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See differently

NHS National Services Scotland Website

Desktop and Mobile WCAG 2.1 Audit Report – Re-test

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by:

Suzette D’Cruz: Digital Accessibility Consultant

Robert Cummings: Accessibility Auditor

Peer reviewed by:

Lori Di Bon Conyers: User Experience Evaluator

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RNIB (Royal National Institute of Blind People)
User Experience Team, Northminster House, Northminster,
Peterborough, Cambridgeshire, PE1 1YN
Email: nppd@rnib.org.uk

Royal National Institute of Blind People

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1 Executive Summary

An audit was conducted on 28 July 2021. A re-test of this audit was conducted on the following date(s): 02 to 03 September 2021. This report documents the results of the re-test in comparison with the previous report.

Based on this evaluation, the NHS National Services Scotland website's HTML pages meets WCAG 2.1 AA Conformance Level. However, the website partially meets WCAG 2.1 AA Conformance Level as the PDFs on the site are not accessible and require remedial work (see report for further details: National Services Scotland PDF WCAG 2.1 AA Audit Report (28.07.2021)). This failure will need to be addressed in the Accessibility Statement with a resolution date.

A detailed review of the HTML pages' results is available in the Detailed Analysis section.

A total of nine issues were raised in the initial audit and these have now been resolved. Three of these issues have been marked as 'pass' as they relate to usability/best practice and do not constitute WCAG failures. Resolving these issues is optional as they do not affect WCAG compliance, though we recommend that these issues are resolved for the benefit of all website users. Please see the respective issues for further details.

2 Website Accessibility audit

This section provides information on how to use the audit report, the methodology used and a summary of the results.

2.1 Using the audit report

The evaluation results in this report are based on evaluation conducted on the following date(s): 02 to 03 September 2021.

The website may have changed since the above dates.

Please remember that we can only carry out a detailed assessment of a representative sample of pages from any one website, unless the site is very small.

Therefore, the examples we provide in the "Detailed Analysis" section are just that, examples, and should not be regarded as a definitive list of all instances of any particular accessibility problem. Please use these examples to help you identify and correct all instances of each issue, not simply deal with the instances referred to in the report.

While we make every effort to identify all existing accessibility issues, the size of most commercial websites means that it is impossible for us to guarantee that we have found every problem that exists, particularly where issues may only occur on one or two pages deep within a site.

Once we have completed the audit, it is the site owner/manager's responsibility to ensure that the standard of accessibility is not degraded during content or design changes.

3 Methodology

3.1 Web Content Accessibility Guidelines

The World Wide Web Consortium's (W3C) commitment to lead the Web to its full potential includes promoting a high degree of accessibility for people with disabilities. The Web Accessibility Initiative (WAI), part of the W3C, in co-ordination with organisations around the world, is pursuing web accessibility through five primary areas of work: Technology, Guidelines, Tools, Education & outreach and Research & development. RNIB is an active member of the W3C, and all of the tests that we carry out during an audit are based on WAI recommendations. Version 2.1 of the **WAI Web Content Accessibility Guidelines (WCAG)** was published in June 2018 by the WAI and can be found at <https://www.w3.org/TR/WCAG21/>.

3.2 The audit process

The audit tests a representative sample of pages against all of the Level A and Level AA checkpoints in the WCAG 2.1 guidelines. When all requirements are met, the site can claim conformance to level AA of the WCAG 2.1 standard.

RNIB's Web Accessibility Consultants conduct all of our website accessibility audits. The site is first checked using an automated checking tool to pinpoint any accessibility problems that can be detected programmatically and highlight aspects of the site that need to be examined more closely.

A representative sample of pages from the website is then examined using a combination of semi-automatic evaluation tools and manual evaluation in detail. A selection of browser and access software is used, such as:

Tools: WAVE, colour contrast, accessibility and developer toolbar

Browsers used to support the audit: Chrome, Firefox, and Safari

Assistive Technology: NVDA, JAWS, VoiceOver

Browsers used to support assistive technology software: Chrome for JAWS, Safari for VoiceOver, NVDA for Firefox

We perform code, technical and manual reviews producing in-depth audit reports containing examples, solutions and strategies for improvement.

Where no issues are found, the web site will be able to claim WCAG 2.1 Level AA conformance. More commonly we find that assessed sites don't fully reach the required standard, and remedial work is needed.

3.2.1 WCAG 2.1 Conformance

Each issue found in the Audit is assigned a **priority level** based on its severity. The priority levels are **must**, **should**, **advisory** and **recommended**.

To conform to WCAG 2.1 AA the website must address **all** the issues raised (except for recommended), regardless of their assigned priority level. The priority levels are only to prioritise the issues raised.

Must issue: a critical issue is detected that means the user cannot complete, or it is very difficult to complete, the task/goal.

Should issue: a major issue is detected that is heavily affecting the user's experience/performance in completing the task/goal.

Advisory issue: a minor issue is detected, but there are ways to overcome it or avoid it. The issue marginally affects the user's experience/performance in completing the task/goal. These issues are mainly usability problems that can also be addressed to create a more accessible user experience on the web.

Recommended issue: this is not a WCAG 2.1 checkpoint violation but if you are able to address this issue, it will help to improve the overall accessibility and usability of the website.

3.3 Pages audited

The following list of representative pages were audited:

1. Home - <https://www.nss.nhs.scot/>
2. Browse - <https://www.nss.nhs.scot/browse>
3. Publications - <https://www.nss.nhs.scot/publications>
4. The publication search and several publications: Facilities Monitoring Report Q1 vr 2.0 - <https://www.nss.nhs.scot/publications/facilities-monitoring-report-q1-vr-20/>
5. News - <https://www.nss.nhs.scot/news>
6. The news search and several news articles: The Year of the Nurse and the Midwife – Mairi Gaffney - <https://www.nss.nhs.scot/news/the-year-of-the-nurse-and-the-midwife-mairi-gaffney/>
7. How NSS Works - <https://www.nss.nhs.scot/how-nss-works/>
8. Transparency and disclosure - <https://www.nss.nhs.scot/how-nss-works/transparency-and-disclosure/>
9. Board members - <https://www.nss.nhs.scot/how-nss-works/governance/board-members/>
10. Case studies - <https://www.nss.nhs.scot/how-nss-works/case-studies/>
11. Guide template - Fraud awareness presentations - <https://www.nss.nhs.scot/countering-fraud/prevention/fraud-awareness-presentations/>
12. Article template - Browse tender notices - <https://www.nss.nhs.scot/procurement-and-logistics/tendering/browse-tender-notices/>
13. Start page template - Report fraud - <https://www.nss.nhs.scot/countering-fraud/detection/report-fraud/>

As stated in the work proposal, these areas are essential for full use of the site(s) and the site(s) itself cannot be considered compliant until these areas have been addressed.

3.3.1 Page(s) out of scope:

The NHS Scotland Counter Fraud Services, Crimestoppers form (<https://forms.theiline.co.uk/nhs-scotland-counter-fraud-services>) accessed via the Report fraud page (<https://www.nss.nhs.scot/countering-fraud/detection/report-fraud/>)
- See Executive Summary for further details.

3.4 Summary of the results

All the issues have been fixed with the NHS National Services Scotland website and conforms to WCAG 2.1 AA guidelines.

All issues fixed are discussed in full within the Detailed Analysis section.

We hope that you find the following analysis useful and informative. If you have any questions, please do get in touch; we are here to help.

The following are the results of the WCAG Success Criteria:

Level A

Pass: 19

Fail: 0

N/A: 11

Total: 30

Level AA

Pass: 14

Fail: 0

N/A: 6

Total: 20

3.4.1 WCAG 2.1 Check Point Conformance Summary

Checkpoint	Description	Pass/Fail
1.1.1: Non-text Content (Level A)	Provide text alternatives for non-text content	PASS
1.2.1: Audio-only and Video-only (Pre-recorded) (Level A)	Provide an alternative to video only and audio only content	N/A
1.2.2: Captions (Pre-recorded) (Level A)	Provide captions for videos with audio	N/A
1.2.3: Audio Description or Media Alternative (Pre-recorded) (Level A)	Videos with audio has a second alternative	N/A
1.2.4: Captions (Live) (Level AA)	Live videos have captions	N/A
1.2.5: Audio Description (Pre-recorded) (Level AA)	Users have access to audio description for video content	N/A
1.3.1: Info and Relationships (Level A)	Logical structure	PASS
1.3.2: Meaningful Sequence (Level A)	Present content in a meaningful order	PASS
1.3.3: Sensory Characteristics (Level A)	Use more than one sense for instructions	PASS
1.3.4 Orientation (Level AA) [WCAG 2.1]	Do not restrict to portrait or landscape orientation	PASS
1.3.5 Identify Input Purpose (Level AA) [WCAG 2.1]	The purpose of the input can be determined programmatically	PASS
1.4.1: Use of Colour (Level A)	Don't use presentation that relies solely on colour	PASS
1.4.2: Audio Control (Level A)	Don't play audio automatically	N/A
1.4.3 Contrast (Minimum) (Level AA)	Contrast ratio between text and background at least 4.5:1	PASS

Checkpoint	Description	Pass/Fail
1.4.4 Resize Text (Level AA)	Text to be resized to 200% without loss of content or function	PASS
1.4.5: Images of Text (Level AA)	Don't use images of text	N/A
1.4.10 Reflow (Level AA) [WCAG 2.1]	Must be usable when resized to 320 pixels/400% zoom	PASS
1.4.11 Non-Text Contrast (Level AA) [WCAG 2.1]	Contrast ratio of interface graphics is at least 3:1	PASS
1.4.12 Text Spacing (Level AA) [WCAG 2.1]	Text has enough line height and spacing	PASS
1.4.13 Content on Hover or Focus (Level AA) [WCAG 2.1]	Content triggered on focus or hover is not obscured and can be dismissed	N/A
2.1.1: Keyboard (Level A)	Accessible by keyboard only	PASS
2.1.2: No Keyboard Trap (Level A)	Don't trap keyboard users	PASS
2.1.4 Character Key Shortcuts (Level A) [WCAG 2.1]	If using single character key shortcuts, allow users to disable/remap them	N/A
2.2.1: Timing Adjustable (Level A)	Time limits have user controls	N/A
2.2.2: Pause, Stop, Hide (Level A)	Provide user controls for moving content	N/A
2.3.1: Three Flashes or Below Threshold (Level A)	No content flashes more than three times per second	N/A
2.4.1: Bypass Blocks (Level A)	Provide a "Skip to Content" link	PASS
2.4.2: Page Titled (Level A)	Helpful and clear page title	PASS
2.4.3: Focus Order (Level A)	Logical order	PASS
2.4.4: Link Purpose (In Context) (Level A)	Every link's purpose is clear from its context	PASS

Checkpoint	Description	Pass/Fail
2.4.5: Multiple Ways (Level AA)	Offer several ways to find pages	PASS
2.4.6: Headings and Labels (Level AA)	Use clear headings and labels	PASS
2.4.7: Focus Visible (Level AA)	Keyboard focus is visible and clear	PASS
2.5.1 Pointer Gestures (Level A) [WCAG 2.1]	If using complex gestures, allow users a simple alternative	N/A
2.5.2 Pointer Cancellation (Level A) [WCAG 2.1]	Do not trigger actions on the down event	N/A
2.5.3 Label in Name (Level A) [WCAG 2.1]	Interface components must have same name as visual label	PASS
2.5.4 Motion Actuation (Level A) [WCAG 2.1]	If triggering actions my device motion e.g. shake, provide simple alternative	N/A
3.1.1: Language of Page (Level A)	Page has a language assigned	PASS
3.1.2: Language of Parts (Level AA)	Tell users when the language on the page changes	N/A
3.2.1: On Focus (Level A)	Elements do not change when they receive focus	PASS
3.2.2: On Input (Level A)	Elements do not change when they receive input	PASS
3.2.3: Consistent Navigation (Level AA)	Use menus consistently	PASS
3.2.4: Consistent Identification (Level AA)	Use icons and buttons consistently	PASS
3.3.1: Error Identification (Level A)	Clearly identify input errors	PASS (no error validation available on forms: Publications & News)

Checkpoint	Description	Pass/Fail
3.3.2: Labels or Instructions (Level A)	Label elements and give instructions	PASS
3.3.3: Error Suggestion (Level AA)	Suggest fixes when users make errors	PASS (no error validation available on forms: Publications & News)
3.3.4: Error Prevention (Legal, Financial, Data) (Level AA)	Reduce the risk of input errors for sensitive data	N/A
4.1.1: Parsing (Level A)	No major code errors	PASS
4.1.2: Name, Role, Value (Level A)	Build all elements for accessibility	PASS
4.1.3 Status Messages (Level AA) [WCAG 2.1]	Assistive Technology users must be notified of dynamic content	PASS

4 Detailed analysis

All issues found in the sample pages checked are described in this section, along with information about which WCAG 2.1 checkpoint(s) each issue fails against.

The issues are categorised based on their assigned priority level, from the more severe to the least severe.

4.1 Desktop issues - Should

4.1.1 Issue: Linked images with incorrect alternative text (PASS)

Re-test result: PASS

This issue has now been resolved. The linked image now has an alternative text that describes the link destination: 'NHS National Services Scotland Home'.

4.1.2 Issue: Currently selected state is not announced by the screen reader (PASS)

Re-test result: PASS

This issue has now been resolved. The currently selected or active page is now announced to screen reader users.

4.2 Desktop issues - Advisory

4.2.1 Issue: Links to non-HTML documents missing file type and file size information (PASS)

Re-test result: PASS

This issue has now been resolved.

On the Case studies page, the document file type and file size has now been included in the link text.

The 'Publication: Facilities Monitoring Report Q1 vr 2.0' page now displays the file type and size of the document, but not within the link text. As an enhancement to this link for screen reader users, consider including the file type and size of the document within the link text.

4.2.2 Issue: Incorrect positioning of Skip link when cookies modal present (PASS)

Re-test result: PASS as it's a usability issue

This issue has been marked as resolved as it's not a WCAG fail but relates to usability and this fix is therefore optional.

4.2.3 Issue: Form control's criteria not conveyed to screen reader users (PASS)

Re-test result: PASS

This issue has now been resolved. The hint text is now being announced by the JAWS screen reader. However, on some occasions, the hint text is still not announced by JAWS for the form controls though we have been unable to reliably replicate this behaviour. We believe that this is a JAWS specific issue.

4.2.4 Issue: Multiple Heading Level 1 <h1> (PASS*)

Re-test result: PASS* as it relates to best practice

This issue has now been resolved.

* Using multiple H1s is not a WCAG violation but is considered best practice to only use a single H1 per page. Multiple H1s may affect the experience of assistive technology users. Also, two of the H1 headings seem similar in wording and could be confusing for some users: 'Fraud awareness presentations'; 'Fraud awareness workshop'. Consider using one heading level <h1> per page. Re-wording one of the headings to avoid confusion would also help.

4.2.5 Issue: Definition is not provided for abbreviation (PASS)

Re-test result: PASS

This issue has now been resolved.

The main issues relating to unfamiliar acronyms have now been fixed on the Home and Browse pages. These have been changed from 'CLO Services' to 'Legal'.

The acronym, CFS, used on the Report fraud page can be deciphered from the 'address' section, further down the page. Ideally, it would be helpful for all users if the abbreviation was expanded on the first instance of its use.

4.2.6 Issue: Landmark elements missing abbreviation (PASS)

Re-test result: PASS

This issue has now been resolved. Landmark regions have now been added to enhance navigation for assistive technology users.

4.2.7 Issue: Adjacent image and text links for the same resource for mouse users (PASS)

Re-test result: PASS as it's a usability issue

This issue has been marked as resolved as it's not a WCAG fail but relates to usability and this fix is therefore optional.

4.3 Mobile only issues

No mobile only issues were found.

5 Further Information

5.1 What happens next?

5.1.1 Claiming WCAG 2.1 Conformance

This audit has highlighted issues that need to be corrected in order for the site to achieve WCAG 2.1 AA conformance – see Executive Summary for further details. You should arrange for the site to be re-checked once the necessary changes have been made.

5.1.2 Arranging for the site re-test

Once you have read the report and estimated how long it will take you to make the required changes to your website, please contact us to schedule the site re-test.

5.1.3 Making changes to a site which carries a WCAG 2.1 conformance claim

You are responsible for ensuring that any changes you make to your site do not reduce the standard of accessibility attained. If you are unsure, you can contact us for advice. Depending on the nature and extent of the changes you are proposing, there may be a charge for assessing these changes, to establish if there is any impact on the accessibility of the site and its continuing right to display a conformance claim. If you completely change the design of the site, you are strongly advised to arrange for a new audit to be carried out before the new site can display a WCAG 2.1 conformance claim.

6 Appendix 1: WCAG 2.1 guidelines and checkpoints for levels A and AA

6.1.1 Guideline 1.1: Text Alternatives

Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols, or simpler language.

1.1.1: Non-text Content (Level A)

- All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below.
- Controls, Input: If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to Guideline 4.1 for additional requirements for controls and content that accepts user input.)
- Time-Based Media: If non-text content is time-based media, then text alternatives at least provide descriptive identification of the non-text content. (Refer to Guideline 1.2 for additional requirements for media.)
- Test: If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content.
- Sensory: If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.
- CAPTCHA: If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities.
- Decoration, Formatting, Invisible: If non-text content is pure decoration, is used only for visual formatting, or is not presented to

users, then it is implemented in a way that it can be ignored by assistive technology.

6.1.2 Guideline 1.2: Time-based Media

Provide alternatives for time-based media.

1.2.1: Audio-only and Video-only (Pre-recorded) (Level A)

For pre-recorded audio-only and pre-recorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labelled as such:

- Pre-recorded Audio-only: An alternative for time-based media is provided that presents equivalent information for pre-recorded audio-only content.
- Pre-recorded Video-only: Either an alternative for time-based media or an audio track is provided that presents equivalent information for pre-recorded video-only content.

1.2.2: Captions (Pre-recorded) (Level A)

Captions are provided for all pre-recorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labelled as such.

1.2.3: Audio Description or Media Alternative (Pre-recorded) (Level A)

An alternative for time-based media or audio description of the pre-recorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labelled as such.

1.2.4: Captions (Live) (Level AA)

Captions are provided for all live audio content in synchronized media.

1.2.5: Audio Description (Pre-recorded) (Level AA)

Audio description is provided for all pre-recorded video content in synchronized media.

6.1.3 Guideline 1.3: Adaptable

Create content that can be presented in different ways (for example simpler layout) without losing information or structure.

1.3.1: Info and Relationships (Level A)

Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.

1.3.2: Meaningful Sequence (Level A)

When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined.

1.3.3: Sensory Characteristics (Level A)

Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound.

Note: For requirements related to colour, refer to Guideline 1.4.

1.3.4 Orientation (Level AA) [WCAG 2.1]

Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential.

Note: Examples where a particular display orientation may be essential are a bank check, a piano application, slides for a projector or television, or virtual reality content where binary display orientation is not applicable.

1.3.5 Identify Input Purpose (Level AA) [WCAG 2.1]

The purpose of each input field collecting information about the user can be programmatically determined when:

- The input field serves a purpose identified in the Input Purposes for User Interface Components section; and
- The content is implemented using technologies with support for identifying the expected meaning for form input data.

6.1.4 Guideline 1.4: Distinguishable

Make it easier for users to see and hear content including separating foreground from background.

1.4.1: Use of Colour (Level A)

Colour is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

Note: This success criterion addresses colour perception specifically. Other forms of perception are covered in Guideline 1.3 including programmatic access to colour and other visual presentation coding.

1.4.2: Audio Control (Level A)

If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level.

Note: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether or not it is used to meet other success criteria) must meet this success criterion. See Conformance Requirement 5: Non-Interference.

1.4.3: Contrast (Minimum) (Level AA)

The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following:

- Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1;
- Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement.
- Logotypes: Text that is part of a logo or brand name has no minimum contrast requirement.

1.4.4: Resize text (Level AA)

Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality.

1.4.5: Images of Text (Level AA)

If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following:

- Customizable: The image of text can be visually customized to the user's requirements;
- Essential: A particular presentation of text is essential to the information being conveyed.

Note: Logotypes (text that is part of a logo or brand name) are considered essential.

1.4.10 Reflow (Level AA) [WCAG 2.1]

Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for:

- Vertical scrolling content at a width equivalent to 320 CSS pixels;
- Horizontal scrolling content at a height equivalent to 256 CSS pixels.

Except for parts of the content which require two-dimensional layout for usage or meaning.

Note: 320 CSS pixels is equivalent to a starting viewport width of 1280 CSS pixels wide at 400% zoom. For web content which are designed to scroll horizontally (e.g. with vertical text), the 256 CSS pixels is equivalent to a starting viewport height of 1024px at 400% zoom.

Note: Examples of content which require two-dimensional layout are images, maps, diagrams, video, games, presentations, data tables, and interfaces where it is necessary to keep toolbars in view while manipulating content.

1.4.11 Non-text Contrast (Level AA) [WCAG 2.1]

The visual presentation of the following has a contrast ratio of at least 3:1 against adjacent colour(s):

- **User Interface Components:** Visual information required to identify user interface components and states, except for inactive components or where the appearance of the component is determined by the user agent and not modified by the author;

- **Graphical Objects:** Parts of graphics required to understand the content, except when a particular presentation of graphics is essential to the information being conveyed.

1.4.12 Text Spacing (Level AA) [WCAG 2.1]

In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all of the following and by changing no other style property:

- Line height (line spacing) to at least 1.5 times the font size;
- Spacing following paragraphs to at least 2 times the font size;
- Letter spacing (tracking) to at least 0.12 times the font size;
- Word spacing to at least 0.16 times the font size.

Exception: Human languages and scripts that do not make use of one or more of these text style properties in written text can conform using only the properties that exist for that combination of language and script.

1.4.13 Content on Hover or Focus (Level AA) [WCAG 2.1]

Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true:

- **Dismissible:** A mechanism is available to dismiss the additional content without moving pointer hover or keyboard focus, unless the additional content communicates an input error or does not obscure or replace other content;
- **Hoverable:** If pointer hover can trigger the additional content, then the pointer can be moved over the additional content without the additional content disappearing;
- **Persistent:** The additional content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid.

Exception: The visual presentation of the additional content is controlled by the user agent and is not modified by the author.

Note: Examples of additional content controlled by the user agent include browser tooltips created through use of the HTML title attribute.

Note: Custom tooltips, sub-menus, and other nonmodal popups that display on hover and focus are examples of additional content covered by this criterion.

6.1.5 Guideline 2.1: Keyboard Accessible

Make all functionality available from a keyboard.

2.1.1: Keyboard (Level A)

All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints.

Note 1: This exception relates to the underlying function, not the input technique. For example, if using handwriting to enter text, the input technique (handwriting) requires path-dependent input but the underlying function (text input) does not.

Note 2: This does not forbid and should not discourage providing mouse input or other input methods in addition to keyboard operation.

2.1.2: No Keyboard Trap (Level A)

If keyboard focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away.

Note: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.

2.1.4 Character Key Shortcuts (Level A) [WCAG 2.1]

If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true:

- **Turn off:** A mechanism is available to turn the shortcut off;

- **Remap:** A mechanism is available to remap the shortcut to use one or more non-printable keyboard characters (e.g. Ctrl, Alt, etc);
- **Active only on focus:** The keyboard shortcut for a user interface component is only active when that component has focus.

6.1.6 Guideline 2.2: Enough Time

Provide users enough time to read and use content.

2.2.1: Timing Adjustable (Level A)

For each time limit that is set by the content, at least one of the following is true:

- Turn off: The user is allowed to turn off the time limit before encountering it; or
- Adjust: The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or
- Extend: The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or
- Real-time Exception: The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or
- Essential Exception: The time limit is essential and extending it would invalidate the activity; or
- 20 Hour Exception: The time limit is longer than 20 hours.

Note: This success criterion helps ensure that users can complete tasks without unexpected changes in content or context that are a result of a time limit. This success criterion should be considered in conjunction with Success Criterion 3.2.1, which puts limits on changes of content or context as a result of user action.

2.2.2: Pause, Stop, Hide (Level A)

For moving, blinking, scrolling, or auto-updating information, all of the following are true:

- Moving, blinking, scrolling: For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and
- Auto-updating: For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential.

Note 1: For requirements related to flickering or flashing content, refer to Guideline 2.3.

Note 2: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.

Note 3: Content that is updated periodically by software or that is streamed to the user agent is not required to preserve or present information that is generated or received between the initiation of the pause and resuming presentation, as this may not be technically possible, and in many situations could be misleading to do so.

Note 4: An animation that occurs as part of a preload phase or similar situation can be considered essential if interaction cannot occur during that phase for all users and if not indicating progress could confuse users or cause them to think that content was frozen or broken.

6.1.7 Guideline 2.3: Seizures

Do not design content in a way that is known to cause seizures.2.3

2.3.1: Three Flashes or Below Threshold (Level A)

Web pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds.

Note: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.

6.1.8 Guideline 2.4: Navigable

Provide ways to help users navigate, find content, and determine where they are.

2.4.1: Bypass Blocks (Level A)

A mechanism is available to bypass blocks of content that are repeated on multiple Web pages.

2.4.2: Page Titled (Level A)

Web pages have titles that describe topic or purpose.

2.4.3: Focus Order (Level A)

If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability.

2.4.4: Link Purpose (In Context) (Level A)

The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general.

2.4.5: Multiple Ways (Level AA)

More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process.

2.4.6: Headings and Labels (Level AA)

Headings and labels describe topic or purpose.

2.4.7: Focus Visible (Level AA)

Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.

6.1.9 Guideline 2.5 Input Modalities

Make it easier for users to operate functionality through various inputs beyond keyboard.

2.5.1 Pointer Gestures (Level A) [WCAG 2.1]

All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential.

Note: This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology).

2.5.2 Pointer Cancellation (Level A) [WCAG 2.1]

For functionality that can be operated using a single pointer, at least one of the following is true:

- **No Down-Event:** The down-event of the pointer is not used to execute any part of the function;
- **Abort or Undo:** Completion of the function is on the up-event, and a mechanism is available to abort the function before completion or to undo the function after completion;
- **Up Reversal:** The up-event reverses any outcome of the preceding down-event;
- **Essential:** Completing the function on the down-event is essential.

Note: Functions that emulate a keyboard or numeric keypad key press are considered essential.

Note: This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology).

2.5.3 Label in Name (Level A) [WCAG 2.1]

For user interface components with labels that include text or images of text, the name contains the text that is presented visually.

Note: A best practice is to have the text of the label at the start of the name.

2.5.4 Motion Actuation (Level A) [WCAG 2.1]

Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when:

- **Supported Interface:** The motion is used to operate functionality through an accessibility supported interface;
- **Essential:** The motion is essential for the function and doing so would invalidate the activity.

6.1.10 Guideline 3.1: Readable

Make text content readable and understandable. 3.1

3.1.1: Language of Page (Level A)

The default human language of each Web page can be programmatically determined.

3.1.2: Language of Parts (Level AA)

The human language of each passage or phrase in the content can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text.

6.1.11 Guideline 3.2: Predictable

Make Web pages appear and operate in predictable ways. 3.2

3.2.1: On Focus (Level A)

When any component receives focus, it does not initiate a change of context.

3.2.2: On Input (Level A)

Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behaviour before using the component.

3.2.3: Consistent Navigation (Level AA)

Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user.

3.2.4: Consistent Identification (Level AA)

Components that have the same functionality within a set of Web pages are identified consistently.

6.1.12 Guideline 3.3: Input Assistance

Help users avoid and correct mistakes.

3.3.1: Error Identification (Level A)

If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text.

3.3.2: Labels or Instructions (Level A)

Labels or instructions are provided when content requires user input.

3.3.3: Error Suggestion (Level AA)

If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content.

3.3.4: Error Prevention (Legal, Financial, Data) (Level AA)

For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true:

1. Reversible: Submissions are reversible.
2. Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them.
3. Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.

6.1.13 Guideline 4.1: Compatible

Maximize compatibility with current and future user agents, including assistive technologies.

4.1.1: Parsing (Level A)

In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their

specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features.

Note: Start and end tags that are missing a critical character in their formation, such as a closing angle bracket or a mismatched attribute value quotation mark are not complete.

4.1.2: Name, Role, Value (Level A)

For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies.

Note: This success criterion is primarily for Web authors who develop or script their own user interface components. For example, standard HTML controls already meet this success criterion when used according to specification.

4.1.3 Status Messages (Level AA) [WCAG 2.1]

In content implemented using markup languages, status messages can be programmatically determined through role or properties such that they can be presented to the user by assistive technologies without receiving focus.

7 Contact details

Accessibility Consultancy and User Experience Team
Royal National Institute of Blind People
Northminster House, Northminster, Peterborough, UK, PE1 1YN

Email: nppd@rnib.org.uk