Guidelines for Producing Clear Print

Round Table on Information Access for People with Print Disabilities

About these guidelines

These guidelines are published by the Round Table on Information Access for People with Print Disabilities Inc. The Round Table is an umbrella organisation which brings together producers, distributors and consumers of information in alternative formats to print; blindness agencies, tertiary institutions and government departments in Australia and New Zealand.

These guidelines are available from Round Table in accessible formats.

Acknowledgements

Contents

Introduction

These guidelines have been produced to help print designers to improve the legibility of books, reports, newsletters and other printed material. The guidelines are also intended for those adapting existing printed material into large print for people with low vision.

Producing clear print is no more difficult than any other approach to print design, but it may require more initial thought about typography and layout. Incorporating clear print principles will result in a document which is more accessible for all readers.

What is clear print?

Clear print is an approach to print design that creates legible, uncluttered documents which are easier to read.

In a clear print document:

- information is easy to locate.

- layout is simple, consistent and logical.

- text is legible and well spaced.

- graphics are clear and legible.

- presentation of information does not rely solely on graphics.

- documents are printed and bound for ease of reading.

A clearer, more legible document is more readable—therefore clear print benefits everyone, but especially benefits people with vision loss. Using these clear print guidelines should help your document reach as many people as possible by making it more accessible.

What is large print?

Large print is text which is bigger than the standard print size and designed using clear print principles.

Large print documents can be designed and printed in the same way as regular print. If reformatting from existing print, this may involve enlarging the text, reformatting or reflowing the text, modifying the artwork and the layout of

the publication. For most types of information, large print can be produced effectively using standard word processors and printers.

When producing large print, you should always follow clear print guidelines. This document also includes guidance on reformatting existing material into clear large print.

How do people with low vision read print?

People are affected in different ways by their vision impairment and use different methods when reading. These methods become more effective when documents are designed using a clear print approach.

The most basic strategy involves not using any vision aids at all, just relying on any remaining vision an individual may have. In order to read the text, the reader may position the printed page very close to their eyes. This means that the reader can only see a very small amount of the total page at a time.

Magnifiers are very popular reading aids. These range in size and technical sophistication from simple hand-held optical magnifiers to computerised devices which can adjust text size and colour contrast. Magnifiers tend to limit the amount of the page that can be seen at a time, quite often to as little as one or two words. Magnifiers work more effectively if the document placed under them is completely flat. A key point to remember with magnifiers is they will only enlarge the existing text—so if the original is of poor quality, this poor quality is only made larger—it is still difficult to read.

Scanners and optical character recognition (OCR) software can provide information access for people unable to read regular print. Documents can be scanned and read on a computer through enlargement or the use of speech software. OCR is most effective on documents that have a simple layout and use an easily recognisable font.

Reformatting text into large print is another way of making print accessible for people with low vision. This may involve adjustments such as reflowing text, making headings clearer or easier to locate. If an individual requires text to be in a very large text size in order to read it effectively, it may be more effective to consider magnification technology or other accessible format options rather than producing the material in large print.

Some people rely on their remaining vision to read

Electronic magnifiers limit the amount of the page visible at a time

Clear print checklist

- ☐ A simple, clear font has been used.

- ☐ All text is of an appropriate size.

- ☐ Use of block capitals, italics and underlining is limited.

- ☐ Text is left aligned and set horizontally.

- ☐ Text is not condensed or stretched.

- ☐ Space between lines and paragraphs is adequate.

- ☐ There is good contrast between text and background.

- ☐ Layout is simple, consistent and logical.

- ☐ Heading styles are consistent throughout the document.

- ☐ Page margins are wide enough to allow flat binding.

- ☐ Page numbers are visible and in a consistent location.

- ☐ There is adequate space or a vertical line between columns.

- ☐ Tables have visible borders, with adequate space between text and border.

- ☐ Table headings are repeated at the top of each page, and cells are not split across page breaks.

- ☐ Text boxes and images are easily located and do not interfere with the flow of text.

- ☐ Graphics are clearly designed.

- ☐ No information is conveyed solely on graphics or colour.

- ☐ Text within graphics is clear, consistent and the same size as the main text.

- ☐ In contents lists, indexes and glossaries, page numbers are visibly linked to the reference.

- ☐ Paper is thick enough to prevent show-through.

- ☐ Document is bound so that it can be opened flat.

Checklist for reformatting into large print

☐ Copyright permission obtained if required.

☐ Text meets clear print guidelines.

☐ Graphics meet clear print guidelines.

☐ No information is conveyed solely through graphics or colour.

☐ Original print page numbers have been inserted.

☐ The needs of the individual reader have been accommodated.

Clear text formatting

Choosing a font

The word "font" refers to the appearance of a "family" of characters used for printing. In addition to the upper and lower case version of each letter, it includes italics, numbers, punctuation marks and symbols.

A clear print document should use fonts which are clear and easy to read. Qualities to look for in a font are:

- plain rather than stylised.

- easily distinguishable characters.

- open counterforms (that is, the blank spaces inside open letterforms like e and o).

- a large "x-height" proportional to point size (that is, the height of a lower case x compared with the overall size of the letters).

- prominent ascenders and descenders (that is, the parts of the letter that appear above or below the main body of the letter, for example the tail of a lower-case g, or the vertical bar in a lower-case h).

- uniform stroke thickness.

- even spacing between letters.

Avoid fonts that are highly stylised, ornate, decorative or handwriting-style.

Serifs

Serifs are details on the ends of some of the lines that make up letters and symbols. Serif fonts include serifs on their letters, and sans serif fonts do not. There is little evidence to suggest that one category is easier to read than the other in general, but sans serif fonts are more commonly used for large print. Large or complex serifs may reduce legibility and should be avoided.

Easily distinguishable characters

It is important to choose a font with easily distinguishable characters. In some fonts, it may be easy to confuse certain characters, for example I (capital i) with l (lower case L), and t with f.

It is also important to ensure that the numbers are distinct. Certain numbers such as 3, 5 and 8 can easily be misread. In certain typefaces, 0 and 6 can also be confused.

Examples of clear fonts	Clear sans serif typefaces	
	Arial	Gill sans
	Century Gothic	Tahoma
	Clear serif typefaces	
	Garamond	Bookman
	Palatino	Times

Examples of highly stylised or ornate fonts which should be avoided	Gigi	Brush Script
	Curlz MT	Xᴡᴀᴛ̆ᴜ̨̞ᴋç ꜰ ᴜ̨̃ʎ̃ᴀ̃
	Pristina	CASTELLAR
	Kirsten	Chiller

Using fonts

Font size

The size of the text is a vitally important aspect of clear print design. In general, larger text is easier to read, particularly for people with low vision.

Often, books and newspapers use type sizes between 8 and 10 point. Clear print documents should use a minimum type size of 12 point.

Consider the audience for your document. If the document is designed for older people or for people with low vision, consider increasing the text size.

Large print uses a larger text size than standard documents—from 16 point to 36 point or larger. If preparing a large print document for an individual who has low vision, use their preferred font size, if known.

Font size is an important aspect of clear print design. These examples show the same piece of text in 8 point Arial and 14 point Arial	**The latest technology (8 point)** Access to information for people with a print disability, be it in traditional formats such as large print, braille and audio, or in newer and emerging electronic technologies such as the world wide web, structured e-text, e-commerce and interactive voice response, ensures that all people have access to the thoughts and ideas which make a society. **The latest technology (14 point)** Access to information for people with a print disability, be it in traditional formats such as large print, braille and audio, or in newer and emerging electronic technologies such as the world wide web, structured e-text, e-commerce and interactive voice response, ensures that all people have access to the thoughts and ideas which make a society.

Font weight

Fonts are often available in light, normal, semi-bold (medium) or bold weights. The light options should be avoided, since letters are not dark or thick enough to provide good contrast with the background, particularly if coloured paper is used. Most readers find normal or bolder font weights easier to read. People with low vision often prefer bold or semi-bold weights to normal ones.

Light weight	Round Table's strength is the diversity of knowledge and experience in the production and use of alternate format materials embodied by its members.
Normal weight	Round Table's strength is the diversity of knowledge and experience in the production and use of alternate format materials embodied by its members.
Semi-Bold weight	**Round Table's strength is the diversity of knowledge and experience in the production and use of alternate format materials embodied by its members.**
Bold weight	**Round Table's strength is the diversity of knowledge and experience in the production and use of alternate format materials embodied by its members.**

Font style

Most people read by recognising word shapes rather than individual letters. When whole words are set in italics or block capitals, the shape of the word is altered since letters are set at an angle or all the same height. This makes words harder to read, so clear print design should aim to avoid long passages of italic or block capital letters. If you need to add emphasis to your text, try a bolder font weight. If it is necessary to use italics, make certain that they are in the same font type as the body of the text, and choose a font that has a clear italic. If necessary, block capital letters may be used to give emphasis to titles, single words or short phrases.

Underlining should also be avoided as it makes it more difficult to recognise the shape of the words. This is because the underline intersects with the letter descenders (tails of letters like p and g). If it is essential that underlining is used, increase the space between the letters and the underline to ensure that the line does not intersect with the words.

The use of italics, underline and block capitals inhibits readability	This in-depth experience is drawn on by the Round Table to prepare its standards and guidelines on the production of alternate formats.
	This in-depth experience is drawn on by the Round Table to prepare its standards and guidelines on the production of alternate formats.
	<u>This in-depth experience is drawn on by the Round Table to prepare its standards and guidelines on the production of alternate formats.</u>
	THIS IN-DEPTH EXPERIENCE IS DRAWN ON BY THE ROUND TABLE TO PREPARE ITS STANDARDS AND GUIDELINES ON THE PRODUCTION OF ALTERNATE FORMATS.

Mathematics and use of fonts

If mathematical symbols are being used in a clear print document, make sure that the font selected includes clear, adequately large mathematical symbols.

Where there are expressions with superscripts and subscripts in a document, it may be necessary to increase the base font for mathematical expressions throughout the document or the font size of the superscript/subscript.

Text Layout

Text alignment

In general, text should be left aligned with a ragged right margin.

Fully justified text, which is aligned to both the left and right margins, distorts the spacing between the words and can create stretched or cramped lines of text. Readers with low vision can mistake large gaps between words as the end of lines, particularly when using a magnifier to read the print.

Aligning text to the right, which produces a ragged left margin, also makes text more difficult to read for people with low vision. This is because each new line starts in a different place and is difficult to find.

Centred text, where each line starts and ends in a different place, is even more difficult to follow and should not be used for blocks of text. You can, however, centre titles or main headings.

The way text is justified can have a significant impact on its readability

Left aligned text

A draft version of the proposed amendments to the Copyright Act was released in October 2006 for comment. This followed extensive representations to the copyright department of the Attorney Generals.

Right aligning text makes it more difficult to find the start of the next line

A draft version of the proposed amendments to the Copyright Act was released in October 2006 for comment. This followed extensive representations to the copyright department of the Attorney Generals.

Fully justified text can produce confusingly large gaps between words

A draft version of the proposed amendments to the Copyright Act was released in October 2006 for comment. This followed extensive representations to the copyright department of the Attorney Generals department.

Word and character spacing

It is best to keep the same amount of space between each word. Do not condense or stretch single words or lines of text to fit your line length since this makes the text more difficult to read.

Splitting words over two lines by using hyphens disrupts reading flow, so should be kept to a minimum.

Text direction

Generally, all text should be set horizontally. Text set at an angle or following a curved line is more difficult to locate and read. Text set vertically is extremely difficult for a reader with low vision to follow, and should not be used.

Vertical Text

is hard to read

Most people find that curved text is also hard to read
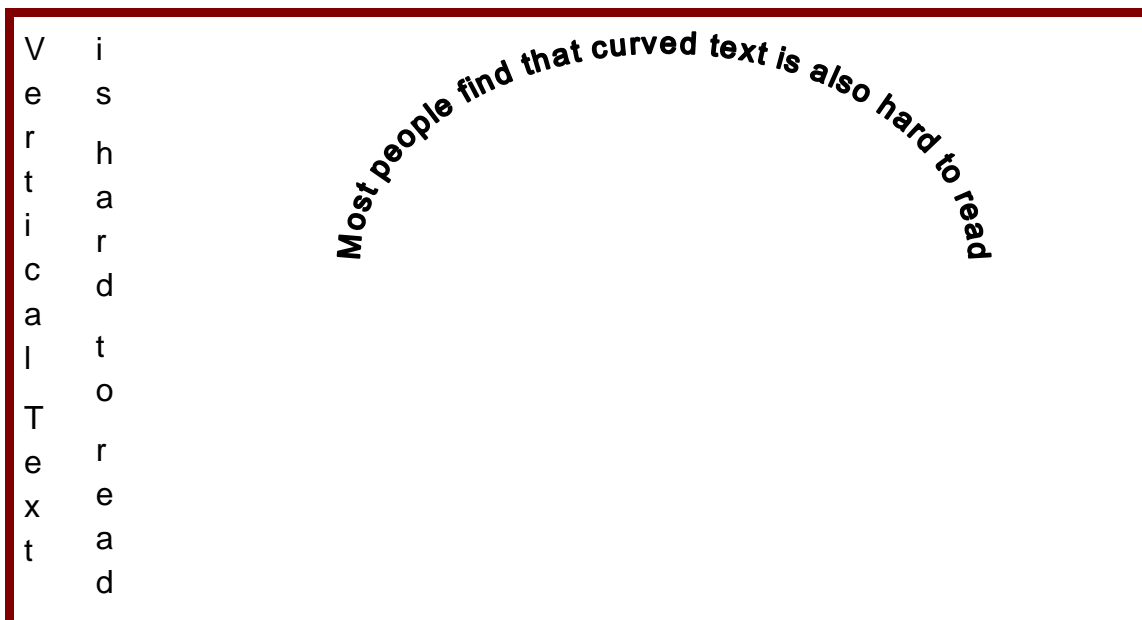
Line spacing

The space between lines of text, also known as leading, needs to be adequate. If the space between lines is too narrow, the print can be difficult to read. Lines of text may appear to merge with the text on the lines above and below, making it difficult to recognise word shapes. For larger font sizes, more spacing is required between lines.

Insufficient line spacing can give the text a cramped look and make it less legible.

12 point text on 12 point leading

Copyright Changes
The proposed changes incorporate the addition of the Bern convention 3- step test. This in effect means it is not an infringement of copyright to make a copy of a publication as long as it is a special case, does not interfere with the rights of the author to benefit from their work or that the copying does not unduly prejudice the intellectual property of the owner.

12 point text on 17 point leading

Copyright Changes

The proposed changes incorporate the addition of the Bern convention 3- step test. This in effect means it is not an infringement of copyright to make a copy of a publication as long as it is a special case, does not interfere with the rights of the author to benefit from their work or that the copying does not unduly prejudice the intellectual property of the owner.

Paragraph spacing

Adding vertical space between paragraphs helps to divide up the text and enhances readability.

In some situations, it may be suitable to increase the size of the indent on the first line to help separate paragraphs.

Examples of paragraph spacing	**Paragraphs in 12 point with 10 point spacing between paragraphs** There are currently around 300,000 Australians who are blind or have low vision. In addition, there are many others who are unable to read standard print with ease due to a physical disability or a learning disability. One of the barriers to participation in the community is a lack of access to information, and for these Australians it is critical to ensure the best possible access to a wide range of information in alternative formats. **Paragraphs in 12 point with 10 point spacing between paragraphs plus indent** There are currently around 300,000 Australians who are blind or have low vision. In addition, there are many others who are unable to read standard print with ease due to a physical disability or a learning disability. One of the barriers to participation in the community is a lack of access to information, and for these Australians it is critical to ensure the best possible access to a wide range of information in alternative formats.

Contrast

Good contrast between the text and the background on which it is printed is extremely important for legibility. Contrast is affected by several factors, including paper colour, printing inks and the size and weight of the text.

The contrast between the colours is generally more important for legibility than the specific colours used. Black on white provides the best contrast. Some specific colour combinations should be avoided to help ensure your

document is legible for people with colour vision deficiencies: red-green, green-yellow, and blue-yellow.

Some people prefer to read white text on a black background because it reduces the amount of glare from the page. If using white text on a block of colour, make sure that the background colour is dark enough to provide good contrast to the text. Pay special attention to text weight and size when reversing out text, since white text on a coloured background appears smaller.

Try to avoid switching between dark on light and light on dark on the same page, as this can be difficult for the eye to adjust to.

Poor colour contrast examples:

To facilitate and influence the production and use of quality alternative formats for people with print disabilities...	To facilitate and influence the production and use of quality alternative formats for people with print disabilities...
To facilitate and influence the production and use of quality alternative formats for people with print disabilities...	To facilitate and influence the production and use of quality alternative formats for people with print disabilities...

Good colour contrast examples:

To facilitate and influence the production and use of quality alternative formats for people with print disabilities...	To facilitate and influence the production and use of quality alternative formats for people with print disabilities...
To facilitate and influence the production and use of quality alternative formats for people with print disabilities...	To facilitate and influence the production and use of quality alternative formats for people with print disabilities...

Clear layout

The layout of a well designed clear print document should be simple, consistent and logical. It is important to use features which make the layout easy to follow, and information easy to find. Remember that consistency is the key when designing and reproducing publications to make them accessible to people with low vision.

Page layout

Page layout should be simple and uncluttered. Different elements of information on the page such as headings, photographs, text and captions should be carefully designed and clearly separated.

Layout should be predictable and consistent so that information can be located easily. Consider that for readers with low vision who may be using magnification technology, only a small part of the page is visible at a time. For this reason, it is best to avoid placing information on the right hand side of the page without connecting it visually to the left margin, as it may be overlooked by a reader who is not viewing the whole page at once.

Page size

Choose a page size that is manageable and fits the required information easily. It can be physically difficult to handle large page sizes such as A3, especially for readers who read best by holding print close to their eyes. Large sized paper may be appropriate for large graphics or complex tables.

Margins

If you are producing bound documents, make sure that the central margin is wide enough to avoid text printing close to the centre of the spine. This allows the document to be laid flat so that it can be used with magnification or a scanner.

Navigational aids

Recurring features, such as headings and page numbers, are easier to find if they are always placed in the same position on the page. These serve as navigational aids and help the reader to find the information they need quickly.

Icons and visual aids can help readers navigate around a document and identify sections, points and headings. Ensure that icons are clear and easily distinguishable.

Even if the actual icon is not easily distinguishable to a reader with low vision, the colour and form can act as a location guide

Writing Activity

Reading Task

Other useful aids for navigating the document could include a list of contents, and horizontal lines to separate different sections of the document.

Headings

Headings within a document provide the reader with important information about the text. The size and prominence of the heading should reflect its importance in the context of the document. Be sure to use consistent heading styles throughout the document.

Page numbers

Page numbers should be in a predictable location and with an adequate font size, which may be slightly smaller than the main text size.

Contents pages, glossaries and indexes

Contents pages, Glossaries and Indexes should be formatted so that the referenced page numbers are easy to locate. Either place the number close to the reference, or use leader dots between the reference and number so that the reader can follow the line visually to locate the number.

Columns

When setting out text in columns, make sure the space between the columns, also known as the gutter, clearly separates them. Columns that are too close together may introduce confusion as the reader may read across the page rather than down. If space is limited, use a vertical line of at least 1 point thickness to separate the columns.

Columns that are too close together

Each year the Round Table runs a conference to facilitate and influence the production and use of quality alternative formats for people with print disabilities. Conferences showcase examples of best practice in the provision of accessible information to people with a print disability in the workplace and the community centre, including businesses, agencies, tertiary institutions, libraries, Commonwealth, State and local government.

Columns with a clear blank space between them

Each year the Round Table runs a conference to facilitate and influence the production and use of quality alternative formats for people with print disabilities. Conferences showcase examples of best practice in the provision of accessible information to people with a print disability in the workplace and the community centre, including businesses, agencies, tertiary institutions, libraries, Commonwealth, State and local government.

Columns with a clear dividing line between them

Each year the Round Table runs a conference to facilitate and influence the production and use of quality alternative formats for people with print disabilities. Conferences showcase examples of best practice in the provision of accessible

.

information to people with a print disability in the workplace and the community centre, including businesses, agencies, tertiary institutions, libraries, Commonwealth, State and local government

Tables

Tables need to have sufficient space around text within the cell so that the cell contents do not merge visually with the borders of the table. Border lines should be visible to make it easier for the reader to locate information.

Tables should be formatted so that headings are repeated if the table extends over more than one page. Individual rows should not be split across pages.

If using background colour within table cells, ensure that there is good colour contrast between the text and its background.

Generally, text in a table should be left aligned within each cell. It is often more appropriate to right-align numbers.

Table with insufficient cell margins

ISBN	TITLE	PRICE	QUANTITY	TOTAL
1 84000160 7	Garden Planning	$15.00	100	$1500.00
1 84000159 3	Water Gardening	$15.00	2	$30.00
1 84000157 7	Garden Structures	$10.00	47	$470.00
1 84000151 8	Pruning	$15.00	3	$45.00

Table with increased cell margins

ISBN	Title	Price	Quantity	Total
1 84000160 7	Garden Planning	$15.00	100	$1500.00
1 84000159 3	Water Gardening	$15.00	2	$30.00
1 84000157 7	Garden Structures	$10.00	47	$470.00
1 84000151 8	Pruning	$15.00	3	$45.00

Text boxes

Text boxes should be consistently located and should not interfere with the flow of text. They should be positioned between paragraphs as close as possible to the text to which the box is referring.

If using background colour within a text box, ensure that there is good colour contrast between the text and its background.

Boxes should have a clear border line, at least 1pt thick. Ensure that there is sufficient extra space between text and the box border so that they do not merge visually.

Clear graphics

Graphics such as diagrams, graphs and illustrations can be used to convey important information. Decorative graphics can be used to break up blocks of text or provide navigational aids.

However, while graphics can aid understanding, it is important that information is not conveyed to the reader through graphics or colour alone. All graphics should either support the main body of the text, or should be accompanied by a text caption explaining their significance.

Consider that even though people with low vision may be able to see an image, they may only see a small part of it at a time, which they have to mentally piece together to understand the complete picture.

Text and graphics

Text labels within a graphic should be of the same size as the main text. Labels should normally be placed horizontally.

Avoid setting text labels over images if possible. Setting text over an image can reduce contrast, making it harder to read. Readers may not expect to find text within images, so it can easily be overlooked.

If labels need to be placed over graphics, place inside a text box, and ensure that there is sufficient contrast between the text label and the background it appears on. Figure 1 shows an example of this.

Figure 1   German barns in the Barossa, South Australia
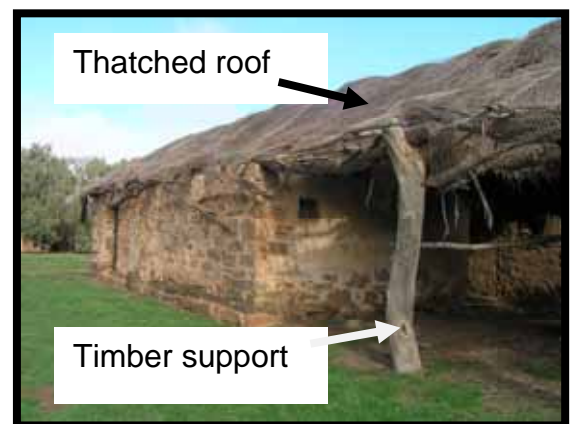
Make sure that image captions are located in a consistent position throughout the document so that the reader can predict the location.

Colour contrast

Make sure graphics can be understood without colour. Printing a copy of the graphic in black and white is a simple way of assessing whether the main features contrast adequately.

Avoid combining yellow with blue, green with red, or green with yellow as these colour combinations are particularly difficult for people with colour vision limitations to distinguish.

Layout of graphics on a page

When placing graphics on a page, ensure that there is adequate spacing between graphics and the surrounding text. If you are wrapping text around a graphic, wrap it around the left side so that the start of each line is on the left margin and is easier to find. Wrapping text around the right side of a graphic means that lines of text start in different places, making them more difficult for the reader to find.

Avoid placing graphics in the middle of a column. This can be confusing as the reader has to skip over the picture to rejoin the line of text and can sometimes lose their place, or go to the start of the next column.

Spacing between graphics

Avoid overlaying graphics, as this creates complex images which are difficult to interpret visually. Ensure that there is adequate spacing between graphics.

Placing graphics over one another makes interpretation difficult

Types of graphics

Illustrations and cartoons

Ideally illustrations should be line drawings with thick, dark strokes or outlines. Pictures with undefined edges, such as watercolour paintings, highly stylised, abstract images and those that use a continuous tone are more difficult to see.

If designing cartoons, make sure text size and style is legible and that graphics are simple.

Photographs

If photographs are being used, these should not be too grainy or contain a lot of detailed information which could be lost to readers with low vision. The important part of the image should be obvious.

Photographs should have a good contrast. A picture in which a dark coloured foreground image is set against a light coloured background will be easier to understand than a picture where the tonal values of its colours are equivalent to each other. Make illustrations and photographs as large as possible without being grainy.

When using halftone screens, (illustration created by dots of varying sizes which form a "continuous tone") be aware that these can become coarse and distorted when enlarged. This results in a hazy image that is often hard to see.

Maps, graphs and diagrams

Maps, graphs and diagrams should all be clearly defined with good contrast. Try to avoid "cluttered" diagrams as this will make interpreting diagrams very difficult.

If diagrams are very complex it may be possible to reduce the amount of information by creating more than one diagram, graph or map.

Ensure that any coloured or patterned areas are distinctive enough to be easily identified.

Printing and binding

Paper

There are three important factors to consider when choosing paper:

1. How much light the paper reflects. Avoid glossy papers, as light will reflect off the surface and obscure the print. Preferably choose matt, silk or uncoated paper.

2. Amount of "show through". It is important to choose paper that is thick enough so that the text printed on one side can not be seen on the other side to the extent that it interferes with legibility. If it is not possible to choose paper thick enough to prevent show-through, print single sided.

3. Colour of paper. Choose a paper colour that will give an adequate contrast between the text and background. Generally, white paper with black text produces the best contrast. For some readers, this produces too much contrast and off-white, buff or coloured paper is preferred.

Binding

Documents should be bound on the left to enable them to be opened out flat.

Readers who rely on scanners or magnifiers need to be able to place the document flat, so care should be taken with the number of pages in your document and the binding methods you choose.

Some book binding methods can make it difficult to open a document so that it is completely flat. Staples work well for shorter documents. Wire binding allows a larger document to be bound and still be opened out flat for use under a magnifier.

Reformatting into large print

There are a number of issues which arise when an existing document needs to be reformatted into clear, large print. Educational and specialist organisations often need to reformat material and usually will need to adapt the existing material to improve the readability and clarity of presentation.

It is important that the reformatted document provides the same information as the original print and retains as much as possible of the original document, including formatting and graphics, except where this contravenes clear print guidelines. This is especially important in educational settings, where students may be accessing a large print version while their classmates use the original print.

When reformatting an existing print document into large print, refer to the clear print guidelines—for example it may be necessary to choose a clearer font and increase leading as well as simply increasing the font size.

Digital files

When files are obtained from a regular source; such as a work place, school or tertiary educational provider, it will expedite the conversion to large print if the files are correctly and clearly formatted initially. It may be worth providing specific training to raise awareness of the issues within organisations to make the production of large print more efficient.

Several simple adjustments will help to make the conversion more efficient. Some examples are:

- ensuring that the original print document follows clear print principles.
- the use of templates and styles.
- effective use of tables.

Copyright

By reformatting existing material into large print, you are making a copy of the work, so it is important to be aware of relevant copyright legislation.

If you do not hold copyright for the original print document, creating a large print document may require obtaining the original print publisher's permission,

negotiating a license or using a print disability exception in your national copyright legislation.

Depending on the copyright authority you are using to make the large print copy, it may be necessary to include information about the original publisher, the reformatting publisher and the copyright permission or license details in the text of the large print version.

Photo-enlargement

Enlarging information using a photocopier will not produce clear large print if the original does not follow clear print principles.

Photocopy enlargement may not produce material in an adequately large font size. Text in particularly small type, for example an extracts from a train timetables, may need to be further enlarged.

Print quality may be poor compared with computer generated material which has been digitally printed.

Text formatting

Font size and style should be appropriate for use by the reader. Readers with low vision will often have a preferred font size which optimises their access to the text. If producing material for an individual, it is important to use their preferred font size, if known.

Italics should be avoided where they only serve a visual function. Italics and bolding are sometimes used to highlight text for a specific purpose within a document. These may be words which are in the glossary, which are being emphasised or various other purposes. Care must be taken to ensure that the intention of the original document is retained. For example, where both italics and bold are used within a single passage of text to provide different kinds of emphasis, it would not be appropriate to simply replace the italicised words with bold.

Ensure that there is adequate spacing between lines and paragraphs of text. When using indents at the beginning of each paragraph, the size of the indent may need to be increased proportionate to the font size to make it easier to locate.

Page layout

Make sure that layout is simple, consistent, logical and meets clear print guidelines. Remember that consistency is the key when designing and reproducing publications to make them accessible to people with low vision.

Use of white space, headings and icons in documents can provide a source of relief from the text for readers with low vision.

Page margins may need to be reduced in order to increase the amount of text on each page. Margins should not be less than 1.5 cm, and should be adequate to allow the document to be bound and opened completely flat.

Page size

Choose a page size that is manageable and fits the required information easily. It can be physically difficult to handle large page sizes such as A3, especially for readers who read best by holding print close to their eyes.

Large sized paper may be appropriate for large graphics or complex tables. In some cases, B4 paper may be more appropriate than A3.

Headers and footers

Headers and footers can both be useful in large print; however they should be separated from the surrounding text to avoid confusion. A line can help provide this distinction.

Footers are preferable to headers as they are easier to avoid if the information is not required. Footers should contain information relevant to the document, including the document name and page number.

Headings

Headings within a document provide the reader with important information about the text. The size and prominence of the heading should reflect its importance in the context of the document, and should reflect the heading hierarchy of the original publication. Be sure to use consistent heading styles throughout the document.

Boxes

Information in boxes needs to be included and should be in the same font size as the text. Wherever possible the same colours and style of box should be retained unless this is contrary to the clear print guidelines. For example, if

using background colour within a text box, ensure that there is good colour contrast between the text and its background. One method of ensuring good contrast is to replace a coloured background with a coloured border line.

Boxes should have a clear border line, at least 1pt thick. Ensure that there is sufficient extra space between text and the box border so that they do not merge visually.

Where a box appears beside or in the middle of text in the original print, it may need to be relocated in the large print version. In this case the box should be positioned between paragraphs as close as possible to any text to which the box is referring.

Tables

It can be difficult to reformat tables in large print. There are various methods which can be used to make this easier:

- it may be useful to change the orientation of the page from portrait to landscape.

- a key or description in the accompanying text can be used to reduce the amount of information in the table.

- complex tables could be split into more than one table.

- some tables can be converted into lists.

Table headers should be repeated if the table continues for more than one page. Generally, individual rows should not be split across pages.

Page numbers

Page numbers and the title of the document should be included in a footer, normally the same size as the body of the text. If the body of the text is in a very large font it may be necessary to reduce the font size in the footer.

Original print page number

When a document is converted to large print, the print page numbers from the original document should be retained in the large print. This is especially important in educational settings, where students with low vision may be accessing a large print version while their classmates use the original print.

These can be indicated in a number of ways, but must be consistent within the document. The numbers need to be easily distinguished from the surrounding text and should be unambiguous.

Some common methods of indicating the print page number are:

- position the print page number on the right margin and indicate by leader dots.

- position the print page number on the left margin and increase the leading.

- include a border line above the print page number.

The preferred thickness of handwritten text depends very much on the individual. However, a slightly thicker line will increase the size of the .... p12 handwriting, making it easier to see. Above a certain thickness, lines run into each other and become difficult to read. Therefore,

    The preferred thickness of handwritten text depends very much on the individual. However, a slightly thicker line will increase the size of the
p12
    handwriting, making it easier to see. Above a certain thickness, lines run into each other and become difficult to read. Therefore,

The preferred thickness of handwritten text depends very much on the individual. However, a slightly thicker line will increase the size of the

p12

handwriting, making it easier to see. Above a certain thickness, lines run into each other and become difficult to read. Therefore,

---

Footnotes and endnotes

Footnotes should usually be located on the same page where the reference occurs, so that they are easy to locate. However if there is a significant number of footnotes, other options may need to be explored. Methods of organising footnotes include:

- placing them together at the end of the document as endnotes.

- creating a separate endnote section at the end of each chapter or section.

- placing footnotes on the facing page.

- creating a separate large print volume. This option may be useful where there are almost as many footnotes as text (for example, in some editions of Shakespeare).

Footnote text should be the same size as main font size of the document. Footnote reference numbers may be slightly smaller.

Graphics

Consider whether all graphics in the original text are necessary for the clear print version. Do they provide the reader with information or are they a distraction and provide visual clutter? Graphics which contribute information or enhance the text should always be included.

Graphics should not interrupt the flow of the text, and if necessary should be repositioned. Care should be taken to ensure that images are clearly separated from the surrounding text and that they are not too small or complicated.

Icons

Many documents contain simple icons which serve as navigational aids or indicators of recurring features. These should be retained from the original wherever possible, but may need to be adjusted or relocated to improve their clarity and readability.

Writing Task – writing about the text

Simplifying Graphics

In some cases it may be necessary to simplify the graphics to make them easier for a reader with low vision to interpret. Consider that even though people with low vision may be able to see an image, they may only see a small part of it at a time, which they have to mentally piece together to understand the complete picture.

If altering a graphic, consider the important components of the graphic and what information it conveys.

Simplifying a graphic may involve:

- **splitting a graphic into multiple images**, for example splitting a complex graph that shows two data sets into two separate graphs. Complex collages, maps and diagrams may need to be presented both in their original format and a deconstructed format to allow for interpretation.

- **showing only the important details.** If extraneous information in the graphic is reduced or removed, take care to ensure that the graphic remains structurally correct.

- **increasing contrast.** Where increased contrast is required on a diagram, line thickness and style can be adapted and areas can be coloured or shaded using distinctive patterns. If a key is required it should be in a prominent position.

When enlarging graphics, scale diagrams need to be handled with particular care to ensure that the scale remains correct.

Contrast can be improved by lightening

Complex images may need to be presented both in their original format and a deconstructed format

Colour

Where the original graphics included colour, the enlarged version should also be in colour. When using colour, make sure that:

- colours or patterns are clearly differentiated from each other.
- colour is not the only means of conveying information.
- for individuals who have limitations in colour perception, reformatting takes into account the needs of the individual.

Labelling graphics

Ensure that any labelling on diagrams is the same size font as the body of the text and does not impede the interpretation of the graphic.

Graphic headings should normally be placed above the graphic, regardless of where they appear in the original. Any labelling such as 'not drawn to scale' should be placed at the top left of a diagram so that it is not overlooked.

Essential labelling lines or arrows should be straight and of a suitable thickness. Preferably, labelling lines should not intersect. If lines are close to one another they should be clearly differentiated.

Simplifying the labels within a graphic and providing a key may assist in reducing clutter. If a key is required it should be in a prominent position.

Verbalisations and tactiles

Written descriptions and **verbalisations** may be necessary for complex graphics. Care should be taken to keep all descriptions neutral and concise. For further information of this topic please see the Round Table *Guidelines for Conveying Visual Information.*

In some situations it may be useful to provide a tactile version of graphics.

Covers

The covers of any texts which are reformatted into large print should be the same as the original. This allows for easy identification.

Work produced in a very large font size may need to be split into separate volumes. If this is the case the volume number and the total number of volumes (e.g. volume 3 of 4) should be placed at the beginning of the book.

The volume number (i.e. volume 3) can be placed on the cover and/or spine for easy identification.

Special types of print material

Forms

When designing forms or questionnaires, use the clear print guidelines. In particular:

- ensure that text is left aligned and well spaced

- avoid using italics, block capitals or underlining

- ensure that there is good colour contrast between text and background

As well as these points there are some issues specific to forms which will make it easier for someone with a vision impairment to follow and complete.

Tick Boxes

When people are asked to choose from a list of answers and tick the appropriate box, it is preferable have the tick box on the left before the appropriate answer.

This avoids a jagged column of tick boxes on the right hand edge or large spaces between the tick box and the answer.

Example of form tick boxes	Please indicate which workshop you will be attending:
	☐ Braille
	☐ Large print
	☐ Audio

Leader Lines

If there is a gap between a question and the space for completing the answer, always provide a leader line between the two. Make sure that any leader line is formatted differently from an answer-line, for example use a dotted line as a leader line and a solid line as an answer-line.

Example of leader lines

Please indicate any special requirements

Information _____

Dietary ...... _____

or

Mobility   .... _____

Answer Spaces

Solid answer-lines and the lines around the boxes should be at least 1 point. Ensure that you provide plenty of space for details or answers, as some people with low vision may have larger than average handwriting.

Posters

To maximise the reach of any posters you are displaying, you should aim to follow the clear print guidelines in this book. In particular:

- keep the layout simple.

- use clear, easily recognisable fonts.

- avoid using italics, underlining, or large amounts of block capitals.

- ensure there is good colour contrast between the text and its background.

- do not place text over images or a textured background.

- make sure the poster colour contrasts well with the wall it is placed on.

- use strong, clear images that convey a clear message.

Posters are used in a variety of ways and in a variety of situations. The further away someone is from a poster at the point they are expected to read it, the larger the text will have to be in order to ensure the message is accessible to as many people as possible.

Within a confined space, such as a waiting room or within a corridor, it is easier to specify font sizes. In situations such as these we would recommend that you use a minimum font size of 26 point. This size should only be used for the smallest information on the poster such as the contact information.

It is important to position the poster so that people with restricted areas of vision are more likely to notice it. The core information of your poster should be positioned between 1400 mm and 1700 mm from the ground.

There will always be some people who cannot read information provided on posters. In a work or educational environment it is common for posters to promote internal events. This practice can lead to the exclusion of colleagues or students with vision impairment. Additional methods of conveying the information should be found, such as the use of email or an intranet.

Examination and assessment material

When designing examination or assessment material, use the clear print guidelines. When reformatting material into large print for an individual student:

- ensure that material is provided in the font style and size, paper size and colour which has been assessed by their vision support specialist to give the student best access to the material.

- keep all visual material, and retain page layout, colour and text formatting from the original document except where it contravenes clear print guidelines.

- follow the guidelines for reformatting graphics. If necessary, clarify with the examiner what information a student is expected to obtain from the graphic. If no appropriate adaptation can be made, consider approaching the examiner to provide a verbal description of the graphic or a substitute question.

- provide all information in clear large print, in the same font size as the main paper - for example answer booklets and reference material. Provide the original print copies for reference as well as large print versions.

- ensure that line numbers and original print page numbers are retained. Where references are made to page numbers, clarify whether these are the original print page numbers or the reformatted large print page numbers.

- ensure that answer spaces are large enough to allow for larger handwriting. Where the size of an answer space reflects the length of answer required, ensure this is indicated in the large print version.

- keep page layout consistent and simple. Avoid splitting questions over more than one page if possible, and keep diagrams and graphics with the questions they relate to.

For detailed information on making examinations and assessment accessible to people with vision impairment, refer to Round Table's *Guidelines on Accessible Assessment*.

References

RNIB. (2006). *See it Right: Making information accessible for people with sight problems*. RNIB.

Round Table on Information Access for People with Print Disabilities. (2005). *Guidelines on Conveying Visual Information.* Round Table on Information Access for People with Print Disabilities.

Round Table on Information Access for People with Print Disabilities. (2011). *Guidelines for Accessible Assessment*. Round Table on Information Access for People with Print Disabilities.