codeenigma

Website Accessibility & Performance audit

JUSTINE POCOCK
Head of Design

A guided tour through our Accessibility audits

sales@codeenigma.com
+44 (0)20 3588 1550

This PDF is a **guided tour** of our own accessibility audit. It explains why our audits are the bee's knees...

We understand the irony that PDFs aren't very accessible, but we've had requests to create one. It's intended for sharing, but it can also be used as a quick reference guide.

If you need assistance, please contact us. We can explain anything within this PDF, respective of your needs.

You'll find notes on the process throughout, and what to expect at each stage of your audit (and beyond).

codeenigma

Where do we start?

- We kick-off with a consultation to look at the different types of information on your site and decide if we have a good sample of content to audit. This includes pages with special content. For example, forms and search results, videos and embedded media or microsite pages. Plus any mission business pages, like membership information, or contact details.

  If you have special testing requirements we'll decide upon them in the consultation.

- We audit the site using both automated and manual tests. We ensure the site is understandable, not just operable. We'll give you an overview of the website and a breakdown for each page tested.

- We'll write an accessibility statement for you to publish on your site (if you don't have one).

- Devise a roadmap to help resolve outstanding issues. If you have a support contract, we'll create tickets in your icebox for our support team to action.

Our site is small, so our content list is short. It'll grow when our website does.

LATER

- Help you complete the tasks. If you have a support contract, it's likely we can fit these tasks under this. We'll ensure the new work we're doing is compliant. Either every six months (or yearly) we'll review the roadmap and new content, update the sample content list and amend your accessibility statement.

codeenigma

Accessibility Audit

At least [1 in 5 people in the UK have a long term illness, impairment or disability](#). Many more have a temporary disability. For example, someone with impaired vision might use a screen reader (software that lets a user navigate a website and 'read out' the content), braille display or screen magnifier. Or someone with motor difficulties might use a special mouse, speech recognition software or on-screen keyboard emulator.

New regulations came into force for public sector bodies on 23 September 2018. They say you must make your website or mobile app more accessible by making it 'perceivable, operable, understandable and robust'. The full name of the regulations is the Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018.

You can read more at:

https://www.gov.uk/guidance/accessibility-requirements-for-public-sector-websites-and-apps

Results at a glance

8 issues to address from **85** automated tests

Average User Impact
SERIOUS
12 pages tested

We haven't done our manual tests yet, but the overall results are shown here and more in-depth page details in the annex at the end.

codeenigma

Accessibility Results

We used aXe to test several URLs of the website (See Annex 1). aXe is an accessibility testing engine for websites and other HTML-based user interfaces. We first use aXe and then run through the site with some manual tests to ensure we cover the other areas of WCAG 2.1

Issues found

User Impact	Issue
Critical	Images must have alternative text
Serious	Elements must have sufficient color contrast
Serious	Elements should not have tabindex greater than zero
Serious	<html> element must have a lang attribute
Serious	Frames must have title attribute
Moderate	Aside must not be contained in another landmark
Moderate	Heading levels should only increase by one
Moderate	Page must contain a level-one heading

Manual tests

Accessibility means more than putting things online and passing a WCAG 2.1 audit. It means making your content and design clear and simple enough so that most people can use it without needing to adapt it, while supporting those who do need to adapt things.

We recommend constantly checking for better accessibility with the use of automated scripts but there's much more that needs to be tested manually, such as how a user tabs through the website and if the content/image descriptions are relevant or not.

There are some areas which could be improved that have passed automated tests such as alt tag descriptions, making them more descriptive to convey the humour behind the black and white images better.

By listing the issues found in order of user impact we can start to plan our roadmap without thinking of pages.

codeenigma

Accessibility roadmap recommendations

As this is your first accessibility audit the suggestions here are to get you started:

1. Write and publish your accessibility statement and roadmap
2. Use the tab order/skip links from bbc.co.uk to make the roadmap easy to find.
3. Work through your roadmap

As the audits go on we'll provide more recommendations.

Next steps could be testing with other devices such as screen readers, magnifiers and speech recognition as well as more pages, or user testing with people to see if the content is understandable to those with different cognitive abilities, such as literacy, learning difficulties and autism.

codeenigma

Performance Audit

Google Lighthouse is an open-source, automated tool for improving the quality of web pages. It has audits for performance, accessibility, progressive web apps, and more. It paints a comprehensive picture of possible user experience and developer bottlenecks.

Lighthouse provides a performance score out of 100, benchmarking the provided URL against common metrics. A score above 60 is considered to be good, and anything above 90 very good. We look at only the performance tab within this audit as we believe good site performance and accessibility are key for the best user experience.
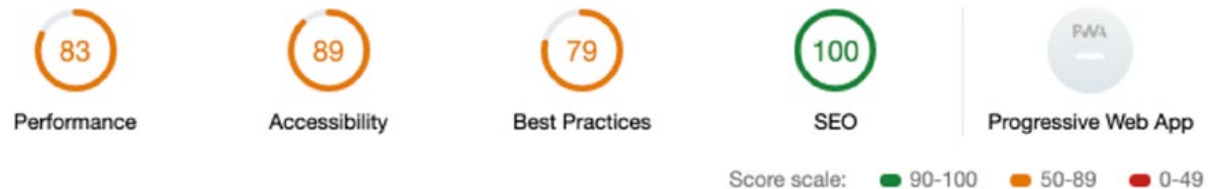
Results at a glance

Performance
score of **83**

Why do we run a performance audit in an accessibility review?

Simple, the better your site loads images, paints the text, loads the animations, more people will enjoy the experience.

codeenigma

Lighthouse Performance scores

Code Enigma's performance rating is 83/100. Initial page load performance is essential for a good user experience. Ideally, a first meaningful paint should take place within 2 seconds of loading the website. The longer the load time, the higher the likelihood of abandonment.

| 83 | 89 | 79 | 100 | PWA |
| Performance | Accessibility | Best Practices | SEO | Progressive Web App |

Score scale: ● 90-100 ● 50-89 ● 0-49

URL tested: https://www.codeenigma.com/work/national-stem-learning-centre-0

We also tested the homepage, a basic page and FAQ page with similar results, those without large images performing better.

We check typical mobile and desktop speeds

Metric	Desired time (s = seconds)	Actual time mobile/desktop
First Contentful Paint Marks the time at which the first text or image is painted.	0-2s (fast) 2-4s (average) Over 4s (slow)	**1.7s/1.7s**
First Meaningful Paint Measures when the primary content of a page is visible.	0-2s (fast) 2-4s (average) Over 4s (slow)	**1.9s/2.7s**
Speed Index Shows how quickly the contents of a page are visibly populated.	0 - 4.3s (fast) 4.4 - 5.8s (average) Over 5.8s (slow)	**3.0s/4.0s**
First CPU Idle Marks the first time at which the page's main thread is quiet enough to handle input.	0 - 4.7s (fast) 4.8 - 6.5s (average) Over 6.5s (slow)	**2.6s/3.6s**
Time to Interactive The amount of time it takes for the page to become fully interactive.	0 - 5.2s (fast) 5.3 - 7.3s (average) Over 7.3s (slow)	**6.1s/7.0s**
Estimated Input Latency An estimate of how long your app takes to respond to user input, in milliseconds. during the busiest 5s window of page load.	0-50ms (fast) 50ms+ (slow)	**10ms/130ms**

These times are set by Google and help make up your score, we're looking to be the fastest.

codeenigma

Performance roadmap recommendations

Google recommends the following actions for better performance:

1. Serve images in next-gen formats (9.75 s)
2. [Properly size images (9.3 s)](#)
3. Defer offscreen images (6.75 s)
4. Remove unused CSS (0.15 s)

We have already started to look at [serving properly sized images](#), starting with the hero images which has made page performance increase the score to 97. The next step would be to ensure other large images are served this way, such as images in the body text on case studies.

With regards to serving images in next-gen formats, the design team could go through all of the PNG files on the site and convert them to JPEGs. It might be worth removing PNG from the allowed files or using 'something' in the CMS to turn images into JPEG or WEBP's on upload: https://dev.acquia.com/blog/webp-and-drupal

We're at 100 now!!

Our clients come first so we have to break tasks for our site down into very small ones.

Adding responsive images to the largest images first made a great improvement to our score.

Once we're done testing all the pages we'll write you an accessibility statement to put on your website (or amend your current one.) You might have to fill in some blanks.

codeenigma

ANNEX 1: Content types available

Content Type	Help Text	Example Node
Case Study	A set of questions to answer which help showcase our wonderful work	https://www.codeenigma.com/work/national-stem-learning-centre-0
FAQ	This content type does not need description	https://www.codeenigma.com/devops-hosting/faq/how-do-i-create-useful-support-ticket
Page	Use pages for your static content, such as an 'About us' page.	https://www.codeenigma.com/our-services/web-development
Section Index	These are index pages for the different sections of the site, crazy huh?! It's expected each section of the company has at least one of these.	https://www.codeenigma.com/

Other Pages of significance

Unique page components

Dropdown secondary menu: https://www.codeenigma.com/our-services/hosting

Views

Team: https://www.codeenigma.com/meet-the-team

FAQ Search: https://www.codeenigma.com/faq?search=code

Who we work with: https://www.codeenigma.com/work

Drupal core

User profile page: https://www.codeenigma.com/team/heather

Log-in: https://www.codeenigma.com/user/login

404: https://www.codeenigma.com/404

403 (not logged in!): https://www.codeenigma.com/admin/

Each of these pages are tested, automatically and by hand.

We also use this list to help with our regression testing.

codeenigma

Annex 2: Individual page test results

URL tested: https://www.codeenigma.com/work/national-stem-learning-centre-0

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	15
Moderate	Aside must not be contained in another landmark	1
Serious	Elements should not have tabindex greater than zero	1

URL tested: https://www.codeenigma.com/admin/ (not logged in)

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	4
Serious	Elements should not have tabindex greater than zero	1
Moderate	Page must contain a level-one heading	1

URL tested: https://www.codeenigma.com/404

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	5
Serious	Elements should not have tabindex greater than zero	1
Moderate	Page must contain a level-one heading	1

URL tested: https://www.codeenigma.com/faq?search=code

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	11
Serious	Elements should not have tabindex greater than zero	1
Moderate	Heading levels should only increase by one	1

codeenigma

URL tested: https://www.codeenigma.com/user/login

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	15
Serious	Elements should not have tabindex greater than zero	1
Moderate	Heading levels should only increase by one	1

URL tested: https://www.codeenigma.com/team/heather

User Impact	Issue	Number of occurrences on tested page
Critical	Images must have alternate text	4
Serious	Elements must have sufficient color contrast	16
Serious	Elements should not have tabindex greater than zero	1
Serious	<html> element must have a lang attribute	1
Serious	Frames must have title attribute	1
Moderate	Aside must not be contained in another landmark	1

URL tested: https://www.codeenigma.com/work

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	8
Serious	Elements should not have tabindex greater than zero	1

codeenigma

URL tested: https://www.codeenigma.com/meet-the-team

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	8
Serious	Elements should not have tabindex greater than zero	1

URL tested: https://www.codeenigma.com/our-services/hosting

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	21
Serious	Elements should not have tabindex greater than zero	1

URL tested: https://www.codeenigma.com/

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	12
Serious	Elements should not have tabindex greater than zero	1

URL tested: https://www.codeenigma.com/our-services/web-development

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	15
Serious	Elements should not have tabindex greater than zero	1

codeenigma

URL tested:

https://www.codeenigma.com/devops-hosting/faq/how-do-i-create-useful-support-ticket

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	7
Serious	Elements should not have tabindex greater than zero	1
Moderate	Aside must not be contained in another landmark	1

URL tested: https://www.codeenigma.com/work/national-stem-learning-centre-0

User Impact	Issue	Number of occurrences on tested page
Serious	Elements must have sufficient color contrast	15
Serious	Elements should not have tabindex greater than zero	1
Moderate	Aside must not be contained in another landmark	1

codeenigma

Accessibility statement to publish on the Code Enigma website

Your website needs an accessibility statement and a roadmap to prove you'll fix anything which is non compliant.

This is the first draft of your accessibility statement, all of this content should be published on your website and accessible from every page in a prominent place like the website footer.

Find out more about publishing your accessibility statement on your website.

codeenigma

Accessibility statement for Code Enigma

This website is run by Code Enigma. We want as many people as possible to be able to use this website. That means you should be able to:

- change colours, contrast levels and fonts
- zoom in up to 300% without text spilling off the screen
- navigate most of the website using just a keyboard
- listen to most of the website using a screen reader (including the most recent versions of JAWS, NVDA and VoiceOver)

We've also made the website text as simple as possible to understand.

AbilityNet has advice on making your device easier to use if you have a disability.

How accessible this website is

We're aware that some parts of this website aren't fully accessible, yet.

- you can't modify the font size, line height or spacing of text
- you can't skip to the main content when using a screen reader
- there's a limit to how far you can magnify the map on our people pages
- alternative text on photographs don't always provide accurate context

What to do if you can't access parts of this website

If you need information on this website in a different format, we don't currently have any options like accessible PDF, large print, easy read, audio recording or braille, but we will happily talk to you over the phone or via email.

Email: hello@codeenigma.com
Call: +44 (0)20 3588 1550

Reporting accessibility problems with this website

We're always looking to improve the accessibility of this website. If you find any problems that aren't listed on this page, or think we're not meeting accessibility requirements, contact our design team at hello@codeenigma.com or call us on: +44 (0)20 3588 1550

codeenigma

Enforcement procedure

The Equality and Human Rights Commission (EHRC) is responsible for enforcing the Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018 (the 'accessibility regulations'). If you're not happy with how we respond to your complaint, contact the Equality Advisory and Support Service (EASS).

Contacting us by phone or visiting us in person

Our telephone service is managed by [TTNC](#) who will take a message and we will get back to you. Please do tell TTNC how you'd like us to contact you, we prefer email, but are happy to call you back.

We're a distributed company, so if we need to meet, we'd like to come to you, where you're most comfortable. If this isn't possible we do have a serviced office in Farringdon, London. There are 4 steps at the front of the building, we can talk to the office and ask for a ramp if required.

Technical information about this website's accessibility

Some phrases are required by law

Code Enigma is committed to making its website accessible, in accordance with the Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018.

This website is partially compliant with the Web Content Accessibility Guidelines version 2.1 AA standard, due to the non-compliances listed below.

Non accessible content

This is where we write out the roadmap to fix the issues we've found.

The content listed below is non-accessible for the following reasons.

Non compliance with the accessibility regulations

Some images don't have a text alternative, so the information isn't available to people using a screen reader. This doesn't meet WCAG 2.1 success criterion 1.1.1 (non-text content).

We plan to add text alternatives for all images by January 2020. When we publish new content we'll make sure our use of images meets accessibility standards.

codeenigma

There are some areas of the website where the colour contrast isn't strong enough for those who might have vision impairments. This doesn't meet WCAG 2.1 success criterion 1.4.3 (Contrast)

We plan to tweak the design of the header - where most of the issue is - and ensure this isn't an issue in the redesign, this will be live by November 2019

When making the skip link to content link for our website we used an invalid tab index of "1" this causes an error on the automated tests we run, it might be that this isn't a problem and the skip link should come first, and doesn't miss out important content, but we need to investigate. This doesn't meet WCAG 2.1 success criterion 2.4.3 (Focus Order)

We will do this investigation and make any changes by January 2020

When a page has a sidebar it can be difficult for people using a non-screen reader or keyboard to navigate the right sections. This doesn't meet WCAG 2.1 success criterion 1.3.1 (Info and Relationships)

We will resolve the incorrect markup by December 2019

On some pages there isn't a H1 tag but the large text looks like a page title. This wouldn't be read   aloud   with some screen readers. This doesn't meet WCAG 2.1 success criterion 2.4.10 (Section Headings)

We plan to address this when we redesign some parts of the site, this will be live by the end of November 2019

Disproportionate burden

Google Maps on team member pages, doesn't have a title attribute. We can't control the embedded map but we do have a sentence before the map which also tells a user where the team member lives.

It's acceptable to have some parts that don't comply if the burden is too great. Check legislation for the rules here.

codeenigma

How we tested this website

This website was last tested on 1 August 2019. The test was carried out by Code Enigma as part of internal auditing.

We used the following approach to decide on a sample of pages to test:

One of each content type, every list (Drupal View) generated in Drupal, Drupal specific pages, such as user, login and error pages. Including any content pages which has notably different HTML structures, when this content is created by our editors, the URL gets added to the audit list and will become part of our regression testing.

We tested:

Case Study - https://www.codeenigma.com/work/national-stem-learning-centre-0

FAQ - https://www.codeenigma.com/devops-hosting/faq/how-do-i-create-useful-support-ticket

Standard Page - https://www.codeenigma.com/our-services/web-development

Section index - https://www.codeenigma.com

Dropdown secondary menu: https://www.codeenigma.com/our-services/hosting

Team: https://www.codeenigma.com/meet-the-team

FAQ Search: https://www.codeenigma.com/faq?search=code

Who we work with: https://www.codeenigma.com/work

User profile page: https://www.codeenigma.com/team/heather

Log-in: https://www.codeenigma.com/user/login

404: https://www.codeenigma.com/404

403 (not logged in!): https://www.codeenigma.com/admin/

You can read the full accessibility test report.

That is this report for the world to see. We removed this last section and made it publicly available.

What we're doing to improve accessibility

Our website roadmap shows how and when we plan to improve accessibility on this website.

This statement was prepared on 1st August 2019. It was last updated on 13th August 2019.

Even though workable tickets are in Redmine, we show our roadmap to the public.

codeenigma

...so how much does it all cost?

Accessibility audit with Accessibility statement: £4,950

- 1 hour discovery call
- 20 pages
  - Automated testing
    - Google Lighthouse
    - aXe
  - Technical manual review
    - Accessibility Insights
    - NVDA screen reader
    - Keyboard only
- Comprehensive report of findings
  - Includes Accessibility statement for website (legally required) defining your level of compliance: Compliant/Partially compliant/Not compliant
- 1 hour walk through of the report
- A Code Enigma Audit badge - Recognising that you've been independently audited

Interim Accessibility audit: £1,950

- 1 hour discovery call
- 10 pages of automated testing
- Report of key findings
- 1 hour walk through of the report

codeenigma