



Website Accessibility and the Law

Under the requirements of the Disability Discrimination Act and Government Guidelines public bodies and organisations can be challenged on the grounds of accessibility if their website does not achieve an AA rating. John Hookham looks at the implications and presents the results of a brief survey into several NHS websites.

Five years ago, 2003 was designated as the 'European Year of People with Disabilities'. At the time it was estimated that one in ten Europeans lived with some form of disability and now discrimination or exclusion of people who have a physical disability has been largely eradicated. Public buildings and offices all now have ramps; and transport systems have been modernised to allow wheelchair access.

In October 2004 the final rights of access covered by the (Disability Discrimination Act) DDA 1995 act came into force to end discrimination against people with disabilities. Employment rights and first rights of access came into force in December 1996 with further rights of access in October 1999. In 2002 a revised Code of Practice was issued covering aspects of web accessibility.

While the issues around 'physical exclusion' have been addressed many disabled people still suffer from 'digital exclusion'; they still do not have equal access to information on the Internet or World Wide Web.

In 1999 the W3C (World Wide Web Consortium) produced guidelines covering web accessibility and usability standards. The aim of the W3C can best be summarised by Sir Tim Berners-Lee, a Director of W3C, who is better known as the inventor of the World Wide Web, and says: 'The power of the web is in its universality. Access by everyone regardless of disability is an essential aspect'.

Accessibility has a moral aspect and in Australia it has legal implications; the Court awarded damages against the Sydney Olympic Games Organising Committee because their website was not accessible. Clearly it should not take a UK legal test case to enforce website accessibility standards. We readily accept that there should be no discrimination based on sex, age, religion, sexual orientation etc and the addition of disability to the list is long overdue.

Current Standards

The W3C have defined three levels that cover website accessibility and these attract different website accessibility ratings ranging from 'A' to 'AAA'. Organisations should aim for their websites to have a rating of 'AA' or 'Double-A' which means they need to satisfy the Priority 1 and 2 items.

Priority 1 Items

A Web content developer **must** satisfy this checkpoint. Otherwise, one or more groups will find it **impossible to access information** in the document. Satisfying this checkpoint is a basic requirement for some groups to be able to use the web.

So the Priority One list is the basic minimum that any website should expect to meet. This will provide reasonable access to people with a disability.

A site meeting this requirement is given a rating of 'A'.



Priority 2 Items

A Web content developer **should** satisfy this checkpoint. Otherwise, one or more groups will find it **difficult to access information** in the document. Satisfying this checkpoint will remove significant barriers to accessing Web documents.

A site that covers all of the items in the Priority 2 list (together with those in the Priority 1 list) is given rating of 'AA' also referred to as 'Double-A'. The UK government indicate that public sites for example the NHS, Inland Revenue, Councils etc should have this 'Double-A' rating.

Priority 3 Items

A Web content developer **may** address this checkpoint. Otherwise, one or more groups will find it **somewhat difficult to access information** in the document. Satisfying this checkpoint will improve access to Web based documents.

Some checkpoints specify a priority level that may change under certain (indicated) conditions.

A site meeting this requirement (plus those needed for to attain a 'Double-A' rating) is given a rating of 'AAA'.

International Requirements

Different countries have different legal requirements and different recommendations when defining website access. For example, Australia has mandated strict legal requirements and any company wishing to do business there must have a site that provides a high level of accessibility for people with disabilities

In the USA there are also rules covering disability access and there are particular requirements for companies looking for government contracts.

In the UK, public bodies such as the NHS should aim to have a site with a rating of 'Double-A'. Their sites should therefore address all of the items in the Priority One and Two lists.

Basis of the Accessibility Survey

A brief survey was undertaken during January 2008. The number of sites examined was limited and concentrated on website accessibility by people with sight problems, rather than those with physical disabilities. According to the Royal National Institute for the Blind over 300,000 people in UK are registered as being either blind or have problems with their sight that cannot be corrected by spectacles.

The survey focused on just two criteria from the priority lists. The items selected are from the W3C document 'Checklist of Checkpoints for Web Content Accessibility Guidelines 1.0'.

From the Priority One list (required for a rating of 'A') item 1.1

*Provide a **text equivalent** for every non-text element (e.g., via "alt", longdesc", or in element content). This includes: images, graphical*



representations of text (including symbols), image map, regions, animations (e.g., animated GIFs), applets and programmatic objects, ASCII art, frames, scripts, images used as list bullets, spacers, graphical buttons, sounds played with or without user interaction), stand-alone audio files, audio tracks of video, and video.

From the Priority Two list (required for a rating of 'double-A') item 3.4

*Use **relative rather than absolute units** in mark-up language attribute values and style sheet property values.*

In layman's terms, text equivalent (the requirement for a rating of 'A') means.

Each picture should have a description that can be read by a screen reader to convey the contents of the picture to a blind or non-sighted user. For example 'this is a portrait of the composer Beethoven' or 'vase containing a selection of summer flowers'.

The picture or image has been included for a reason and a text description will enable a non-sighted person to appreciate the content.

In layman's terms, relative not absolute units (the requirement for a rating of 'Double-A') means.

The text contained on a web site should be capable of being made larger so that people with poor eyesight can read it.

Text sizes are commonly defined by a font size, for example 8 point is small; 12 point is medium and 24 point is large. When a font is defined as Times New Roman 12 point the Web Browser, for example Internet Explorer will always display the text as size 12. The web developer has defined the rule – the text shall be 'Times New Roman size 12 point' and the browser simply follows the rule. This is an absolute value; it is of a fixed size.

A relative value would allow the text size to be changed for example, Smallest, Smaller, Medium, Larger, Largest. Internet Explorer assumes a value of Medium and using the *Browser > View > Text Size* function the user should be able to select another relative value, Smaller, **Largest** etc.

However if the web developer has used absolute values and defined the text as 'Times New Roman size 12 point' this will over ride the *Browser > Text Size* option. Consequently the text size cannot be changed and will always be displayed as size 12 point. (The *Browser > View > Text Size* function will have no effect). So if the user cannot read Times New Roman size 12 point there is nothing that can be done to increase the size of the text on the screen. The user may need to resort to using a magnifying glass to read the text on the computer screen.

If a site does not achieve a rating of 'A', groups of users will find it **impossible to access information** in the document; they will be excluded. This is the digital equivalent of just providing steps to physically enter an office block.

And if a site does not achieve a rating of 'double-A', some groups of users will find it **difficult to access information** in the document. This is the digital equivalent of providing a narrow steep ramp located at the back of an office block for people in



wheelchairs to enter the building. It may be acceptable for some people but difficult for others.

Description of the Tests used in the Survey

Two tests were used as a basis for determining whether the sites were 'A' rated, 'Double-A' rated or failed. The website tests started by examining the home page, the accessibility page (where present) followed by other randomly selected pages. Most of the websites are relatively large and no attempt was made to make a complete assessment, however the pages chosen were those most likely to be used by the general public. These included pages that highlighted the services provided by a particular clinic and the latest news. The survey also paid particular attention to the navigation and / or menu system as this has site-wide implications.

Test 1 - defines a site rating of A.

Does the site contain more than three images that do not have a text equivalent ie a description of the image?

Clearly every image should have a text equivalent ('alt text') but it would be unfair to fail a website that contained for example an error where the text equivalent had not been entered. The arbitrary number of three non-conformances was chosen before a website was deemed to have failed the test. Having more than three non-conformances would indicate there is no adequate accessibility policy in place to ensure text equivalents are created for all images.

Test 2 - defines a site rating of 'double-A'.

Is there an option to increase the size of the text?

This can be accomplished by selecting the 'increase text size' option or by using the standard Browser option; *Browser > View > Text Size* and selecting the required option. Ideally the site would allow both rather than just one or the other. (The WCC site for example has both options working in tandem).

The site is deemed to have failed the test if any part of the menu / page selection system, header or footer does not conform. As per test 1 the site would be allowed to have three pages or instances of text non-conformance. (ie the text content as opposed to the menus, header and footer) to allow for errors.

More than three text (content) non-conformances or any non-conformance of the menu, system, header or footer would indicate that the site has not been designed to appropriate accessibility standards.

Although it did not form part of the test and is not on the Priority Lists there are comments about different layouts, for example 'high contrast' options when a site has this function available.



Test 3 - defines a site rating of 'double-A'.

This test was only carried out if the site failed test 2 and looked at the underlying design of the site to see if absolute rather than relative values were being used.

Sites that passed test 2 could fail test 3. For example, the site could use multiple CSS all of which used absolute rather than relative values to define font sizes. However from a usability perspective, the site would appear to use relative values as the text size could be increased or decreased. For example, 'Small' may be 8 point, 'Medium' may be 10 point etc.

Test 3 examined the website's cascading style sheet to see if font sizes are defined as absolute rather than relative values. Again the arbitrary number of three non-conformances has been allowed before the site is deemed to have failed the test.

This survey uses just two items from the priority lists, but from an accessibility point of view these can be considered to be two of the key items. Applying 'strict' rules of compliance, a failure to meet these requirements means the website fails the applicable rating test even if the website meets all of the other requirements.

Survey Results

The focus of the survey was on centred on NHS public websites ie those websites that provide information to the general public rather than the internal NHS website; trustnet. The NHS sites are a mix of specialist NHS Trusts, PCT (Primary Care Trusts) and foundation Trusts. Foundation Trusts have more operational flexibility than NHS Trusts but they are also more accountable to their Members.

The summary results are contained in the table below. There is a brief comment about each of the individual sites tested.

Benchmark sites

In addition to the NHS websites, three additional sites were chosen to act as a benchmark; the BBC, Camden and Westminster Councils. Each organisation has some unique attributes but all three exist to interact with the general public, including people who have disabilities. In most instances the sites will be providing or displaying information, but in some cases the sites will be accepting information and data from the customers.

The BBC has a section of their website devoted to accessibility and is generally recognised as being a well respected site that uses leading edge technology and has a commitment to accessibility.

Westminster County Council is a vast organisation with a wide range of services and a diverse user base covering every sector of society. WCC is also widely respected for the quality of the services it provides and its efforts to communicate with its customers.

In addition, Camden Council's website was used as an additional benchmark. The site has an accessibility guide and multiple viewing options, including a high contrast option which displays yellow or turquoise text on a black background.



BBC



Test 1. All of the images examined had an alternate description. The site also has a text only option as well as different contrast layouts.

Test 2. The site has an option (button selector) that allows the text size to be increased. The *Browser > View > Text Size* option can also be used as an alternative way of increasing the text size. For additional clarity there are also 'high contrast' modes available.

The BBC site has excellent accessibility support for people with all types of disabilities and is a good reference point for any website developer.

Westminster City Council (WCC)

Test 1. All of the images examined had an alternate description.

Test 2. The site has an option (button selector) that allows the text size to be increased. The *Browser > View > Text Size* option can also be used as an alternative way of increasing the text size.

From the brief examination of the site the two options work together to provide a broad range of text size preference.

This is illustrated in the tables below. In the first table the results show the effect when the 'text size button' selection works in isolation. Ie the *Browser > View > Text Size* option is ignored.

	Text Size Selection Button		
Browser	Small	Medium	Large
Smallest			
Small			
Medium	Med - Small	Med - Med	Med - Large
Larger			
Largest			

The Browser Default is normally Medium and in the above example, using the 'text size selection button' will decrease or increase the text size.

The second table shows the number and types of combination that result from the 'text size selection button' option working with the '*Browser > View > Text Size* options'.

	Text Size Selection Button		
Browser	Small	Medium	Large
Smallest	Smallest - Small	Smallest - M	Smallest - L
Small			
Medium	Medium - Small	Med - Med	Med Large
Larger			
Largest	Largest - Small	Largest - M	L - L

By using the two systems together, a wider range of text sizes is available, in this example there are 15 different sizes from 'Smallest - Small' to 'L - L'. The number of combinations (15) is derived from the five options supplied by the standard browser,



multiplied by the number of 'text size' buttons typically a site will provide three. Nine text examples have been shown to illustrate the approach. Clearly there may be some overlap in that 'Med - Med' may be the same size as 'Largest - Small'.

The WCC site also has a 'listen' feature that users can use to have the contents of the site read out to them by a 'screen reader'.

Camden Council

Test 1. All of the images examined had an alternate description. The site also has a text only option.

Test 2. The site has an option (button selector) that allows the text size to be increased. When this option is selected the images are also enlarged, as is therefore any embedded text that is really a graphic. The *Browser > View > Text Size* option can also be used as an alternative way of increasing the text size. For additional clarity there are also 'high contrast' mode available.

As with the BBC website, the Camden Council website has a number of accessibility options and the site is well organised. It is easy to use and to find the information or service that is required. The website is also pro-active in asking for feedback and contains many features that other websites should seek to emulate.

Summary of the Benchmark Sites

The three benchmark sites have taken a different approach to accessibility but all three have achieved websites that are flexible (variable text size and viewing modes etc) and easy to use.

The WCC site contains a massive amount of information, which given the size and number of services provided by WCC is not surprising. But the site is still easy to use and has excellent accessibility standards as well as a number of different language options. As with the BBC and Camden site, the WCC website sets a standard for accessibility and ease of use that other sites can measure themselves against.

All three sites would be rated as 'double-A' (and therefore also by default 'A' rated).

NHS sites used for the Accessibility Survey

Birmingham and Solihull Mental Health NHS Trust
Central Manchester and Manchester Children's University Hospitals
Central and North West London NHS Foundation Trust
Christie Hospital Manchester (NHS Foundation Trust)
Leeds Primary Care Trust
Manchester Primary Care Trust
Sheffield Primary Care Trust

Birmingham and Solihull Mental Health NHS Trust

A splash page is used to enter the site before a standard menu system is adopted for navigation within the five main areas. On the splash page it is unclear what is merely text and what is a link as there seems to be no clear convention. The links are not underlined but may have a 'click here' message as part of the text.



Central Manchester and Manchester Children's University Hospitals

The *Browser > View > Text Size* function has no effect but the site does have a text size change facility. A basic accessibility requirement, 'alt text' on all images is missing. The site does however support different ethnic languages.

Central and North West London NHS Foundation Trust

The site has an option that allows the text size to be increased but the function does not work on all of the text and in particular parts of the selection menu. Also when the 'text size function' is invoked there are inconsistencies; on some pages only part of the content is changed. The *Browser > View > Text Size* option also functions but again excludes some (ie the selection menu) text. Many of the images on the site do not have an 'alt text' description.

Christie's Hospital Manchester (NHS Foundation Trust)

Christie's Hospital claims to have a 'AAA' rating and the site scores highly when looking at its accessibility. The site has a range of viewing options; high contrast, large text, text only etc and these are highly visible at the top of the webpage. On other web sites, for example on the Sheffield PCT site the accessibility options are located in the footer menu, which can only be accessed by 'scrolling down'.

The Christie's site layout and general usability is good with all of the information arranged in a logical manner. There is attention to detail (different icons for telephone numbers, email, fax, forms, webpage links etc) and consistency across the site.

Speech support is provided by Browsealoud; a program that reads the text contained on a page and speaks the words out loud. The site has a special form for feedback, comments or problems associated with using the website.

Leeds Primary Care Trust

Old outdated standards, for example 'click here for more' and 'more', dominate the site and there seems to have been little attention to accessibility; for example the accessibility page is blank. There are a number of images that do not have 'alt text', a basic Priority One item required for an 'A' rating. In common with other sites the width is a fixed number of pixels (approximately 750px) and remains fixed irrespective of the type of screen used (1024x800 or 1440x900 etc).

Manchester Primary Care Trust

The site has taken a proactive approach to accessibility and recognises that not everyone can use a mouse or other pointing device. There are also a number of shortcuts, for example 0 will take you to the accessibility page, 1 is Home etc. There are options to change the text size as well as four different screen colour combination ranging from yellow text on black to less harsh pastel shades.

Sheffield Primary Care Trust

A start has been made towards making the site more accessible. It would seem that a 'change text size' function is a later addition to the site as the *Browser > View > Text Size* function does not operate consistently across the site. But there are also shortcuts available. On the site it states that 'greater control over the text sizing can be gained by disabling CSS.' However for the majority of users this task would be



deemed to be too technical and ideally the will site add additional CSS options, as per the Manchester PCT website.

Survey Results

Survey Results	Test 1	Test 2	Test 3	A Rated	AA Rated
NHS Sites					
Birmingham and Solihull Mental Health NHS Trust	Passed	Failed	Failed	Yes	No
Central Manchester and Manchester Children's University Hospitals	Failed	Failed	Failed	No	No
Central and North West London NHS Foundation Trust	Failed	Failed	Failed	No	No
Christie Hospital (NHS Foundation Trust)	Passed	Passed	Passed	Yes	Yes
Leeds Primary Care Trust	Failed	Failed	Failed	No	No
Manchester Primary Care Trust	Passed	Passed	Passed	Yes	Yes
Sheffield Primary Care Trust	Passed	Failed	Failed	Yes	No
Benchmark Sites					
BBC	Passed	Passed	Passed	Yes	Yes
Camden Council	Passed	Passed	Passed	Yes	Yes
Westminster City Council	Passed	Passed	Passed	Yes	Yes

Of the seven NHS sites reviewed only two could be classified as being 'Double-A' rated. Three sites failed to achieve even a single 'A' rating by not having 'alternate text' for all of the images on the site; a problem that is easy to address but which should not occur on a public website.

The 'NHS Identity Guidelines for Websites' document was published in 2005 and if its recommendations were followed all of the NHS websites could achieve a 'Double-A' rating and improved accessibility not only for the disabled but for all of their visitors.

Summary

This brief survey of NHS Trust and NHS Foundation Trust sites indicate that there are a number of the websites do not achieve a rating of 'double-A' and in some cases do not even achieve a rating of 'A'. However Christie's Hospital and Manchester PCT are exceptions and have achieved a 'Triple-A' rating.

The three 'benchmark' sites, Manchester PCT and Christie's Hospital show that if the fundamental design of a website addresses accessibility issues then the site can achieve a 'double-A' rating. This means the site can be fully accessible by people with disabilities. The 'Double-A' rating can be achieved irrespective of the size of the site or the frequency with which the site is updated.

Access to good healthcare and information about healthcare is a fundamental right for every UK citizen irrespective of sex, age, religion and disability. Currently a number of NHS Trusts and Foundation Trusts are failing to meet their obligations and meet the minimum standards of accessibility for people with a disability.

Previously the UK government and the NHS itself have stated that government websites **should** have at least a rating of 'Double-A', and by December 2008 all government websites **must** achieve a W3C 'Double-A' rating.