



Plymouth Marjon University

WCAG2.1 AA Website Accessibility

September 2020

We believe that the web should be an open, inclusive and fair space for all. By designing and building the Plymouth Marjon University website progressively, we have ensured that all users have access to a consistent experience, regardless of technology or network conditions.

By identifying the core functionality and ensuring that it is available using the simplest technologies and building accessible user interfaces, it ensures that everyone has equal access regardless of accessibility needs.

Plymouth Marjon University is available through sight, hearing or touch; is user-friendly, easy to comprehend and robust, accessible across devices from mobile to the largest of desktops, responsive to users' needs and extendable into the future.

The website was approached not only to be accessible for the 20% of users with disabilities, but to appeal to those without accessibility issues, to promote Plymouth Marjon University as the outstanding institution it is.

Design - Studiose (studiose.co.uk)

STUDIOSE

Development - Square Apple (squareapple.co.uk)



APPROACH

Navigation and Buttons

1. The same primary, secondary and tertiary navigation is repeated on all pages appearing in the same place each time, with the same functionality, essential to make navigation predictable and consistent.
2. Interactive elements have touch points no smaller than 45px square.
3. User interface components repeat using the same labels each time.
4. Signposting has been designed with clear titles and call to action buttons.

Content

1. Content appears and is operated in predictable ways.
2. The page design is based on a 12 column grid, ensuring reusable modules align, making content navigation fluid and understandable.
3. Paragraph text is set at 18px, 2px bigger than WCAG guidance for improved legibility.
4. Text line length has been restricted to a maximum width of 66.6% of the content area width to avoid hard-to-read line lengths.

Colour

1. The contrast ratio between text and its background is at least 4.5 to 1 (conformance level AA.)
2. The existing Marjon colour palette remains untouched however where necessary, larger fonts are used to read at lower contrast.
3. We have avoided using colour alone to make critical information understandable

Images

1. Full browser width images have been avoided, resulting in faster page load.
2. 16:9 or Square format images have been used to ensure a consistent and predictable page layout.
3. Images with text overlays have been avoided, other than the main hero image on the home page, which has been made accessible by ensuring a suitable and minimum contrast.

Forms

1. Form design has been given extra attention to improve accessibility including clear labelling and browser default inputs, selectors, radio buttons, check boxes and buttons, allowing for users individual browser settings to be utilised.
2. Forms have 'Steps' so users can understand where they are in the process of submitting information.

Embedded 3rd Party Content

1. Embedded widgets, (Twitter and YouTube) have been mainly left untouched, allowing for their already accessible code and UI to perform correctly and accessibly.
2. Video Transcripts options are available on videos and are displayed in a clear and accessible way.

Other considerations

1. Animated elements have been avoided inline with WCAG guidance who have set a limit to 3 seconds.
2. Auto-scrolling has been replaced with a 'snap' action, avoiding the web page moving and causing animated accessibility problems.

Accessibility Options

The new WCAG 2.1 AA website has additional accessibility options, enabling visitors to change display colours, fonts, text sizes and text spacing

1. Colour - The user has options to change the display of the website to various 'Dark' or 'Light' presets.
2. Fonts - The user has options to change the display fonts to Arial, Comic San, Courier New and Verdana are available, but also a specifically styled font suitable for visitors with dyslexia called Open Dyslexia.
3. Font size and spacing - Options are provided to increase/decrease font size, letter-spacing and line-heights.
4. Option to reset any accessibility settings made by user.
5. Accessibility settings made by the user are saved in their Cookies for future visits to the website.

CHALLENGES

Calendars

We acknowledge that calendar displays and functions aren't fully accessible and are working on improvements for Phase 2 of the new website.

Tables

The use of tabular data has been reduced or excluded when possible as tables don't perform well enough on mobile devices as they rely heavily on side-ways scrolling.

Testing and Build

This report describes the conformance of the Plymouth Marjon University website with W3C's Web Content Accessibility Guidelines (WCAG 2.1), and how the site was built and tested.

Conformance evaluation of web accessibility requires a combination of semi-automated evaluation tools and manual evaluation. The evaluation results in this report are based on evaluation during the build and subsequent design changes. Some of the initial approved designs were adapted to ensure we could meet the relevant WCAG standards.

Testing occurred before (design), during (build) and after (implementation) on all templates built for the project, as well as on external resources such as Funnelback.

Conformance was tested against WCAG 2.1 Level AA, with WCAG 2.0 conformance.

The website was tested using automated tools including:

- Website Accessibility by Level Access,
- Web AIM Contrast Checker - <https://wave.webaim.org/>
- Axe Pro by Deque
- Accessibility features in Chrome Dev Tools.

Manual reviews included testing the website against:

- Website Accessibility by Level Access
- Government WCAG 2.1 Checklist
- <https://wave.webaim.org/>
- Axe Pro by Deque

These reviews enabled us to check that the automated tools reported correctly or incorrectly, and review and fix any issues. We also checked heading structures and semantic HTML via the W3C validator here: <https://validator.w3.org/>, as well as manually.

HTML AND SITE BUILD

The new Plymouth Marjon University website was built using modules. Separating each part of a page into either re-usable blocks or individual blocks. As each module was built, it was tested and ensured semantic HTML was being used, based upon the approved designs. The CSS used within the site is all standard CSS3, supported on all major browsers, with some fallbacks for older versions of IE. No CSS frameworks were used. Vanilla JavaScript and jQuery were used to build the site and add additional accessibility conformance to items such as the menu, and the custom accessibility tools.

Based upon the WCAG 2.1 AA guidelines, each part of the site was based upon the four foundations of accessibility conformance where applicable:

PERCEIVABLE

Do all images have an appropriate text equivalent? Is essential visual information also available as text?

YES – All images have an alt tag description. Where information is included visually, an alternative text description has been included. Blank ALT tags have been added where the image is decorative.

Do all videos have captions that are synchronised with the audio?

YES – All videos have captions that are synchronised with the audio via the YouTube player. We have also created custom transcript areas.

Does video that includes important visual information have an audio description?

N/A – Videos on this website do not include important visual information that is not communicated in text.

Is all content structure that is communicated visually available to assistive technologies?

YES – All content structure that is communicated visually is available to assistive technologies.

If styling is removed is the content in a logical order?

YES – All content is in a logical order if styling is removed.

Have you avoided using visual characteristics to communicate information?

YES – Visual characteristics have been avoided to communicate information.

Have you avoided using colour as the only way to convey some information?

YES – Colour has not been used to convey information.

Can users stop audio/video that auto plays?

N/A – No audio/video auto plays on this website.

Does all text have sufficient contrast against the background colour?

YES – All text has been tested against the background colour in accordance with Web AIM Contrast Checker. Where necessary font size was increased to ensure compliance.

Is the content fully usable when text is enlarged up to 200%?

YES – No functions are impaired when the website is enlarged to 200%. The accessibility toolbar has a font increase button, and pages have been tested to ensure that everything is still useable.

Have you avoided using images of text?

YES – There are no images of text on the site.

Can users flip the content horizontally and vertically?

YES – The content can be viewed in landscape and portrait modes.

Have you added HTML autocomplete tokens to any forms collecting information about the user?

YES – An autocomplete function has been added to forms.

Does the page content resize to a single column with no horizontal scrolling?

YES – The page content resizes to a single column with no horizontal scrolling. Auto-scroll has been added to tables to ensure they are visible and do not overflow the page.

Do all important graphical objects, interface components, and states have a colour contrast of 3:1?

YES – The colours used in this website has been checked against the Web AIM Contrast Checker.

Can line height, spacing between paragraphs and letter and word spacing be changed without breaking anything?

YES – Line height, spacing between paragraphs and letter and word spacing can be changed without breaking anything, with the use of a browser extension or our custom accessibility tool bar.

Where extra content is shown or hidden on focus, can it be dismissed, interacted with (and not disappear when the user moves to it) and will stay visible until dismissed by the user?

YES – Where extra content is shown or hidden on focus, it can be dismissed, interacted with (and not disappear when the user moves to it) and will stay visible until dismissed by the user.

OPERABLE

Can all menus, links, buttons, and other controls be operated by keyboard?

YES – All menus, links, buttons, and other controls be operated by keyboard. Custom keyboard controls have been added to the main and mobile menus, allowing full keyboard control, including arrows, escape keys, letter shortcuts etc...

Do pages that have time limits include mechanisms for adjusting those limits?

N/A – No pages on this website have time limits.

Can any content that moves or auto updates be stopped?

N/A – We have avoided using content that moves.

Have you avoided using content that flashes or flickers?

YES – No content flashes or flickers on this website.

Can blocks of links and other interactive elements be bypassed by keyboard users?

YES – Blocks of links and other interactive elements can be skipped using the 'Tab' key.

Does each page have a unique title that indicates its purpose and context?

YES – Each page has a unique title that indicated its purpose and context, this comes from T4.

When using a keyboard to move through a page does the order make sense?

YES – The order makes sense when using a keyboard to move through a page, we ensured that the order of HTML on page was not altered by CSS or JS.

Is the purpose of every link clear from its link text?

YES – All hyperlinks use descriptive link text where possible. Title tags have been avoided where descriptive text is used to prevent duplicate screen reader announcements.

Does the website have two or more ways of finding content, such as a navigation menu, search feature, or site map?

YES – The website has a navigation menu and search feature, as well as a sitemap.

Are headings and labels clear and descriptive?

YES – All headings and labels are clear and descriptive.

When using a keyboard to move through a page can you tell where you are?

YES – When using a keyboard to move through a page, links and buttons are highlighted with a yellow box and the page moves automatically if something is selected beyond the fold.

Do you have shortcuts triggered by only one letter or character? If so can they be turned off or remapped by the user?

N/A – No shortcuts/quick-keys can be triggered on this website, except within the search query form by Funnelback.

Does some of your site functionality need several fingers or complex gestures to operate it? If so, can the same functionality be used with just single taps or clicks?

N/A – This website does not require several fingers or complex gestures to operate it.

Does some of your site functionality work using a single point (e.g fingertip)? If so, have you ensured it doesn't get triggered the moment it is touched?

YES – Some links only require a single fingertip point on mobile devices, however they are not triggered by touch only (e.g. if a user swiped past the link).

On forms and other components is the accessible name or label the same as any on-screen text?

N/A – Every field has a label linked with an input, and where necessary extra text and legends to help the user understand its purpose and use.

Does your site respond to motion or movement? If so, can responding to motion or movement be disabled, and your site still be fully usable?

N/A – This site does not respond to motion or movement.

UNDERSTANDABLE

Has the language of the web page or document (or individual parts of a multilingual document) been defined?

YES – The language is defined as 'English' as defined in the HTML tag.

Have you avoided links, controls, or form fields that automatically trigger a change in context?

YES – Links, controls, or form fields that automatically trigger a change in context have been avoided, where conditional fields in forms are used, radio buttons have been used with conditional content in hierarchical order.

Does the website include consistent navigation?

YES – The website includes consistent navigation across all pages.

Are features with the same functionality labelled consistently?

YES – All features with the same functionality are labelled consistently.

Do forms provide helpful, understandable error and verification messages?

YES – Error and verification messages on forms are helpful and easy to understand, and validation and descriptions are provided, as well as extra descriptions on fields and legends on groups of related fields.

ROBUST

Is the web page coded using valid HTML?

YES – The website has been coded using valid semantic HTML, CSS and Javascript.

Do all interactive components have an accessible name and role, and when required state? Has the correct ARIA markup been used and does it validate?

YES – Aria has been added where appropriate and tested manually and by automated tools (as above). Where relevant aria has been added via JavaScript. This is so when JavaScript is disabled via the browser, a fallback is provided that does not need those aria mark ups.

Additional Information

This website will be continuously evaluated after it has been implemented into Terminal Four CMS, to ensure that accessibility is met and adhered to. Included checking aria, alt tags, titles and heading structures.

Web Content Accessibility Guidelines (WCAG)

Overview

<https://www.w3.org/WAI/intro/wcag>

Web Content Accessibility Guidelines 2.1

<https://www.w3.org/TR/WCAG21/>

Techniques for WCAG 2.1

<https://www.w3.org/WAI/WCAG21/Techniques/>

Accessibility Evaluation Resources

<http://www.w3.org/WAI/eval/>

Web Accessibility Evaluation Tools List

<https://www.w3.org/WAI/ER/tools/>

Using Combined Expertise to Evaluate Web Accessibility

<https://www.w3.org/WAI/eval/reviewteams>