

GUIDANCE NOTES

Produced by

Tendring District Council
Building Control Service



Colour and Contrast:

**Guide to help compliance with
Approved Document M**

COLOUR AND CONTRAST: **GUIDE TO HELP COMPLIANCE WITH APPROVED DOCUMENT M**

Whilst the selection of colours can enhance both the way a building looks and works, careful colour selection can particularly improve the ability of visually impaired people to move around a building more easily and is now a legal requirement under Approved Document M of the Building Regulations and the Disability Discrimination Act.

Throughout Approved Document M there is a requirement for a contrast between certain elements in a building and it imposes a figure of 30 points as an acceptable variation in light reflective value between two surfaces. These figures can be obtained from the product manufactures.

This guide is intended to assist in understanding the difficulties sometimes presented to visually impaired people, therefore promoting a better understanding of the requirements of the regulations.

Types of visual impairment

People who are visually impaired experience loss of some of the visual field but retain significant residual vision. The nature of the loss of the visual field can be divided into three groups, namely: central, peripheral or general/sporadic visual field loss.

Central field loss

This group of people cannot see the part of the visual field straight in front of them although they can still see around the periphery.

The fovea, which is affected when people experience a central vision field loss, is especially important in the perception of fine spatial detail. In fully sighted people, small differences in the position of images in each eye combine to give a sensation of three-dimensional depth and the fovea is important in the precision of these judgements. Damage to the fovea can give problems with depth or distance perception.

Its impairment may also produce problems with fine colour discrimination and create severe difficulties in tasks such as reading.

Peripheral field loss

The people in this group can see ahead but lose the periphery of a scene as if looking through a tube.

Peripheral visual loss may affect walking by creating difficulty in seeing and avoiding obstacles. A person with peripheral visual loss may be unaware that someone is approaching them from the side.

However, performance on tests of visual acuity or colour vision may be essentially normal in someone with a marked loss of peripheral vision.

General/sporadic

Those with general/sporadic losses to the visual field may experience a combination of the above depending on the part of the eye which is affected.

Navigation

When entering an unfamiliar area the vast majority of visually impaired people will stop. Sometimes they will take up to several minutes using their residual vision to assess visual clues about the area they have entered.

The upper wall and the ceiling are often the least cluttered areas of a room and can therefore be scanned to obtain a perception of the space that has been entered. Consequently the provision of adequate colour differentiation between these surfaces can assist the perception of the size of the space.

Having assessed the dimensions of an interior the large majority of visually impaired people have a common strategy for using their residual vision to move around unfamiliar buildings. They obtain information by carrying out a continual scan of the scene in front of them looking downward and not more than two metres ahead. They do not concentrate their view directly on particular elements such as the skirting board or the wall. Instead, visually impaired people continuously search for and compare any colour contrast between large areas.

The wall and the floor are therefore critical surfaces requiring sufficient colour differentiation to each other.

In this guide a number of such critical surfaces have been identified and guidance is given to the colour differentiation that will be helpful to visually impaired people.

Where an area is particularly confined, convoluted or contains many obstacles, additional design features beyond the use of colour differentiation may be required.

Lighting

The nature of the lighting can significantly affect the way we perceive colour contrasts that are applied to the critical surfaces of an interior.

In many interiors there are lighting conditions, which produce glare and shadows. Whilst this adds interest to a space, it may also create an environment which is uncomfortable for visually impaired people.

Large amounts of light on surfaces will cause contrast to reduce and glare to increase. This is a particular problem where light is reflected from shiny surfaces.

The general guidance offered is relevant for interiors using daylight or artificial lighting with good colour-rendering characteristics.

Poor colour rendering lamps can reduce the ability of observers to perceive colour contrasts.

Incandescent lamps may:

- Emphasise colours containing red
- Produce point sources of light
- Cause glare due to high luminous intensities

Point sources of light can be distracting for visually impaired people because they produce pools of light and shadows on internal surfaces. This can make the identification of visual clues difficult.

Fluorescent lamps may:

- Emphasise colours containing blue
- Produce area sources of light
- Cause glare when the fluorescent tubes are exposed

Daylight may:

- Give a natural appearance to colours
- Produce area sources of light from windows and roof-lights
- Cause glare particularly where the sun's path tracks across the window

Strongly directional daylight from windows and roof-lights can also cause problems. The changing pattern of sky illuminance may mean that there are moving patches of light and shadows within an interior space.

Colour Differentiation

Visually impaired people are generally less confident at differentiating colours than fully sighted people but if the colour difference is above a certain threshold value their confidence improves significantly.

The colour difference required is reasonably consistent throughout the findings. This design guide has applied this observation to a series of colour schemes eliminating colours that are closer to one another than the threshold colour difference.

Critical surfaces are large areas of an interior that form the impression of shape space and proximity when scanned by a visually impaired person.

Navigation through the building is much easier if these large areas are differentiated sufficiently by colour.

Ceilings walls, doors and floors are critical surfaces that should be sufficiently differentiated from each other (**see Diagram 1**).

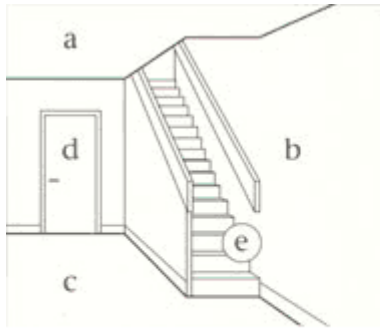


Diagram1

Ceiling colour (a) to be sufficiently different from wall colour (b)

Wall colour (b) to be sufficiently different from ceiling colour (a) and floor colour (c)

Door colour (d) to be sufficiently different from wall colour (b)

Stair colour (e) to be sufficiently different from adjoining wall colour (b)

Shiny surface finishes are confusing for visually impaired people and should therefore be avoided. Use matt or mid-sheen finishes to realise the full benefit of colour differentiation. When a pattern is used the colour that occupies the largest proportion of the area is the most significant.

Critical surfaces may be covered in patterns or broken colour effects; but designs which use highly contrasting colours in irregular, busy, regular geometric or striped patterns are very unhelpful.

Where a wall surface is split horizontally at dado height the upper wall colour should be sufficiently different from the ceiling colour and the lower wall colour should be sufficiently different from the floor colour.

Special features

Special features are additional areas that need to be highlighted to allow the building to be used effectively by visually impaired people.

These features vary according to the building type and the following list is therefore not exhaustive.

Small items need a bigger colour difference from their surroundings to differentiate them.

Toilet Facilities

Sanitary ware colours should be sufficiently different from the surrounding wall colour.

Stairs

Stair nosing in a single solid colour which contrasts with the colour of the stairs should be used.

Handrails

Handrail colours should be sufficiently different from the supporting wall colour. Handrails of appropriate design in terms of length, size, shape and strength should be provided on both sides of the staircase and on landings.

Doors

Door handles, finger plates and kickboards should be sufficiently different in colour to the door. The vertical door edge should be strongly contrasted to the remainder of the door and walls.

Doors in the partly or fully open position can offer a hazard to visually impaired people because they are unable to distinguish the open edge of the door in their walking path. Steps should be taken to ensure that doors are either held fully closed or fully open and tight to a wall.

Switches & control buttons

The switch area should be strongly contrasted to the supporting wall colour, as should controls such as lift buttons.

General obstacles & furniture

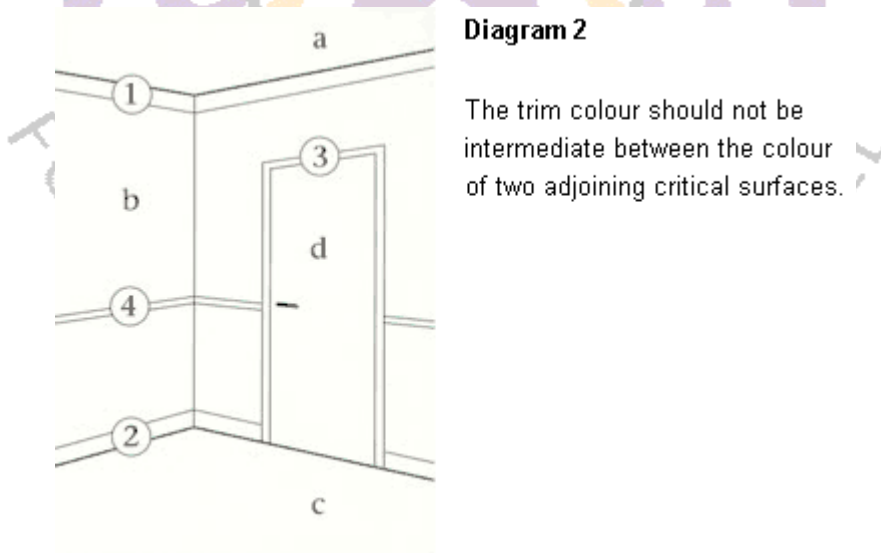
The number of items protruding into the walking space should be minimised. They are potential obstacles that need to be considered as critical surfaces requiring colour differentiation to the floor and the supporting wall.

Free standing obstacles should also be sufficiently differentiated to the floor and wall surfaces and other backgrounds against which they may be viewed.

Particularly strong contrast is needed for features that extend beyond their support at ground level, such as signs, telephone booths, literature displays and coat and hat stands.

Trim

Trim is the term used for decorative mouldings that are used to improve the appeal and durability of an interior. The colours used for trim features should maintain or improve the impact of the different colours used on the large critical surfaces (**see Diagram 2**).



The coving (1) should be the same colour as the ceiling (a), or wall (b), or highlight the junction even further.

The skirting board (2) should be the same colour as the wall (b), or floor (c), or highlight the junction even further.

The architrave (3) should be the same colour as the wall (b), or door (d), or highlight the doorway even further.

The dado or handrail colour (4) should be sufficiently different from the supporting wall colour (a).

The colour of the door handles, finger plates and kick boards should be sufficiently different from the door colour (d).



**For More Information please call
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**or alternatively call into our offices in Thorpe Road
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Other guidance leaflets can be downloaded using the following link:

[Click here for further guides](#)