

# B Analysis and Auditing

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# 04 Baseline Auditing

Audit the current accessibility of all aspects of the organisation, including the frontlist and backlist book files, the website functionality and the backend submission platform. You could complete this yourself using self auditing, or employ an external auditor. You could also look at assessing current organisational knowledge, attitudes towards and motivations for engaging with accessibility work.

Automated Testing

Manual Checking

Assistive Technology Tests

End user testing from print disabled people

# Automated Testing

There are many proprietary and open source tools available to audit accessibility using automated testing. Below we have collated our top picks for open source tools, however many publishers may have budget to purchase a tool to do this, therefore, we have included links to other curated lists of accessibility tools from recommended sources. It's important to note that automated testing is only part of the process and can only take you so far, as many accessibility features require human assessment, for example, automated tools can check for the presence of ALT text, but can only guess at it's quality, for example length or matching the file name, and full quality checking will always need a human.

## EPUBs

Ace by Daisy: <https://daisy.org/activities/software/ace/>

Smart by Daisy: <https://smart.daisy.org/>

## PDFs

PAC (Pdf Accessibility Checker): <https://pac.pdf-accessibility.org/en>

## HTML and Web Pages

Wave Browser extensions <https://wave.webaim.org/extension/>

Accessibility Checker: <https://accessibilitychecker.org/>

## Curated Lists of Tools

<https://www.w3.org/WAI/test-evaluate/tools/list/>

<https://accessibility-manual.dwp.gov.uk/tools-and-resources>

<https://github.com/ediblecode/accessibility-resources?tab=readme-ov-file#checkers>

<https://www.allyproject.com/resources/#tools>

# Manual Checking

## Checklist for manual checking

You can download this checklist, produced by us, in a spreadsheet format with additional richer information, including an indication of the complexity of each task, from here: [The Open Book Futures Accessibility Tools](#)

## EPubs and PDFs

### Text Features

1. Text is actual text; not images of text.
2. Colours of text has contrast ratio of at least 4.5:1
3. Headings are descriptive of the content they contain
4. Text is reflowable without problems
5. Text can be resized without problems
6. Line height and spacing, letter spacing and word spacing can all be changed without problems
7. Orientation can be changed without problems
8. Fonts are coded correctly

### Non-Text Features

1. Non-text features (figures, graphics, captions, links, mathematical expressions) have meaningful ALT text
2. Colours of non-text features (figures, graphics) has contrast ratio of at least 3:1
3. Non-text features (figures, graphics, captions, links, mathematical expressions) have multiple ways of conveying meaning
4. Links are accessible and meaningful
5. Other clickable elements are 24 x 24 pixels
6. Other clickable elements have visible text that matches the text in the underlying code
7. A list's numbers, letters or bullets are displayed and tagged correctly
8. A tables's headers, rows and columns are tagged correctly

### Semantic Tagging

1. Non-decorative/real and decorative/artefact content is all tagged correctly

2. Non-text features (figures, graphics, captions, links, mathematical expressions) are tagged and grouped correctly
3. Lists, tables and TOCs are tagged correctly
4. Headers, footers, notes and references are tagged correctly
5. Headings are tagged as headings
6. Headings have just 1 <H1>, at the beginning
7. Headings <H2>-<H6> don't skip levels
8. No headings <H7> or higher
9. Other non-PDF structure elements tagged correctly (Epubs)
10. PDF tags support the separate reading order (PDFs)
11. PDF role mapping is correct (PDFs)
12. Other structure elements in PDF tagged correctly (PDFs)

## Reading Order and Navigation

1. Multiple ways to navigate
2. Static page breaks are present (Epubs)
3. Static page breaks are navigable (Epubs)
4. Navigation consistent throughout
5. Reading/focus order retains meaning when using tabs or a screenreader
6. Repeating blocks of content can be skipped

## Metadata and Conformance reporting

1. File has metadata
2. File metadata has a title that is used instead of file name
3. File metadata has a valid language
4. Where the language changes, individual parts have a valid language
5. Source of static page breaks/pagination is identifiable (Epubs)
6. File metadata includes full accessibility conformance information

## HTML and Web Pages

For HTML books and web pages, you would need to consider all of WCAG AA, rather than just the selected checklist above, which only includes aspects of standards that apply to ebook files that need to be manually checked. Below are a list of already available widely used full WCAG based checklists:

[WebAIM's WCAG 2 Checklist](#)

[Checklist of Checkpoints for Web Content Accessibility Guidelines 1.0](#)

Please note that completing these checklists does not equal full certified compliance with WCAG AA.

Other checklists:

[W3C Easy Checks](#)

[UK Government: Basic accessibility check](#)

[Web Content Accessibility Guidelines - Quick Reference](#)

[Web Content Accessibility Guidelines in Plain English](#)

# Assistive Technology Tests

We recommend running at least a sample of eBooks through assistive technology in order to double check that everything works OK, and best if this is a range of the most commonly used tools that fulfill a range of functions. The minimum checks you complete should be checking that:

- the file opens
- the file displays properly in a way that's understandable
- everything within the file can be used with that technology

There are different types of assistive technology that are commonly in use and you should check through at least one example of each type.

## Contrast, Colour and Font Changers

Try different settings using:

- Windows High Contrast mode
- Different browser's settings, such as Firefox and Chrome

## Screen Readers

NVDA desktop screen reader and JAWS desktop screen reader are commonly used open source applications that you can download and test with. It's also recommended to check using mobile screen readers such as VoiceOver on iOS or TalkBack on Android. Complete the following tests using these technologies:

- Read every element and header
- Tab through every link
- Check every landmark, for example your footer and any navigation
- Check your use of Accessible Rich Internet Applications (ARIA)
- Check you can fill in any editable fields, for example writing and submitting a form

## Screen Magnifiers

Use desktop features such as Windows Magnifier or mobile features such as Apple Zoom to check this. Complete the following checks using these features:

- Test up to at least 4 times magnification
- The spacing between elements, for example the gap between a form label and field
- That page elements display consistently on different page layouts - so someone who is zoomed in to a page can always find the search box, for example



- That users know when something happens outside the viewport - for example, with modals or error messages

## Speech Recognition

Dragon speech recognition is a commonly used proprietary desktop screen reader that you can test with. It's also recommended to check using mobile speech recognition on iOS or Android. Complete the following tests using these technologies:

- Navigate to each feature using speech
- Activate every link, button, or interactive element, for example form controls or a media player using speech
- Enter text into any forms if applicable to your service using speech, say punctuation out loud and correct any spelling mistakes you make

Make sure you speak clearly, but naturally. You should also use a high quality headset rather than an in-built microphone in your local machine and make sure you're at a consistent distance from the microphone.

WebAim articles on:

[using JAWS to evaluate web accessibility](#)

[using NVDA to evaluate web accessibility](#)

[using VoiceOver to evaluate web accessibility](#)

UK Government advice:

<https://www.gov.uk/service-manual/technology/testing-with-assistive-technologies>

# End user testing from print disabled people

While not common for small presses, and likely this is beyond available capacity, best practice would be to approach end users with disabilities to test a sample of book files, web pages and submission systems. Below is some advice on finding user testing opportunities like this, if presses decide to go down this route.

The best feedback will always come from end users with disabilities, and from older users, as it can uncover accessibility barriers that are commonly experienced by your readership, yet are not captured within legal minimum accessibility requirements.

In most cases, including users in evaluation involves:

- getting a few people with disabilities, and depending on your target audience, older users
- including them throughout the development process to complete sample tasks on draft book files and websites so you can see how different aspects of the design and coding could be improved before publication
- discussing accessibility issues with them

Advice taken from:

[W3C Involving Users in Evaluating Web Accessibility](#)

[W3C Involving Users in Web Projects for Better, Easier Accessibility](#)

The Gov.UK website includes a set of hypothetical user profiles to give you working examples of the range of users and their needs. These can be used to develop a strong idea of accessibility use cases and may help make content design decisions.

[Understanding disabilities and impairments: user profiles](#)

More information:

[AbilityNet - A Step-by-Step Guide to User Testing](#)

[AbilityNet - Product and Services - User Accessibility Testing and Research](#)

# 05 Available and Required Capacity and Budget

Improving accessibility requires dedicated time and money, and a full consideration of where this can be diverted to accessibility goals will help with planning. It is likely that you will have some idea of how long book production tasks take, and how much extra work accessibility improvements will add to that, but it could be that you will need to understand more about the relative simplicity or complexity of individual accessibility requirements (like ALT text, or checking colour contrast) before you can assess this.

See our [checklist](#) for tasks to consider during this process.