

# The Clear Print standard: arguments for a flexible approach

Rob Waller *July 2011*

Thanks for their help and comments to Professor Gary Rubin, UCL Institute of Ophthalmology, Hugh Huddy of the Royal National Institute of Blind People, and Dr Mary Dyson of the University of Reading.

As well as Large Print for people with impaired vision, the Royal National Institute of Blind People (RNIB) also publishes Clear Print guidelines for general use. These have been widely adopted in the public sector. In these notes we take a critical look at what they say about type size, and the evidence on which the standard is based. We support the idea of a minimum type size for normal text, but question the inflexibility which inhibits some organisations from using even slightly smaller sizes for diagrams and tables – features that can make information clearer. We make recommendations for a more flexible and practicable version.

We publish this paper in order to start a debate, and in that spirit have included at the end (page 19) a response from Hugh Huddy of RNIB, who has been responsible for best practice in See It Right.



## Clear Print and Large Print

The RNIB has two standards for the size of typefaces (RNIB, 2006).

**Large Print** should have an x-height\* of at least 2.8mm, and is intended for special versions of documents for people with recognised sight problems. Because the type is so much larger than most people need, it is generally assumed that Large Print should be provided on request rather used for all documents. The possible exception is where a document is specifically aimed at people in their 70s or older, where sight problems are very common – around 25% could benefit from Large Print, as distinct from estimates of around 1-2% of the working-age population of 16-64 year olds.

**Clear Print** calls for a minimum x-height\* of 2mm, and is intended to make reading easier for general readers, not just people with visual impairment. In fact RNIB recommend a range of 12-14pt, with a preference for 14pt – it is not entirely clear why a minimum size should be stated as a range, but it may be the result of internal debate about what is realistic or reasonable to expect.

Large Print with a 2.8mm x-height.

This is 16pt Charter.

Clear Print, with a 2mm x-height. This is 11.5pt Charter.

To restate, Clear Print is not proposed as a standard for alternative versions of documents to be provided on request, but for *all* documents – and this is how it has been interpreted within many government departments and agencies, who are particularly constrained by the Equality Act (which superseded the Disability Discrimination Act in 2010). It is now very common to see reports, leaflets and correspondence from government in much larger type than used to be the case. This makes this information more accessible not only to people with some degree of visual impairment, but also to people with dyslexia, or with literacy problems.

The move to Clear Print still has to reach some critical areas, however. Package leaflets, which contain vital information about medicines, are highly regulated but are still frequently printed in a very small typesize. The majority of users of these leaflets are elderly and so likely to have a degree of vision loss. And important financial contracts are typically printed in sizes of type at the threshold of

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\* The height of a small x, explained further on page 5.

legibility, and are jokingly titled ‘the small print’ by organisations who seem happy for them not to be taken seriously by customers.

Anyone interested in clear communications must instinctively welcome the idea of a minimum type size that prevents important information being hidden from the user. That having been said, the implications of Clear Print are considerable and deserve a proper examination – but it has been little commented on, at least among document designers who may not have realised that it is becoming so firmly embedded in public sector design standards. In this discussion paper I want to play devil’s advocate and question the evidence that underlies the standard to make sure it is robust and defensible. And I argue that it could be counterproductive to apply it inflexibly and in ways that may actually damage other strategies available to designers who are trying to make information clearer.

To remind you, the standard says that 2mm type should be the minimum used for everything – including footnotes, captions on diagrams and maps, lists of ingredients, and so on. If applied in a literal way to all the text in every printed document, the Clear Print standard would have little effect on simple information leaflets but would transform documents which use multi-column layouts or variations in type size to structure information, or to fit text into tables or diagrams. A typical dictionary might double in size, tables of scientific data would expand hugely, and maps would be much larger to accommodate all the place names that could no longer be set in small type.

This may sound like an exaggeration for effect, but it is how the standard is effectively being interpreted in parts of government. For example, one major department was recently very concerned when we proposed to use 10pt type for small amounts of type in a table. Putting the text in a table brings out systematic patterns in the content, and allows people to look up information quickly – but it often means the type has to be a little smaller. As with so many things in design, there is a trade-off to be made. The government department concerned needed assurance that they were not actually excluding anyone from this information, and more importantly were not prepared to be in breach of the Equality Act.

The Equality Act does not, of course, specify a type size to be used, so organisations rely on guidance from experts and advocacy groups.

And with the trend towards legislating to enforce the use of plain language, it may not be long before the use of larger type is similarly enforced. We believe it would be a good thing, and entirely possible

given the fact that ‘the small print’ is so deeply implicated in frequent financial mis-selling scandals. If that were the case, questions would inevitably arise: how large is large enough? what’s the evidence? can there be any exceptions?

## Problems with the Clear Print guidelines

The Clear Print guidelines are not restricted to type size, and include much good advice that most typographic designers would agree with – for example, ensuring good contrast between type and background, and not printing words on top of images. But at some points the guidelines appear inflexible and occasionally inconsistent. For example, handwriting is allowed (and some guidance given) but there is a baldly stated rule ‘no italics’, which ignores the fact that italics range widely in style. For example, compare the relative legibility of these two italic typefaces: *Charter* and *Garamond*.

It is of course in the nature of guidelines to be inconsistent – they are only rules of thumb, and need to be interpreted in context. But when they are adopted by a large organisation that needs tick-box quality standards, they quickly become rules that cannot be broken.

In our view there are several problems with the Clear Print guidelines on type size as they stand.

Firstly, the guidance is usually communicated in an imprecise way. In particular, although both point size and x-height are specified, it is point size that is most commonly quoted – and point size is a notoriously imprecise measure.

Secondly, although they carry the strong moral authority of the RNIB, they are not presented with the support of scientific evidence about their use with the general population. Rubin et al (2006) remark that ‘the scientific basis for the guidelines is elusive at best’. We think that guidance of this kind should be evidence-based – if there is evidence that type below 12pt cannot be read by a significant proportion of the population, then no critical information should ever be printed in smaller type – medical information, contracts, user guides, for example. If, on the other hand, this evidence cannot be found, public sector bodies could feel free to print information more economically in traditional type sizes, while continuing to make provision for large-print versions on request.

Thirdly, the inflexibility of the guidelines excludes common techniques which help designers use layout and typographic signalling to show the structure of documents. In other words, there

is a potential conflict between the requirements of close reading (reading the words on the page) and strategic reading (seeing the structure of a text in order to skim read, or to read different parts with different levels of attention).

We will look at each of these three issues in turn, and propose solutions where we can.

## The problem with points

What the guide actually says is

“Clear print documents should use a very minimum size of 12pt or ideally 14pt. This relates to a very minimum x-height of 2mm or more ideally 2.3mm.” *See it right guide, 2006, page 33*

Because 12pt corresponds to the way we set type sizes on our PCs, that is the measure that is invariably quoted when Clear Print is discussed, or adopted as a standard by organisations. The problem is that 12pt is not the same as 2mm in all typefaces.

Points (abbreviated to ‘pt’) are a traditional form of measurement used by printers, that does not correspond to the metric or imperial systems. They describe the height of the piece of lead on which a letter would have sat in the days of metal type, so 12pt refers, roughly speaking, to the distance from the highest part of letters such as ‘h’ or ‘k’ to the lowest part of letters such as ‘p’. However what we actually see is dominated by the part in the middle, known as the x-height. The x-height varies with each typeface, so as Figure 1 shows, a 2mm x-height might represent anything from 10pt to 12.5pt. So, for example, an organisation using Times as their corporate typeface might even want to use a higher point size than



Figure 1: some common sans serif (top group) and serifed (bottom group) typefaces, adjusted to have the same x-height.

The pink bars are all 2mm high – the RNIB’s clear print minimum.

It is clear from this comparison that most sans serif typefaces have higher x-heights than serifed ones – so 12pt Times looks the same height as 10pt Verdana.

10.5	Arial	abcdefghijklmnopqrstuvwxy
11	Frutiger	abcdefghijklmnopqrstuvwxy
12.5	Gill Sans	abcdefghijklmnopqrstuvwxy
10.5	Helvetica	abcdefghijklmnopqrstuvwxy
11	Meta	abcdefghijklmnopqrstuvwxy
10	Modena	abcdefghijklmnopqrstuvwxy
10	Verdana	abcdefghijklmnopqrstuvwxy
11.75	Calisto	abcdefghijklmnopqrstuvwxy
12	Century	abcdefghijklmnopqrstuvwxy
11.5	Charter	abcdefghijklmnopqrstuvwxy
11.5	Georgia	abcdefghijklmnopqrstuvwxy
12.5	Minion	abcdefghijklmnopqrstuvwxy
12	Palatino	abcdefghijklmnopqrstuvwxy
12.5	Times	abcdefghijklmnopqrstuvwxy

the RNIB's recommended point size, whereas one using Arial could specify a smaller one and still conform.

**Recommendation:** Any guidelines about print size need to be carefully translated for particular typefaces.

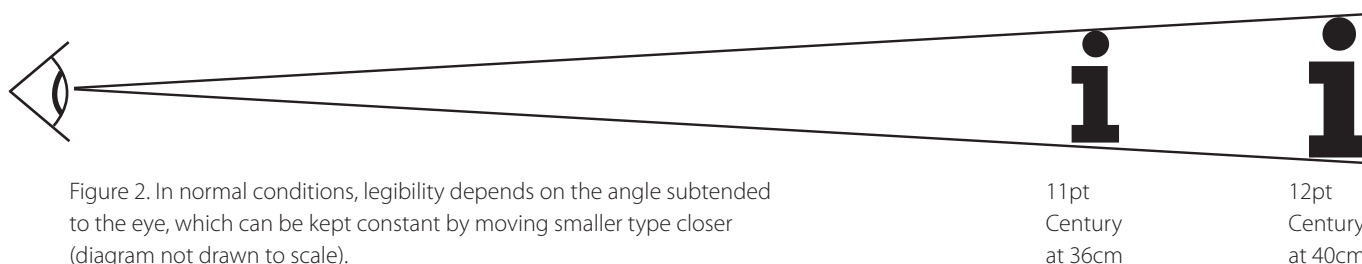
A further complication is that standardising on x-height ignores another important dimension: width. This has not been as widely studied as x-height, but studies that have compared the legibility of typefaces of equivalent x-height but different widths have found that the wider typeface is slightly quicker to read.\* This points to a new measure being needed, that reflects both vertical and horizontal dimensions – perhaps the total space taken up by an alphabet (ie, x-height times alphabet length). This would prevent the practice of using condensed type to conform to the Clear Print standard without taking up extra space.

**Recommendation:** The horizontal space taken up by a typeface should be considered as part of any guidelines about size. We need new research to verify an appropriate measure.

### *Making type bigger by holding it closer*

The size of the image that the reader sees depends not only on the size of type, but on how far away it is. A normal reading distance is usually assumed to be 40cm, but for most people it is flexible – we can move the document nearer to our eyes.

Figure 2 shows the principle. The critical thing for good legibility is that a clear, well-lit image of an appropriate size falls on the reader's retina. The same size of retinal image can be achieved by a smaller font that is closer, as a larger one further away.



\* Garvey et al (1997) and Waller (2007) both found this effect, and it was additionally recognised by Rubin et al (2006), who adjusted their data to compensate.

It is easy to see this principle at work in the type sizes that are used for traffic signs – those designed to be seen at speed and from a distance use larger letters than those designed to be seen from closer.

The table below shows the approximate viewing distances needed with different type sizes, to achieve a retinal image equivalent in size to 12pt Century Schoolbook from 40cm.

Viewing distance	x-height in millimetres	Example
40cm	2	12pt Century
36cm	1.8	11pt Century
32cm	1.6	10pt Century
28cm	1.4	9pt Century
24cm	1.2	7.5pt Century

This isn't to suggest that we should regularly print information in very small type, and expect people to hold it up to their face – and, in any case, people differ in their preferred reading distance, or focal range. But it does open up a discussion about what is reasonable to expect people to do from time to time, where the content requires it.

For example, the recommended 12pt size may be suitable for continuous text, but is not the best size for flow charts, tables or captions on diagrams. Designers make frequent trade-offs, in which some compromises have to be made to achieve a greater purpose. So small amounts of text in smaller sizes may be slower to read (the usual measure of legibility), but speed is not essential when reading a diagram or table. They are read relatively slowly, with words, shapes, and graphic relationships scrutinised for meaning.

We might draw an analogy with the way we design physical environments. We would like every environment to be completely flat, but we accept the need to climb a hill from time to time. If we are a wheelchair user, we accept the occasional inconvenience of having to use a ramp or a lift. Of course, if the entire journey were uphill, we would quickly tire, and there are limits on what gradient is acceptable for anyone.

**Recommendation:** The Clear Print guidelines should be adaptable to different kinds of text, specifying guideline maximum amounts (that is, numbers of words) for text at different type sizes.

# The evidence about visual impairment

The Equality Act requires that organisations do not disadvantage any particular group because of a disability. So it is very clear that Large Print should be offered to those people requesting it. It is less obvious, however, exactly who Clear Print is designed for.

People are born with or develop different levels of vision – there is a complete continuum from perfect sight to total blindness, with many points between. There are various classification schemes to define points along this continuum – one that is useful for our purposes (because it comments in reasonable detail about lower levels of visual impairment) was published by the International Council of Ophthalmology (ICO) in 2002 (see Figure 3).

1M is a measure of image size that corresponds to newsprint (ie, a typical 9pt seriffed type). People with the highest levels of visual acuity can read this from 160cm away.

'Reserve capacity' reflects the fact that a normal reading distance is around 40cm, so these people can read smaller type if they have to, but more slowly.

'No reserve for small print' is self-explanatory – it suggests that Clear Print could benefit the people in the Mild Impairment group.

**RANGES of READING ABILITY**

Ranges of Vision Loss	Visual Acuity (how the eye functions)			Statistical estimates of Reading Ability (how the person functions)		
	Decimal notation	Letter count	Reads 1 M at:	Ability Ranges	Reading Ability	Comments
Range of Normal Vision	1.6	110	160 cm	Has reserves $(100 \pm 10)$	Normal reading speed Normal reading distance  <i>Reserve capacity for small print</i>	Since newsprint is generally read at around 40 cm, this range has an ample reserve.
	1.25	105	125 cm			
	<b>1.0</b>	<b>100</b>	<b>100 cm</b>			
Minimal Impairment	0.8	95	80 cm	Lost reserves $(80 \pm 10)$	Normal reading speed Reduced reading distance  <i>No reserve for small print</i>	Individuals in this range have lost their reserve, but have no or only minimal vision rehabilitation needs. <i>(Driver's license and other criteria usually fall within this range.)</i>
	0.63	90	63cm			
Mild Impairment	0.5	85	50cm	Normal with aids $(60 \pm 10)$	Near-normal with appropriate reading aids  <i>Low power magnifiers and large print books</i>	Reading at 25...12.5 cm requires strong reading glasses (4D to 8D) or moderate power magnifiers. <i>(In the U.S. students qualify for special education assistance.)</i>
	0.4	80	40cm			
Moderate Visual Impairment	0.32	75	32cm	Restricted with aids $(40 \pm 10)$	Slower than normal with reading aids  <i>High power magnifiers (restricted field)</i>	Reading at < 10 cm precludes binocular vision. The small field of strong magnifiers slows reading. Vision substitution skills may be an adjunct to enhancement aids.
	0.25	70	25 cm			
	0.2	65	20 cm			
Severe Visual Impairment	0.16	60	16 cm	Marginal with aids $(20 \pm 10)$	Visual reading is limited  <i>Uses magnifiers for spot reading, but may prefer talking books for leisure</i>	Use of non-visual skills increases as rehabilitation needs shift gradually from vision enhancement aids to vision substitution aids.
	0.125	55	12.5cm			
	<b>0.1</b>	<b>50</b>	<b>10 cm</b>			
Profound Visual Impairment	0.08	45	8 cm	(Near-) impossible $(0 - 10)$	No visual reading <i>Must rely on talking books, Braille or other non-visual sources</i>	In this range individuals must rely primarily on vision substitution skills. Any residual vision becomes an adjunct to the use of blind skills.
	0.063	40	6.3 cm			
	0.05	35	5 cm			
Near-Blindness	0.04	30	4 cm			
	0.032	25	3.2 cm			
Blindness	0.025	20	2.5 cm			
	0.02	15	2 cm			
	Less	10	Less			
		5				
	<b>0.0</b>	<b>0</b>				

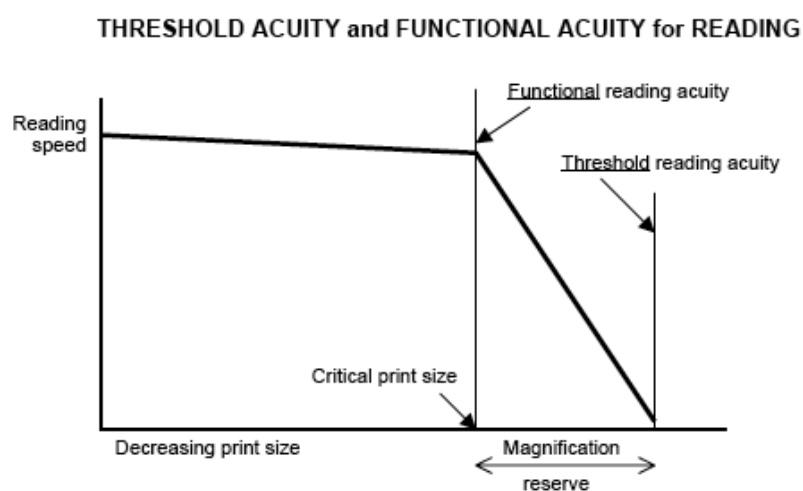
Figure 3. Table from the International Council of Ophthalmology, showing levels of visual impairment, related to reading ability. Colenbrander & ICO (2002).



The second column in Figure 3 lists levels of visual acuity – the ability to register an interpretable image on the retina. In terms of reading, most people have an easily identifiable cut-off point for the smallest type size they can read (labelled ‘threshold reading acuity’ in the diagram below) that is far smaller than the size that they actually prefer to read. For example, many people with excellent or corrected vision can read (from a 40cm distance) type as small as 3pt or 4pt, but they prefer to read type that is 9pt or larger – this is known as their critical print size (CPS) and represents the point at which they reach their maximum reading speed.

The difference between your threshold reading acuity level and your critical print size is known as your ‘reserve capacity’. It means you can actually read type in this range, although you may slow down (see Figure 4).

Figure 4: This diagram, from Colenbrander (2003) explains the relationship between threshold reading acuity and critical print size. This is a conceptual diagram, not a graph, so the angles and shapes of lines do not necessarily reflect data.



Ophthalmologists use a rule of thumb that most people’s critical print size is around 2 or 3 times their threshold reading acuity\*. So if 4pt is your threshold acuity level, then your ideal type size is between 8 and 12pt – which, of course, corresponds to the range used for centuries for most everyday text types such as newspapers and books.

Returning to the table, the people in the Moderate Visual Impairment category who have no reserve capacity need Large Print, and cannot compromise. It would appear then that it is the Mild Impairment group who might benefit from the Clear Print guidelines since they have no reserve capacity. Unfortunately it is not clear how many people are in this category, and how many of them, lacking reserve capacity, might actually be happier opting for Large Print.

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 \* Based on a personal conversation with Professor Gary Rubin of the UCL Institute of Ophthalmology, December 2010.

Traditional practice has evolved in response to user needs over hundreds of years. What we might call ‘standard print’, used for newspapers and books, ranges from around 9pt to 12pt, assuming a font such as Times New Roman. Traditionally the term ‘large print’ was probably used to describe anything where the type was 14pt or greater.\*

Standard print, as the name suggests, makes no concessions for visual impairment, but suits the people in the Normal Vision category. They have ample reserve capacity, and everyday document design practice has evolved for them – most designers choose type sizes between 9pt and 12pt, with smaller sizes occasionally used where space is a problem.

Because many conditions that cause visual impairment are associated with aging, people adopt other strategies in turn before making the fairly major transition to Large Print – holding the document closer, or using a magnifying glass to provide reserve capacity for the occasional incidence of small print.

#### *The Rubin et al (2006) study*

A study led by Professor Gary Rubin of the UCL Institute of Ophthalmology, and funded by the RNIB, did address the lack of evidence for type size recommendations. They measured the reading speed of 43 people who had some degree of visual impairment due mostly to cataracts or glaucoma, using samples of four typefaces in sizes ranging from 10pt to 16pt. In terms of x-height, the smallest sample was 10pt Times New Roman. They adjusted their data to account for differences in x-height and width.

Rubin et al’s data supports the choice of 2mm or 12pt as the Clear Print standard – reading speeds increased with each increase in font size up to that point, but each further increase produced diminishing returns. So this is an encouraging endorsement of a standard that was originally drafted on the basis of preference data or expert judgement.

But while this study provides good evidence for the 2mm (12pt) Clear Print standard, we can also find support here for our proposal that Clear Print need not be rigidly applied to every word in a document.

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\* The 14pt figure is not based on firm evidence, but I have found older books labelled as ‘large print’ which appear to be around 14pt or in the case of a Bible, 12pt, which is relatively speaking large for that genre.

Of the 43 people in the sample, almost all (40) had a visual acuity level corresponding to 10pt type or smaller, with a median level of approximately 5pt. Their Critical Print Size (the size at which they reach their maximum reading speed) had a median of 10pt. Three participants had very high acuity levels leading to the need for type sizes of at least 20pt (in other words, they actually needed Large Print). But with the possible exception of these three, it appears from the reported data that the others could read all the samples in all the sizes, and they could mostly read them at speeds normally regarded as fluent (85 words per minute), even if this was less than their maximum. In other words, while they would prefer to read the bulk of a document in 12pt, even these cataract and glaucoma patients would be capable of reading chunks of smaller type when it appears in a diagram or table, in a footnote, or when they only have to read a small amount, such as in a directory, catalogue or form.

**Recommendation:** The Clear Print guidelines need good supporting evidence, interpreted in terms of practical document design strategies, before they become the basis for public policy.

### *How many people are there with visual impairment?*

The RNIB estimate there are around two million people in the population who have a sight problem that is uncorrectable by wearing glasses. These people are distributed very unevenly among the population – sight problems are overwhelmingly associated with old age, and escalate hugely after the age of 75, where the decline of sight occurs as part of the ageing process, and macular degeneration and cataracts – major causes of vision loss – are likely to occur.

Sometimes the RNIB's figure of two million gets carelessly multiplied. Researching this paper, for example, we came across a public sector website about disability (as far as we can judge, excellent in every other respect) which asked 'Did you know... 40% of the population cannot easily read print if the type size is below 12 pt?'. The organisation concerned was not able to tell us where they found the statistic (they have since edited their website).

It is very hard to find out the exact figures, and no data seems to be available covering the proportion of the population likely to benefit from the 12pt minimum recommended in the Clear Print standard, since they are below the level of vision loss where people would register as blind or partially sighted. And their vision loss seems not to be considered great enough to be covered in most surveys.

A study commissioned by the RNIB expresses concern about the unreliability of even the data that is available.

“Most studies have been done in the older population and there is a scarcity of data in younger adult age groups in the UK.”

“Information is lacking on less severe levels of visual impairment.” *Tate et al (2005), page 8*

Much of the available data is based on self-reporting, and the authors remark that:

“There are doubts concerning the reliability of all estimates based on the criteria of “difficulties with reading newsprint” or worse. The lack of reliability is based on findings from the OPCS/RNIB 1998/1999 survey. The sample for this study included a re-survey of respondents who had reported sight difficulties in the 1996/7 survey. A substantial proportion of respondents who initially self reported with a sight problem denied on re-survey they had had a sight problem... Confidence in the results is further limited by the lack of detailed information on response rates in the government surveys.” *Tate et al (2005), page 4.*

“We encountered difficulties in understanding the methods and basis for calculations in some of the reports we reviewed due to a lack of clarity and transparency in the reporting of data.” *Tate et al (2005), page 6.*

**Recommendation:** Published data on visual impairment should be clearer about the parts of the population it relates to – in particular, the difference between the working age population and the elderly should be clarified.

## Why designers vary type size

Designers commonly use a range of different type sizes within the same document. This practice has several motivations, and it is worth noting them so we can see what might be lost should we limit the range available:

- Larger type may be used to signify more important information – headings, in particular, are assigned their position in a hierarchy in this way.
- Larger type may signify that the designer wants to raise the reader’s level of engagement, for example, for introductory paragraphs that attract attention.
- Smaller type may be used to allow text to fit in a compact space – in a table or diagram, for example.

- Smaller type may be used to actively discourage reading, and to signal that the text is not really worthy of the reader's time. This is the classic 'small print' that can be abused if it later turns out to have been very important.
- Typographic variation also recognises that many information documents have multiple authors. A different graphic appearance makes it less surprising when the writing style or content also changes.

Type size usually works alongside other cues, such as typeface, colour, layout, boxes or panels. The use of any typographic variation is based on the assumption that documents should support strategic reading. Most effective readers do not read at a steady pace, or in a straight line, but instead they read unevenly, with a purpose in mind. They use metacognitive skills to monitor their understanding and decide on their next move – in practice, this means they may skim read at first, perhaps just the headings; they may reread the passages that they see as more important, or that they find hard to understand; they may speed up and slow down to match the level of attention they think is appropriate.

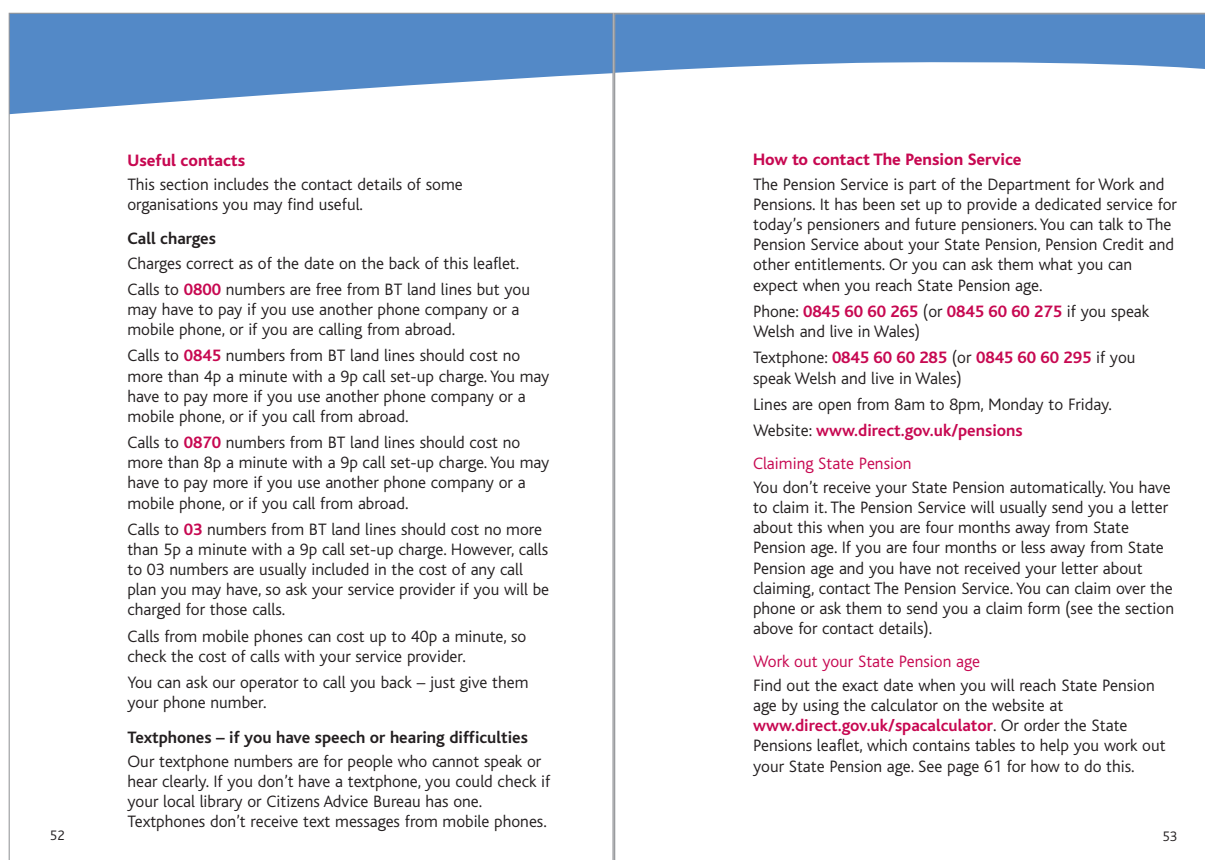


Figure 5: The monotone appearance of a document conforming rigidly to the Clear Print guidelines, but not appreciating the support readers gain from graphic structure. *Pensions – the basics*, The Pensions Service, September 2009. Original size A5, 66 pages.

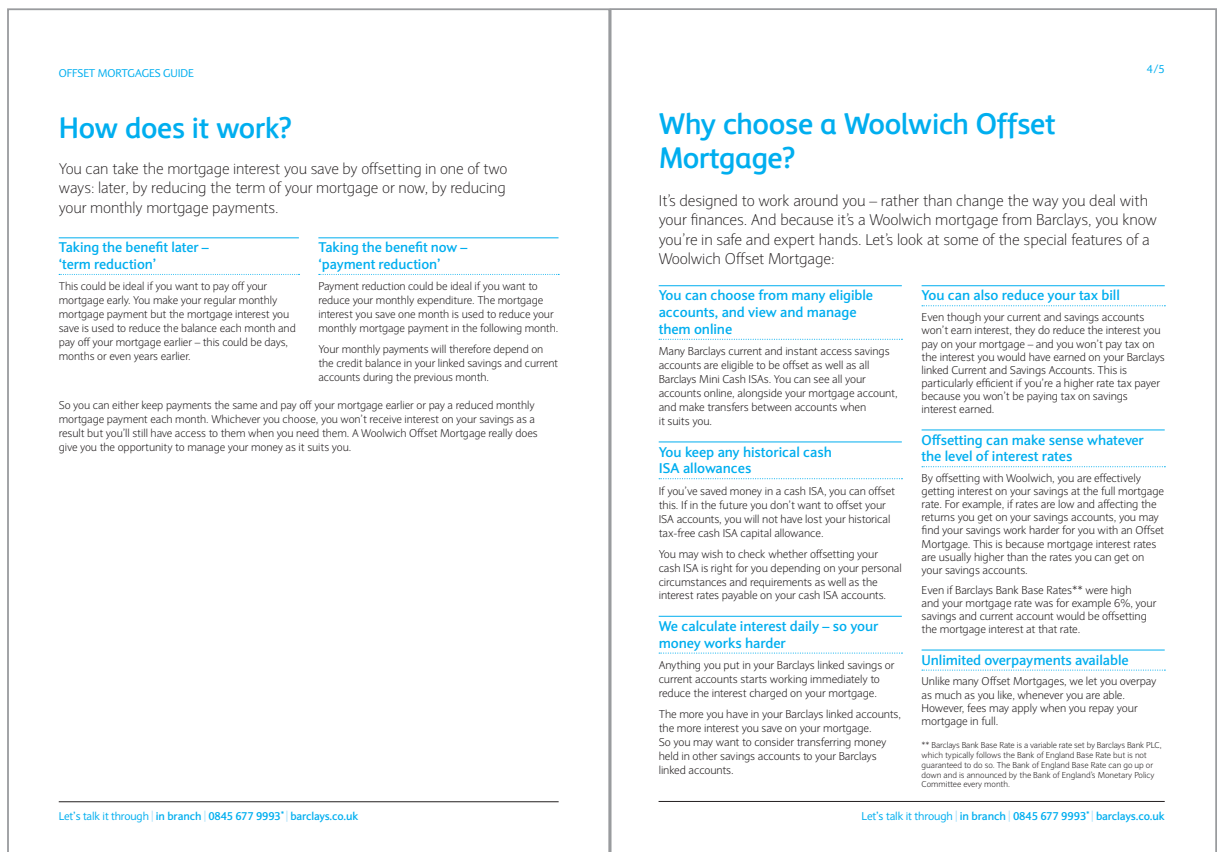


Figure 6: A graphically structured text. *Woolwich Offset Mortgages*, Barclays Bank plc, Oct 2010, Original size A4, 12 pages.

Compare the booklets in Figure 5 and 6. The typeface in the booklet from the Pensions Service (Figure 5) has the 2mm x-height specified by the Clear Print guide, but no size variation is used – so the information about call charges takes the same space as the phone numbers. Colour and a semibold variant are used to add some emphasis, but it is still something of a monotone. So although it starts with a friendly intro about contact details, a glance ahead doesn't immediately reveal them, as they are separated by the call charges information. This immediately switches to a more bureaucratic tone of voice (for example, the verbless construction 'Charges correct as of the date on the back of this leaflet', and the formulaic repetition of 'you may have to pay more if...').

The mortgage brochure from Barclays (Figure 6), on the other hand, uses design to articulate the content structure – a larger typeface for introductions, and a smaller size for the technical definition of base rate. Barclays also makes more use of layout: for example, contrasting 'term reduction' and 'payment reduction' by presenting them side by side. And Barclays has also chosen to start each topic on a separate page, even though there is an apparent waste of space at the end of the previous page. The result is a document that is easier to read strategically – to skim, scan and search.

## Useful contacts

This section includes the contact details of some organisations you may find useful.

**Call charges**

You can ask our operator to call you back – just give them your phone number.

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**Calls to 0800 numbers**  
Free from BT land lines but you may have to pay if you use another phone company or a mobile phone, or if you are calling from abroad.

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**Calls to 0845 numbers**  
from BT land lines should cost no more than 4p a minute with a 9p call set-up charge. You may have to pay more if you use another phone company or a mobile phone, or if you call from abroad.

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**Calls to 0870 numbers**  
from BT land lines should cost no more than 8p a minute with a 9p call set-up charge. You may have to pay more if you use another phone company or a mobile phone, or if you call from abroad.

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**Calls to 03 numbers**  
from BT land lines should cost no more than 5p a minute with a 9p call set-up charge. However, calls to 03 numbers are usually included in the cost of any call plan you may have, so ask your service provider if you will be charged for those calls.

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**Calls from mobile phones**  
can cost up to 40p a minute, so check the cost of calls with your service provider.

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Charges correct as of the date on the back of this leaflet.

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**Textphones – if you have speech or hearing difficulties**  
Our textphone numbers are for people who cannot speak or hear clearly. If you don't have a textphone, you could check if your local library or Citizens Advice Bureau has one. Textphones don't receive text messages from mobile phones.

## Useful contacts

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### The Pension Service

**0845 60 60 265**

Lines are open from 8am to 8pm, Monday to Friday.

**Welsh:** 0845 60 60 275

**Textphone:** 0845 60 60 285

**Welsh textphone:** 0845 60 60 295

[www.direct.gov.uk/pensions](http://www.direct.gov.uk/pensions)

**Call costs**

You can ask our operator to call you back – we'll pay for the call.

	<b>Cost from a BT land line</b> It could cost more from another company, from a mobile or from abroad.
<b>0800 numbers</b>	Free .
<b>0845 numbers</b>	9p call set up + up to 4p per minute.
<b>0870 numbers</b>	9p call set up + up to 8p per minute.
<b>03 numbers</b>	Usually included if you have a call plan. If not, 9p call set up + up to 5p per minute.
<b>Calls from mobiles</b>	Could cost 40p per minute: check with your provider.
<b>Textphones</b>	These are for people who cannot speak or hear clearly. They are not for text messages from mobiles.

Figures 7 and 8: redesigned pages from the Pensions Service leaflet shown in Figure 5.

Figure 7 shows a similar approach applied to the Pensions Service leaflet. Full size type is used for all key information, including topic headings within the call charges, which are separately packed as a panel, but details of the charges are in a smaller size. Figure 8 goes further, and ruthlessly edits unnecessary text to make key information quicker to find by a skimming reader. The editing has meant that the first contact information can appear next to the main heading, rather than on the next page.

## Towards a flexible standard

The question for the Clear Print guidelines is whether any print that is smaller than its 2mm minimum is admissible, and if so, in what quantities and on what justification.

We would like to see a new version of the Clear Print guide that makes it clear that variation in typography is not only permissible but desirable. We applaud the spirit of these guidelines, but worry about their apparent inflexibility leading to resistance to general adoption. To some degree this has already happened – the official RNIB position is actually that Clear Print is between 12pt and 14pt, with 14pt the preferred size. This has not been generally adopted, and the lack of clarity in this approach just draws attention to the lack of a firm evidence base.

A world in which most information is printed in larger type than is typical today would be welcomed not just by people with a diagnosed moderate sight loss, but by everyone as they age, by people with low functional literacy, and people with dyslexia. But for the Clear Print guidelines about type size to be fully accepted, we believe they need a clearer evidence-base, and a more flexible approach.

A flexible approach would need a way to discriminate between information of different levels of importance, and would allow occasional use of smaller type that exploits the reserve capacity of the great majority of readers, including those whose sight is less than perfect (such as those classed by the ICO as having minimal or mild impairment – see Figure 3).

A simple risk analysis might be done, to distinguish between low risk and high risk information.

- Low risk information would include content that most of us do not need to read, and which can appropriately be put in small print. An example might be statutory information about the ownership of a company, and its registered office. The risk is said to be low because the consequences of not reading this information are unlikely to be serious.
- High risk information might include business terms that might surprise customers, and be to their disadvantage: for example, if I were to sign up to a mobile phone service and find the operator is entitled to raise the price at any time, but that I am locked in. The risk is high because, firstly, it is quite possible that it will happen, and secondly because I will be financially penalised by my lack of information.



Proposed sizes	x-height	Compensatory viewing distance (equivalent to 2mm at 40cm)	Parameters for use
<b>Standard text</b> This paragraph is set in 11pt Frutiger, which has a 2mm x-height.	2mm	40cm	Most text to be set in this size, which is the current Clear Print standard. This would also remain the minimum size for high risk content.
<b>Table text</b> This paragraph is set in a proposed size for tables and diagrams: 9pt Frutiger, which has a 1.6mm x-height	1.6mm	32cm	The size for use in tables and diagrams, or for use in reference material not designed for continuous readings (headings and headwords should be full size). This is the smallest size for medium risk content..
<b>Small print normal</b> This paragraph is set in a proposed Small Print Normal: 8pt Frutiger, which has an x-height of 1.45mm.	1.45mm	29cm	The default size for small print with low risk content. To be accompanied by headings in full size, and never to be used for warnings, disclaimers, or similar messages that should be unmissable by consumers.
<b>Small print exceptional</b> This paragraph is set in a proposed Small Print Exceptional: 7pt Frutiger, which has an x-height of 1.25mm.	1.25mm	25cm	In very exceptional cases with specialist and predictable low risk content, no more than 50 words at a time, once per page, to be accompanied by full size headings (2mm).

Figure 9: an illustrative set of possible guidelines, recognising different levels of text, and allowing the use of smaller type in limited and defined situations. This technical paper uses a type height of 2mm for the main text, and 1.6mm for tables and captions.

We will be addressing the issue of risk assessment for layered text in another working paper.

Figure 9 illustrates the kind of guidance that might emerge from consultations with users, special interest groups and experts. Over the coming year we plan to work with organisations on demonstrator projects in which we will explore this issue among others.

**Recommendation:** A more flexible version of the Clear Print should be developed, using a risk-based approach to deciding what information might be printed in smaller sizes.

## List of recommendations

**Page 4:** Any guidelines about print size need to be carefully translated for particular typefaces.

**Page 5:** The horizontal space taken up by a typeface should be considered as part of any guidelines about size. We need new research to verify an appropriate measure.

**Page 6:** The Clear Print guidelines should be adaptable to different kinds of text, specifying guideline maximum amounts (that is, numbers of words) for text at different type sizes.

**Page 9:** The Clear Print guidelines need good supporting evidence, interpreted in terms of practical document design strategies, before they become the basis for public policy.

**Page 10:** Published data on visual impairment should be clearer about the parts of the population it relates to – in particular, the difference between the working age population and the elderly should be clarified.

**Page 14:** A more flexible version of the Clear Print should be developed, using a risk-based approach to deciding what information might be printed in smaller sizes.

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## An RNIB response

I have been very grateful for helpful comments and constructive criticism from Hugh Huddy of RNIB, who has in the recent past been responsible for best practice in the See it Right guidelines. I made a number of changes to the paper at his suggestion, but I thought it would also be appropriate to print his comments in full, in the interests of debate. With his permission I have edited an email he sent with extended comments setting out some important practical and policy issues. These comments are made in a personal capacity and do not represent RNIB policy.

“I think this is an interesting paper that raises important issues and recommendations.

I very much welcome your airing of type width as a critical factor and one which has been neglected, at the expense of those with milder sight loss and who are partially sighted, who vehemently told us, when RNIB rolled out ‘RNIB sans’ (narrower than Arial but the same x-height) that they found it much harder to read. And I fully agree that variations across different fonts must be properly addressed as well.

Reading distance is something that cannot be ignored either, and should be used to frame various articulations of the Clear Print guidelines. Some time ago I wrote an extra section on PowerPoint, because people were interpreting Clear Print guidelines as transferable to PowerPoint slides, obviously incompatible.

I think it’s worth noting that anti-discrimination law applies to people with a disability, but doesn’t apply to people who have no disability, so the usual democratic rules cannot be applied. And you don’t have to be officially registered as partially sighted or blind to be covered by anti-discrimination legislation, so I’ve always understood Clear Print as addressing the proportionally larger group who have sight loss but who aren’t registered as partially sighted or blind. These people wouldn’t say they need 16 point but might say they struggle to read anything smaller than 12 point.

I know from discussions here that RNIB has continued to hold with the line that Clear Print means no font will be below 12 point, enabling the public to be assured that if they personally cannot read text much smaller they can be confident with the Clear Print design approach.

Breaking down this principle would be something that RNIB teams and I guess other disability supporters would almost certainly resist strongly. Picking up on your ‘hills and wheelchairs’ analogy, the principle is all about ‘no hill being steeper than this’.

This is not to say that the arguments put forward in your paper aren’t substantial and worthy of careful consideration by these groups – just that I suspect more issues than you cover will be sucked in.

### *Concerns about a risk based approach*

My main concern about a risk based approach is that defining the list of exceptions, given the diversity of communication contexts, could generate so much work and controversy that it ends up not being practicable. This is compounded by my observations of human nature: disabled people often complain that ‘occasionally’ too easily gets shifted to ‘most of the time’. No news is not good news when you’re dealing with sections of the public who live with high levels of adversity and extra work just to do ordinary things.

### *Policy issues*

‘Reaching the hard to reach’ has become an important goal of public communicators and it’s possible that because people in these positions are risk averse, their instinct is to take down as many barriers to access as they think may exist, even if they cannot be 100% sure of the evidence. Clear Print has been promoted as a design approach for post DDA Britain, which I suspect has often been treated as an insurance policy by organisations anxious to demonstrate full compliance.

Although it’s ten years ago now, I believe Clear Print probably moved forward a distinct policy to change society’s attitudes and create clear boundaries that could easily be communicated, in a single sound bite.

Having said that, I do think your paper highlights the lack of evidence supporting the sound bites. I also think See it Right has been very poor at being up front about the guesswork/gaps in facts, and this should have made it the target of more constructive criticism. Why we have not had this debate before, I am not sure. Perhaps the ‘moral authority of RNIB’?

I agree with the first part but not the last part of your recommendation ‘Clear Print guidelines need stronger arguments about their scope, and better supporting evidence, before they become the basis for public policy’. In my experience, policy is informed by more than one kind of evidence.

### *The experience of organisations*

I have found many publishing teams who are happy to increase font sizes. They typically do this as part of a rebranding exercise, in which coming across ‘more open and accessible’ with slightly larger fonts is appealing, even if people don’t quite know why.

Another thing I’ve observed amongst publishing teams is a ‘push back’ as they took on the larger font message. Instead of rejecting the 12-14pt message, they created a new policy requirement for their content authors to reduce word counts to allow for the larger font sizes. If nothing else, this seemed to appeal to them. I took it as a helpful development.

I have a concern that by adopting a risk based flexible approach may relax the positive pressure to keep word counts to a minimum and as it is harder to communicate effectively in fewer words, compared with shrinking font size, I worry that word counts would go up and font sizes go down with this sort of approach.

There is another point to make here too: if ten people complain about a council newsletter being in small print, and ask for it to be in 12 or 14 point, it is usually the case that the standard edition is bumped up a point or two, rather than those 10 people being given large print version. This effect is most apparent when the organisation has no established alternative format process. Setting one up seems to them harder than just increasing general font sizes, whilst they perceive they have spare capacity to do so. I have come across this many times – it could be managers guessing that for every 10 there are 10 more, or perhaps they just see it as a nice symmetrical solution that reflects their ‘open and accessible’ brand values.

### *The question of numbers*

You suggest a ‘way is needed’ to permit greater flexibility enabling smaller fonts for certain types of information to be used ‘exploiting the reserve capacity of the great majority of readers’. The message of your paper is clear that there aren’t very many people with uncorrectable sight loss out there so I assume you

mean great majority of general readers, rather than those with sight loss?

To put my campaigning hat on for a moment, I don't believe the great majority of the 1.5 million with uncorrectable sight loss do have much spare capacity below 12 point. This section of the public certainly are far more limited and therefore any move to allow flexibility with font sizes would disproportionately impact them.

Perhaps to argue that an existing policy relaxes back to allow smaller fonts, there might need to be more solid evidence that the majority of 1.5m can happily read letters, leaflets and typical publications in 8/10 point.

Something that has started to get more apparent recently is the notion that access is not just about what one can stretch to in a one off test, but what one can reasonably do along with all the other information gathering tasks one has in a typical day.

Having said all of this, you make a very solid point that if someone says they need 12 point minimum, they can probably read 10 point or even smaller for short runs. People advocating for those who need larger fonts might say that 10 point will more likely than not be out of range for people in another group who say they prefer 16 point, who will now be squeezed out and perhaps end up demanding alternative formats, where previously they would not.

Overall I think your paper is excellent in putting forward important questions and I hope my comments here, especially the latter ones relating to policy considerations, are helpful.

*Hugh Huddy, April 2011*