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## Designing your library's printed materials for accessibility

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## 1. What is clear print?

### 1.1 Various international guidelines

There are a wide variety of international guidelines on clear print, but most concentrate on similar design principles. This presentation draws mainly from The Royal National Institute of Blind People's (RNIB) clear print guidelines from RNIB's See it Right guidance and CNIB's Clear Print Guide.

### 1.2 It's a set of principles

Clear print is a set of principles which give guidance on producing printed documents in a way which makes them accessible to the

widest possible audience. It is a design approach which considers the needs of people with sight problems.

Simply put, a clear print document will find a wider audience. The solutions proposed are straightforward and inexpensive, focusing on some basic design elements, for example font, type size, contrast and page navigation.

RNIB's own clear print guidelines are based on experience of the issues over many years, advice from experts in the field and evidence including recent research into fonts and type size.

### **1.3 Applicable to all printed materials**

There are fundamental differences between document types, and clearly different sorts of documents may require the use of different fonts and designs. However, the principles of clear print are flexible enough to be applied to a wide variety of document types, from posters to bookmarks.

## **2. Why should I use clear print?**

### **2.1 More people than you might think have sight problems**

Looking at studies such as the World Health Organisation's Global Data on blindness, it is impossible to generalise about prevalence, causes and severity of eye problems globally.

However, looking at the UK alone, two million people in the UK are estimated to have sight problems. Over the next 25 years the number of people who will require printed materials in alternative formats is expected to double, due to an ageing population and the rise of diseases such as diabetes which can damage eyesight.

### **2.2 Different effects of sight loss**

It is sometimes assumed that all people with sight loss have no vision and read using an alternative format such as Braille. However, the range of different eye conditions and their different effects means that in fact many people with sight problems have remaining vision which they use to read printed materials.

## **2.3 Various ways of reading print**

There are a number of ways in which people with sight loss read print.

The most basic method involves no aids at all. People using their remaining vision alone might hold the printed page very close to their eyes and may only be able to see a small amount of the page at one time. A dark ruler can be used under the line a person is reading to help focus on a particular point on the page.

Other people with sight loss use a magnifier to read printed materials. These may be hand held or desktop units with varying degrees of magnification. Again, the amount of the page which can be seen at one time might be very small, perhaps only one or two words.

Alternatively, Closed Circuit Televisions are often used, which are like a television or PC screen beneath which printed information can be laid for magnification to the size needed. Character recognition software is also of increasing quality and allows documents to be scanned in to a computer to be read out loud, or simply displayed on the PC monitor at an appropriate size.

The use of clear print principles can make reading easier for people who are using printed documents with any of these methods.

## **2.4 Benefits for everybody**

Clear print does not just benefit those with a sight problem, however.

Although some organisations may view the use of accessible print as "dumbing down", it is arguable that communications which use these guidelines will really convey their message and reach the widest possible audience, rather than simply look attractive to a particular target group.

Clear print does not necessarily mean austere design with no images, but is more about using visual elements in a structure which is easier for people to navigate and understand.

## **2.5 Legislation**

Again, it is impossible to generalise about disability discrimination legislation worldwide. However, in some countries there are now imperatives for organisations and businesses to provide information in accessible formats. In the UK, the Disability Discrimination Act brought a statutory responsibility to ensure that goods and services are accessible to disabled people, and applies to printed materials.

In many cases, businesses now look to provide accessible information because it makes good business sense. In the public sector, a disability equality duty has been introduced which reinforces the obligation of organisations like the National Health Service to provide printed material in formats which can be used by disabled people.

## **3. How do I do it?**

There follows a look at some of the elements of clear print design drawn from RNIB and CNIB's guidance. It is not possible to cover everything in the space available here: however, the further reading in section 4 provides more comprehensive information.

### **3.1 Contrast and colour**

The contrast between the text and the background it is printed on is very important. Various factors affect contrast, including inks, paper colour and the size and weight of type printed on it.

#### **Relationship between colours**

This is more important than the actual colours used. Very dark and very pale colours used together will provide the greatest contrast.

#### **Reversing out type**

Where white type is used reversed out of a coloured area, it's also important to ensure that the background colour is dark enough to give sufficient contrast. While some people prefer this kind of colour combination, it is very difficult with current printing techniques to create large areas of high quality white text on a darker background.

White text will also appear smaller against a coloured background, so be aware of the type size and weight used (see 3.2 and 3.5).

### **Consider colour blindness**

People who are colour blind also benefit from good contrast. However, combinations of yellow and blue, or green and red, should be avoided as they are hard to distinguish.

## **3.2 Type size**

### **Affects reading fluency**

Research commissioned by RNIB (Gary Rubin at al, "Size matters...", *New Beacon*, January 2006) indicated that the reading speed and fluency of people with sight problems increases with the text. While each person has an optimal font size beyond which further benefits are not realised, increasing font sizes will increase the proportion of the population able to reach their highest reading speed.

### **Standard books are 8 to 10 point**

Although standard books and newspapers are usually published in between 8 and point print, clear print documents should use a minimum size of 12 point or ideally 14 point. Another way to measure print size is x-height - the height of a lower case letter x. The clear print guidelines translate to an ideal x-height of 2 to 2.3 mm.

## **3.3 Leading**

Leading is the space between one line of text and the next. If this space is too narrow, it makes the text hard to read.

### **Use greater space between lines of text**

People with sight problems can find that the lines merge together when closely spaced, making it hard to recognise word shapes.

Leading should be 1.5 to 2 times the space between words; i.e. if the space between words in a line is 2mm, a good size for the space between each line of text would be between 3 and 4mm. This can be hard to measure without printing the page out to test. In Microsoft Word, line spacing can be adjusted from the "Paragraph" option in the "Format" menu.

## 3.4 Fonts

The appearance of the whole set of symbols used for printed text - including letters, numbers and punctuation - is often referred to as a typeface or, in word processing programs, as a font.

### **Clear sans serif typeface**

While a clear sans serif font such as Arial is often recommended for use when producing material for people with sight problems, in fact there is only anecdotal evidence to suggest it is any clearer than a good serif typeface.

### **Take cues from existing materials**

A good approach is to look at what is used by existing materials of the type you are producing and to choose a similar font. For example, books are often set in a semi-bold serif font, while large outdoor signs will employ sans serif fonts.

## 3.5 Type weight

Typefaces are generally available in three different "weights": a light, a semi-bold and a bold.

### **Avoid light weight type**

There is less ink used in light weight types which decreases the contrast with the background and makes it harder to read.

### **Use bold for emphasis**

However, bold type should be used sparingly for emphasis, and not as a rule of thumb - unless it is preferred by a particular reader.

## 3.6 Type style

In general, people tend to read by remembering word shapes, which are recognised by the eye instead of the individual letters.

### **Italics and capitals are harder to read**

Extensive use of italics and capitals can confuse the eye and make it harder for people to identify these shapes. Long passages of italics can be particularly difficult for partially sighted people to read.

### **Avoid underlining**

A similar problem can be caused by underlining, which can cut through the tails of letters and make the word shapes more difficult to identify.

## **3.7 Alignment and columns**

### **Aligning to left margin recommended**

There are various ways of aligning text. Justified text, which is aligned to both left and right margins, can be easy to read if the space between letters can be kept consistent. However, this is very hard to achieve with word processing packages.

Aligning to the right margin makes each line start in a different place on the left and can make it hard for people to find the beginning. Centred text, where lines start and finish in different places can be even harder to follow.

It is therefore recommended that text be justified to the left margin for maximum readability.

### **Gutter between columns should be clear**

It is important to ensure that there is adequate space in the area between two columns (known as the gutter) to differentiate them. There is a possibility that a partially sighted person might otherwise read straight across to the other side of the page.

### **Avoid pictures in column text**

Putting pictures in the text of a column can cause readers to think that the column has finished, or to lose their place when moving over the picture to find where the text continues beneath.

## **3.8 Paper type**

### **Use matt, silk or uncoated paper**

One of two things to consider when choosing paper is how much light it reflects. Using a matt or similar paper will keep this to a minimum and ensure the print is not obscured.

### **Weight over 90gsm**

The second consideration is how much of the text from the other side of the paper will show through and confuse the area of text

being read. Use of heavier weight papers ensures that this is not a problem.

### **Ask for pre-printed samples**

If a printer is supplying sample papers, ask for these to be already printed on to check whether the paper meets these criteria.

### **Avoid watermarks and backgrounds**

Paper with these features on will also confuse the printed text and make it harder to follow for people with sight problems.

## **3.9 User friendly design**

Some final factors to consider when producing clear print text are:

### **Use navigational aids**

It is helpful if recurring features of a document such as page numbers and headings can appear in the same place throughout, as partially sighted people can take longer to navigate through a document. This will aid orientation.

### **Set text horizontally**

Text which is set following a curved line or in another shape is very hard to follow. When a reader cannot see more than a couple of letters at a time, it is very hard to determine which direction text is flowing in, so it is advisable to use the traditional horizontal left to right setting.

### **Be aware of images**

Setting text over the top of an image can be equally problematic and confuse letter shapes.

In addition, readers may not be able to see whole images, only small areas at a time. It is important not to convey information solely through images, but to use them to support the text. A caption for each image which appears in a consistent place is also a very useful tool.

### **Simplicity**

Finally, be aware that clean, simple design is always more likely to be accessible to blind and partially sighted readers than something which is highly complex or decorative.



Using distinctive colours, shapes and sizes on the covers of materials will also make them easier to tell apart.

## **4. What else can I do?**

### **4.1 Make other accessible formats available**

Regardless of local legislation, an organisation which makes materials available in other accessible formats will maximise its reach to blind and partially sighted people and demonstrate a commitment to equal access to information.

Creating clear print materials in the first place should make the process of producing other accessible formats such as Braille, large print and audio easier, as the content will have been produced and formatted with accessibility in mind.

### **4.2 Contact a local organisation involved in blindness issues for help**

A local organisation (see the address for a worldwide list in Section 4 below) should be able to provide help and advice.

## **5. Where can I get more help?**

### **5.1 RNIB See it Right**

RNIB's See it Right pack can be purchased through the RNIB website. This address also contains some useful free information including a good checklist for clear print materials.

<http://www.rnib.org.uk/seeitright>

### **5.2 CNIB Clear Print Design Standard**

Documents including CNIB's Clear Print Guide, research into the legibility of typefaces and the Clear Print Study are available through the accessibility area of CNIB's website.

<http://www.cnib.ca/accessibility>

### **5.3 Worldwide agencies**

The comprehensive listing of agencies involved in blindness issues on the Tiresias website should help to identify a local organisation which can provide further help and assistance.

<http://www.tiresias.org/agencies/>

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