Design for Dementia

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Welcome to PPG

Offering total coatings solutions, we provide decorative paint, woodcare, insulation, render and protective coatings with an extensive portfolio of leading brands to meet every need of the built environment.

At PPG we work every day to develop and deliver the paints, coatings and materials that our customers have trusted for more than 130 years.

When it comes to decorative coatings, Johnstone's Trade offers high performance products and services that specification professionals can rely on. At the forefront of the UK professional trade paint market for over 125 years, Johnstone's Trade specialises in meeting the needs of specifiers and trade decorators who demand high quality and believe in the best possible results.

The comprehensive Johnstone's Trade portfolio has been used on a wide variety of projects that have helped to create beautiful spaces. As a leading paint brand, Johnstone's Trade offers a comprehensive range of premium paint solutions and support services to ensure the success of every project.

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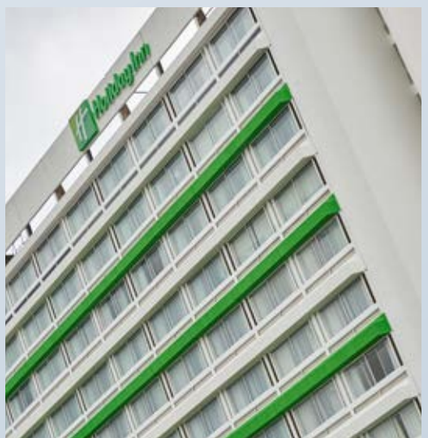


Think, **SPEAK,** feel,
behave *and PERCEIVE.*

Introduction to Dementia

Types of Dementia

Dementia is often a term that is misunderstood as it does not have a singular meaning. The word is used to describe a range of diseases that affect the function of the brain, resulting in disorders such as Alzheimer's, Vascular Disease, Lewy Body Disease and Frontotemporal Dementia (including Pick's disease). The diseases affect the chemistry and structure of the brain and no two types of Dementia are the same.

In a recent Alzheimer's Society report (2015) it was identified that over 850,000 people in the UK are currently living with dementia, a number that is expected to rise to over 1 million by 2025. As many as 225,000 people are also expected to develop some form of dementia every year around the world, equivalent to one person every three minutes (Alzheimer's Society, 2015).

Whilst the experience of living with dementia is unique to each person, there are common symptoms that occur such as agitation, anxiety, aggression, confusion and problems with depth perception.

Common misconceptions

It is often considered that dementia is a problem with memory loss, however the disease is far more complex. Although it can often start by affecting a person's short-term memory, common symptoms also include difficulty in controlling emotions, concentrating, communication and completing previously familiar tasks.

It's also important to recognise that dementia is not a natural part of the ageing process. Dementia is a disease and is not limited to affecting older people. Currently over 40,000 people in the UK under 45 live with dementia, however the risk of being affected by the disease does increase as you get older:

- 1 in 688 people under 65 have dementia
- 1 in 14 people over 65 have dementia
- 1 in 6 people over 80 have dementia

Living with Dementia

Unfortunately there is currently no cure for dementia, however symptoms of the disease appear gradually, allowing many people to remain independent for years. We are here to support you in creating dementia friendly environments that can help people to continue to lead active, independent and purposeful lives.

Importance of Design for Dementia

The Equalities Act

The Equalities Act (2010) protects people from discrimination within both the workplace and in wider society. The Act is outlined within the building regulations Approved Document M, which highlights the impact that design can have on a person's experiences. One example from the Act is Visual Impairment, which explains what can be done to prevent any person with this disability from being discriminated against. The use of colour and contrast was introduced for use on critical surfaces, to enable anyone with a visual impairment to navigate their way around a public building.

This is achieved by using a Light Reflectance Value (LRV) which is an individual measurement that is applied to a colour. The LRV scale ranges from 0, assumed to be a perfectly absorbing surface that is Black, up to 100, which is assumed to be a perfectly reflective surface that is White. However, due to practical influences in any application, Black is always greater than 0 and White is never equal to 100.

It is this fundamental element that is applied within dementia design.

Dementia Friendly Design

There are several key elements to consider when creating Dementia Friendly Designs:

- Consider the entire room and its furnishings:
  - The degree of visual contrast should be considered for all surfaces. This may include floors, walls, doors, frames, ceilings and handrails.
  - It is recommended that each surface should have a light reflectance value of at least 30 points between them.
  - Furniture should also offer a distinguishable visual contrast to the wall and flooring.
- Light reflectance values should also be considered for key fixtures and fittings as LRV differences between small objects on a larger background such as door handles are important.

There are also several core design elements to avoid when creating a dementia friendly environment:

- Avoid realistic floral patterns as they may appear life like which can encourage someone to pick at the design and cause confusion and agitation. Wavy patterns can appear to move causing an imbalance and some geometrics with high colour contrast can cause 3D perception issues and distress.
  - Patterns in a lower colour contrast, that are less perceptible are suitable for use in Wallpapers, Furniture and Curtains. Some higher colour contrast patterns can also be used with caution, such as in cushions which can be easily removed should they cause distress.
- Surfaces with a high sheen level can appear wet and similar to water. Products with a matt or satin finish are preferable.
- Dark surfaces and shadows can be interpreted as holes. Shadows can be minimised through the use of appropriate lighting.

The Science of Colour

The use of colour and the contrast between colours is a great way of helping people with sight loss and dementia as it can identify key features and rooms. Using the combination of 'hue', 'saturation' and 'tone' a perfect colour scheme can be created for a dementia environment.

Hue

Hue is most commonly referred to when people discuss colour. It is the actual attribute of a colour which allows us to classify it as a Red, Blue, Green etc. Hue is the true name for a colour.

Tone

Tone is a Greyscale, which is created using Black and White. The amount of Black or White used together determines the value of the Grey, which is then added to a pure hue.

The darker the Grey means the tone of the colour is deeper.

Saturation

Saturation is the intensity or purity of a colour. Visually brighter colours tend to be more saturated and are usually referred to as vibrant hues. Bold or Fresh hues can also have fairly high levels of saturation, but are reduced by adding varying Tone levels.

Creating Visual Contrast

A contrast in colour is the key to vision. It's how we're able to understand our environment.

As we age we lose the ability to distinguish colour clearly as our perception of depth diminishes and our sensitivity to contrast is reduced. This means that colours with higher saturation levels are required as colours will appear muted to the aged eye.

The lens often becomes thickened, making colours appear washed out. This can make it difficult to differentiate between similar colours, for example a blue and purple of similar tones and saturation may appear to be the same.

Colour contrast can be achieved in several ways. A contrast in hue, for example using a Yellow and a Blue. It can also be achieved by intermixing different tones - for example a light blue with a dark blue. Good colour contrast is achieved by using a combination of both.

High colour contrast is often used to draw attention to something important, for example, toilets are more easily found if the doors are made obvious, it can also help to remind someone that there is a toilet behind every door in that colour.

Low colour contrast is used to achieve the opposite effect. Areas you may not want occupants to be attracted to, such as staff rooms or storage cupboards, can be somewhat disguised by choosing colours which match the background, such as a white door on a white wall.

Circulation Areas to Main Hospital Design Concept

Use consistent lighting that doesn't create shadows or pools of light.

Entrance or exit doors should be painted in a contrasting colour of at least 30 LRV points to the walls to distinguish them.

Use a satin finish as opposed to gloss to avoid the surface appearing wet.

TIP

Use our Microbarr Anti Bacterial Acrylic Matt to inhibit the growth of bacteria such as MRSA and E.coli

Non patient areas can be disguised by blending the doors and frames into the walls.

Reception desk outward facing to encourage interaction.

Highlight Nurse Stations as a method to help patients find their way.

Cleanable Matt is available in over 16,000 colours.

TIP

Paint all toilet doors in the same colour to assist wayfinding.

FALL GOLD PPG1205-7 **LRV 56**
ALL TOILET DOORS

WALLS

WASHING LINE PPG1213-1 **LRV 86**
WALLS TO CIRCULATION CORRIDORS

GRAPHITE 00A09 **LRV 21**
ALL BUMP RAILS

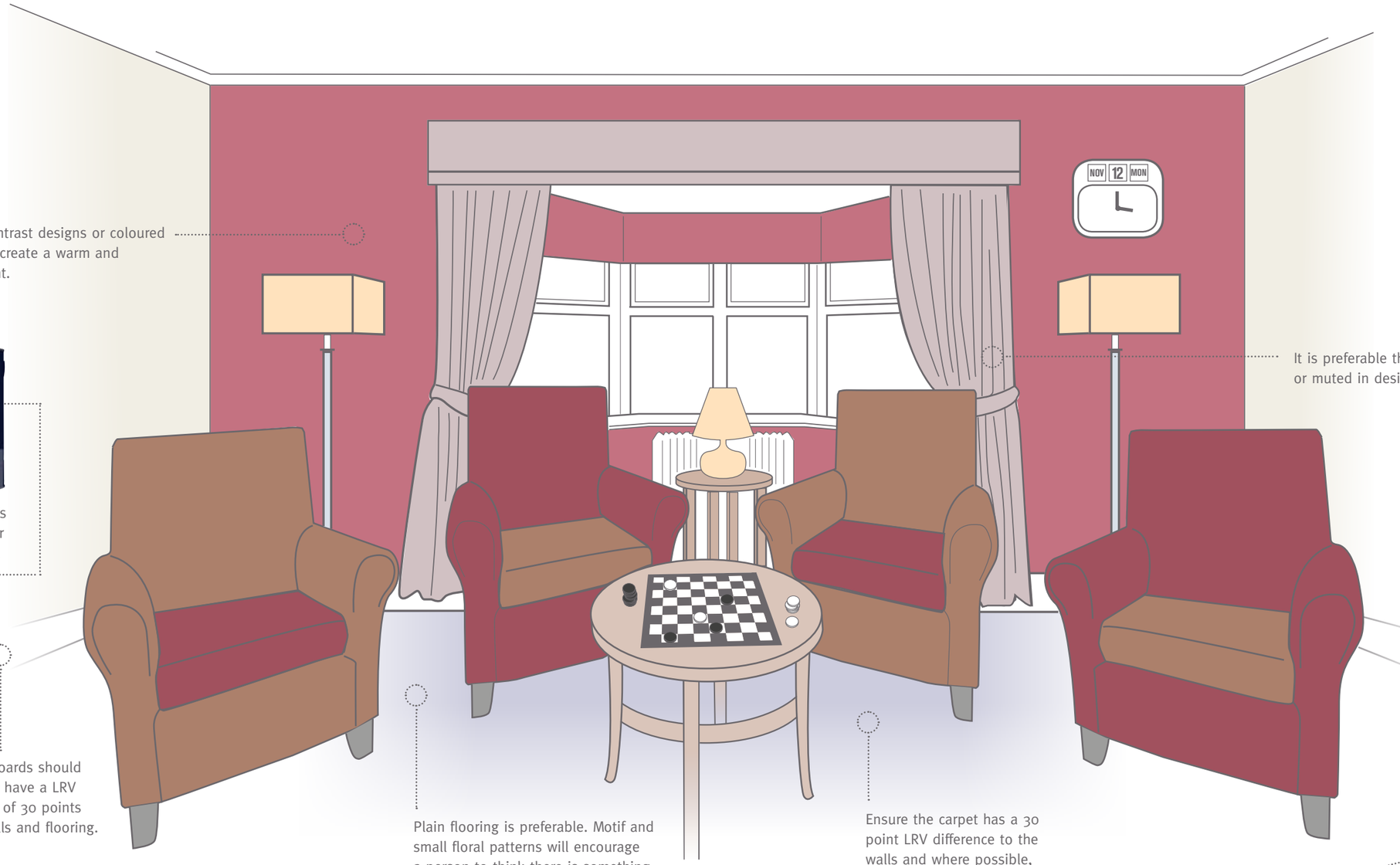
LIME SWIRL PPG1226-4 **LRV 53**
FEATURE WALL

FLOORING

Flooring should offer a 30% contrast to the lowest value wall colour, in this instance, 23 points. Where two separate floors meet, the colours should be within a 10% LRV ratio of each other.

Avoid flooring with a high sheen level that may appear slippery or wet.

Care Home Communal Area Design Concept



Wallpaper with low contrast designs or coloured paints can be used to create a warm and welcoming environment.

Cleanable Matt is available in over 16,000 colours.

It is preferable that curtains are plain or muted in design.

Skirting boards should preferably have a LRV difference of 30 points to the walls and flooring.

Plain flooring is preferable. Motif and small floral patterns will encourage a person to think there is something on the floor and try to pick it up. This creates a high risk of a fall.

Ensure the carpet has a 30 point LRV difference to the walls and where possible, the skirting boards.

WALLS

PPG1050-5 RICH ENTICEMENT **LRV 25**
FEATURE WALL

GRAY BEIGE PPG14-30 **LRV 64**
MAIN WALL

BRILLIANT WHITE **LRV 94**
ALL DOOR FRAMES & SKIRTING

TIP

Use Johnstone's Trade Water Based Satin as opposed to gloss to ensure that the surface does not appear wet.

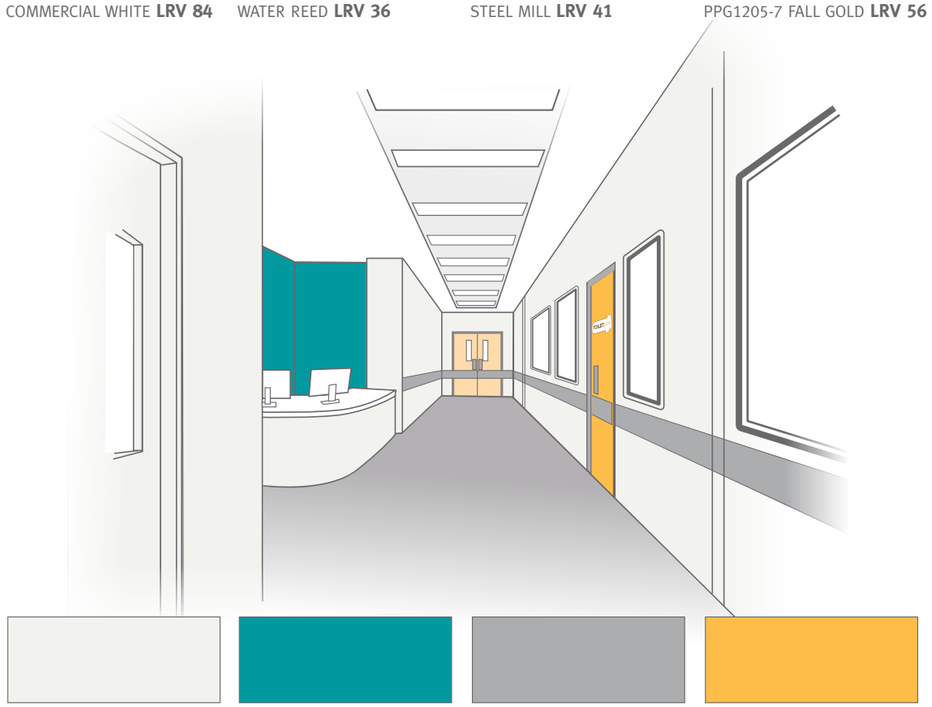
Circulation Areas to Main Hospital Concept

MAIN WALL PPG1025-1
COMMERCIAL WHITE **LRV 84**

FEATURE WALL PPG1222-6
WATER REED **LRV 36**

FRAMES/SKIRTING PPG1001-4
STEEL MILL **LRV 41**

PAINTABLE TOILET DOORS
PPG1205-7 FALL GOLD **LRV 56**



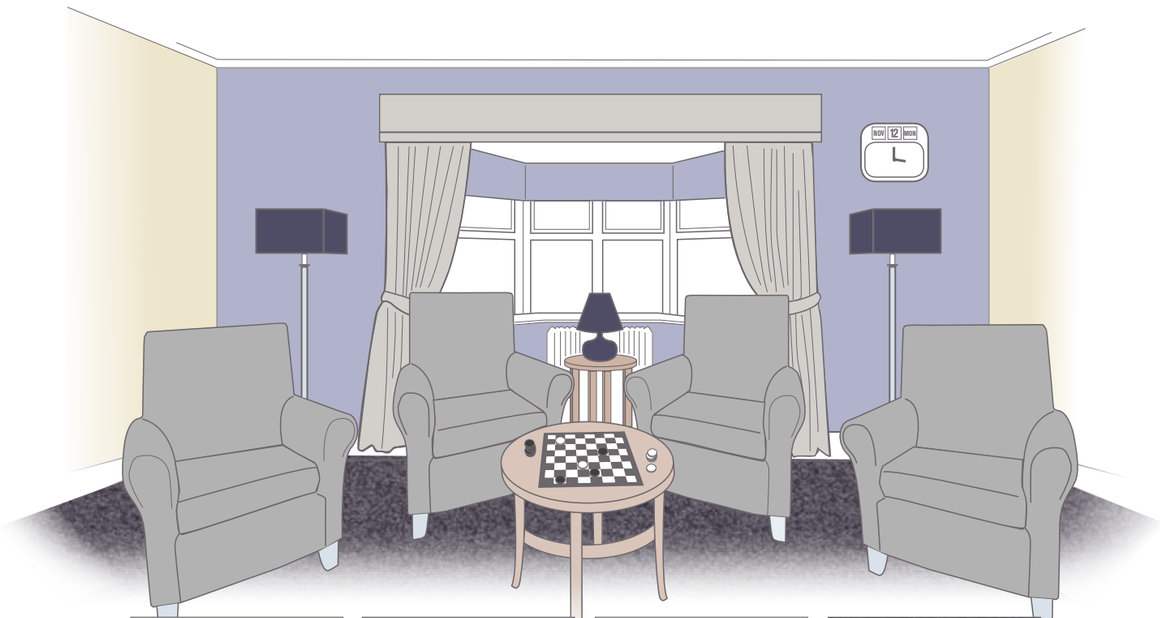
MAIN WALL PPG1001-1
SWANSONG **LRV 88**

FEATURE WALL PPG1233-7
RIVIERA PARADISE **LRV 26**

FRAMES/SKIRTING PPG1001-4
STEEL MILL **LRV 41**

PAINTABLE TOILET DOORS
PPG1205-7 FALL GOLD **LRV 56**

Care Home Communal Area Concept

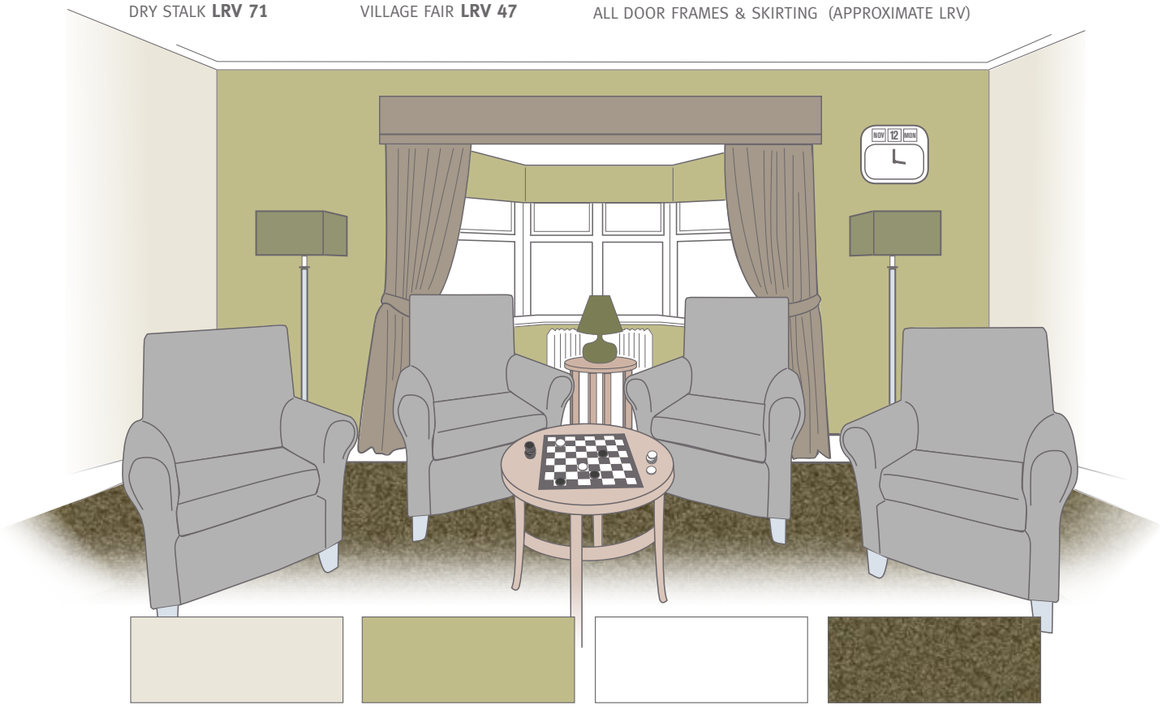


MAIN WALL PPG110-1
DRY STALK **LRV 71**

FEATURE COLOUR PPG1170-4
VILLAGE FAIR **LRV 47**

BRILLIANT WHITE **LRV 94**
ALL DOOR FRAMES & SKIRTING

CARPET PPG1171-6 **LRV 17**
(APPROXIMATE LRV)



MAIN WALL PPG1101-1
POTTERY STONE **LRV 79**

FEATURE WALL PPG1118-4
JITTERBUG **LRV 49**

BRILLIANT WHITE **LRV 94**
ALL DOOR FRAMES & SKIRTING

CARPET PPG1077-4 **LRV 34**
(APPROXIMATE LRV)

Case Study

Derwent Ward

Our colour consultants have provided their expert services within Derwent Ward of Kingston Hospital to help create a dementia friendly environment. The colour board provided was designed with consideration for elements relating to visual impairment, elderly people and dementia and focuses on providing a visual contrast between substrates, finishes and colours.

A LRV of 30 points difference was suggested for critical surfaces such as walls, door frames and handrails. Where split flooring was present, the Dementia Services Development Centre (DSDC) flooring recommendations of staying within one of the three colour levels; light, medium and dark were used. The flooring shown here is a medium colour, and has no more than a 10% colour difference to the next floor. This is recommended in order to avoid the perception of a step or hole which may cause confusion, uncertainty and falls.

Johnstone's Trade Microbarr Anti Bacterial Acrylic Eggshell was specified to paint both new uncoated surfaces and existing coated surfaces to provide a finish that can inhibit the growth of bacteria such as MRSA and E.coli.

Use of Colour for Wayfinding and Navigation

The ageing eye can diminish the blue response curve (cone), suggesting that muted levels of blues, purples and some greens from the cool side of the colour spectrum may not be as obvious as those from the warmer end. To use colour for identification and wayfinding for people living with Dementia it is advised that brighter colours are used. The following colour palette demonstrates six colours that can be used for wayfinding within bed bay wards, run in a complementary manner to ensure appropriate levels of LRV difference. The bed bay ward colours are then matched to door frame colours to assist people with navigating back to their ward room.

Feature Colour 1:
PPG1244-4
Boudoir Blue LRV 37

Feature Colour 2:
PPG1184-5
High Note LRV 28

Feature Colour 3:
PPG1223-5
Hearty Hosta LRV 44

Feature Colour 4:
PPG1250-5
Lavender Patch LRV 33

Feature Colour 5:
PPG1197-5
Horizons Eye LRV 49

Feature Colour 6:
PPG1185-7
Calypso Berry LRV 15

A murial using an image from the local area has been used to create interest and spark interaction between people, particularly those who may recognise the image, triggering personal memories.

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The Product Range

When it comes to coatings, our range of professional products and services will support you when creating a dementia friendly environment. For a complete specification, please contact our team at PPG Extra on 09124 354354 or ppgextra@ppg.com.

ecological Solutions from PPG

An environmentally certified range of products all with the coveted EU Ecolabel Accreditation.

PERFORMANCE COATINGS

A comprehensive range of high performance products and finishes together with appropriate pre-treatments for specialist projects.

ADVANCED TECHNOLOGY

The next generation of new and innovative paint technology designed by experts for decorators.

STORMSHIELD

A range of paints, renders and wall insulation developed for the ultimate protection for the exterior of buildings.

TRADE PROFESSIONAL

A range of decorating products offering everything a decorator would come to expect.

PPG EXTRA

Our Bespoke Design Service

Our PPG colour consultants can help you to create a tailored specification for your project to ensure that your design is dementia friendly at every point. We will provide our expert opinion on colour choices and additional tips to help people living with dementia such as wayfinding colour schemes. To find out more, call us on **01924 354 354** or email us at **ppgextra@ppg.com**.

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