



# Inclusive Healthcare Design

For Dementia and  
Ageing Environments

**Gerflor**<sup>®</sup>



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# Inclusive Design is for everyone!

It is design that considers the full range of human diversity with respect to ability, language, culture, gender, age and other forms of human difference.



## And it considers...



- Vision
- Hearing
- Mobility
- Intellectual abilities
- Communication abilities



- Culture
- Religion
- Social status
- Economic status



- Height
- Weight
- Age
- Gender



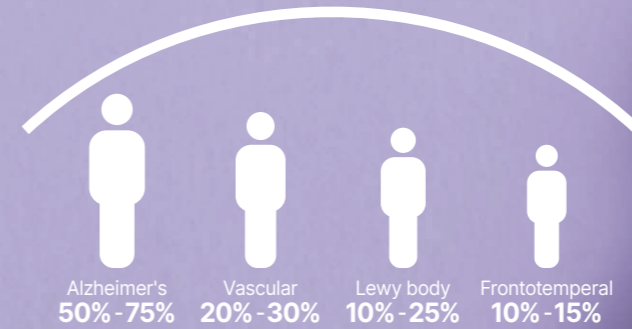
- Psycho-emotional state
- Ways of perception

# Dementia: Disease or syndrome?

It is a syndrome, usually of a chronic or progressive nature, caused by a variety of brain illnesses that affect memory, thinking, behaviour and ability to perform everyday activities.

Dementia is overwhelming not only for the people who have it, but also for their caregivers and families.

An "umbrella" term used to describe a range of symptoms associated with cognitive impairment.



# Why Dementia is important!

**55m** Today

**132m** 2050

People living with Dementia

**7th**

Leading cause of death

**65%**

Of people dying of dementia-related deaths are women

Dementia is a major cause of disability and dependency among older adults worldwide

Source: Global action plan on the public response to dementia, WHO Report

## They see and experience the world differently !



Less sensitivity to variations in the contrast between objects and background

- Diminished ability to detect movement
- Reduced ability to see different colours
- Problems directing or shifting gaze
- Problems with recognizing things and faces
- Reduced sensitivity to depth perception



# Dementia Services Development Centre



Is an international centre for knowledge exchange and research impact dedicated to improving the lives of people with dementia.

In order to accommodate the unique needs of people with dementia and make their lives easier, DSDC is responsible for accrediting finishing material designs and patterns in addition to offering guidance for designing dementia-friendly surroundings.

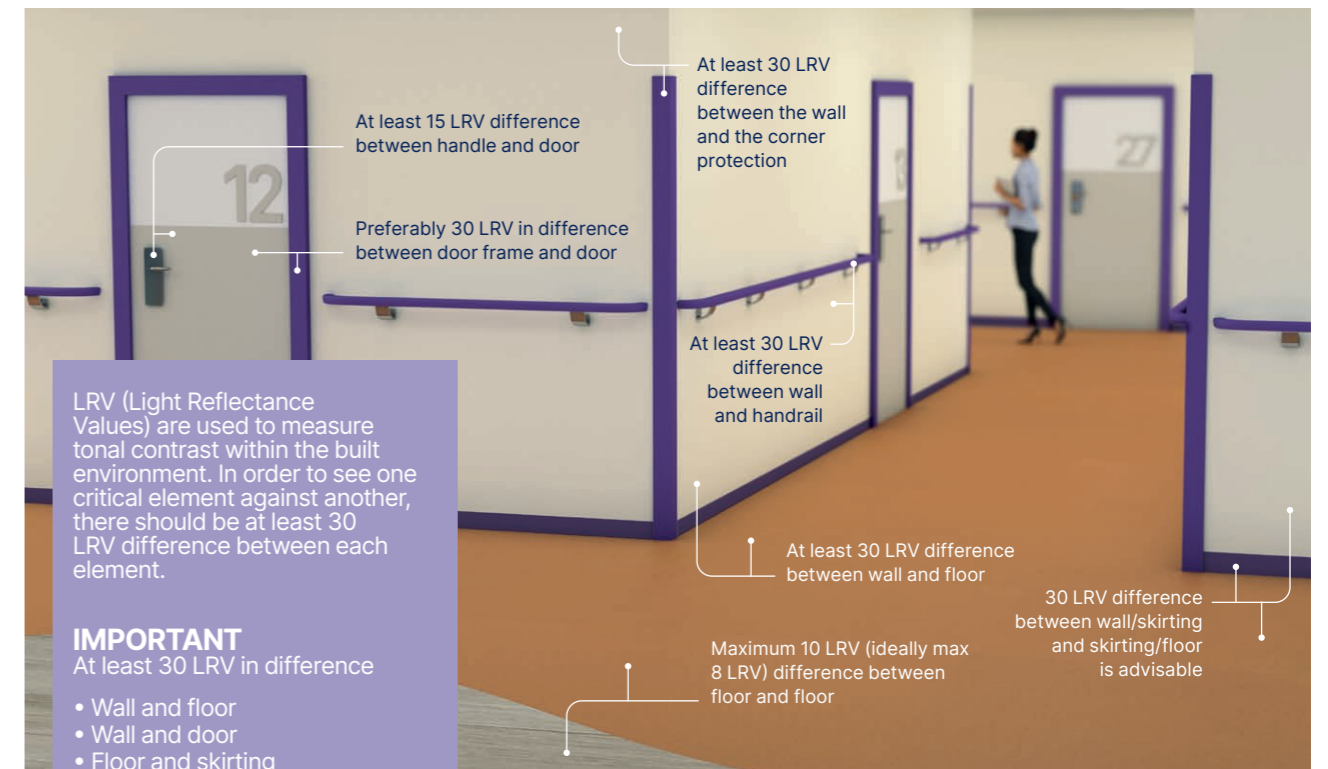


<https://www.dementia.stir.ac.uk/>

## Respect contrasts

### How can we make the surrounding environment Dementia friendly?

Colours need to contrast to ensure visibility within spaces and give a 3D enhancement to the environment. As people living with dementia age and the condition progresses, their eyesight can change. Contrasting walls and floors, tables and chairs, and even sets of plates and bowls, ensure that everything is noticeable and recognisable.



LRV (Light Reflectance Values) are used to measure tonal contrast within the built environment. In order to see one critical element against another, there should be at least 30 LRV difference between each element.

**IMPORTANT**  
At least 30 LRV in difference

- Wall and floor
- Wall and door
- Floor and skirting
- Wall/door and sign
- Wall and handrail

## Avoid falls and trips

- Tonal contrast is one important factor that must be considered.
- This is because persons who have dementia frequently struggle to recognise contrasts between surfaces.
- It's crucial that people living with dementia can distinguish between the ends of the floor and the walls that surround them.



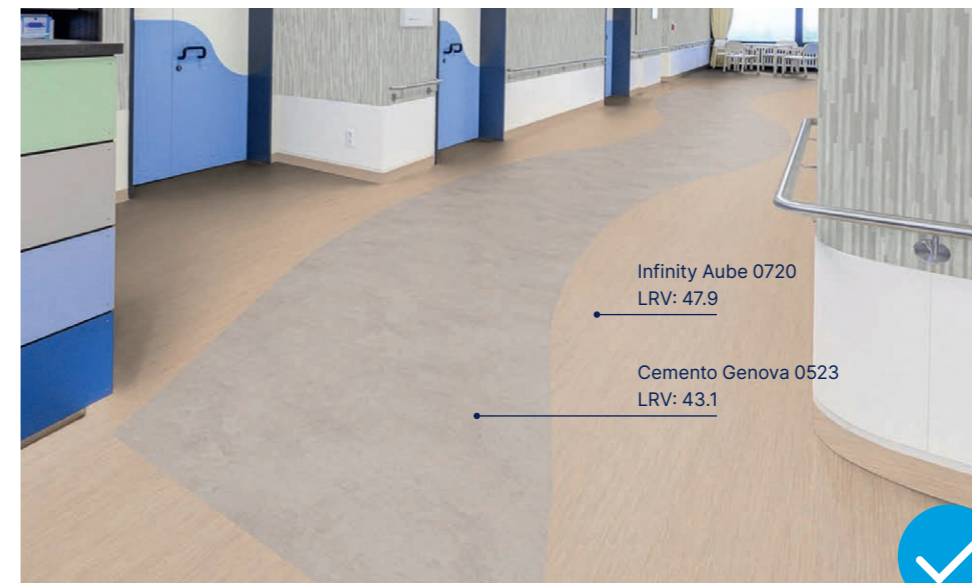
**LRV differential  
of Floor/Wall  
>30 points**



**LRV differential  
of Floor/Wall  
<30 points**

## Falls also caused by high stepping

- The floor should feel and appear to be one continuous surface in its ideal state.
- It is essential to choose flooring materials for adjacent areas that have LRVs that are close to one another and have complementary tones.
- The threshold strips between two floor surfaces have to be similar tone ideally within 3 LRV of each other.

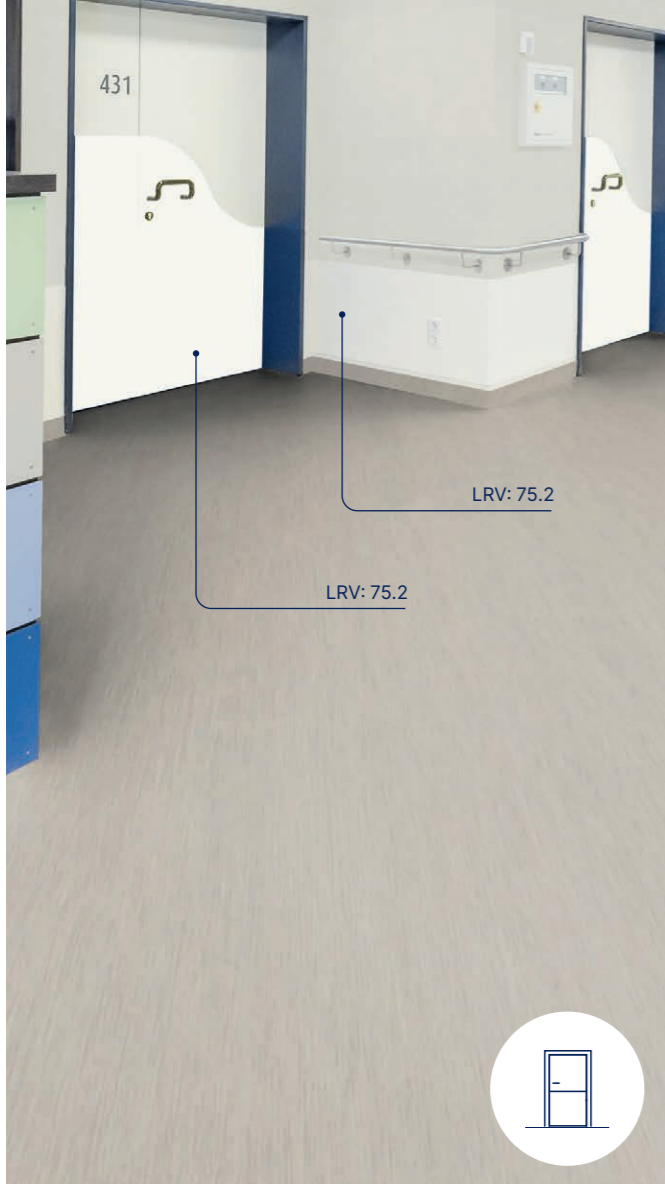


**LRV differential  
of Floor/Floor  
<10 points**



**LRV differential  
of Floor/Floor  
>10 points**

# Door colours are also important !



**LRV differential of Wall/Door <10 points = Staff Door**

- Utilize the colours of the door to control entry to various rooms and zones.
- If at all feasible, provide each end user with a unique door colour to personalise the room entrance; door colour is only one way to achieve it.



**LRV differential of Wall/Door >30 Points = Public Door**

# Handrails contrast to the walls

- For safety, it is important that handrails are visible.
- Use LRV value to highlight them.



**LRV differential of Wall/Handrail >30 Points**



**LRV differential of Wall/Handrail <30 Points**

# Where to find LRV Values ?



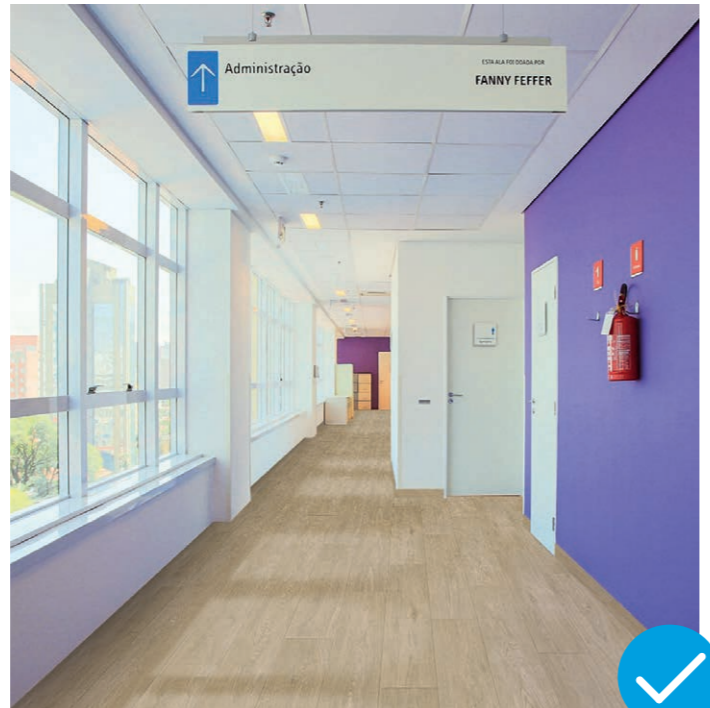
LRV values are available for all Gerflor floorings and walls solutions.



# Pay attention to patterns, designs, visual and sensorial aspects

## Avoidance of erroneous moves and confusion

- It's important to keep the flooring design free of contrasting colours and patterns. Plainer floor designs are more suitable for dementia inclusive environments.
- These can be perceived as changes in level or things to avoid and may lead to trips and falls.



## Control the shine

- It is important to select flooring options without any shine or sparkle effect in their design since these elements may be seen as a wet floor surface by someone with dementia, disrupting their gait and raising the possibility of a slip.



Shows minimal glare and reflection which is ideal for a dementia inclusive interior.

Shiny and sparkly effects in the flooring design can be mistaken for a wet surface. This can disrupt the gait of patients and increase the risk of slipping.





## Blend the dots into the principal floor's surface colour

- A large tonal contrast between the secondary flecks and the primary floor tone should be avoided when using speckles or secondary flecks in the flooring material.
- Dementia patients could mistake the specks for pieces on the floor and try to pick them up to toss them away.
- Flooring with slight tonal secondary flecks or a solid colour is preferred.



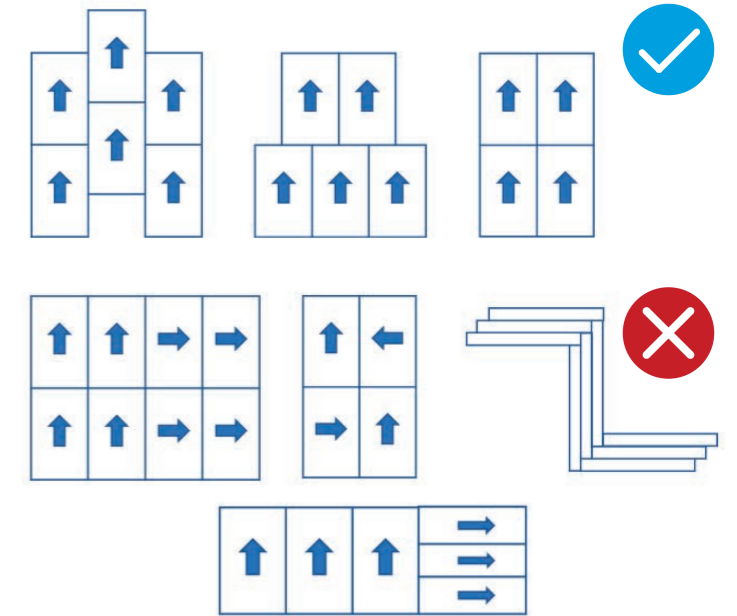
Is a good example of tonally consistent flooring. The secondary colour within the pattern is tonally close to the main background colour.



Shows an example of flooring to avoid using in dementia inclusive environments. The light edges contrast noticeably with the main background colour and this creates tonal inconsistency and could be perceived as undulations or movement within the flooring.

## Layout patterns

- The flooring should always be laid in the same direction. If it isn't, this can cause patients to become confused and disorientated.



## Smell & odour



- Odours may accumulate from liquid or food spills and incontinence on the floor. This could create intense emotional reactions, confusion and discomfort. All of Gerflor's resilient floorings come with a high-quality surface treatment, this ensures a non-porous surface for easy cleaning.



## Noise

- A noisy environment can make social interactions much harder and intensify risk of falls. To help prevent this, use Gerflor comfort flooring with excellent acoustic properties to minimise impact sound.



# DSDC Accreditation Levels



Rating	Rating Description	
<b>class 1a</b>	Flooring within this rating are plain and can be used indiscriminately.	
<b>class 1b</b>	Flooring within this rating are semi-plain (minimal texture or fleck / and or minimum contrast between fleck / pattern, wood effect with no knots) and in general, can be used throughout. Natural patterns such as timber and stone may be used in most areas due to their familiarity but with a degree of caution.	
<b>Class 2</b>	Flooring within this rating have some pattern and need to be used with caution. The natural patterns such as timber & stone in this range are more figured / patinated and although still familiar they need to be used with more caution than the above range.	
<b>Not suitable</b>	Flooring within this rating have strong pattern, flecks and / or are highly reflective & are not suitable for use in areas used by people with dementia. Tessellated tile arrangements are not considered appropriate irrespective of pattern. This rating incorporates stripes, flowers and dots which could be seen as dirt or something to pick up. Thus, it is possible that some people with dementia, particularly if on anti-psychotic drugs, may have an adverse reaction to these patterns. Thus, it is possible that some people with dementia, particularly if on anti-psychotic drugs, may have an adverse reaction to these patterns.	

## Accredited floorings ranges by the DSDC

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
TARALAY IMPRESSION		Uni Matt Brick	1090	23	1a	Totally plain & matt
		Uni Matt Copper	1089	21.3	1a	As above
		Uni Matt Corail	1091	28.4	1a	As above
		Uni Matt Dark Beige	1088	36.8	1a	As above
		Uni Matt Dark Green	1079	14.1	1a	As above

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
TARALAY IMPRESSION		Uni Matt Green	1080	32.6	1a	Totally plain & matt
		Uni Matt Grey	0832	43	1a	As above
		Uni Matt Indigo	1078	34.1	1a	As above
		Uni Matt Jungle Grey	1084	29	1a	As above
		Uni Matt Lagoon	1081	38.6	1a	As above

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
TARALAY IMPRESSION		Uni Matt Light Beige	1092	48.2	1a	Totally plain & matt
		Uni Matt Light Green	1082	46.9	1a	As above
		Uni Matt Navy	1083	9.1	1a	As above
		Uni Matt Poudre	1086	29.9	1a	As above
		Uni Matt Teal	1085	17.7	1a	As above
		Uni Matt White	0848	64.3	1a	As above
		Uni Matt Yellow	1087	53.7	1a	As above
		Riverside	1057	13	1b	Mottled effect which could look slightly patchy
		Cemento Brescia	0543	32.5	1b	Some blotchy patches which are relatively noticeable
		Cemento Capri	0524	21.8	1b	The mottled effect is much more subtle
		Cemento Firenze	1025	22	1b	Some scratches and spots with a slightly patchy effect
		Cemento Genova	0523	43.1	1b	The mottled effect is much more subtle
		Cemento Napoli	1024	33.8	1b	As above
		Cemento Roma	1026	37.8	1b	As above
		Finesse Brown	1063	36	1b	Not totally plain
	Finesse Nature	1064	37.6	1b	As above	
	Finesse Paille	1065	44.5	1b	As above	

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
TARALAY IMPRESSION		Finesse Poudre	1066	40.5	1b	Not totally plain
		Gentlemen Clear	0770	46.2	1b	As above
		Gentlemen Denim	1068	23.2	1b	As above
		Habana 3D Vinales	1070	35.5	1b	There is larger scale figuration
		Infinity Aube	0720	47.9	1b	Not totally plain
		Infinity Greige	0680	33.1	1b	As above
		Nature Oak Blond	1053	36.8	1b	Some dark spots, knots and figuration
		Nature Oak Brown	1054	22.9	1b	As above
		Nature Oak Clear	1055	41.2	1b	Some knots but overall consistent tonally
		Nature Oak Dark	1056	25.5	1b	Some dark spots, knots and figuration
		Noma Ice	0373	52	2	There is a stronger & larger scale figuration
		Habana 3D Trinidad	1069	24.7	2	Knots are noticeable and some strong figuration
	Charme Kraft	1093	26.9	2	Tonally less consistent due to some lighter edges on plank pattern	

The DSDC Accredited product logo is awarded on the merit of the individual product and colourway. This accreditation does not merit the final application. Whilst every endeavor has been made to ensure the ratings are reflective of the product's suitability and applied use at the time of print, DSDC cannot be held responsible for the application of the final product, its performance or its interface with other products or finishes.

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
CREATION 55		Bostonian Oak Honey	0016	29.8	1b	No noticeable knots & grain is consistent
		Bostonian Oak Beige	0853	36.7	1b	No noticeable knots. Tone & grain pattern is consistent
		Charming Oak Nature	1277	18.6	1b	No obvious knots. Some reasonable figuration but overall not too much tonal variation
		Charming Oak Beige	1278	31.5	1b	Pattern has some figuration but is familiar & natural with no visible knots
		Bloom Uni Taupe	0868	28.5	1b	Pattern is relatively mottled but consistent
		Cambridge	0465	39.8	2	Strong figuration which could create the perception of movement
		Honey Oak	0441	27.7	2	Some knots and overall patchy effect
		Quartet	0503	19.4	2	Figuration & some knots
		Swiss Oak Golden	0796	25.8	2	Cracks, knots and strong figuration
		Lounge Oak Beige	1272	33.9	2	Figuration which may be perceived as movement or visually overstimulating
		Twist	0504	38.9	2	Some knots
		Bostonian Oak	0871	26.4	2	Overall patchy effect which could be perceived as undulating
		Lounge Oak Golden	1271	23.8	2	Some knots albeit these are relatively small.
		Buffalo	0457	16.3	2	Obvious knots & cracks and some patchiness
		Brownie	0459	10.7	2	Some figuration & knots
		White Lime	0584	36	2	Knots
		Arena	0060	37.2	2	Dark knots which are noticeable against the paler background
		Mansfield Light	0068	31.8	2	Overall patchy effect
	Swiss Oak Pearl	0846	36.1	2	Obvious knots and cracks	
	Oxford	0061	19.2	2	Contrast with planks could create a stepped effect once laid.	

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
CREATION 70		Pure Concrete Medium	1061	28.4	1a	Almost plain. The natural concrete pattern is so subtle and consistent that this is viewed as plain overall.
		Pure Concrete Light	1060	39.1	1a	Almost plain. The natural concrete pattern is so subtle and consistent that this is viewed as plain overall.
		Onka Pearl	1056	32.9	1b	Any knots are not visible & figuration is relatively subtle
		Carassi	0561	21.7	1b	Some sheen but overall the colourway & pattern is consistent
		Limed Oak	0329	42	1b	No visible knots, cracks and minimal tonal variation
		Onka Natural	1055	31.1	1b	Any knots are not visible & figuration is relatively subtle
		Silersands	0324	33.1	1b	Some figuration but no knots are present & contrasts between planks is minimal
		Serena	0545	16.7	2	Knots visible in the room generator image
		Clifton	0556	23.2	2	Obvious knots
		Clifton Honey	1190	24.2	2	Noticeable knots
		Muse Sand	1052	39.4	2	Patchy pattern and contrast between adjacent planks
		Midwest	0538	38.9	2	Cracks & knots
		Cervino Oak Honey Clear	1186	27.6	2	Crack & knots
		Denim Wood	0356	41.4	2	Figuration
		Douglas	0535	29.1	2	Cracks & knots
		Etna Beige	1068	36.6	2	Some variation with the pattern albeit this is natural & expected for stone of this type
		Dock Taupe	0087	19.2	2	Metallic sheen, scratch marks & some noticeable lighter marks
		Dock Grey	0085	20.1	2	Metallic sheen, scratch marks & some noticeable lighter marks
	East Village	0522	22	2	Pattern relatively consistent but there are some noticeable markings	

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
CREATION 70		Halifax	0531	15.1	2	As above
		Wild Oak	0359	26.8	2	Knots and visible cracks
		Deep Forest	0360	15.8	2	Crack & knots
		Etna Dark	1069	12.9	2	Patchy effect with significant areas of contrasts within the pattern

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
TARASAFE H <sub>2</sub> O		Peyto	0024	43.7	1b	This product is very matte which is excellent. Not totally plain
		Nile	0025	43.4	1b	As above
		Eacham	0031	34.3	1b	As above
		Malawi	0032	40.1	1b	As above
		Rhine	0033	29.7	1b	This product is very matte which is excellent. Not totally plain
		Zambezi	0034	19.9	1b	As above
		Bacalar	0035	32.5	1b	As above
		Lagoa	0036	31.1	1b	As above

## Accredited walls ranges by the DSDC

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
WALL PROTECTION (SPM) - DECOCHOC		Spume	1102	82.5	1a	Rated 1a as totally plain. Relatively matt with a slight stippled texture.
		Cream	0102	81.8	1a	As above
		Chalk	0001	83.4	1a	Rated 1a as matt
		Lychee	0040	44.7	1a	Stipled texture. Sheen less perceptible in this colourway
		Straw	0021	73.2	1a	Rated 1b due to sheen
		Mimosa	0043	68.1	1a	Stipled texture. Sheen less perceptible in this colourway
		Lagoon	0048	48.3	1a	Stipled texture. Sheen less perceptible in this colourway
		Magnolia	0034	52.5	1a	As above
		Quartz	0039	54.8	1a	As above

	Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
WALL PROTECTION (SPM) - DECOCHOC		Turquoise	0047	25.1	1a	As above
		Linden	0049	29.4	1a	As above
		Mist	0101	60.9	1a	As above
		Sage	0044	38.8	1a	As above
		Fern	0045	17.8	1a	As above
		Schist	0005	15.4	1a	As above
		Alum	0031	73.5	1b	Rated 1b due to sheen
		Ivory	0006	80.1	1b	Rated 1b due to sheen

Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
WALL PROTECTION (SPM) - DECOCHOC	Wicker	0007	70.8	1b	Rated 1b due to sheen
	Pebble	0011	54.2	1b	Rated 1b due to sheen
	Gravel	0002	52.7	1b	Rated 1b due to sheen
	Clay	0003	31.6	1b	Rated 1b due to sheen
	Cinnamon	0014	38.5	1b	Rated 1b due to sheen
	Flint	0032	43.9	1b	Rated 1b due to sheen
	Greige	0013	41.3	1b	Rated 1b due to sheen
	Granite	0004	24.7	1b	Rated 1b due to sheen
	Sand	0008	51.4	1b	Rated 1b due to sheen
	Sienna	0009	26.0	1b	Rated 1b due to sheen
	Glacier	0016	57.2	1b	Rated 1b due to sheen
	Azure	0018	43.5	1b	Rated 1b due to sheen
	Denim	0020	15.7	1b	Rated 1b due to sheen
	Indigo	0046	10.4	1b	Stipled texture. Sheen less perceptible in this colourway
	Bamboo	0024	53.4	1b	Rated 1b due to sheen
	Iris	0030	17.7	1b	Rated 1b due to sheen
	Mulberry	0042	13.5	1b	Stipled texture. Sheen less perceptible in this colourway
	Terracotta	0041	26.7	1b	Stipled texture. Sheen less perceptible in this colourway
Poppy	0028	15.4	1b	Rated 1b due to sheen	
Bark	0010	14.7	1b	Rated 1b due to sheen	
Slate	0033	6.7	1b	Rated 1b due to sheen	
Basalt	0036	4.5	1b	Rated 1b due to sheen	

Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
WALL PROTECTION (SPM) - DECOWOOD	Maple	0060	48.6	1b	Rated 1b as familiar timber pattern
	Light Oak	0062	34.6	1b	Rated 1b as familiar timber pattern
	Stripped Pine	0065	35.6	1b	Rated 1b as familiar timber pattern
	Brown cedar	0069	23.5	1b	Rated 1b as familiar timber pattern
	Smoky cedar	0068	11.3	1b	Rated 1b due to sheen
	Walnut	0070	11.6	1b	Has a straight-grain figuration
	Cherry	0071	23.8	2	Includes some knots and swirls

Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
WALL PROTECTION (SPM) - DECOTREND	Brushed Aluminium	0050	40.6	2	Brushed metal effect texture with more of a sheen. Rated 1a as still plain.
	Raw Concrete	0054	26.6	2	Slight sheen. Rated 2 as slightly patchy brushed plaster effect.
	Rust Corten	0056	18.5	2	Very matt. Rated 2 as stippled effect with some contrasting darker markings.
	Green Corten	0057	22.2	2	Very matt but rated 2 due to the mottled patinated metal effect which is patchy in tone.

Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
WALL COVERING - MURAL CALYPSO	Uni Snow	7611	82.8	1a	Totally plain. No noticeable sheen
	Uni Ice	7020	71.8	1a	Totally plain
	Uni Lotus	7021	71.9	1a	As above
	Cloud Ice	7711	70.7	1b	Mottled pattern is apparent in tonal setting
	Cloud Haze	7010	62.3	1b	Mottled pattern is apparent in tonal setting
	Fabric Silk	7740	58.8	1b	Fabric pattern is familiar & relatively consistent across the pattern repeat
	Cloud Lotus	7309	75.5	1b	As above

Product Range	Colourway	Colour code	LRV	DSDC Stirling Rating	Notes
WALL COVERING - MURAL CALYPSO	Cloud Linen	7311	56.5	1b	Mottled pattern is apparent in tonal setting
	Cloud Pink	7017	56.4	1b	As above
	Cloud Green	7018	53.8	1b	As above
	Cloud Terra	7020	51	1b	As above
	Cloud Skyline	7408	56.8	1b	As above
	Cloud Moonlight	7201	70.5	1b	Mottled pattern is apparent in tonal setting albeit the pattern is very subtle
	Manhattan Mist	7721	64.6	2	Strongly contrasting mottled effect with some darker spots & scratchy lines



**we care / we act** Our Commitments for a Sustainable future



**CARBON FOOTPRINT\***  
-20 % kg

CO<sub>2</sub> equivalent/m<sup>2</sup>  
between 2020 and 2025



**BIOSOURCED CONTENT\*\***  
10 % by 2025



**RECYCLED CONTENT**  
30 % by 2025



**ADHESIVE FREE\*\*\***  
35 % by 2025



**ANNUAL VOLUME RECYCLED**  
60 000 t by 2025



\* Scopes 1 and 2 defined in the GHG protocol \*\* % of activity with biosourced materials \*\*\* % of activity - adhesive free solution