

Forest Research Web Site WCAG Accessibility Testing

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1 Revision History

Date	Version	Changes
01/03/2021	1.0	Initial Report

2 Introduction

This report provides details on the accessibility testing that has been carried out on the Forest Research website and the corresponding results.

The testing has been carried out against the Web Content Accessibility Guidelines (WCAG)¹ which are a set of standards developed by W3C. These explain the criteria for making web content more accessible to people with disabilities. At the time of writing, version 2.1 is the most recent version of the guidelines, which were published on the 5th of June 2018. This was therefore the version of the guidelines that were used when conducting the tests. Version 2.2 is due to be released later in 2021, so further testing may be required for any guidelines that are added or updated.

Different standards within the guidelines are aimed at different levels of accessibility. These are A, AA and AAA, where AAA represents the strictest guidelines to ensure maximum accessibility. The Accessibility page on the Forest Research website (<https://www.forestresearch.gov.uk/accessibility/>) states that the website aims to be meet the AA level of accessibility. For this reason, only issues at levels A and AA have been fixed on the website, although issues identified at all levels have still been included in this report for completeness.

2.1 Testing Methods

Browser-based tools have been used to assist with flagging up accessibility issues during testing. The most useful of these was the 'Siteimprove Accessibility Checker' extension for Google Chrome², as this assesses the content of the website directly against the WCAG, including providing information on the corresponding guideline and level of any issues identified. The 'WAVE' Google Chrome extension³ and the accessibility features in Google Chrome's built in 'Lighthouse' developer tool were also used for identifying further issues; however, these do not relate issues back to the WCAG. There are some things these tools cannot check, so human testing was also required for some aspects.

2.2 Testing Scope

The testing that was carried out covers the 'general layout' of the website, as the content is managed by Forest Research using the CMS and is therefore subject to change which can have an impact on how well the website conforms to the guidelines set out in the WCAG. All the main pages in the navigation bar in the header and the pages in the footer have been tested. Where sections link to various articles, a selection of these articles were tested to check the layout of the pages, as

¹ <https://www.w3.org/WAI/standards-guidelines/wcag/> - WCAG website

² <https://chrome.google.com/webstore/detail/siteimprove-accessibility/efcfolpjjhcnikpmhnmphjhhpiclljc> - 'Siteimprove Accessibility Checker' extension for Google Chrome

³ <https://chrome.google.com/webstore/detail/wave-evaluation-tool/jbbplnqjmmeebjijfedlgcdilcofth> - 'WAVE' extension for Google Chrome

opposed to exhaustive testing of the content within the thousands of articles that exist within those sections.

That said, accessibility issues that were identified within the limited content testing have been recorded throughout the various sections of this document, and Section 4 includes more general guidance for ensuring existing and future content conforms to the guidelines set out in the WCAG.

3 Test Results and Outcomes

The following sections include details of the issues identified along with further testing information where necessary. The outcome of each issue has also been included so that it is clear what has been fixed and what still requires attention.

As mentioned in the Introduction, this testing has been carried out against the WCAG, but another way of measuring the accessibility of the website is to use the accessibility score provided by Google Chrome’s Lighthouse tool. The scores below summarise the outcome of the testing very well: the original scores show that the website was by no means inaccessible before the improvements although things could have been better, and the new scores show how there are now very few issues but there is still room for improvement following the steps outlined in this report.

Page	Original Lighthouse Score	New Lighthouse Score
Home Page	89/100	99/100
About Us	90/100	100/100
Publications and Research	87/100	98/100
Services	88/100	99/100
Tools and Resources	88/100	99/100
Staff	90/100	100/100
Events	88/100	99/100
News	90/100	100/100
Contact	88/100	99/100

3.1 General Layout

This section contains issues and information on testing that is relevant to elements that appear on all or most pages throughout the website as part of the ‘general layout’. This primarily includes the header and footer elements.

3.1.1 Icon buttons in the navigator do not contain readable text

The search button in the navigation bar, the ellipsis button that is displayed in the navigation bar when there is not enough room for all the navigation links and the button to close the search panel each contained icons but no text. Aabled users will be able to interpret what these buttons do by their icons, but screen readers will not be able to identify their purpose. Hidden text was therefore added to each of these buttons for screen readers to make it clear what each button does.

These issues seemed to be the most prominent when assessing the website using Google Chrome’s Lighthouse Accessibility tool, as fixing this alone pushed the accessibility score out of one hundred from the eighties to the high nineties for each page.

Relevant WCAG guideline(s)	2.4.4
WCAG Level	
Outcome	✓ Resolved

3.1.2 No link text for the home line

Clicking the Forest Research logo at the top of each page takes you back to the Home Page. This is standard behaviour on websites. As far as screen readers are concerned though, this is just a link on an image they are not able to interpret, so users may be left wondering where it will take them and the purpose it serves. Hidden text was therefore added for screen readers to make it clear the link takes users to the Forest Research home page.

Relevant WCAG guideline(s)	2.4.4
WCAG Level	A
Outcome	✓ Resolved

3.1.3 Inappropriate tag used for inserting icons

It is quite common for the <i> HTML tag to be used for inserting icons and the Forest Research website was doing just that. This can be misleading though because the tag was traditionally used for making text italic. It is therefore best to avoid this, so all these tags were replaced with something more appropriate ().

Relevant WCAG guideline(s)	1.3.1
WCAG Level	A
Outcome	✓ Resolved

3.1.4 Search button hidden on wider screens

When clicking on the search icon in the navigator, this results in the search bar being displayed. Within the search bar there is a search box, and then the user was expected to hit the return key on their keyboard to initiate the search once they have finished typing, which may seem very unintuitive for many users. There is a search button when viewing the website on mobile devices, but for some reason the button is hidden when using a larger screen. To aid usability and to follow the WCAG, this button is now displayed all the time.

Relevant WCAG guideline(s)	3.2.2
WCAG Level	A
Outcome	✓ Resolved

3.1.5 Assistive search text is too small

After clicking the search button in the navigator, the search panel is revealed. The line of text underneath the search box is too small according to the WAVE Chrome extension. This line of text is 10px in size, but WAVE recommends sizes larger than this. The font size has therefore been changed to 12px. The minimum font size is not specified in the WCAG, so there is not a corresponding guideline for this.

Relevant WCAG guideline(s)	N/A
WCAG Level	N/A
Outcome	✓ Resolved

3.1.6 Indistinguishable landmarks

The WCAG (and other standards) state that it is good practice to divide significant parts of the page up using certain HTML tags (known as landmarks), which makes it clearer to screen readers what the purpose of different parts of the page is. The Forest Research website already does that, but on many of the pages, the landmark tag used for the side bars was immediately used inside another, resulting in two of them. This could be problematic for screen readers as they could be uncertain which one to use. The repeated tag was therefore removed from the side bars where appropriate, and care was taken to ensure this did not break the styling.

Relevant WCAG guideline(s)	1.3.1
WCAG Level	A
Outcome	✓ Resolved

3.1.7 Skip to main content link

It is considered best practice for accessibility to have a hidden link that allows users with screen readers to skip to the main content of the page instead of having to go over all the navigation links. The Forest Research website already includes this link, so no action is required.

Relevant WCAG guideline(s)	2.4.1
WCAG Level	A
Outcome	✓ No action required

3.1.8 Language of the page defined

The language each page is in should be included in a hidden part of the page. The Forest Research website already has this, so no action is required

Relevant WCAG guideline(s)	3.1.1
WCAG Level	A
Outcome	✓ No action required

3.1.9 Hidden text field in the footer without a label

There is a text field in the footer that is part of the same form for subscribing to the Forest Research newsletter. Unlike the email address field, this one gets hidden from view and it is not clear what purpose it serves. The fact it does not have a label goes against many of the guidelines (see below) so was mentioned a lot during the accessibility testing. The field has been left, given the uncertainty about its purpose, as it may be important for the subscription form to work. Furthermore, this is configured within the CMS itself so is something Forest Research would have to alter.

It would require plenty of testing to ensure nothing breaks, but if it is determined the field is still required, in theory there is no reason this could not be changed to a hidden field instead of a text field, and then this will fix all the WCAG violations (this has been verified locally). To do this, somebody will need to log into the Wagtail CMS, go to 'Settings' in the side menu and then 'Newsletter'. In the form that appears, there will be a 'Hidden Field' field, and it is this one that is causing the problem. The value will currently contain something like:

```
... <input type="text" ...
```

Replacing 'text' with 'hidden' and then saving the form values will change the type of the field and therefore fix the WCAG failures. Again, it is important to stress that the newsletter subscription functionality should be tested following the change to ensure that is still functioning as expected though.

Relevant WCAG guideline(s)	1.3.1, 3.3.2 and 4.1.2
WCAG Level	A
Outcome	X Action required

Commented [SH1]: Done, sign up form seems to be working ok

3.1.10 Content displayed outside landmarks

As mentioned in 3.1.5, certain tags called landmarks can be used within the page to make it clear where key content is on the page, making it easier for screen readers to navigate the page. All the content on the various pages lives inside a landmark apart from two elements that were flagged up during the testing. These are the 'skip to main content' link (see 3.1.7) and the alert about Covid-19. It was determined it seems perfectly valid for these elements to appear above the main content though, so no action was taken, particularly as the positioning of the 'skip to main content' link is also consistent with the gov.uk website.

Relevant WCAG guideline(s)	1.3.1
WCAG Level	A
Outcome	✓ No action required

3.1.11 Unnecessary role attributes

In conjunction with landmarks on the page (see above), role attributes can also be used to indicate the purpose of certain elements. These attributes have been added to some of the landmark tags but one of the accessibility tools flagged up that this is unnecessary. Originally this would have been done for enhanced support in older browsers that did not recognise the landmark tags, but now they are widely supported and seem unnecessary. Despite this being flagged, it was decided this does not go against the WCAG, it will not affect a screen reader's ability to interpret the page and may still be useful in case a user does have a really outdated browser. As a result, these were left alone.

Relevant WCAG guideline(s)	4.2.1
WCAG Level	A
Outcome	✓ No action required

3.1.12 Tabbing through content

Users who either do not have a mouse or are unable to use one can interact with the website content using their keyboard, and the tab key allows them to focus on different components on the page. In general, the ability to tab through content worked well on the website except for the search bar. Previously when tabbing through the links in the navigation bar, once you got to the end of the links, the focus would seemingly disappear. If you press the tab button a couple more times, the focus will move into the content of the page and you could continue tabbing as usual. The reason for the focus disappearing like this is because elements in the hidden search bar had gained focus when they should not have done if they are not in view. This has therefore been fixed now.

As an additional enhancement, the search field now gains focus as soon as the search bar is revealed, allowing the user to simply start typing straight away.

A further enhancement that should be considered is making focus state of the navigation links clearer when tabbing through them. They currently turn from grey to purple, but this seems a very subtle change, so individuals with reduced visibility will struggle to see this and identify which link currently has focus. Outlining links with focus like elsewhere on the page would make it much clearer.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ Resolved Further action recommended

3.1.13 Incorrect heading level in the footer

The ‘Subscribe to the Forest Research newsletter’ and ‘Useful links’ headers in the footer are at the incorrect level on many pages (heading 4). For this to be a valid heading level, headings at all the preceding levels would need to exist above it, which is not the case. This level may have been picked for the font size, but to meet this guideline, using heading 2 would make more sense here and then styling can be added to keep the font size the same as it currently is. This has not been actioned due to the WCAG level.

Relevant WCAG guideline(s)	2.4.10
WCAG Level	AAA
Outcome	X Action required

3.1.14 Search bar contrast (enhanced)

According to the stricter WCAG colour contrast rules, there is not enough contrast between the background colour of the search panel and the text colour. The ratio value is currently 5.44 and the required value is a minimum of 7.

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.2 Home Page

3.2.1 Twitter buttons do not have link text

The various buttons for liking and sharing tweets etc. in the ‘Latest tweets’ section were simply icons and did not have any link text, making it impossible for screen readers to interpret the links. Link text has now been added to each of the icon buttons, and an effort has been made to try and make this unique for each tweet by using the date of the tweet in the description (to make them more distinguishable in line with WCAG 2.4.4 and 2.4.9). This will not be perfect if there are multiple Tweets on the same day but should still help narrow down which links correspond to which Tweets.

Relevant WCAG guideline(s)	2.4.4
WCAG Level	A
Outcome	✓ Resolved

3.2.2 Adjacent Twitter content links to the same location

At the top of each Tweet, there were three different elements that all linked to the profile of the account that posted the Tweet. This can be confusing for screen readers because the same link has been described in three different ways, sometimes making it unclear what the page is linking to. The content in this section has therefore been reworked to use a single link to make this less ambiguous.

Relevant WCAG guideline(s)	1.1.1
WCAG Level	A
Outcome	✓ Resolved

3.2.3 Tabbing through the content

Tabbing through the home page content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.2.4 Insufficient contrast (enhanced) for the Twitter link preview boxes

If Tweets include a link to a website, a link preview box appears. According to the stricter WCAG contrast rule, the contrast between the background colour of this box and the text colour is not strong enough (a ratio of 6.65 when the guideline states it should have a value of at least 7). This has not been actioned due to the level of the guideline.

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.3 'About Forest Research' Page

3.3.1 Tabbing through the content

Tabbing through the main about page content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.4 'Annual reports and corporate plans' page

3.4.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.5 'Careers' page

3.5.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.5.2 Insufficient contrast (enhanced) in the no jobs box

On the staging version of the site, no jobs have been listed and a box appears to say there are not any jobs available. According to the stricter WCAG contrast rule, the contrast between the background colour of this box and the text colour is not strong enough (the contrast ratio is 5.67 when it should be at least 7).

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	✗ Action required

3.6 'Equality, Diversity and Inclusion' page

3.6.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.7 'Locations' page

3.7.1 Location map contains text

At the end of the Locations page, there is a map of the various locations. This map image contains text, but screen readers are unable to read this text, making it inaccessible for users who rely on screen readers. Descriptive text should be added instead (arguably the rest of the content on the page could already serve that purpose).

Relevant WCAG guideline(s)	1.4.5
WCAG Level	AA
Outcome	X Action required

Commented [SH2]: Updated descriptions

3.7.2 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.8 'Partnership and Collaboration' page

3.8.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.9 'Procurement' page

3.9.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.10 'Quality and Environmental Assurance' page

3.10.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.11 'Structure and Governance' page

3.11.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.12 'Publications and Research' list page

This section covers the issues identified with the main search and filter functionality of the 'Publications and Research' page. The template used for the content of each result is covered in the next section.

3.12.1 Filter checkboxes and radio buttons are not grouped

In the panel to the left of the page, there are various checkboxes and radio buttons for filtering the publications and research results listed. Visually to an abled user, these are grouped under meaningful headings which makes them easier to use. Structurally though, screen readers may have been unable to interpret the grouping of these options. Attributes have therefore been added in the code to make it much clearer to screen readers which elements group and provide a heading for those options.

Relevant WCAG guideline(s)	1.3.1 and 3.3.2
WCAG Level	A
Outcome	✓ Resolved

3.12.2 Insufficient contrast between the text and the background of the Theme labels

Each result on the page is labelled with one or more themes. The contrast between the background colour of this label and the text colour is not high enough according to the basic contrast guideline in the WCAG (the contrast ratio is currently 3.02 and should be at least 4.5). Due to this guideline being at the AA level, it is advised the colour of these labels should be changed.

The labels are currently the 'Forest Research Pine' colour, so one alternative could be to instead use the 'Forest Research Evergreen' colour as this is a darker green (see colour swatches below). This has been tested and does solve the compliance failures, but guidance is required from Forest Research on whether this is an acceptable change in design.

One potential issue could be that this darker green colour is already used on the page at the top of the official publication results, resulting in the same colour having different meanings.



Relevant WCAG guideline(s)	1.4.3
WCAG Level	AA
Outcome	X Action required

Commented [SH3]: Done

3.12.3 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.12.4 Insufficient contrast (enhanced) between the status label and the background

Some of the results have a status label but the contrast ratio between the text colour used for this and the white background colour is too low according to the enhanced WCAG contrast guideline (the current contrast ratio is 5.98 but should be at least 7 for the enhanced contrast guideline).

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.12.5 Insufficient contrast (enhanced) for the next and previous buttons

At the bottom of the page are next and previous buttons for paging through the results. The contrast between the background colour of the buttons and the text within them is not high enough according to the enhanced WCAG contrast guideline (the current contrast ratio is 5.7 but should be at least 7).

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.13 'Publications and Research' content page

3.13.1 Incorrect structure of the theme links

When viewing a publication or research article, any themes mentioned are clickable so the content tagged with the same theme can be discovered. The way these links were added results in invalid HTML and therefore goes against WCAG 4.1.1. They have therefore been reworked to ensure the HTML is valid.

Relevant WCAG guideline(s)	4.1.1
WCAG Level	A
Outcome	✓ Resolved

3.13.2 Insufficient contrast between the text and the background of the Theme labels

The same styling on the theme labels has been used on the page for viewing the content, and therefore suffers from the same contrast issues (see 3.12.2).

Commented [SH4]: Done, as above

Relevant WCAG guideline(s)	1.4.3
WCAG Level	AA
Outcome	X Action required

3.13.3 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.13.4 Heading elements are not in sequentially descending order

A lot of the headings on the content pages start at heading 3 and therefore skip heading 2 (heading 1 already exists at the top of the page). This is considered bad practice so care should therefore be taken when adding content to ensure the heading hierarchy makes sense. Typically, top level headings within the content on this page should start at heading 2.

Relevant WCAG guideline(s)	2.4.10
WCAG Level	AAA
Outcome	X Action required

3.13.5 Insufficient contrast (enhanced) between the status label and the background

Again, the same enhanced contrast issue exists between the status label (where used) and the background colour. See 3.12.4.

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.14 Services page

This section relates to the page that lists the different services offered by Forest Research. The page that displays the content for each of the services is covered in the next section.

3.14.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.15 Services content page

3.15.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.15.2 Heading elements are not in sequentially descending order

A lot of the headings on the content pages start at heading 3 and therefore skip heading 2 (heading 1 already exists at the top of the page). This is considered bad practice so care should therefore be taken when adding content to ensure the heading hierarchy makes sense. Typically, top level headings within the content on this page should start at heading 2.

Relevant WCAG guideline(s)	2.4.10
WCAG Level	AAA
Outcome	✗ Action required

3.16 Tools and Resources page

This section covers the page for listing the different Tools and Resources offered by Forest Research, so the page that displays the content for each of these options is covered in the next section.

3.16.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.17 Tools and Resources content page

3.17.1 Tabbing through the content

Tabbing through this content worked well and no action is required

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.17.2 Content Errors

The pages for the various Tools and Resources were not exhaustively tested, but a couple of content errors were discovered when going through the pages there were checked. These include an incorrect heading level being used to say how many results were found when searching the Seed Storage database (WCAG 2.4.10 – level AAA), and the same link text being used for different URLs on

the Biomass Energy resources page (WCAG 2.4.4 and 2.4.9 – levels A and AAA respectively). Care therefore needs to be taken when maintaining this content.

Relevant WCAG guideline(s)	Various
WCAG Level	Various
Outcome	X Action required

Commented [SH5]: Alerted appropriate web editor to change link text

3.18 Staff page

This section applies to the pages that list staff members. Testing for the page that gives details about each staff member is covered in the next section.

3.18.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.18.2 Insufficient contrast (enhanced) in the head of department box

On the main Staff page that lists the different departments, there is a grey box for the head of each department to the right. The contrast between the background colour of this box and the text colour is not high enough according to the enhanced WCAG contrast guideline (the current contrast ratio is 6.59 and should be at least 7).

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.18.3 Insufficient contrast (enhanced) for the next and previous buttons

At the bottom of the page when listing all members of a particular department are next and previous buttons for paging through the results. The contrast between the background colour of the buttons and the text within them is not high enough according to the enhanced WCAG contrast guideline (the current contrast ratio is 5.7 but should be at least 7).

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.19 Staff profile page

3.19.1 Links differentiated only by colour

The link on the email address of the staff member and the links in the sections towards the bottom of the page providing links and references are all differentiated from normal text using a different colour. The guidelines mention there should be some other visual indicator that the text is a link, or the contrast ratio between the link text and the surrounding text should be greater than the colour

that is currently used. These links have therefore been changed so that they are underlined, which brings them in line with the other links throughout the website.

Relevant WCAG guideline(s)	1.4.1
WCAG Level	A
Outcome	✓ Resolved

3.19.2 Insufficient contrast in the research theme labels

As previously mentioned in the Publications and Research section, there is not enough contrast between the theme label background colour and the text colour for the 'Related Research' that is listed for a particular staff member, according to the basic WCAG contrast guidelines. See section 3.12.2.

Commented [SH6]: Done

Relevant WCAG guideline(s)	1.4.3
WCAG Level	AA
Outcome	X Action required

3.19.3 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.19.4 Incorrect level of job title heading

The heading which gives a staff member's job title is formatted as heading 3, but there is not a heading 2 before it which is considered bad practice. Furthermore, the 'Affiliations' heading (where applicable for staff members) is formatted as heading 2 despite being after the previous heading, so this structure does not make sense and may confuse some screen readers.

Relevant WCAG guideline(s)	2.4.10
WCAG Level	AAA
Outcome	X Action required

3.19.5 Insufficient contrast (enhanced) on research status label

As previously mentioned in the Publications and Research section, the text colour used for the status label does not provide enough contrast against the background according to the enhanced WCAG guidelines (the contrast ratio is currently 5.98 but should be at least 7).

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.20 Events page

This section relates to that page that lists the various events. The page that displays the event details is covered in the next section.

3.20.1 Grouping of checkboxes

Like with the Publications and Research filtering, the event filtering checkboxes are visually grouped but not structurally grouped, meaning a screen reader may have issues distinguishing between different groups. As it happens there is only one group of checkboxes on this page, but the issue was still fixed in case additional groups are either added in the future or a screen reader still cannot work out that the checkboxes are related.

Relevant WCAG guideline(s)	1.3.1 and 3.3.2
WCAG Level	A
Outcome	✓ Resolved

3.20.2 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.20.3 The ‘Filter Events’ heading is the incorrect heading level

The ‘Filter Events’ heading is formatted as heading 3, but there is no heading 2 above it which is bad practice. If the heading has been formatted in this way because the font size was deemed more appropriate, separate styling should instead be applied after making it a level 2 heading.

Relevant WCAG guideline(s)	2.4.10
WCAG Level	AAA
Outcome	✗ Action required

3.21 Events content page

3.21.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.21.2 ‘Event Details’ heading is the incorrect level

The ‘Event Details’ heading has been formatted as heading 3, but there is no heading 2 above it which is considered bad practice. This heading should instead be a level 2 heading with appropriate

styling applied if a smaller font size is needed, making it easier for screen readers to understand the page structure.

Relevant WCAG guideline(s)	2.4.10
WCAG Level	AAA
Outcome	X Action required

3.22 News page

The following section applies to the page that lists the news articles. The page that displays the contents of the news articles is covered in the next section.

3.22.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.22.2 Insufficient contrast (enhanced) for the next and previous buttons

At the bottom of the page are next and previous buttons for paging through the news articles. The contrast between the background colour of the buttons and the text within them is not high enough according to the enhanced WCAG contrast guideline (the current contrast ratio is 5.7 but should be at least 7).

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.23 News content page

3.23.1 Insufficient contrast between the news details box and the text colour

Under the main heading of the news article is a box giving the date the article was posted and the relevant categories. There is not enough contrast between the background colour of this box and the white text within it according to the contrast ratio set out in the WCAG minimum contrast guideline (The contrast ratio is currently 3.02 but should be a minimum of 4.5). This background colour is the Forest Research Pine colour that caused problems for the Publications and Research theme labels (see section 3.12.2), so again the Forest Research Evergreen colour could be used instead.

Some news articles have related research and publication articles underneath, so the same issue exists if any of these have theme labels

Relevant WCAG guideline(s)	1.4.3
WCAG Level	AA
Outcome	X Action required

Commented [SH7]: done

3.23.2 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.23.3 Insufficient contrast (enhanced) for the related article status

If a news article has any related research topics or publications, there is insufficient contrast between the status line and the background colour (see section 3.12.4)

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.24 Contact Page

3.24.1 reCAPTCHA links differentiated only by colour

The reCAPTCHA links underneath the contact form are differentiated from normal text using a different colour. The guidelines mention there should be some other visual indicator that the text is a link, or the contrast ratio between the link text and the surrounding text should be greater than the colour that is currently used. These links have therefore been changed so that they are underlined, which brings them in line with the other links throughout the website.

Relevant WCAG guideline(s)	1.4.1
WCAG Level	A
Outcome	✓ Resolved

3.24.2 'Privacy Policy' link text goes to different locations

In the line of reCAPTCHA text underneath the contact form, there is a link to Google's privacy policy which was labelled with the text 'Privacy Policy'. There is then a link to Forest Research's privacy policy in the footer labelled with the same text. These links are very different, but it may be hard for screen readers to differentiate between the two given they contain the same link text. The two Google links on the reCAPTCHA line have therefore been prepended with 'Google' so the difference between the links is now clear.

Relevant WCAG guideline(s)	2.4.4 and 2.4.9
WCAG Level	A and AAA
Outcome	✓ Resolved

3.24.3 The reCAPTCHA line font size is too small

The reCAPTCHA line is set to be 10px in size which, according to the WAVE Chrome extension, is too small. There is no official minimum font size in the WCAG, but the WAVE extension recommends a font size larger than 10px. This has therefore been increased to 11px.

Relevant WCAG guideline(s)	N/A
WCAG Level	N/A
Outcome	✓ Resolved

3.24.4 Textarea has no description in reCAPTCHA functionality

The reCAPTCHA functionality contains a textarea element that does not have a description associated with it. This content is loaded from Google, so it is not possible to override any of this functionality.

Relevant WCAG guideline(s)	1.3.1, 3.3.2 and 4.1.2
WCAG Level	A
Outcome	X No solution

3.24.5 HTML used to format elements in reCAPTCHA functionality

It is considered bad practice to use HTML for any formatting and this should be left to CSS instead. Because this reCAPTCHA functionality comes from Google though, it is not possible to change any of the HTML. This should at least not have any impact on a screen reader’s ability to interpret the page so should not cause any issues.

Relevant WCAG guideline(s)	1.3.1
WCAG Level	A
Outcome	X No solution

3.24.6 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.24.7 ‘Before you contact us’ heading is the incorrect level

The ‘Before you contact us’ heading is styled as heading 3, but there is no heading 2 above it. This should either be a level 2 heading, or considering the text does not really make sense as a structural heading, it would probably be clearer for screen readers if this was just normal text formatted with a larger font size.

Relevant WCAG guideline(s)	2.4.10
WCAG Level	AAA
Outcome	X Action required

3.25 Search Page

3.25.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.25.2 Insufficient contrast (enhanced) for the next and previous buttons

If there are many pages of search results, at the bottom of the page are next and previous buttons for paging through the results. The contrast between the background colour of the buttons and the text within them is not high enough according to the enhanced WCAG contrast guideline (the current contrast ratio is 5.7 but should be at least 7).

Relevant WCAG guideline(s)	1.4.6
WCAG Level	AAA
Outcome	X Action required

3.26 Freedom of Information page

3.26.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.27 Privacy Policy page

3.27.1 Empty heading 2 element

There is an empty heading 2 element above the 'How to control and delete cookies' section. This could be confusing for screen readers and should be removed.

Relevant WCAG guideline(s)	1.3.1 and 2.4.10
WCAG Level	A
Outcome	X Action required

Commented [SH8]: Done

3.27.2 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.28 Crown Copyright page

3.28.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.28.2 'Open Government License' text used twice

Two links exist on the Crown Copyright page with the link text 'Open Government License', but both go to two different locations. This could be confusing for screen readers, so it is recommended the link text should be changed slightly for at least one of the links if it makes sense to do so. This will make it clear to users what the difference is between the two links.

Relevant WCAG guideline(s)	2.4.9
WCAG Level	AAA
Outcome	X Action required

3.29 Disclaimers page

3.29.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.30 Accessibility page

3.30.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

3.30.2 The 'Barriers to accessibility' heading is the incorrect level

The 'barriers to accessibility' heading has been formatted as heading 3, but there is no heading 2 above it. This should therefore be modified so it is formatted as heading 2.

Relevant WCAG guideline(s)	2.4.10
WCAG Level	AAA
Outcome	X Action required

3.31 FR News Archive page

3.31.1 Tabbing through the content

Tabbing through this content worked well and no action is required.

Relevant WCAG guideline(s)	2.4.7
WCAG Level	AA
Outcome	✓ No action required

4 Future Content Management

As highlighted in previous sections, some of the content of the various pages does not meet the desired level of WCAG accessibility. As this is managed within the Wagtail CMS, these issues were not fixed as part of this work. Care should therefore be taken to ensure all existing and future content comply with the required level of accessibility going forward. The WCAG need to be followed in detail to ensure full compliance, but the points below can be followed as a first step, based on some of the accessibility errors that have been identified in the content as part of this testing. The accessibility tools mentioned in section 2.1 could then be used for more comprehensive testing of the content.

- Ensure headings start at the correct level. This should be Heading 2 for the most significant headings in the content, followed by smaller headings in order accordingly. Level 1 headings tend to already be used at the top of each page, so there should typically not be a need to use those within the content.
- Ensure alternatives are provided when including images that contain useful text. Screen readers for disabled users are not able to read the text in the images, so they will be unable to interpret what the image is showing. This is therefore considered a failure against the WCAG (Level AA for 1.4.5).
- Ensure there are not any empty lines / elements. There was at least one instance where extra spacing had been added between paragraphs by adding headings without any text. This can be confusing for screen readers and is therefore considered a failure against WCAG (Level A for 1.3.1 and 2.4.10).