features that they have seen regularly for a long time. Any change to an area should, therefore, be small-scale and incremental (CR1, CR5).

People with dementia find streets with varied urban form easier to recognise. They also find them easier to find their way along than streets identical to neighbouring ones, and streets with identical buildings and few distinguishing features.

Different features, shapes and colours, such as varying roof lines and a variety of tiles, chimney pots, facades, front doors and gardens help them to concentrate and to know where they are and which way to go. The styles can be traditional or modern as long their function is obvious and they are seen regularly (CR5).

People with dementia can find it difficult to 'read' the nature and use of different spaces. Physical boundaries can help to differentiate public from private space. Low fencing, walls or hedges enable passers-by to see and use the architectural features, house numbers and names. This also helps the sense of safety, as building occupants can see onto the street (CR5).

People with dementia often find maps and written directions difficult to follow. Many plan their route and visualise it as they walk along, using a number of outdoor features to clarify where they are and which way they need to go.

Commonly used landmarks are historic and civic buildings, such as town halls and churches. Others are distinctive structures, such as clock or water towers and public art; and places of activity, including playgrounds, parks and urban squares.

Distinctive, practical features,

such as red telephone and post boxes; and aesthetic features, such as gardens, trees and planters are also often used as wayfinding cues. People with dementia, however, only remember landmarks and features if their function is obvious and they see them regularly.



Distinctive street furniture, in styles familiar to older people, can be useful wayfinding cues

It is therefore important, when redeveloping an area, to keep as many well-established historic, civic and distinctive landmarks and places of activity as possible. New developments should include a number of such landmarks. Street furniture, trees, planters and public art, in designs recognisable to older people, should also be kept or introduced.

However, too much street clutter can confuse rather than help people with dementia (CR6, CR8).

People with dementia generally prefer simple, well-connected street layouts with short, fairly narrow, gently winding streets. These help to maintain the concentration needed to avoid losing the way because they appear more interesting than long, wide or straight streets. Being able to see the end of a short street or having the view ahead constantly open up when walking along a gently winding street also helps people to find their way (CR3).

An irregular grid layout provides a variety of streets that are well connected and have simple junctions without blind bends or crossroads. Staggered and T-junctions provide a focal point at the end of the street. Forked junctions make it easy to see along alternative routes (CR3).

People with dementia often find numerous or complicated signs confusing. However, useful signs are those that display simple, essential information with realistic symbols and large, clear lettering (CR7).

Directional signs should be placed at important decision points, such as large road crossings.



Too many signs can be confusing

It is preferable for directional signs to be on posts and single pointers as people with dementia find multiple pointers or arrows ambiguous and confusing (CR7).

The post office sign is a good example of a locational sign. It is familiar as it is well established. It is easy to see from a distance, as it is usually placed perpendicular to the wall. It is also distinctive and bright with large lettering in a clear colour contrast to the background. The red and orange colours are particularly suitable as older people often struggle to distinguish colours, especially those on the blue/green spectrum. However, those on the red/orange spectrum are generally less problematic (CR7).

As too many perpendicular locational signs on one street would be confusing they should be restricted to essential shops, services and facilities. Signs positioned flush on a wall should

be in a clear contrasting colour to that of the wall (CR7).

Safety in the outdoor environment

Older people with dementia can face a number of physical barriers in the outdoor environment. People with dementia often walk with a slow, unsteady shuffling gait. They cannot always interpret the intentions of other pedestrians. Wide footways give some protection from being jostled (CR9).

Frailty, an unsteady gait and visual impairment mean that level changes are problematic. Slight level changes can cause stumbling and steep changes can be onerous. Where level changes are unavoidable, they should have clearly marked gentle slopes and steps (CR9).

People with dementia often mistake sharp colour contrasts or paving patterns for steps or holes.



Patterns and sharp colour contrasts can be disorienting

Busy patterns, such as chessboard squares or repetitive lines, can cause dizziness. Reflective or shiny surfaces are seen as wet and slippery (CR9).

Changes in road colour or material, such as for bicycle lanes, can be mistaken for footways unless they are in clear contrast to the pedestrian paving. Similarly, black speed humps painted with white arrows can be misread as pedestrian crossings. It is, therefore, essential that any traffic measure be in clear colour and textural contrast to that of footway paving (CR9).

Sudden, loud sounds often startle people with dementia. Continuous noise, such as from heavy traffic, affects the ability to hear. Buffers can be used to shield pedestrians from traffic, including trees, on-road parking and bicycle tracks (CR9). Older people with dementia are slow to react to audible signals, such as those at pedestrian crossings. These must be at a pitch and timing suitable for frail older people (CR9).

Older people require between two to five times more lighting than younger adults. They also struggle to cope with deep shadow, bright light and glare. Buildings should be oriented and designed to avoid creating areas of extreme dark and light (CR5).

Regardless of increasing age and diminishing capabilities, older people have the right to a safe, dignified and healthy living environment where they are treated as equals. Using the recommendations in this booklet will help to shape and re-shape outdoor environments into welcoming, easy to use neighbourhoods for life.

Lynne Mitchell, Elizabeth Burton and Shibu Raman

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For further information, please contact:

Lynne Mitchell
Oxford Centre for Sustainable Development
Department of Architecture
School of the Built Environment
Oxford Brookes University
Headington Campus
Gipsy Lane
Oxford OX3 0BP
01865 484296
lmitchell@brookes.ac.uk

Neighbourhoods for life: design checklist

CR1 Scale of development	✓
Changes should be incremental and small-scale	
Existing places and buildings should be retained or regenerated	
Housing schemes should be relatively compact	
CR2 Development mix	✓
Provide a variety of adaptable dwelling types	
Locate housing no further than 500m from local primary services and facilities, including a general food store, post office, bank, GP surgery/health centre and public transport stops	
Locate housing no further than 800m from local secondary services and facilities, including open space, a library, places of worship, and community and leisure facilities	
CR3 Layout	✓
Use an irregular grid layout	
Have a hierarchy of street types, such as main streets, side streets, lanes, and passageways	
Street blocks should be small	
Streets should be connected with bends greater than 90°	
Streets should be fairly short, narrow and gently winding	
Use forked, staggered or t-junctions	
Provide quiet alternatives to busy streets, such as pedestrianised areas	
CR4 Open space	✓
Local open spaces should be small and informal with varied activities and features	
There should be a variety of open spaces, such as 'village greens', allotments, parks	
Open spaces should have access to toilets, seating, shelter, lighting and refreshments	
Open spaces should be free from motorised traffic	
CR5 Building form and style	✓
The local distinctiveness of the area should be maintained	
Streets, places, buildings and architectural features should be in a variety of local styles, colours and materials that are familiar to or easily understood by older people	
The function of places and buildings should be obvious	
Entrances to places and buildings should be obvious and clearly visible	
Use low walls, fences or hedges, or open fencing to separate private and public space	
Spaces and buildings should be designed and oriented to avoid creating areas of dark shadow or bright glare	

CR6 Landmarks	✓
Existing historic and civic buildings should be retained	
Distinctive structures should be retained or included	
Places of activity should be retained or included	
Distinctive street furniture or aesthetic features should be positioned at decision points, such as road crossings and junctions	
CR7 Signs	✓
Signs should give simple, essential and clear information	
Signs should have non-glare lighting and non-reflective coverings	
Lettering and symbols should be large (5-7.5cm high), realistic and in clear colour contrast to the background (preferably dark lettering on a light background)	
Directional signs should preferably be on posts and single pointers Locational signs for primary services and facilities should be positioned perpendicular to the wall	
CR8 Street furniture	✓
Street furniture should be in designs familiar to or easily understood by older people	
Public seating should be sturdy and in materials that do not conduct heat or cold	
Public seating should have arm and back rests	
Public seating should be provided every 100m	
Public shelters should be enclosed and have seating	
Telephone boxes should be enclosed with a level threshold	
CR9 Pedestrian footways and crossings	✓
Level changes should be avoided wherever possible	
Gentle slopes, with a maximum gradient of 1 to 20, and steps should be used where level changes are unavoidable	
Level changes should be clearly marked and well lit with guards, handrails and plain, non-slip, non-glare surfaces	
Trees, on-road parking and bicycle lanes can be used to separate pedestrians from heavy traffic	
Bicycle lanes should be separated from footways and clearly marked	
Pedestrian crossings and public toilets should be at ground level	
Pedestrian crossings should have signals with audible cues at a pitch and timing suitable for frail older people	
Street lighting should be adequate for people with visual impairments	
Footways should be wide with flat, smooth, non-slip and well maintained paving	
Paving should be plain and non-reflective in clear colour contrast and textural contrast to walls, bicycle lanes and traffic calming measures	
Grates and drains should be flush with the paving with openings smaller than walking stick size	