



## Abbeyfield Winnersh – understanding how people live with dementia in care environments

This case study looks at the purpose-built specialist care home at Woodward Close in Winnersh, Wokingham. This care home has been designed for people living with dementia and has taken on board the latest information and technologies for the treatment of dementia.



Written for the Housing Learning and Improvement Network by **Conrad Quast**, Director, Edmund Williams Architects in cooperation with **April Dobson**, formerly Head of Dementia Innovation, Abbeyfield Society

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## About Abbeyfield Winnersh

In 2013, the team of Edmund Williams Architects was approached by Castleoak Care Developments to have a look at the site at Woodward Close, Winnersh. Engaging with The Abbeyfield Society for this new development, Castleoak were looking for a new and innovative care home design for the older people living with dementia.

The site was particularly suited to the use as a care home with ease of access, low density surroundings, established boundary tree growth, and being at the edge of built up areas, with a sense of activity from passing traffic and the newly constructed primary school.

Located on Woodward Close, an area of residential development characterised by up market family housing built within the last 10-15 years, the scheme is close to a range of local facilities and a Sainsbury's superstore. It is also served by the nearby Reading Road (A329) and to the north of the M4 motorway and west of the Winnersh \ Wokingham railway line to London Waterloo. In addition, there is a regular bus service that runs every 15-20 minutes (Weekdays) through the centre of the village between Reading and Bracknell via Wokingham.



## The layout of the scheme

To avoid visual impact and to protect the boundary conditions, vehicle access to the site is at the mid-point of the south boundary giving adequate separation distance from the Woodward Close junction and the road bend towards the bridge. This access location generates a useful zoning arrangement for the site from southeast to north-west.

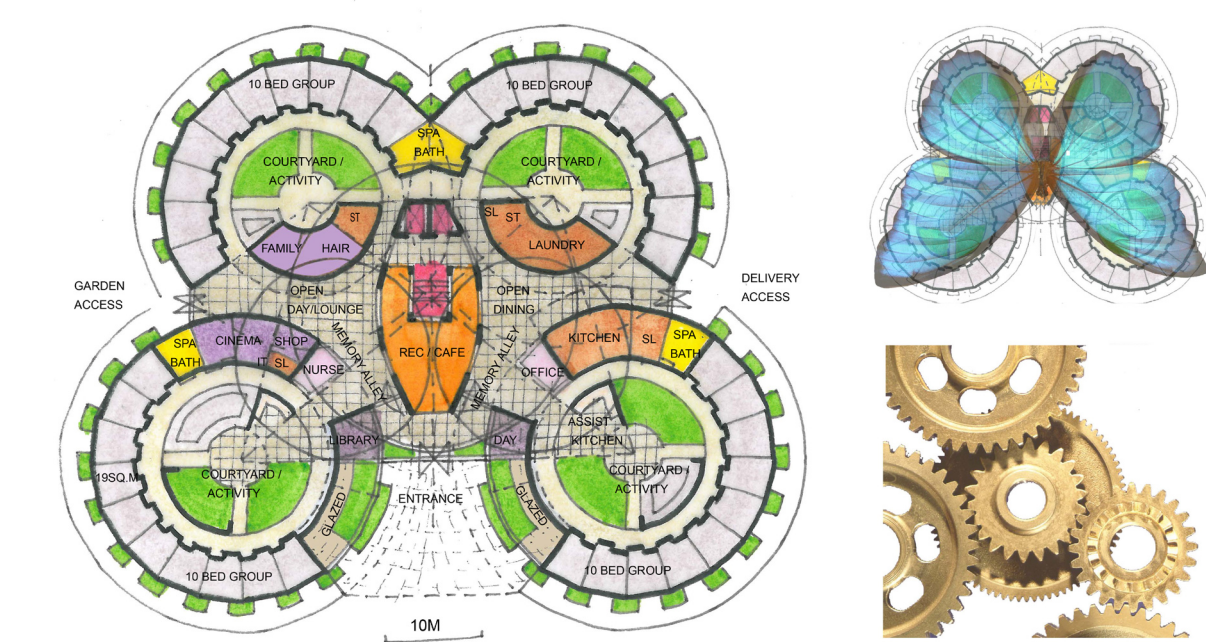
Service area and parking located to the southeast keeps this ancillary zone distant from any neighbouring residential property. The building footprint sited centrally minimises visual impact on the surrounding area and leaves a significant border for landscaping. The irregular shape of the site generates a large usable amenity space to the north west.

The development is for 60 residents and 2 respite places. These en-suite bedrooms are divided into 6 streets each comprising 10 bedrooms (plus the 2 respite rooms). The streets are formed as intersecting rings with four rings on ground floor and two on first floor.

The resident's rooms, as described above, with patio doors to the majority of the perimeter all have adequate space for individual patio areas where personalised planting and artefacts will define the residents "front doors".

The layout of the building itself evolves from understanding how older people living with dementia interpret their environment and how the plan form and facilities should be arranged to provide comfort, security and identity.

The intersecting circles reflect the interaction of "cog-wheels" of the mind with the disorientation and uncertainty that might be created by the fluttering of a butterfly.



The main entrance is positioned for direct visibility from the site access with independent footpath link from the public highway. The approach passes close to residents' rooms and patios on either side to include rather than exclude direct involvement between residents and visitors.

Entry into the home leads directly to open-plan spaces with dining, lounge and activity functions as well as the necessary accommodation to provide flexible use and variety in the daily life of the home. This core space is constructed to allow for future flexibility and adaptability to address changes in care strategies over time.

Each street of residents' accommodation is accessed off the core areas with minimum use of corridors. The plan form is set out for clarity of way finding and spatial identification.

Each bedroom street allows the residents easy access to a quiet lounge and to the private inner courtyard garden for that street, or at first floor easy access to roof terrace and roof garden.

The first floor accommodation comprises two of the six bedroom clusters and occupies approximately half of the footprint. The additional height gives beneficial protection to the inner courtyards from traffic and train noise.

The off-set massing of the building also gives different views from any point within the site and this is beneficial for residents to understand or "read" the building and to identify their room and their group instead of the anonymity of a uniform and featureless massing.

The layout internally allows simple and clear routes through the building and the arrangement externally gives safe, easy and clear direction, use and activity.

The nature of the development requires a degree of boundary and security protection. The existing site edge tree and hedge growth has been retained, and the boundary have been reinforced. The south boundaries, having a more open aspect have an additional 1800mm high metal hoop-top railing to separate resident accessible space from parking areas.

The combination of site edge definition and protection, together with a building perimeter with no hidden recesses, makes the site simple for observation and therefore beneficial for crime prevention in respect of unwelcome intruders. Car park areas are viewable from nearby windows over two floors and not screened by landscaping.

## Appearance

The context of the location, the modest scale and the spacious setting within the site all allow the building to have its own individual character without dominating its surroundings.

The sculptural form of the built massing and its changes in appearance driven by variations in weather and daylight give the home visual depth and its identity without the need for excessive applied detail.

The intention was to present the home with a clean, crisp finish to external walls, allowing the circular forms and the rhythm from regular bedroom windows to form the façade.



The building is a design “in the round” without a hierarchy of front, sides and back. The stepping of the massing from one to two storeys adds shape to the overall form and helps residents to read the building from the gardens and to better locate their own personal spaces from a distance.

It is very important that older people living with dementia do not feel disoriented and this visual understanding of the building is key to offering a sense of connection. Personalising the external spaces reinforces this.

Being set in a positive landscape environment as described above, a variety of plants is encouraged around bedroom door patios. Changes in colour and scent add another level of individuality to the patios. External works are an important part of the visual impact of the development.



Arrival is from the west and the approach view is through edge planting and across open landscape. The site access and pedestrian route to the main entrance are not interrupted by large areas of car park or service yard. The majority of parking is set to the east and will be flanked by the landscaped backdrop on the rising land formed by the railway bridge approach.

## **Designing for Dementia**

It is acknowledged that there are main challenges when designing for people suffering from dementia. These can be categorised as the following:

### ***Perception***

- Loss of vision
- Loss of hearing
- Loss of sense of time

### ***Movement / Orientation***

- Orientation and choices
- Dead end corridors
- Lack of meaningful spaces
- Restriction of movement

This list is by no means exhaustive but shows some of the major points that need to be considered in any design for dementia. Especially the loss of orientation and a confused circadian rhythm can lead to increased anxiety and stress.

The layout and design of the building can help to ease these issues and partially counter them. The team looked into this in particular during the initial design phase. It became clear that the best way to help and support the residents the layout should cater for:

### ***Connecting to external spaces and daylight***

- Easy access to outside at every floor
- Secure garden areas
- Access to facilities within external spaces
- View to outside
- Daylight to all spaces

### ***No dead ends / no meaningless corridors***

- Create a layout without dead ends
- All streets should have meaningful places
- Create ease of wayfinding

Another main issue that was identified is the risk of isolation caused by anxiety and confusion. Therefore, the team decided to adapt the layout to have the following:

- Small groups (Streets)
- Semi-private spaces and corridors
- Each street to have its own ancillary spaces
- Central communal spaces for everyone
- Additional communal spaces in each street



Lastly, other parameters were set from the beginning by Abbeyfield. They included:

### ***Freedom of movement and easy wayfinding***

Abbeyfield wanted freedom of movement for all residents in all parts of the building (except for the offices and main catering kitchen) including the garden spaces. It was therefore crucial to have the wayfinding as clear and straightforward as possible with additional open separations to avoid unwanted intrusion upon residents by other residents.

The streets laid out as rings allow for an easy wayfinding as one does always come back to the central communal core. The internal themed courtyards help the orientation as does the visible but subtle colour coding of each street without being overbearing.

### ***Accessibility***

As stated above freedom of movement was a key aspect in the design. All residents should have access to all spaces – internally and externally (except for Back of House). In addition, all residents should have easy access to outside spaces. Whilst at Ground floor all bedrooms have their own garden access, the upper floor residents have access to the roof garden off the central lounge / café.

The main gardens are accessible via the main lounge / dining area or the main entrance.

Two lifts service the upper floor without any restriction (no key code required).

An additional gate at the access to the site serves as a safety barrier / check point.

### ***Variety of external spaces***

From the beginning Abbeyfield insisted on a range of different external spaces. The external spaces have been designed to encourage outside living - safe gardens, activity areas, family friendly areas, and gardens to wander about. None of these should be closed to the residents including the entrance area to the home.

These gardens should also include additional communal spaces, such as an arts and crafts workshop for the residents, a summer house, and facilities.

The positive impact of being in the open should never be underestimated. Especially for residents with dementia being outdoors has several positive effects:

- First of all it helps to balance the circadian rhythm as the experience of daylight and daylight changes are more direct than indoors (even with large windows and daylight in the home).
- Secondly, being in the open stimulates activity, even if this might just be wandering in the garden areas.
- Thirdly, access to natural daylight helps to raise the levels of Vitamin D which is necessary to regulate the calcium and phosphate levels in our bodies and is therefore especially vital for the older people living with dementia.

Being outdoors also has a stimulating effect in terms of sensory input. Smell, hearing, vision and touch are stimulated even by simply walking in the garden.

These were some of the major factors why Abbeyfield insisted on a stimulating variety of garden spaces and easy access to outdoor spaces at all levels of the building. It also led to an “underdevelopment of the site”: The size of the site would have easily catered for a 80-100 bed care home, but it a deliberate choice to reduce the size to allow for more external, usable space including an orchard, activity gardens, a children’s play area, a summer house, and a crafting shed alongside circular pathways throughout the external gardens.

The internal gardens are easily accessible from the streets and are themed (water garden with a small pond, the earth garden with large boulders, the air garden with light rising trees, and the fire garden with all planting in tones of red). They form quiet and safe gardens.

### ***Variety of communal spaces***

From the beginning it was apparent that the “usual” set up of large day spaces with part dining part lounge would not work. On the other hand isolation can be a problem with residents being withdrawn from the community in their own groups / streets.

Therefore a mix of spaces was needed: Easily approachable main day spaces but also smaller spaces within the streets for smaller groups of residents. Whilst the main spaces in the centre cater for general dining, activities and meeting space, the small lounges can also be used by smaller groups that do not want to be distracted by the bustle in the main hub.

Alongside these spaces there are additional rooms such as a library, a quiet room (that can also be used as a sleep over room, if need be), a resident’s kitchen, a family room / tea kitchen, a fully functioning shop and a hairdresser, a cinema, and a café area at first floor (open out onto the large roof garden area).

## ***Interior Design – special features***

### Reminiscence Windows

Instead of the usual memory boxes, it was decided to incorporate Reminiscence Windows. This goes along the street concept. These windows have a similar function like the usual stick on memory box, but as they are an integral part of the building rather than an afterthought, they do not stand out like an alien object.

The issue with memory boxes can be that they are not recognised as such and in particular when empty do seem to be strange and confusing objects rather than assisting with wayfinding.



The Reminiscence Windows are integral part of the street scene, so even if left empty do not look out of place.

### Wayfinding boxes

In addition to the subtle but recognisable colour coding of each street there are wayfinding boxes – again colour coded – for objects linked to the streets.

These are strategically placed at the entrance of the streets to assist the orientation.

### Front doors to bedrooms

Front doors to bedrooms each have a different colour. These colours are not linked to the colour code of the streets as to avoid confusion by having similar colours in one street.

The doors have fully functioning letter boxes, street lights and the Reminiscence Windows next to them.

### Signage

Signage throughout the home is well placed and not overbearing. There is a risk of an overbearing institutional feel by placing too much signage (or too large signage) in corridors, day spaces etc. The opposite of that is not enough signage or too small signs. Abbeyfield's signage specialists in cooperation with the dementia team have developed their own subtle but visible signage throughout the home.

### Room signs with photos

This signage includes room signs that not only names the room but – as is common in the care environment – has a graphical resemblance of the room. But instead of using standard symbols or pictures of rooms, Abbeyfield chose to use photos of the actual room itself, so that, when opening a door the resident sees exactly what is depicted on the room sign.

### Lighting in corridors

The lighting scheme for the corridors is designed to support the circadian rhythm with different lights:

- The main corridor ceiling lighting



- Spot lights within the Reminiscence Windows
- Street lights on the walls

The lights are programmed to vary in accordance with the general daylighting, so that at night the corridors rather resemble a street after dark, though with still enough illumination whilst at day time the main light is switched on to support the direct daylight in the darker times of the year. Transitional periods are programmed for the morning and evening times.

## Impact on Residents

### Case Study 82 year old resident 'A'

'A' was both a nurse and a midwife and also a cellist in an orchestra. She has been diagnosed with Alzheimer's disease and also has a history of psychotic episodes. She was admitted from another care home that was struggling to cope with her psychotic episodes, and both verbal and physical aggression towards staff.

Her loss of independence bothered her a lot, as she doesn't like being restricted in moving around or going outside for walks and the other home didn't have the facilities to be able to allow her free movement, and safe free access to the outside. This resulted in frequent expressions of frustration, mainly directed at the staff and she would become very distressed.

'A' needs to be kept busy and likes feeling useful. She hates being on her own and likes listening to the radio, reading the paper and helping out with small jobs within the home like clearing the table after mealtimes and likes looking after other people. Being able to walk around freely in the linked circular corridors of the home, she is constantly stimulated by different things and coming into contact with different people. There are a variety of rooms and communal spaces both indoors and outside that lend themselves to either sitting and reading, or interacting with others. So she's able to choose when to sit down and read, or when to do something more active, which results in her being happy and content the majority of the time.

'A' has poor short term memory and is disorientated to time and place, so is happy to re-visit tasks and activities she has already undertaken that day. Since moving to Winnersh she has had no episodes of psychotic symptoms at all, and the staff believe that this is due to her feeling calmer and more in control of where she wants to be.

'A' can become verbally challenging at times, but encouraging her go for a walk calms her down quickly. She walks around the home for most of the day and burns a lot of calories, so the staff offer her fortified foods and drinks which she enjoys and she's starting to put weight on. The layout of the building has enabled the staff to place 'hydration stations' at strategic points to offer drinks and snacks. Because of the exercise, 'A' also has a very good appetite and good muscle tone from walking so much and has not had any falls whilst in the home.

'A' also lives with moderately poor eyesight, so the abundance of natural light enables her to see better and also helps to prevent trips and falls.

Her family say she is very happy living at Winnersh and her needs are being well met. They find her a lot calmer now and very settled.

## Conclusion

It has already been observed by carers and visitors to the home, that residents are generally more at ease and enjoy the home. In discussions with Abbeyfield's former Head of Dementia Innovation, April Dobson, it became clear that the design and layout of the home supports the daily life of the residents – which supports their wellbeing. In fact it has been acknowledged that the home has been able to significantly reduce medications in several cases.

A study is being prepared by Abbeyfield together with the Sterling University for the statistical impact of the design.

## Key learning points

It was the aim to support the residents in terms of wayfinding, community and temporal orientation. This has been achieved through a number of design points:

- Daylight to all corridors and communal areas
- Circular design leading to the central hub
- Diverse day spaces for different activities
- Day spaces within every street
- Garden spaces both protected and open

### ***Lessons that can be learned:***

- **Daylight:** Creating corridors with daylight and direct access to open spaces help with the circadian rhythm and temporal orientation, which in term leads to a reduction of anxiety
- **Orientation:** The circular scheme is a great benefit for orientation. Paths will always lead to an easily recognisable space, the hub. A circular route without a “start and end” would have a negative impact though as it does not give any meaningful destination.
- **Access to the Outdoors:** Garden spaces should be easily accessible for all. This encourages the residents to wander in the garden and participate in outdoor activities. It cannot be stressed enough what positive impact well planned and spacious gardens have.

## Awards

- **Pinders Healthcare Design Awards** – winner in the category ‘Best new care home – elderly’ 2017
- **RICS South East Awards** – shortlisted in the category ‘Design through innovation’ 2017

## About the author

Conrad Quast has more than 20 years of experience working as an architect and over 12 years of experience in the care sector.

Before starting his studies of architecture in Berlin, Conrad worked as a care assistant in elderly care. He studied architecture in Berlin, where he also started his career. From 1998 until 2007 he was involved in several residential and office developments. He then moved to London in 2007 starting to work on care and hospitality. Since then he has designed, managed and delivered projects for several care projects.

## Note

The views expressed in this paper are those of the author and not necessarily those of the Housing Learning and Improvement Network.

## About Edmund Williams Architects

Edmund Williams is a team of award winning Architects and Urban Designers with extensive experience in the care, residential and hospitality sectors.

With a rapidly ageing population and increasing demand, we are very well placed to guide our clients in specific care and residential sectors, and also have the required knowledge and experience to design and advise with regards to varying degrees of transition between these two sectors, to our clients' specific requirements.

[www.edmundwilliams.com](http://www.edmundwilliams.com)

## About the Housing LIN

The Housing LIN is a sophisticated network bringing together over 40,000 housing, health and social care professionals in England and Wales to exemplify innovative housing solutions for an ageing population.

Recognised by government and industry as a leading 'knowledge hub' on specialist housing, our online and regional networked activities:

- connect people, ideas and resources to inform and improve the range of housing choices that enable older and disabled people to live independently
- provide intelligence on latest funding, research, policy and practice developments, and
- raise the profile of specialist housing with developers, commissioners and providers to plan, design and deliver aspirational housing for an ageing population.

To view other examples of housing and dementia, visit the Housing LIN's dedicated 'Focus on Dementia' pages at:

<https://www.housinglin.org.uk/Topics/browse/HousingandDementia/>

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