



Housing LIN

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Factsheet 34

Interior Considerations: Interior Design Impacts Quality of Life (2nd edition)

PARK
GROVE

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Foreword

This Factsheet is intended to be used as a discussion tool and to aid in considerations for the interior design of new build and refurbished housing schemes for older people, including concepts for: extra care housing, dementia design, and is applicable to private residential properties. It does not cover building regulations or specific design guidelines which can be found on the design pages of the Housing LIN website. This factsheet provides inspiration for making housing which meets many of the needs of older people while creating a desirable place in which to live.



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Introduction

Interior design impacts quality of life. This statement is borne out by years of research in neuroscience and psychology. Even a cursory internet search will return over 815 million links to information related to, and in support of, this construct. Park Grove Design has been working to improve later living environments for decades. Our long-held company motto is directly in-line with current philosophy, namely that: 'Great environments improve quality of life.'

In later life it's not unusual to find people wishing to downsize their accommodation or to locate to a property in which they can receive assistance, if needed. Alternatively, alterations to an existing property may be called for. Whatever the circumstances, 'home' represents a stable foundation, security, and a comfortable place in which to both reminisce and create new memories. Home is a place of safety where we also take ownership of our surroundings. In environments where we do not feel 'at home' we are merely visitors. The need for environmental ownership of interior spaces challenges developers, architects, interior designers, and other stakeholders particularly when constructing places with shared communal spaces. When considering modifications which allow for possible physical impairment due to the ageing process, we must look to the opportunities to enhance environments in a non-clinical, safe, and essentially homely manner.

This document shares key interior design considerations when developing environments for later living which are both inviting and in-line with current design research. It builds on the [Housing LIN Factsheet No.34](#), first published in 2012.¹ We hope you will find inspiration here.



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¹ <https://www.housinglin.org.uk/Topics/type/Can-Interior-Design-Improve-the-Quality-of-Life/>

Colour

There are physical changes to the eyes as we age, and as a result colour palettes and contrasts between surfaces should be thoroughly considered. In particular, the blue cone cells deteriorate at a faster rate than our red and green eye receptors. The result is that blues will appear greyer and darker to older people so higher colour saturations are required when using these hues. There is also a yellowing of the lens of the eye, similar to the effect of an aging newspaper. Reviewing colour schemes through a pale-yellow film can be used to evaluate colour and contrast levels. (*Baucom, 1996*) Research also shows the top three preferences for colour in western cultures are blue, red and green, in that order. (*Wijk 2001; Reeves, 1985*)

Due to poorer circulation, older people are often more susceptible to the effects of cold temperatures so it is worth considering warmer colour schemes for areas in which the natural daylight is coming from the north or east, where the natural light colour will be cooler. Such spaces could be experienced as cold, even if they are not physically so.



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You need only to think of the avocado green bathroom suites of the 1970's to realise that colour palettes are interior fashion. Where neutrals or greys may exemplify the height of sophistication at a moment in time, the aesthetic will not only date, but provides little interest for residents who may not venture out as much as they used to. Development of a unique scheme, rather than one which follows current trends, will give a better return on investment, as well as more stimulation for the people living there. Dementia Care Matters (DCM) interior guidelines (*Sheard 2011*) support use of very strong colour in areas for residents with dementia.

Colour can also be an effective tool for wayfinding, particularly in situations where posted signage is deemed inappropriate.²

² <https://www.housinglin.org.uk/Topics/type/Colour-Wayfinding-Design-Guidance/>

Contrast

Colour and value contrasts between floor, walls, furniture, and flooring will make residents with declining eyesight feel safe and comfortable.³



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LRV differences (light reflective values) of up to 30 pointed are recommended for pillars or structural elements to enable them to be seen from a distance (*Dalke 2011*). LRV meters can be purchased. Alternatively, most fabric, paint and flooring manufacturers are able to confirm the LRV for a particular product.

Where a light, more neutral look is desired, using contrast trims for differentiation objects from the surrounding finishes works well. Skirting boards can fulfil the same role in differentiating between walls and floor by provided a suitable contrast.

When selecting flooring the depth of colour differences on a black/white scale should be limited between adjoining spaces. This provides the user with visual clues that there are at there are no differences in level which will require negotiation.

In design for people with dementia it is essential the floor colours be virtually identical between adjoining spaces.⁴

³ For more on sight loss and design for the home and built environment curated by the Housing LIN, visit: <https://www.housinglin.org.uk/Topics/browse/sight-loss-home-the-built-environment/design-lighting/>

⁴ For more on dementia-friendly design curated by the Housing LIN, visit: <https://www.housinglin.org.uk/Topics/browse/HousingandDementia/Design/>

Surfaces

Tiles & Worktops

Gloss finishes on worktops and tiles should be avoided as high sheen creates glare when lit. This affects people with macular degeneration, a natural condition of aging. Surface considerations are practicality, as well as the ability to clean and be repaired.

Horizontal surfaces must be hygienic and devoid of sharp corners and edges. Where a crisp edge is required a chamfer or round of 3mm can be used. Stone, composite materials, and a variety of laminates suit this purpose. Tiles as work surfaces are to be avoided due to potential hygiene and maintenance concerns

Walls

Wall finishes will be more interesting if varied in texture and colour. The main finishes used will likely be smooth plaster painted with water-based matt emulsion, matt vinyl wallcoverings, tiles, and specialist finishes such as polished plasters. If using a wallcovering the correct fire rating must be confirmed with the fire officer for the property jurisdiction and will be based on the paper's rating and the amount used in any one space. In high traffic areas a fabric-backed vinyl is indicated.

Minimise or eliminate pattern on walls if dementia is indicated. When tiling in these areas use grout the same colour as the tiles to prevent creation of a grid pattern or lines.



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Ceiling and pendant fittings should have shades or diffusers to minimise glare and can create interesting focal points. Please allow for a minimum of 2.2 metres head clearance to the underside of the fittings.

Wall lights should be fixed so the lamp (bulb) is positioned approximately 1.6-1.8 metres above finished floor level as standard . These look best as part of groupings on walls, rather than set randomly. These fittings provide a homely atmosphere when used along with table and floor lamps and in conjunction with M&E supplied general luminaires. As with previous guidelines the light source should not be directly visible to the naked eye.

Don't overlook the importance of task lighting. A tall adjustable standing lamp can make an excellent reading light but ensure it either has excellent base support or can be positioned where it can't be used as a physical support.



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Circadian lighting, which mimics the colour temperature of natural daylight, has been shown to have positive impact specifically in people suffering from dementia. A specialist supplier/specifier will need to be used to incorporate this technology into a scheme. To accommodate people living with dementia and/or sight loss it is imperative that the lighting scheme eliminates shadows and all dark corners.^{5,6}

⁵ <https://www.housinglin.org.uk/Topics/type/Good-practice-in-the-design-of-homes-and-living-spaces-for-people-living-with-dementia-and-sight-loss/>

⁶ <https://www.housinglin.org.uk/Topics/type/The-Circadian-House-Hawkes-House-Designing-for-Ageing/>

Communal spaces

A key design consideration in communal spaces is the creation of smaller areas allowing residents to feel the environment 'belong' to them. For this reason, designs are best when they have furniture groupings for day to day use while opening up to allow for multi-functional usage and indoor activities such as talks and lectures, clubs or other meetings, private dining, parties, or television events.



It is advised that any rugs should have a short pile and must be set into the flooring to provide level access throughout. Where dementia is indicated non-patterned designs are recommended.

While cliché, it is also factual to say that people come in all shapes and sizes. It's therefore essential that table and seating heights should vary in communal areas to allow everyone to inhabit the space in comfort. In corridors, and only where it will not interfere with emergency escape routes, allow for rest seating. Staircases with landings should also have this provision. If space does not allow for chairs, consider using a narrow bench with raised side arms.



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Upholstered Furniture

Furniture groupings are most homely if they appear to have evolved, rather than being purchased at any one time. You are providing a home for residents, not a hotel. The occasional quirky, humorous piece is encouraged as are a variety of shapes. As previously noted, furniture must not have sharp corners or edges.



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Seating will be easier to get in and out of if the seat height is a minimum of 480-490 mm from floor level and if it has arms. A seat rake of 6-9° is recommended with seat widths of 400-500mm. (Fuggle, University of Stirling, 2013), ideally, a variety of seat widths, heights, and back heights will be on offer.

Furnishings must be stable enough for older people to use for steadying themselves, while being light enough to be moved when alternative layouts are needed.

Assure that the glides on the bottom of furniture feet are ordered from the manufacturer in-line with the type of flooring on which the piece will be sitting (carpet or hard flooring).

As with wall and carpets, pattern on upholstered furniture is best minimised or eliminated entirely if dementia is indicated.

More information on upholstered furniture can be found on page 13 in the Fabrics section of this Factsheet.

Tables & Case goods

For a non-institutional atmosphere use mixed table shapes. If possible, you will want at least one dining table to have height adjustable legs to allow for potential wheelchair use. Coffee and side tables should be of similar height to the chair or arm of the sofa to minimise bending for residents with restricted mobility, and lower in other areas to encourage mobility.

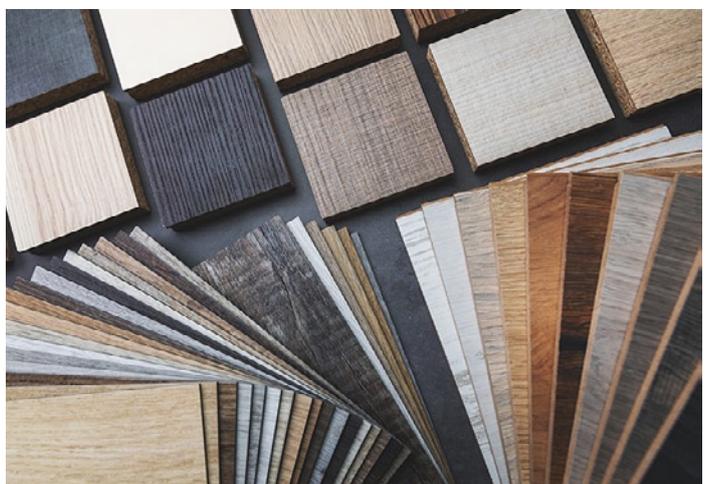
Wooden case goods must have no sharp edges or corners, so add a 2-3mm chamfer to the edges when placing orders.

Furniture finishes provide an opportunity for contrasts to floor and wall colours. Metals, plastics, and painted finishes can be used to add interest, but natural finishes provide for a more homely environment.



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To avoid looking institutional, finishes should provide variety, be durable and repairable, have low or matt sheen, and where necessary sealed with a non-yellowing satin or matt varnish.



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Fabrics

Here are some criteria to use when choosing **upholstery fabric**:

- A mix of textures and colours provides a homely atmosphere
- They must meet current British fire standards (commercial or residential)
- Where used in areas of direct sunlight it should have a colourfast rating of 5-8
- Anti-microbial where possible
- Must exceed a 40,000 Martindale rub test result, but 50,000+ is preferred
- Should not cause the resident to sweat or otherwise stick to the upholstery
- Phthalate-free, a potential health concern applicable to some vinyls



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As previously noted, minimise or eliminate pattern in upholstery and curtains if dementia is indicated.

Window fabrics can be part of a decorative scheme, but window treatments of all kinds control solar gain, control light and glare, and importantly, provide privacy. Light linen or semi-sheer fabrics can be bottom-weighted so they fall neatly into folds. Fabric window treatments are normally floor length but short enough so as not to cause entanglement.

Light adjustable soft louver blinds can be used where glare control is a particular issue or where a curtain stack back space is not available. Hard blinds or shutters can create acoustic challenges in large open areas, whereas fabrics made into roman blinds can have a softening effect.

Acoustics

The trend toward large windows and hard surfaces creates acoustic challenges for anyone with hearing difficulties or a hearing aid. The supply chain has responded with several options. There are new ranges of acoustic sheer fabrics, particularly useful in areas with high-ceilings and hard flooring.

Soft 3D art, particularly pieces made of wool felt, can also have a dampening effect.

Dining areas can be particularly noisy and additional measures might be considered in these spaces such as soft acoustic wall or ceiling panels, or acoustic ceiling slats.



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Lounge Details



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Lounges need the variety of seating referred to in the Furniture section of this Factsheet. Fireplaces and simple display shelving make good focal points. Fire surrounds must not have sharp corners and with hearths visibly raised. Gas or electric fires are good choices and the effect of a mist unit in an electric system will provide a good effect.



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Assure that any free-standing shelving is fixed either to a wall, ceiling, or floor and that objects are also fixed to prevent them falling on people below if knocked.

Where artwork is central, consider a real statement piece or something abstract and soothing. Feature walls don't work with 'middle of the road' imaging. Refer to the Artwork and Accessories page of this Factsheet for more information.

Kitchens

A beautiful kitchen is the heart of any home. When designing for older adults there are simple adaptations which can make these highly functional spaces more user friendly. For example, mid-height wall ovens and microwaves are far easier and safer to access than low or high appliances. Having a nearby seat for tasks, such as preparing vegetables can also be useful, with standard chairs preferable to high stools. You should also ensure adequate lighting in food preparation areas and consider a thermostatic 'stop' on the water temperature at a maximum of 49°C.

Manual dexterity can be challenged as we age. Access to storage will be easier with an open handle rather than a traditional knob. Storage is also easier to reach with drop down interior shelving, now available in most kitchen ranges.



Kitchen by Symphony

Maintain high contrast levels between counters, units, backsplash and flooring and refer to the Contrasts and Surfaces pages of this Factsheet as needed (pages 5-7).



Design by Motionspot

Bathrooms

Some key guidelines for designing bathrooms and wet rooms are:

- Use non-reflective or matt surfaces to reduce glare
- A single lever mixer tap will be easy to use. Have a temperature 'stop' set to a maximum of 49°C
- Install a fixed or dropdown seat in the shower, useful for any age
- Shower controls and a handheld shower head should be within easy reach
- Seek professional assistance for the correct setting out and wall requirements for support rails. There are smart versions which look like contemporary towel rails but take full body weight.
- Simplify shower curtains to one layer only and shorten to prevent entanglement. Better yet, use a smart bi-folding glass screen

Vinyl flooring will not necessarily prevent injury from falls. Whether using a vinyl or a non-slip porcelain tile, confirm that the PTV value is 36 +. (PVT stands for pendulum test value which is a measurement of how slippery a surface may be). Refer to the Surfaces page of this Factsheet for additional information.

Ed Warner, CEO and Founder of inclusive design company Motionspot which has extensive experience in creating beautiful accessible bathrooms, adds:



Design by Motionspot

- Wet rooms are the most accessible bathroom you can make. For example, a large open shower area with a light to move bi-fold door and thermostatically controlled shower valve is suitable for everyone and its clean lines also look stunning.
- Other additions to the shower area could include an easy to reach storage niche so that shower essentials can be accessed without bending.
- Wall-mounted toilets and basins not only create a beautiful sense of space, they're also a dream to clean under and around, and they can be mounted on the wall at the height that best meets the user's individual needs. For example, higher seats are often easier for older people to get on and off. A wash and dry toilet can be a great option from a personal hygiene perspective as upper body flexibility deteriorates and the necessary bending and twisting becomes harder. They also have the capability to clean themselves at the push of a button. Opt for an easy-to-operate mechanical flush plate.

Composite basins offer exceptional durability and hygiene. Wall mounted at the optimum height, including to accommodate a dressing table style stool or wheelchair underneath as required. Basins with elegant cut-outs offer discreet support and double up as a great spot to hang a hand towel.

Bedrooms

Potential entanglement is to be avoided in bedroom designs for this population. You will therefore wish to avoid floor-length bed dressings as these can become a trip hazard at night. Likewise, there should be no loose rugs. Where a bed is dressed in decorative cushions and throws, provide a chair or surface well away from the bed where they can be stored at night. Bedside light switches should be easy to access and make sure bedside table surfaces are large to minimise trips for medications, lotions, and potions.



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Indoor/Outdoor Spaces & Biophilic Design

Biophilic design is based on the idea that humans have an inherent need to engage with nature. It is thought that connecting with nature enhances physical and mental wellbeing. It is a subject worthy of further exploration, but certainly plants are a key component here, as are indoor/outdoor spaces and circadian lighting.⁷

Strong visual links between an interior and exterior are encouraged. Where possible, exterior surfaces can link into an interior through colour or texture. A door or window serves as a frame to the outside world, so large windows with low cill heights are encouraged. Indoor/outdoor spaces can even be created on upper floors without balconies by dressing the area if it were a garden room.

Real plants are essential and generally look best positioned in groups where light levels are sufficient. Containers must be positioned to allow emergency escape and allow for wheelchair access at a minimum width of 950mm. Plant locations must be accessible for watering and dusting and the distance to a water supply should be considered, as should the suitability of the surface beneath. Easy foliage wins are grasses, and trees such as the Chinese Evergreen and Weeping Fig. Check all plants for possible toxicity.

Exterior spaces can also be dressed, with white or green plastic avoided. Most exterior seating will require bespoke cushions to raise seat height to between 450-480mm from floor level.



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⁷ <https://www.housinglin.org.uk/Topics/type/The-Circadian-House-Hawkes-House-Designing-for-Ageing/>

Artwork & Accessories

Within our private homes the items we display change over time. Our dwellings looked 'lived in'. Shared communal spaces can also evolve with changeable elements. This might include, but is not limited to objects on shelving, movable screening or room dividers, and artwork.

To keep an area from appearing hotel-like, consider grouping pictures in a mixture of frame finishes, assuring that any sharp corners are modified. Oversized pieces have more impact than smaller ones, as will a diptych or triptych. Art hanging rails can be positioned directly beneath the ceiling or coving with height-adjustable clear hanging straps which allow pictures to be change or relocated within a building without wall damage. Where possible position artwork so it's centre is 1500mm above floor level.

Where dementia is indicated, avoid the use of images with images with pointy or sharp looking patterns, as well as those which could be interpreted as having eyes. Breakable accessories should also be edited from these areas and Perspex® rather than glass, is recommended in picture framing.



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Technology

Technological advances are making environments safer and easier for people with limitations such as dexterity, visual impairment, and other challenges. This will increasingly have implications for interior designers when designing and fitting out environments/layouts with older adults in mind. From digital connectivity to electric powered solutions, when investigating the use of technology, please be aware that any additional technology may need to integrate with existing systems to limit the number of interfaces for residents or staff.

Examples of available technology range from what is often referred to as 'Smart Home' technology, which can answer the door, adjust lighting, heating and even open and close curtains, to a system as simple as an interactive (talking) 'smart speaker' paired with WiFi smart plugs or light bulbs. These off-the-shelf combinations allow residents to turn appliances on and off or check information from the internet with their own voice. In addition, you will find Independent Living monitoring and 2-way messaging systems, Resident Engagement software, and even Medical Interface technology which monitors key health indicators and provides reminders when it's time to take medications.

The range of available technology and the number of suppliers in this marketplace is wide ranging, and further consumer research is necessary to assure any specification will deliver clearly specified objectives, as well as value for money. At the time of writing, the Housing LIN, in partnership with the TEC Services Association and funded by The Dunhill Medical Trust, is about to embark on series of "testbeds" to test out the 10 foundational design tech principles identified by the Technology for our Ageing Population: Panel for Innovation (TAPPI).⁸

Environmental Impact & Summary



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The British Institute of Interior Design (BIID) has been working diligently to assure designers deliver long-lasting design with low waste and environmental impact and their website offers a 'Sustainable Specifying Guide'. Designs should account for product lifecycle and the environmental impact of any materials used.

⁸ <https://www.housinglin.org.uk/TAPPI/>

Some lower impact materials include sheep's wool, recycled steel, bamboo, reclaimed wood, cork, felt, and organic cottons (although the latter may require treatment to meet current UK fire standards).

Designing housing for older people is both a privilege and a responsibility. This Factsheet points at some of the key areas to consider when undertaking such a project. For the benefit of those living in these environments it is worthwhile to conduct additional research on each of the areas covered here, or to hire an Interior Design firm specialising in design for this age group.

New initiatives in design for the aging population also take place internationally and are highlighted on a free podcast and website at www.ThirdAge.Design.

Interior Design Impacts Quality of Life. This is the essential focus of any project and the very foundation of every aspect of work in this sector. Be inspired, challenge the norm, and assess what you are doing with this simple question; 'given the right set of circumstances...could I call this home?'

Disclaimer

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All images have been supplied by Park Grove Design Ltd, Motionspot, and Adobe Stock as noted.

About the author



Lori Pinkerton-Rolet is Founder and Director of Park Grove Design Ltd. a company committed to raising standards of design in care and senior living environments for over two decades. We believe in the principals of 'Inclusive Design' and create unique and inspirational spaces where there is no need for adaptations due to limited mobility, dexterity, or sight. Park Grove has no prescriptive style, but interprets client needs, budget, and property style into practical and award-winning quality interiors in which people wish to live. Lori also hosts the international senior environments podcast Third Age Design (www.thirdage.design), with a community of listeners in 15 countries on 4 continents.

<https://www.parkgrove.co.uk>

About the Housing LIN

The Housing LIN is a sophisticated network bringing together over 25,000 housing, health and social care professionals in England, Wales and Scotland to exemplify innovative housing solutions for an ageing population.

Recognised by government and industry as a leading 'ideas lab' on specialist/supported housing, our online and regional networked activities, and consultancy services:

- connect people, ideas and resources to inform and improve the range of housing that enables older and disabled people to live independently
- provide insight and intelligence on latest funding, research, policy and practice to support sector learning and improvement
- showcase what's best in specialist/supported housing and feature innovative projects and services that demonstrate how lives of people have been transformed, and
- support commissioners and providers to review their existing provision and develop, test out and deliver solutions so that they are best placed to respond to their customers' changing needs and aspirations.

To access a selection of related resources on designing extra care housing, visit our 'design hub' at: <https://www.housinglin.org.uk/Topics/browse/Design-building/Design/>

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