Digital Accessibility Centre

Accessibility Audit Report for HS2.org pages

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Document Control

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Contents

Executive Summary

An accessibility audit for **HS2.org pages** was carried out by the Digital Accessibility Centre (DAC) user/technical team on **12th January 2026**.

The website service was assessed against the Web Content Accessibility Guidelines WCAG 2.2.

This document incorporates the findings regarding any accessibility barriers identified during the testing process.

The issues reported are examples of any assistive technology barriers which were encountered during accessibility testing, and information has been provided detailing how to resolve them.

Please note: additional instances of these barriers may exist in other pages of the service; wherever these barriers are present, they will also need to be resolved.

Our screen reader analyst found the website more difficult to navigate compared to other user groups. This was due to the high number of accessibility barriers they encountered.

Some of the barriers found throughout the website included non-descriptive links, headings and tables which were not marked up programmatically, custom elements that did not have an accessible name, a problematic carousel that did not convey the selected state of each slide, and decorative images that were discoverable.

Keyboard-only users were unable to interact with custom elements and experienced a loss of focus when tabbing to a link which was hidden within a closed expandable button.

Our voice activation analyst using Dragon NaturallySpeaking also experienced the same issues with the custom elements, an issue whereby the visible label did not match the accessible name and misaligned Dragon tags.

Our low vision analyst found many areas of the pages difficult to navigate. This was due to fonts, various colour contrast of text, and elements that did not have a visual cue.

Usability issues have been included along with comments provided by our manual user testing team. These can be found near the end of the report and describe various aspects of the website, that although do not fail to meet the WCAG 2.2 success criteria, could be improved to benefit the overall user experience.

Issues are organised in the report by the WCAG 2.2 conformance levels. Level A is the minimum level. To achieve the AA standard which most organisations strive to meet, all A and AA requirements must be satisfied.

Audit Summary

The report details the issues that have been identified with the service. To meet government accessibility requirements, and comply with the Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018 it is important to ensure that the service meets level AA of the Web Content Accessibility Guidelines 2.2 (WCAG 2.2) as a minimum and all WCAG 2.2 level A and AA issues listed are resolved.

Areas of the website which fail to meet the WCAG 2.2 AAA requirements are not in scope for the purposes of this audit, however, where issues were encountered by our analysts, these have been reported.

We highly recommend that all issues from the Usability feedback section of the report are also addressed to ensure a fully accessible, usable, and inclusive service.

A

Empty links
Non-descriptive links
Info and Relationships
Custom elements
Labels or instructions
Label in Name
Focus order
Images
Carousel

AA

Colour contrast
Content on hover or focus

Scope

Journeys

Brief Journey and/or URLs are listed below along with the specific browser and AT set.
URL: https://www.hs2.org.uk/

See Appendix I for a full list of Journeys and instructions.

Browser matrix and Assistive Technology (AT) combinations

Desktop

User type	Operating System (OS)	Browser	Assistive Technology
Blind	Windows	Chrome (Latest version) Edge (Latest version)	JAWS 2019 or above
		Chrome (Latest version) Edge (Latest version)	NVDA (Latest version)
Mobility	Windows	Chrome (Latest version)	Dragon Voice Activation v15 or above
		Chrome (Latest version) Edge (Latest version)	Keyboard
Deaf	Windows	Chrome (Latest version)	-
Colour Blind/ Dyslexia	Windows	Chrome (Latest version) Edge (Latest version)	-
Low Vision	Windows	Chrome (Latest version)	Screen Magnification Reflow, Text Spacing
		Chrome (Latest version)	Windows Magnifier
		Edge (Latest version)	ZoomText
Cognitive Impaired/ Aspergers/ Anxiety	Windows	Edge (Latest version)	System inverted colours

Mobile/Tablet

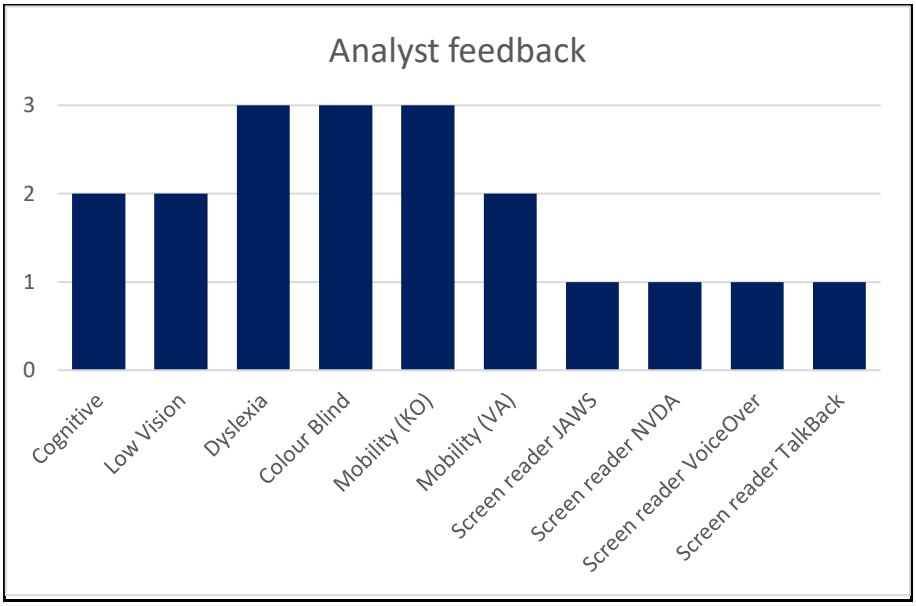
User type	Operating System (OS)	Browser	Assistive Technology
Blind	iOS	Safari (V12 or later)	VoiceOver
	Android	Chrome (Latest version)	TalkBack/ Voice Assistant
Mobility	iOS	Safari (V12 or later)	-
	Android	Chrome (Latest version)	-
Deaf	iOS	Safari (V12 or later)	-
Colour Blind/ Dyslexia	iOS/Android	Safari (V12 or later) / Chrome (Latest version)	-
Low Vision	Android	Chrome (Latest version)	Magnification
	iOS	Safari (V12 or later)	Pinch to Zoom
	iOS/Android	Safari (V12 or later)/ Chrome (Latest version)	System inverted colours

Summary Graphs

Analyst Feedback

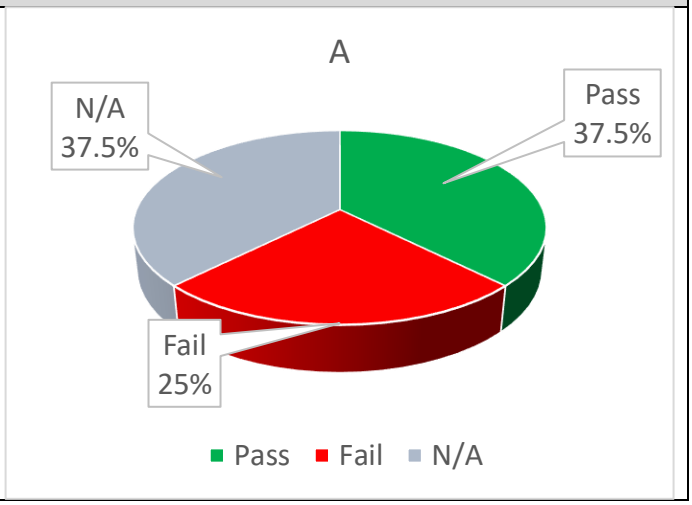
Our analysts provided their overall feedback on the service.
This was rated from 0 – could not complete to 3 – Completed independently, no issues.

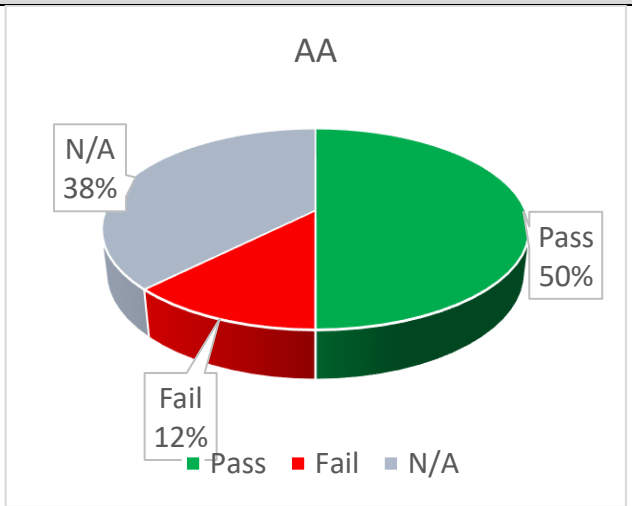
Key:	
0	Could not complete on my own
1	Completed independently but with major issues
2	Completed independently but with minor issues
3	Completed independently, no issues



WCAG 2.2 Breakdown

The graphs below detail the number of checkpoints that passed, failed or were not applicable to the service.
Please refer to the Classification of Accessibility Issues for more information.

A		
Priority Level: High	**Number**	**Percentage: High Priority Results**
Number of checkpoints ‘Passed’	12 (37.5%)	
Number of checkpoints ‘Failed’	8 (25%)	
Number of checkpoints ‘Not Applicable (Not Applicable (N/A))’	12 (37.5%)	

AA		
Priority Level: Medium	**Number**	**Percentage: Medium Priority Results**
Number of checkpoints ‘Passed’	12 (50%)	
Number of checkpoints ‘Failed’	3 (12%)	
Number of checkpoints ‘Not Applicable (Not Applicable (N/A))’	9 (38%)	

Audit Results

These are the results of the Digital Accessibility Centre accessibility audit organised by A, AA, AAA priorities.

Each area contains a reference to the WCAG 2.2 success criteria, a brief overview of the issue encountered, a description of issues found along with user testing commentaries and solutions.

High Priority WCAG Level A

The following section contains areas that failed to meet WCAG 2.2 A. For the service to fall in line with WCAG 2.2 requirements, all A issues must be resolved.

Empty Links

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

WCAG Reference(s):
2.4.4 Link Purpose (In Context) (Level A)
Understanding Link Purpose (In Context) | How to Meet Link Purpose (In Context)

4.1.2 Name, Role, Value (Level A)
Understanding Name, Role, Value | How to Meet Name, Role, Value

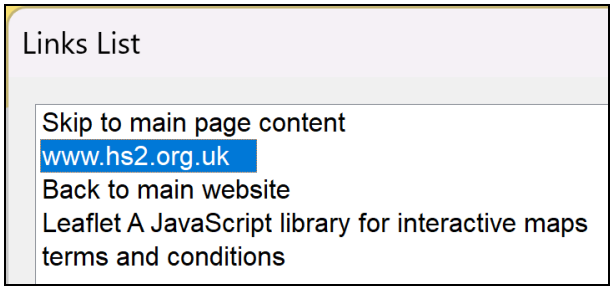
1.3.1 Info and Relationships (Level A)
Understanding Info and Relationships | How to Meet Info and Relationships

2.4.9 Link Purpose (Link Only) (Level AAA)
Understanding Link Purpose (Link Only) | How to Meet Link Purpose (Link Only)

Issue ID: DAC_Empty_Links_01

URL: https://www.hs2.org.uk/map/?mapView=12_52.5013_-2.1039
Page title: Route map - HS2
Journey: Journey 1 step 4

Screenshot:



There is an empty link present on the page. Screen reader software announces the 'href' attribute value which is an URL. The URL does not describe its purpose and/or destination. Without an accessible name, voice activation users will also be unable to access using the visible text.

Current code ref(s):
#map-sidebar-intro--default > div.map-sidebar__content-wrap.margin--none > div.map-sidebar__header > div > div > a

```
<a href="https://www.hs2.org.uk">
<img src="//www.hs2.org.uk/wp-content/themes/hs2/dist/assets/svg/hs2-logo--
dark.svg?v=2" alt="">
</a>
```

Screen reader user comments:
"Within the main region, I located a URL which was announced to me as, www.HS2.org.uk.'

The placement of this link/URL was confusing to me, as I was not sure why it was placed within the main region.

When activating the 'WWW.HS2.org.uk,' I found that it took me to the HS2's homepage.

Relocation of the link/URL and a change of the link text, I feel will aid a more comprehensive experience. For example, changing the link text to read, 'HS2 Homepage,' then relocating this to be situated below the 'Skip to main content' link. In doing this I feel that an understanding will be had by those using the service.
This was located with JAWS, NVDA, but was not found while testing with VoiceOver or TalkBack."

Solution:
Ensure that all links have an accessible name that describes the destination of the link. We recommend using the alt attribute to do this. The visible text HS2 must be contained within the accessible name.

Example:

```
<a href="https://www.hs2.org.uk">
<img src="//www.hs2.org.uk/wp-content/themes/hs2/dist/assets/svg/hs2-logo--
dark.svg?v=2" alt="HS2 homepage">
</a>
```

Non-descriptive links

There were links on the page that were not descriptive.

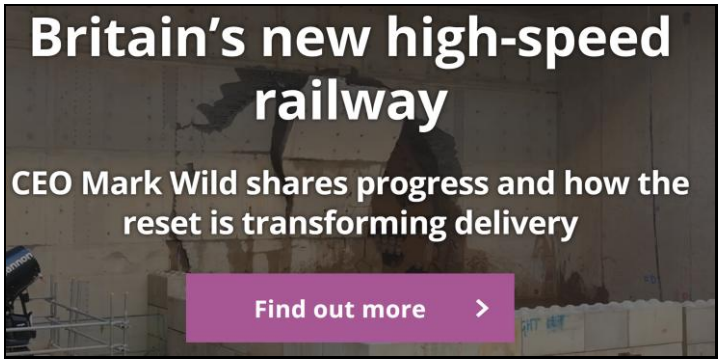
WCAG Reference(s):
2.4.4 Link Purpose (In Context) (Level A)
Understanding Link Purpose (In Context) | How to Meet Link Purpose (In Context)

2.4.9 Link Purpose (Link Only) (Level AAA)
Understanding Link Purpose (Link Only) | How to Meet Link Purpose (Link Only)

Issue ID: DAC_Non-Descriptive_Links_01

URL: https://www.hs2.org.uk/
Page title: Homepage - HS2
Journey: Journey 1 step 1

Screenshot:



The link titled 'Find out more' is ambiguous for screen reader users that browse both in and out of context. Additional description is required to give the link more context.

This issue is consistent throughout all other Journeys where the same link is present.

Current code ref(s):
#hs2main > div.homepage-carousel.margin--none > div > div > div.media__inner__caption.heading > a

```
<a class="button button--primary button--tertiary media__inner__caption__button" href="https://www.hs2.org.uk/what-is-hs2/hs2-project-update/">Find out more</a>
```

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:
Ensure links are descriptive of their purpose or destination. We recommend adding a hidden span which provides the link with added description and more context for screen reader users. This will cover both in and out navigation.

Example:

```
<a class="button button--primary button--tertiary media__inner__caption__button"
href="https://www.hs2.org.uk/what-is-hs2/hs2-project-update/">Find out more<span
class="visually-hidden">about [add description here]</span></span></a>

.visually-hidden
{
position: absolute;  width: 1px;  height: 1px;  margin: -1px;  padding: 0;
overflow: hidden;
 clip: rect(0,0,0,0);  border: 0;
}
```

Alternatively, you could include the link within the same paragraph element as the associated text, or you could explore using ARIA attributes such as aria-label or aria-labelledby.

Please refer to Technique F63:Failure of Success Criterion 2.4.4 due to providing link context only in content that is not related to the link for further guidance.

Info and Relationships

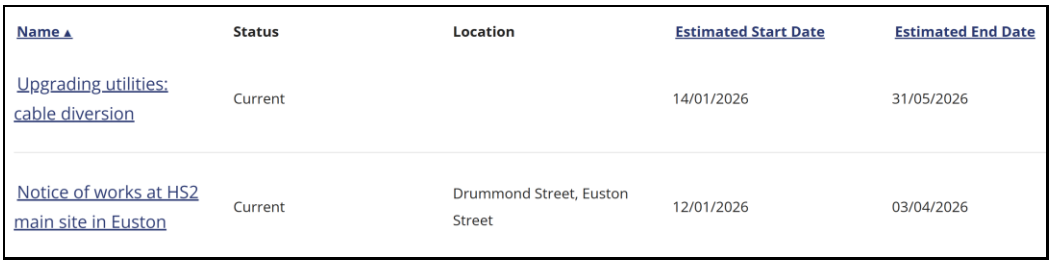
Information, structure, and relationships conveyed through presentation could not be programmatically determined or was not available in text.

WCAG Reference:
1.3.1 Info and Relationships (Level A)
Understanding Info and Relationships | How to Meet Info and Relationships

Issue ID: DAC_Info_and_relationships_01

URL: https://www.hs2.org.uk/map/search-current-works/
Page title: Search current works (text only) - HS2
Journey: Journey 1 step 5

Screenshot:



Name ▲	Status	Location	Estimated Start Date	Estimated End Date
Upgrading utilities: cable diversion	Current		14/01/2026	31/05/2026
Notice of works at HS2 main site in Euston	Current	Drummond Street, Euston Street	12/01/2026	03/04/2026

A visual table with table headers and sortable table headers was present, however, this was not marked up programmatically for screen reader users. The relationship between the data in the table and the table headers was not conveyed to this user group.

Current code ref(s):
#main > div.page__main > div:nth-child(2) > div > div > div.group.contract-opportunities-columnn-headings

```
<div class="group contract-opportunities-columnn-headings">
```

Examples of additional instances:

URL: https://www.hs2.org.uk/supply-chain/direct-contract-opportunities/
Page title: Direct contract opportunities - HS2
Journey: Journey 1 step 7
Note: the same issue applies on the visual table.

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:
Ensure that information, structure, and relationships conveyed through presentation can be programmatically determined.

Use the table element to identify the content as a table. Use <th> for header cells, and <td> for the actual data cells. Make sure headers are correctly associated with the data they describe so screen reader users can understand the table structure. This can be done by using the scope attribute with the value or 'row' on the table headers.

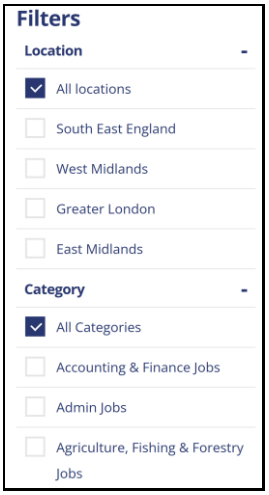
Sortable table headers should not refresh the page and interfere with focus. Once actioned, the table should sort accordingly with focus remaining on the sortable button.

Some accessible examples can be found at Deque University sortable tables and also the ARIA Authoring Practices Guide (APG) table examples.

Issue ID: DAC_Info_and_relationships_02

URL: https://www.hs2.org.uk/jobs-and-skills/careers-with-our-supply-chain/jobs
Page title: HS2
Journey: Journey 1 step 8

Screenshot:



It will be problematic for some screen readers browsing out of context to determine the purpose of the checkboxes. This is because they have not been grouped together appropriately with a grouped label.

Current code ref(s):
#search-filters__inner > div:nth-child(2) > h3

```
<h3 aria-expanded="true" class="heading js-heading">Location</h3>
```

Solution:
Ensure that information, structure, and relationships conveyed through presentation can be programmatically determined.

We recommend implementing the fieldset and legend elements, ensuring there is a clear relationship between the checkboxes.

Example:

```
<fieldset>

<legend>...</legend>

‘Include all other checkboxes and labels here’
</fieldset>
```

We recommend marking these elements up as accordion buttons. The button can be wrapped inside the heading element, or it could be removed from the heading structure completely.

Please refer to w3's accordion button example for further guidance.

Issue ID: DAC_Info_and_relationships_03

URL: https://www.hs2.org.uk/supply-chain/direct-contract-opportunities/
Page title: Direct contract opportunities - HS2
Journey: Journey 1 step 6

Screenshot:

An empty table header was present. Visually, the empty table header relates to the 'More' buttons, however, the programmatic relationship is not determinable for screen reader users.

Another issue is that there is no description for the table. The table caption element provides a programmatic title/description of what the table represents.

Current code ref(s):
#main > div.page__main > div:nth-child(2) > div > div > table > thead > tr > th:nth-child(6)

```
<th class="size--s"></th>
```

Screen reader user comments 1:
"JAWS reported a blank cell within the table on this page.

I found this to be unexpected behaviour as it is common practice for all cells to be occupied with relevant content.

It would be favourable if all the cells were filled in with related content in order to aid a smoother navigation of this service. This was found with JAWS, NVDA, but could not be located with VoiceOver or TalkBack."

Screen reader user comments 2:

"Exploring the table on this page I noted that it did not possess a descriptive caption.

As this table does not have a caption detailing the contents of the table myself and other service users may find it difficult interacting with this table.

Having a descriptive caption will ensure the understanding of the table and the content within leaving the service user in no doubt what would be accessed.
This was found with JAWS, NVDA and VoiceOver, but could not locate this issue with TalkBack."

Solution:

Ensure that information, structure, and relationships conveyed through presentation can be programmatically determined.

We recommend populating the table header with descriptive text that represents its corresponding table data cells.

Suggestion:

```
<th>Action</th>
```

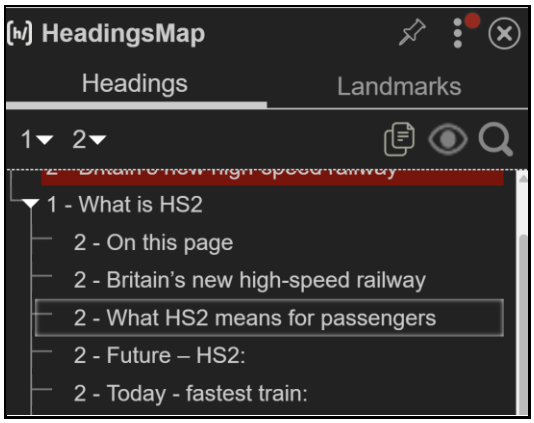
Example of table caption:

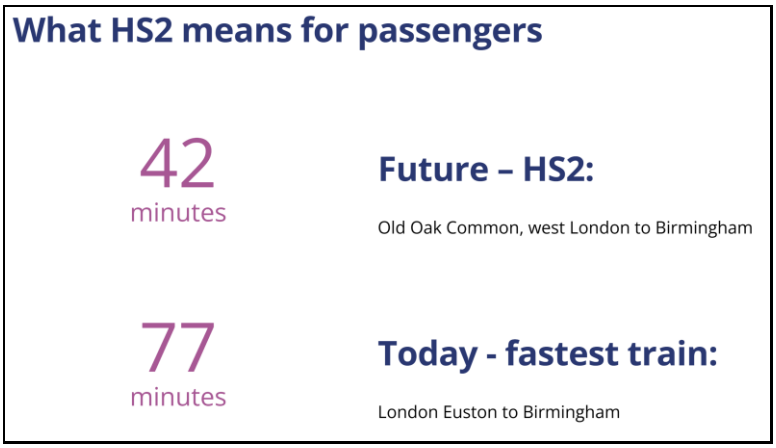
```
<table>

<caption>

Add table description

</caption>
```


Issue ID: DAC_Info_and_relationships_04

URL: https://www.hs2.org.uk/what-is-hs2/
Page title: What is HS2 - HS2
Journey: Journey 1 step 2

Screenshot:





Visually it is clear that 42 minutes and 77 minutes both relate to the 'Future – Hs2' and the fastest train, however, programmatically for blind users it is very difficult to ascertain the relationship. This is because 42 minutes is marked up separately for example as a paragraph element with no clear relationship to the adjacent text.

Another issue is that the headings titled 'Future – HS2: and 'Today – fastest train:' are subheadings of its parent heading titled 'What HS2 means for passengers' but they have been marked up as part of the same heading level (h2).

Current code ref(s):
#hs2main > div:nth-child(6) > div > div > div.infochart_graphic.aos-init.aos-animate

```
<div data-aos="fade-up" data-aos-anchor-placement="top-bottom"
class="infochart_graphic aos-init aos-animate">
<div class="graphic_container">
```

```
<div class="infochart_unit_block
infochart_unit_block221c8b4c2e9d18f69713e62a311512f2 is-visible" data-
viewportcheck="true">
<p>42<span class="infochart_unit">minutes</span></p></div>

<style>.infochart_unit_block {
        font-size:4rem;
        line-height:110%;
        text-align:center;
    }
    .infochart_unit_block .infochart_unit {
        display:block;
        font-size:1.5rem;
        line-height:100%;
    }

    .infochart_unit_block221c8b4c2e9d18f69713e62a311512f2.is-visible p {
        animation: progress-animation_221c8b4c2e9d18f69713e62a311512f2 3s linear
0s 1 forwards;
    }


    @keyframes progress-animation_221c8b4c2e9d18f69713e62a311512f2 {
        0% {
            opacity:0;
        }
        100% {
            opacity:1;
        }
    }</style></div></div>
```

```
<div class="infochart_text">
<h2 class="heading size--xxl">Future – HS2:</h2><div class="copy"><p>Old Oak
Common, west London to Birmingham</p></div></div>
```

Screen reader user comments:

"Browsing in context using the down arrow key I noted text which JAWS read as. '42minutes.' I found this text below the heading which reads, 'What HS2 means for passengers.'

I spent a lot of time trying to figure out what '42minutes' meant, no component was assigned to it, such as a link, button graphic. I did, however, click on '42minutes' and my focus was taken to the main region which perplexed me.

Finding a purpose for the text '42minutes' would give myself and other screen reader users a better understanding regarding this. This was located while testing with JAWS, NVDA, VoiceOver and TalkBack."

Examples of additional instances:

URL: https://www.hs2.org.uk/what-is-hs2/hs2-project-update/
Page title: HS2 Project Update - HS2
Journey: Journey 1 step 3

Noe: the same issue applies to the percentages such as 85/4/11%

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:
Ensure that information, structure, and relationships conveyed through presentation can be programmatically determined.

One method could be to hide the paragraph element containing the figures from screen reader users by using the aria-hidden attribute and provide an alternative as hidden text in the second instance of the paragraph element.

Amend the heading level's so that the headings are subheadings.

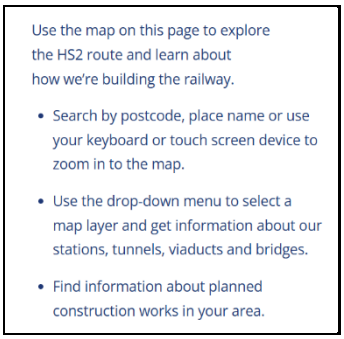
Example:

```
<div class="infochart_unit_block
infochart_unit_block221c8b4c2e9d18f69713e62a311512f2 is-visible" data-
viewportcheck="true">

<p aria-hidden="true">42<span class="infochart_unit">minutes</span>
</p>
</div>

<h3 class="heading size--xxl">Future – HS2:</h3>
<div class="copy">

<p>Old Oak Common, west London to Birmingham<span class="visually-hidden">42
minutes</span>
</p>

</div>

</div>
```


Issue ID: DAC_Info_and_relationships_05

URL: www.hs2.org.uk/map/
Page title: Route map - HS2
Journey: Journey 1 step 4

Screenshot:



A list of 3 items has been marked up three separate unordered lists. Although this can be done, it is time-consuming for screen reader users when having to listen to an over-abundance of additional information that is not required. As these individual list items are related to one another, it is important that they form part of the same list.

Current code ref(s):
#sidebarmain > ul:nth-child(6)

```
<ul>

<li aria-setsize="-1" data-leveltext="" data-font="Symbol" data-listid="2" data-
list-defn-
props="{&quot;335552541&quot;:1,&quot;335559685&quot;:720,&quot;335559991&quot;:36
0,&quot;469769226&quot;:&quot;Symbol&quot;,&quot;469769242&quot;:[8226],&quot;4697
77803&quot;:&quot;left&quot;,&quot;469777804&quot;:&quot;&quot;,&quot;469777815&q
uot;:&quot;hybridMultilevel&quot;}" data-aria-posinset="1" data-aria-
level="1"><span data-contrast="auto">Search by postcode, place name
or use your keyboard or touch screen device to zoom in to the
map.</span><span data-ccp-
props="{&quot;335557856&quot;:16777215,&quot;335559739&quot;:0}"> </span>

</li>

</ul>
```

Screen reader user comments:

"Using the arrow keys and the Screen Reader-specific 'L' keystroke to move between lists I encountered lists containing single items.

Single item lists are time-consuming to read and navigate, especially when using the arrow keys. They are also confused when using the 'I' keystroke which is a Screen Reader-specific command to move between list items.

Adding single list items to related lists or removing them from lists altogether would make navigating lists easier, especially when using the arrow keys.
This was found while testing with JAWS and NVDA. Not present with VoiceOver or TalkBack. This was a medium impact issue for me."

Examples of additional instances:

URL: www.hs2.org.uk/supply-chain/direct-contract-opportunities/ate - HS2
Page title: Direct contract opportunities - HS2
Journey: Journey 1 step 5

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:

Ensure that information, structure, and relationships conveyed through presentation can be programmatically determined.

Use only one unordered list and incorporate all three list items within this unordered list.
Example:

```
<ul>
  <li></li>
  <li></li>
  <li></li>
</ul>
```


Custom elements

There were custom elements on the page that were problematic for users of assistive technology.

WCAG Reference(s):
4.1.2 Name, Role, Value (Level A)
Understanding Name, Role, Value | How to Meet Name, Role, Value

1.3.1 Info and Relationships (Level A)
Understanding Info and Relationships | How to Meet Info and Relationships

2.4.3 Focus Order (Level A)
Understanding Focus Order | How to Meet Focus Order

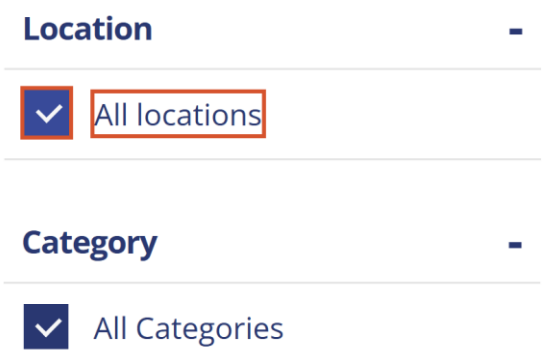
2.1.1 Keyboard (Level A)
Understanding Keyboard | How to Meet Keyboard

2.1.3 Keyboard (No Exception) (Level AAA)
Understanding Keyboard (No Exception) | How to Meet Keyboard (No Exception)

Issue ID: DAC_Custom_elements_01

URL: https://www.hs2.org.uk/jobs-and-skills/careers-with-our-supply-chain/jobs
Page title: HS2
Journey: Journey 1 step 8

Screenshot:



There are elements on the page that are mouse dependant and inaccessible to some users. Non-interactive elements have been used but not customised in a way that exposes the roles states and behaviours to assistive technologies.

Screen reader users encounter the heading as plain text but there is no indication that the element is a selectable element or that it has been selected. Once actioned, the focus order is also compromised because focus jumps to the h1 of the page. Please note: the aria-

expanded attribute has also been incorrectly implemented on a heading which is not permitted.

Keyboard-only users that rely on the tab key top navigate are unable to tab to the elements therefore excluding this user group from expanding and collapsing the content.

Current code ref(s):
#search-filters__inner > div:nth-child(2) > h3

```
<h3 class="heading js-heading" aria-expanded="true">Location</h3>
```

Voice activation user comments:
"The element for the filter options are mouse dependent.

According to its visual title the command "click location" should have selected the detail element of the same name. But it did not.

This slowed me causing me to have to try and alternative way. I tried using the "click button", "click box" and "click link" commands which gives dragon tags to all possible buttons, boxes and links Dragon can identify on-screen respectively. Unfortunately, no dragon tags appeared on the element.

The only way I had left to be able to pick that detail element was to use Dragon to navigate via the keyboard control commands: "press Tab" and "press enter", which replicates the effects of pressing the tab and space keys respectively. Unfortunately, even this did not work as I was unable to navigate focus to the detail element itself. As such this step was mouse dependent and required me to seek the aid of someone else to complete.

I had expected the detail element to be interactable via Dragon command based off the visual title. This would mean that the first command a Dragon users would think to use "click location" would immediately interact with the element. Allowing Dragon users to have quick and easy access like everyone else."

Keyboard-only user comments:
"The detail element for the filter options is mouse dependent.

I was unable to navigate focus to the detail element itself and thus was unable to interact with it. As such this step was mouse dependent and required me to seek the aid of someone else to complete.

I had expected the detail element to be interactable via keyboard navigation via the use of being able to move focus to it via the tab button and then interact with it via the spacebar button. Allowing keyboard only users to have quick and easy access like everyone else."

Solution:
Standard HTML elements should be used to ensure that roles, states and controls are exposed correctly, enabling all users regardless of assistive technology to access and interact with them. This will ensure that:

- the element is focusable and that users are able to gain access via the keyboard and determine this clearly
- the element is operable via keyboard alone (pressing enter and/or space)
- a clear indication of focus
- that the element is labelled and is exposed as an accessible name in accessibility APIs this could include a label or aria-label or aria-labelledby
- that the role is exposed in accessibility APIs i.e. role="button"
- that all states and properties are clearly defined and exposed in accessibility APIs – does it tell the user if it is checked or selected?
- Ensure that in high contrast mode the control is visible and usable in High Contrast Mode (colour inversion) to use color inversion on Windows -alt shift print screen (prt scr)

We recommend marking these elements up as accordion buttons.

Please refer to w3's accordion button example for further guidance.

Labels or instructions

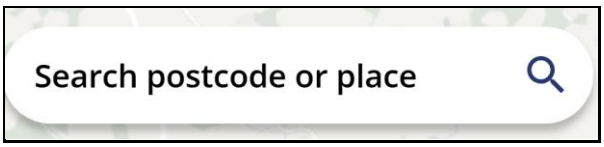
Labels or instructions are provided when content requires user input.

WCAG Reference:
3.3.2 Labels or Instructions (Level A)
Understanding Labels or Instructions | How to Meet Labels or Instructions

Issue ID: DAC_Labels_or_instructions_01

URL: https://www.hs2.org.uk/map/?mapView=10_52.4062_-2.1451&pointType=tbm
Page title: Route map - HS2
Journey: Journey 1 step 4

Screenshot:



The visible label has been provided via placeholder only. The issue with this is the placeholder disappears on input meaning some users especially those with a cognitive impairment may not remember what format is required.

Even though the search icon is usually sufficient search label, If the placeholder text was removed for example, it is not clear what the user should be searching for whether that's a postcode or a place.

Current code ref(s):
#search

```
<input type="text" autocomplete="off" id="search" class="leaflet-control" aria-label="Search postcode or place" placeholder="Search postcode or place" aria-owns="auto-search-results" aria-expanded="false" aria-autocomplete="list" role="combobox" style="">
```

Additional instances of this issue exist on other pages throughout the website; wherever this issue occurs, they too will need to be resolved.

Solution:
Provide a static and visible label for the text input. Use the current aria-label titled 'Search postcode or place' as the visible label, and remove the aria-label attribute so that screen reader users do not head the label twice.

Label in Name

The accessible name did not match the visible label.

WCAG Reference:
2.5.3 Label in Name (Level A)
Understanding Label in Name | How to Meet Label in Name

Issue ID: DAC_Label_in_name_01

URL: https://www.hs2.org.uk/map/?mapView=10_52.4062_-2.1451&pointType=tbm
Page title: Route map - HS2
Journey: Journey 1 step 4

Screenshot:

The accessible name 'Map types' does not match the visual label titled 'Tunnels' which is one of the option elements within the select element. Voice activation users may try to access this element using the command "click tunnels"

Current code ref(s):
#map > div.leaflet-control-container > div.leaflet-top.leaflet-left > div.map-selector__wrap.leaflet-control > select

```
<select class="map-selector" aria-label="Map types" style="outline-style: none;">
```

Voice activation user comments:
"Based on its visual title "click Tunnels" should have interacted with the select drop box of the same name. However, this did not work.

I then tried the command "click box" which Identifies all text boxes Dragon can detect on-screen and gives them a Dragon tag which I could then select to bring focus to it. Thankfully this command did work but the multiple commands this takes is slower and less intuitive.

I would expect for a select drop box to have the same label as its visual title. This would mean that the first command the user would think to use "click type of role" would immediately interact the text box. Making navigation quick and easy.

Solution
Ensure that the accessible name matches the visible label. In this instance we recommend removing the aria-label and providing a visible label titled 'Map types'.

Please refer to Technique G208: Including the text of the visible label as part of the accessible name.

Focus order

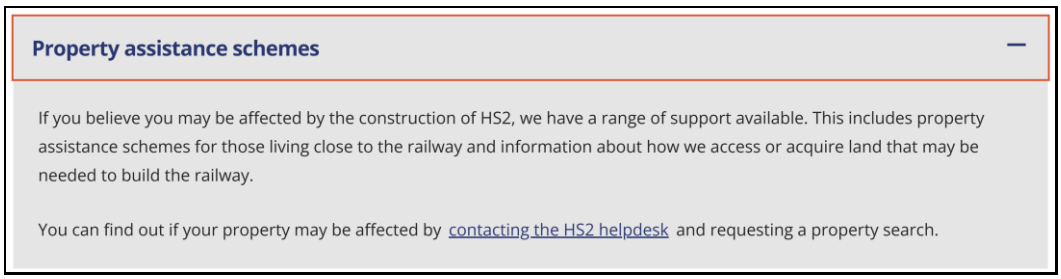
If a web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability.

WCAG Reference:
2.4.3 Focus Order (Level A)
Understanding Focus Order | How to Meet Focus Order

Issue ID: DAC_Focus_order_01

URL: https://www.hs2.org.uk/contact-us/
Page title: Contact us - HS2
Journey: Journey 1 step 9

Screenshot:



When tabbing away from the Property assistance button, keyboard users experience a loss of focus. This is because focus has been taken to the link titled 'contacting the HS2 helpdesk' within an accordion button which is visually closed.

The reason for this is that the container that contains the link has been incorrectly exposed to users using the CSS visibility property even when the button closed therefor the hidden link is still discoverable.

Current code ref(s):
#additional-information > div > div > div > h3:nth-child(3) > button

```
<div id="collapsible-3" class="js-collapsible-content collapsible-content" aria-hidden="false">

.js [aria-hidden=false]
Specificity: (0,2,0)
 {
    visibility: visible;
```

Solution:
Ensure that the button is hidden until users open it. Change the value of the CSS visibility property from ‘visible’ to ‘hidden’ while the button is closed, dynamically changing to ‘visible’ once opened.

Example:

```
.js [aria-hidden=false]
Specificity: (0,2,0)
 {
    visibility: hidden;
```


Images

A decorative image was discoverable for screen reader users.

WCAG Reference:
1.1.1 Non-text Content (Level A)
Understanding Non-text Content | How to Meet Non-text Content

Issue ID: DAC_Images_01

URL: https://www.hs2.org.uk/
Page title: Homepage - HS2
Journey: Journey 1 step 1

Screenshot:

Images have been used for decorative purposes and do not provide any meaningful information required to be discoverable by screen reader users. This extra information can be time-consuming for screen reader users as it causes extra unnecessary navigation steps.

The information can already be found in the adjacent link situated below the image.

Current code ref(s):
#jobs-and-skills > div > div > div > div.card-container > div.card.card-bg--green > div.card-image-container > picture > img

```
<img src="https://assets.hs2.org.uk/wp-content/uploads/2025/10/20250904_Align-JV_Permanent-Secretary-at-Department-for-Transport-Jo-Shanmugalingam-47-385x256.jpg" alt="Careers" loading="lazy">
```

Screen reader user comments:
"Using the JAWS hot key 'G' to test for graphics on the page. I located several graphics which did not add any informative content to the page.

Having several graphics can make it hard for a screen reader user to navigate and this Journey will become quite time-consuming navigating to the relevant parts of the service.

Hiding the graphics from view from screen readers would aid for a more comprehensive navigational experience.
This was discovered while testing with JAWS, NVDA, VoiceOver and TalkBack.

“When testing with NVDA I discovered that some of the graphics were also clickable. Clickable graphics are confusing as it is not obvious why they are clickable or, where focus will be taken to once activated.”

Solution:
We recommend that the image is hidden from screen reader users by applying a null (empty) alt attribute, as the image does not convey meaningful information to assistive technologies.

Example:

```
<img src="https://assets.hs2.org.uk/wp-content/uploads/2025/10/20250904_Align-JV_Permanent-Secretary-at-Department-for-Transport-Jo-Shanmugalingam-47-385x256.jpg" alt="" loading="lazy">
```

Carousel

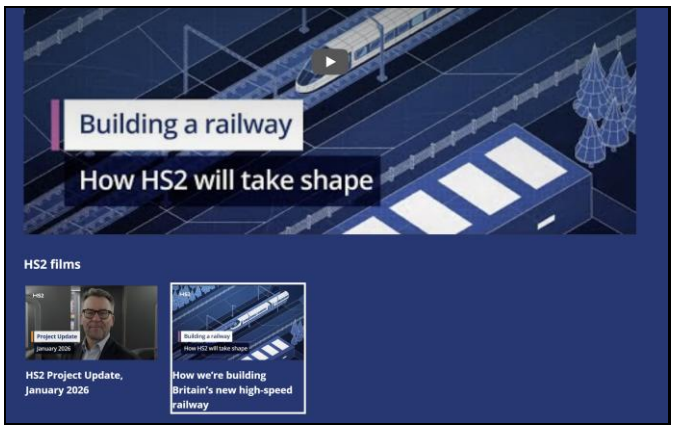
The carousel and how it was conveyed to screen reader users was problematic.

WCAG Reference:
4.1.2 Name, Role, Value (Level A)
Understanding Name, Role, Value | How to Meet Name, Role, Value

Issue ID: DAC_Carousel_01

URL:
https://www.hs2.orghttps://www.w3.org/WAI/ARIA/apg/patterns/carousel/examples/carousel-1-prev-next/.uk/
Page title: Homepage - HS2
Journey: Journey 1 step 1

Screenshot:



When a user selects a link within the carousel the visual state updates to show the selected link and the video content changes above, however, these changes are not conveyed to screen reader users.

Screen reader users may believe nothing has happened after activating a link. Important content updates may be missed and understanding the carousel may be more difficult.

Current code ref(s):
#latest-videos > div > div > lite-yt-carousel > div > section > div > div > div > div > div.slick-slide.slick-current.slick-active > div > div > a

```
<a href="" data-video="TlvmXoq1jJA"><img
src="https://i.ytimg.com/vi/TlvmXoq1jJA/hqdefault.jpg" alt="" loading="lazy">HS2
Project Update, January 2026</a>
```

Screen reader user comments 1:
"When navigating through the 'project update' page I located slides, and their related links are same page links. When activating the links when using NVDA, my focus did not appear to change, however a member of the support team advised me that focus above the carousel does change. I would expect each video to be presented in separate tabs. If this is

the preferred method, then I would expect the video play button to include the name of the video being played.
This was discovered, with JAWS, NVDA, VoiceOver not an issue with TalkBack."

Screen reader user comments 2:
"A member of the technical auditing team advised me that visually focus moved from the link to focus on the new video. This means that in order to locate the new content I would need to traverse backward through the page to locate new content.
This was found with JAWS, NVDA, VoiceOver does not present with TalkBack.

Screen reader user comments 3:
"When navigating through the slides I noticed that NVDA announces them as same page links. Since these do not perform as same page links but rather as buttons, this would be preferable since links lead to specific destinations whereas button perform specific actions.
This was found while testing with JAWS, NVDA, VoiceOver does not present with TalkBack.

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:
When a carousel link is selected, updated video content should be announced to screen reader users.

This could be achieved by managing focus appropriately and using ARIA attributes or live regions so screen reader users are informed of the update.

Please refer to the ARIA Authoring Practices Guide (APG) Carousel examples for further guidance.

Medium Priority WCAG Level AA

The following section contains areas that failed to meet WCAG 2.2 AA. For the service to fall in line with WCAG 2.2 requirements, all A and AA issues must be resolved.

Non-text contrast

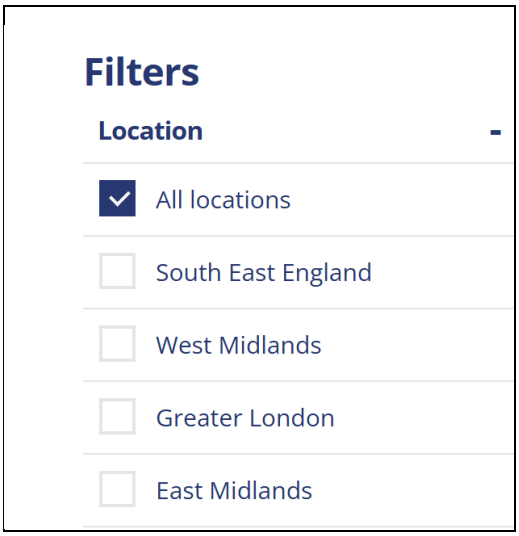
The colours of non-text content failed to meet the requirements to pass WCAG 2.2.

WCAG Reference:
1.4.11 Non-text Contrast (Level AA)
Understanding Non-text Contrast | How to Meet Non-text Contrast

Issue ID: DAC_Non-text_Contrast_01

URL: https://www.hs2.org.uk/jobs-and-skills/careers-with-our-supply-chain/jobs
Page title: HS2
Journey: Journey 1 step 8

Screenshot:



Prior to selecting one of the checkboxes, the only way of determining the input is by the border, however this does not meet the required ratio to meet WCAG 2.2 AA. The required contrast is 3:1 against adjacent colours however is currently 1.13:1.

Current code ref(s):

```
.checkbox-label:before {
    border: 2px solid #e5e5e5;
    border-radius: 0;
    height: 1.5em;
    left: .75em;
    top: .5em;
    width: 1.5em;
}
```

Solution:
Ensure that all borders meet a ratio of at least 3:1 against the adjacent white.
This will ensure that all users are able to perceive the boundaries of the checkboxes.

Colour contrast

The colour of text against its adjacent background may be difficult for users to decipher.

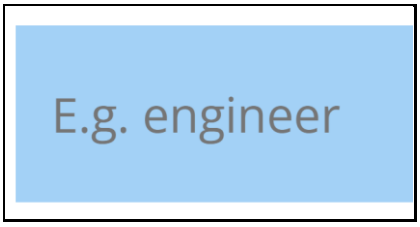
WCAG Reference(s):
1.4.3 Contrast – minimum (Level AA)
Understanding Contrast (Minimum) | How to Meet Contrast (Minimum)

1.4.6 Contrast - Enhanced (Level AAA)
Understanding Contrast (Enhanced) | How to Meet Contrast (Enhanced)

Issue ID: DAC_Colour_contrast_01

URL: https://www.hs2.org.uk/jobs-and-skills/careers-with-our-supply-chain/jobs
Page title: HS2
Journey: Journey 1 step 8

Screenshot:



The placeholder text displayed is likely to be difficult to decipher for someone with low vison. The light grey text against the blue background is likely to fall below the required colour contrast ratio.

The size of the text is 1.3333rem (21.33px or 16pt) and is not bold the colour contrast ratio must be at least 4.5:1.

Another potential issue is the functionality of the placeholder text by nature disappears when users begin to type. This may affect users with a cognitive limitation or memory issues because they may forget its purpose.

Foreground: #757575
Background: #8CD2FA
Contrast ratio: 2.79:1
1.4.3 Contrast (Minimum) (AA) Fail for large and regular text
1.4.6 Contrast (Enhanced) (AAA) Fail for large and regular text
Current code ref(s):
#placeholder

```
<div pseudo="-webkit-input-placeholder" id="placeholder" style="display: block
!important;">E.g. engineer</div>
```

```
    input.c-searchform__input[type=text]
Specificity: (0,2,1)
 {
        font-size: 1.3333333333rem;

placeholder
Specificity: (0,0,1)
 {
    -webkit-text-security: none;
    color: rgb(117, 117, 117);

input.c-searchform__input[type=text] {
    background: #8cd2fa;
```

Cognitive user comments:

"As a dyslexic user I found having the 'search' input with a full blue background was not ideal. This was a medium impact issue for me."

Low vision analyst comments (desktop):

"I can just about read the placeholder text in the search bar on this page, but the contrast doesn't appear to be very good. The grey used doesn't look dark enough to stand out against the blue background."

Low vision user comments (mobile):

"I can't read the placeholder text in this search field due to low contrast. The grey used is too light to stand out against the light blue background.

This default text appears a bit clearer on the desktop site, so I could just about read it when I was testing that version."

Solution:

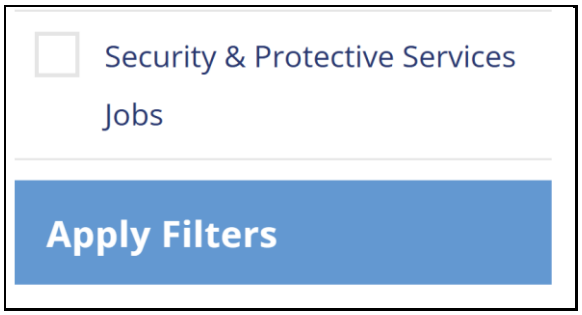
Ensure that the contrast between text and the background is in accordance with WCAG 2.1 recommendations:

- **If the text is not bold and its size is less than 18pt then it must meet a minimum colour contrast ratio of 4.5:1 to Pass AA.**
- If the text is not bold and its size is at least 18pt then it must meet a minimum colour contrast ratio of 3:1 to Pass AA.
- If the text is bold and its size is less than 14pt then it must meet a minimum colour contrast ratio of 4.5:1 to Pass AA.
- If the text is bold and its size is at least 14pt then it must meet a minimum colour contrast ratio of 3:1 to Pass AA.

Issue ID: DAC_Colour_contrast_02

URL: https://www.hs2.org.uk/jobs-and-skills/careers-with-our-supply-chain/jobs
Page title: HS2
Journey: Journey 1 step 8

Screenshot:



The link text may be too difficult to decipher due to the colour of the text against the background. The white text against the light blue background was problematic for our low vision analyst.

The size of the text is 1em (12pt) and is bold so the colour contrast ratio must be at least 4.5:1.

Foreground: #FFFFFF
Background: #3F99D6
Contrast ratio: 3.116:1

Current code ref(s):
#search-filters__inner > button

```
<button class="button c-search-submit">Apply Filters</button>

.c-search-submit {
    background: #3f99d6;
    color: #fff;
    display: block;
    font-weight: bold;
```

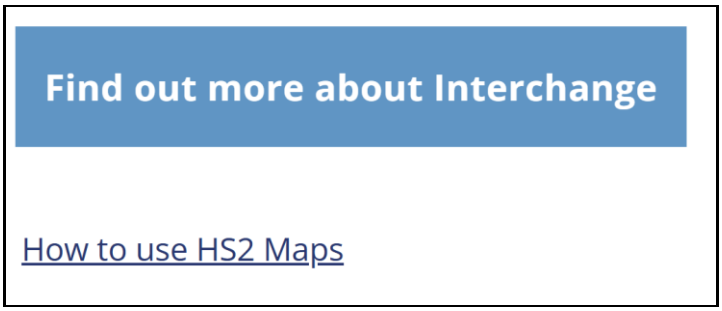
Solution:
Ensure that the contrast between text and the background is in accordance with WCAG 2.1 recommendations:

- If the text is not bold and its size is less than 18pt then it must meet a minimum colour contrast ratio of 4.5:1 to Pass AA.
- If the text is not bold and its size is at least 18pt then it must meet a minimum colour contrast ratio of 3:1 to Pass AA.
- **If the text is bold and its size is less than 14pt then it must meet a minimum colour contrast ratio of 4.5:1 to Pass AA.**
- If the text is bold and its size is at least 14pt then it must meet a minimum colour contrast ratio of 3:1 to Pass AA.

Issue ID: DAC_Colour_contrast_03

URL: https://www.hs2.org.uk/map/?mapView=11_52.4636_-1.7006
Page title: Route map – HS2
Journey: Journey 1 step 4

Screenshot:



The link text may be too difficult to decipher due to the colour of the text against the background. The white text against the light blue background was problematic for our low vision analyst.

The size of the text is 1em (12pt) and is bold so the colour contrast ratio must be at least 4.5:1.

Foreground: #FFFFFF
Background: #3F99D6
Contrast ratio: 3.116:1

Current code ref(s):
#sidebarmain > div.map-sidebar__flexible-content > div.map-sidebar__footer > div > a

```
<a href="https://www.hs2.org.uk/building-hs2/stations/interchange/"
class="button">Find out more about Interchange</a>

body
Specificity: (0,0,1)
 {
    background: #fff;
    font-family: "opensans", sans-serif;
    font-size: 1em;

.map-sidebar__link--button a, a.map-sidebar__post-link {
    align-items: center;
    background-color: #3c96c8;
    color: #fff;
```

Low vision user comments:
"I had some difficulty reading the 'Find out more about Interchange' button. Despite how bold the text is the blue background is too light for it to stand out well. This was a medium impact issue for me."

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved

Solution:
Ensure that the contrast between text and the background is in accordance with WCAG 2.1 recommendations:

- If the text is not bold and its size is less than 18pt then it must meet a minimum colour contrast ratio of 4.5:1 to Pass AA.
- If the text is not bold and its size is at least 18pt then it must meet a minimum colour contrast ratio of 3:1 to Pass AA.
- **If the text is bold and its size is less than 14pt then it must meet a minimum colour contrast ratio of 4.5:1 to Pass AA.**
- If the text is bold and its size is at least 14pt then it must meet a minimum colour contrast ratio of 3:1 to Pass AA.

Content on hover or focus

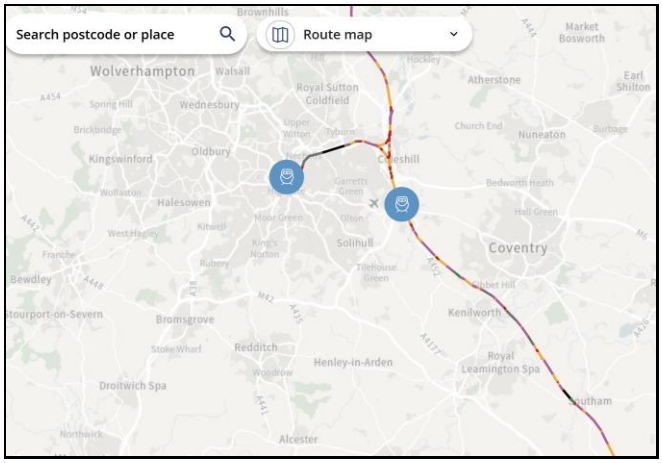
Secondary content was not hoverable, dismissible or persistent.

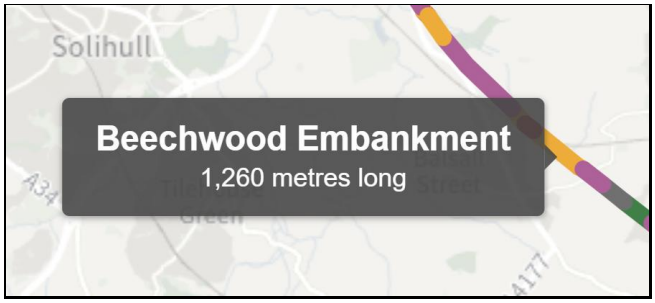
Reference:
1.4.13 Content on Hover or Focus (Level AA)
Understanding Content on Hover or Focus | How to Meet Content on Hover or Focus

Issue ID: DAC_Content_on_hover_focus_01

URL: https://www.hs2.org.uk/map/?mapView=12_52.5013_-2.1039
Page title: Route map - HS2
Journey: Journey 1 step 4

Screenshot:





There are coloured lines within the map that can be hovered over, using the mouse that presents additional content; however, this content is not dismissible or persistent.

Content that appears on hover can be hard to access if it disappears when the mouse pointer moves away. This is especially difficult for users who zoom or magnify the page and need to scroll to see all the content.

Current code ref(s):

#map

```
<div id="map" class="works-map margin--none leaflet-container leaflet-touch leaflet-retina leaflet-fade-anim leaflet-grab leaflet-touch-drag leaflet-touch-zoom" tabindex="0" style="position: relative; outline-style: none;"><div class="leaflet-pane leaflet-map-pane" style="transform: translate3d(0px, -133px, 0px);">
```

Low vision user comments:

"I'm unable to read or navigate this map on my own. The contrast is very low, even after using the maps own magnification tool to focus on the more specific locations. The text is too small and blurry.

The route shown is confusing to me due to all the colours it features. They show no clear meaning, and I can't find a key that explains the colours either. Overall, I'd need a sighted person to use this map."

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:

The content should stay visible until the user moves away chooses to dismiss it or it is no longer relevant.

Hoverable

If pointer hover can trigger the additional content, then ensure pointer can be moved over the additional content without the additional content disappearing.

Persistent

Ensure that the content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid.

Please refer to inclusive tooltips and toggletips for further guidance.

You must also ensure that this information is available for keyboard-only and touch device users. An alternative is required somewhere on the same page for this user group.

Low Priority WCAG Level AAA

Areas of the service which fail to meet the WCAG 2.2 AAA requirements are not in scope for the purposes of this audit, however, where issues were encountered by our analysts, these have been reported. We highly recommend that these issues are resolved.

Focus not obscured

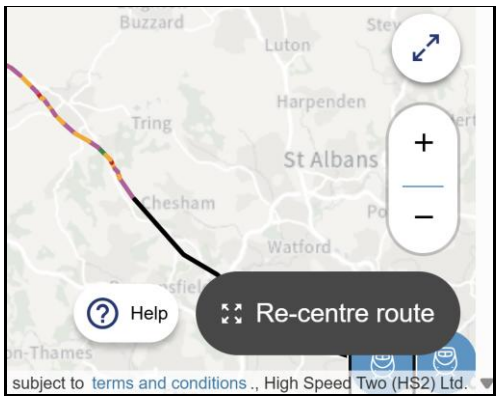
When a user interface component receives keyboard focus, no part of the component is hidden by author-created content

WCAG Reference:
2.4.12 Focus Not Obscured (Enhanced) (Level AAA)
Understanding Focus Not Obscured (Enhanced) | How to Meet Focus Not Obscured (Enhanced)

Issue ID: DAC_Focus_obscured_01

URL: https://www.hs2.org.uk/map/?mapView=12_52.5013_-2.1039
Page title: Route map - HS2
Journey: Journey 1 step 4

Screenshot:



Keyboard focus is currently on buttons situated within the map, however, the focus indictor is only partially visible.

Current code ref(s):
#map > div.leaflet-pane.leaflet-map-pane > div.leaflet-pane.leaflet-marker-pane > img.leaflet-marker-icon.icon-type--stations.icon-post-id--75151.leaflet-zoom-animated.leaflet-interactive

```
<img src="//www.hs2.org.uk/wp-content/themes/hs2/dist/assets/svg/station-icon.svg"
class="leaflet-marker-icon icon-type--stations icon-post-id--75151 leaflet-zoom-
animated leaflet-interactive" alt="Old Oak Common" tabindex="0" role="button"
style="margin-left: -21px; margin-top: -21px; width: 42px; height: 42px;
transform: translate3d(1021px, 640px, 0px); z-index: 640; outline-style: none;">
```

Keyboard-only user comments:
"Using keyboard navigation to move between the different interactive elements on the map is nonsensical. This is because my focus is moved from not just the interactive elements visible on the map but also to interactive elements on the map located offscreen. This causes my focus to shift to a completely new part of the map that I was not trying to interact with, causing confusion and delay.

I would have expected for navigation of the interactive elements on the map to be confined to just the visible elements. This would allow the user to navigate from the map to the other buttons on the webpage without losing focus on the elements that they are interested in."

Additional instances of this issue may exist on other pages throughout the website; wherever this issue occurs, they too will need to be resolved.

Solution:
Ensure that any item receiving keyboard focus is fully visible and not obscured so users can clearly see where focus is.

Colour contrast (enhanced)

Text was found with an insufficient colour contrast ratio against background colours.

WCAG Reference:
1.4.6 Contrast (Enhanced) (Level AAA)
Understanding Contrast (Enhanced) | How to Meet Contrast (Enhanced)

Issue ID: DAC_Colour_contrast_enhanced_01

URL: https://www.hs2.org.uk/supply-chain/direct-contract-opportunities/
Page title: Direct contract opportunities – HS2
Journey: Journey 1 step 6

Screenshot:

The link text may be too difficult to decipher due to the colour of the text against the background. The light blue text against the blue background was problematic for our low vision analyst.

The size of the text is 1 (13.33pt) and is bold so the colour contrast ratio must be at least 7:1.

Current code ref(s):
#main > div.container-outer.page__header.no-margin--top > div > div.contract_additional > ul > li > a

```
<a class="nav-item" href="https://assets.hs2.org.uk/wp-
content/uploads/2025/12/251209-Contract-Opp_For_Publication.xlsx"><span>Current
and future contract opportunities table</span>
<span class="visuallyhidden">(Excel spreadsheet, 126.79 KB)</span>

</a>

.contract-documents li a
Specificity: (0,1,2)
 {
    color: #5fb9f5;

.page__header {
    background: #1e3775;

.contract-documents li a
Specificity: (0,1,2)
 {
    color: #5fb9f5;
```

```
    display: inline-block;
    font-size: 1.1111111111rem;
    font-weight: 700;
```

Low vision user comments:

"I can read the link 'Current and future contract opportunities table' without issue, but I'm not sure the contrast results will be very good. It doesn't look light enough for other users with low vision to read it well. This was a low impact issue for me."

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved

Solution:

Ensure that where possible all text achieves a ratio as high as possible.
For sites to meet AAA, they must comply with WCAG 2.1 checkpoint 1.4.6 for colour contrast.
As far as contrast ratio is concerned, it must at least be:

- if text is not bold and its size is less than 18pt/24px/1.5em/150%: 7:1 for AAA level;
- if text is not bold and its size is at least 18pt/24px/1.5em/150%: 4.5:1 for AAA level;
- **if text is bold and its size is less than 14pt/19px/1.2em/118%: 7:1 for AAA level;**
- if text is bold and its size is at least 14pt/19px/1.2em/118%: 4.5:1 for AAA level.

Usability feedback

The following section contains feedback from our analysts that although do not fail to meet WCAG 2.2 may prove challenging for users of the service.

Dragon tags

The positioning of the Dragon tags were misaligned.

WCAG Reference:
Usability

Issue ID: DAC_Dragon_tags_usability_01

URL: https://www.hs2.org.uk/
Page title: Homepage - HS2
Journey: Journey 1 step 1

Screenshot:

The Dragon tags are consistently misaligned across all pages and all form elements. This can be problematic especially when the number of the tag overlaps specific links which can be difficult to decipher due to the colour contrast.

This was due to the margin-top property interfering with how the tags are visually presented.

Current code ref(s):
body

```
<body class="home wp-singular page-template page-template-page-templates page-
template-home-page page-template-page-templateshome-page-php page page-id-81112
wp-theme-hs2 hs2v2" data-aos-easing="ease" data-aos-duration="400" data-aos-
delay="0">

*+* {
    margin-top: 2.7777777778em;
```

Voice activation user comments:

"Dragon tag positioning issue.

Whenever I use a command that creates a Dragon tag the number and the green box background are not overlaid over each other as I would expect. This happens when using commands such as "click link" which identifies all links that Dragon can detect and gives them a Dragon tag.

Dragon tag still functions in this state but this misalignment makes their numbers harder to see which an issue is as using these numbers in commands such as "choose two" is how I distinguish them to Dragon.

I would have expected for the numbers to be overlaid over the green background thus making the numbers clear to see. This was a low impact issue. This issue repeated consistently throughout the scope."

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:

To ensure that the numbered overlays remain visually aligned with their associated elements, the CSS needs to be adjusted by either reducing or removing the margin-top applied by the + class, or apply the margin in a way that does not affect the visual position of Dragon's numbered indicators.

This will also ensure that numbers remain positioned over the opaque green tag background to maintain sufficient contrast for low vision users who require the use of Dragon voice activation software.

Checkboxes

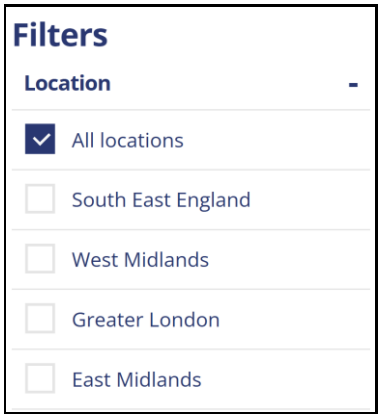
The checkboxes were not discoverable via standard voice commands.

WCAG Reference:
Usability

Issue ID: DAC_Checkboxes_usability_01

URL: https://www.hs2.org.uk/jobs-and-skills/careers-with-our-supply-chain/jobs
Page title: HS2
Journey: Journey 1 step 8

Screenshot:



The original checkbox has been hidden incorrectly which has an impact on voice activation users navigating the page with Dragon NaturallySpeaking.

The checkboxes are not discoverable using the standard voice command “click box” leaving the user having to user alternative methods such as using the tab command or using mouse-grid.

The Mouse-grid command is when Dragon displays grid on the page. Each cell of the grid contains a number. After selecting a cell, the grid becomes smaller each time. This can be used to get the mouse onto a particular area to click on an element.

Current code ref(s):
#filter-job-location-all

```
<input type="checkbox" data-all-checkbox-selector="true" class="input--checkbox"
name="job_location[]" id="filter-job-location-all" value="" checked="">

.input--checkbox {
    left: -3em;
    position: absolute;
```

Voice activation user comments:
"The checkbox requires keyboard navigation to interact with.

According to its visual title the command "click West Midlands" should have ticked the checkbox of the same name. But it did not.

This slowed me causing me to have to try an alternative way. I tried using the "click button", "click box" and "click link" commands which gives dragon tags to all possible buttons, boxes and links Dragon can identify on-screen respectively. Unfortunately, no dragon tags appeared on the checkbox.

The only way I was able to tick the checkbox was to use Dragon to navigate via the keyboard control commands: "press Tab" and "press enter". Which replicates the effects of pressing the tab and enter keys respectively. This required considerably more commands; thus, it was longer and more tedious.

I had expected the checkbox to be interactable via a Dragon command based off the visual title. This would mean that the first command a Dragon users would think to use "click West Midlands" would immediately interact with the element. Allowing for quick and easy access without confusion. This was a high impact issue for me."

Additional instances of this issue may exist on other pages throughout the website; wherever this issue occurs, they too will need to be resolved.

Solution:
We recommend hiding the original checkbox by using the following CSS:

```
    cursor: pointer;
    position: absolute;
    z-index: 1;
    top: -2px;
    left: -2px;
    width: 24px;
    height: 24px;
    margin: 0;
    opacity: 0;
```


Headings

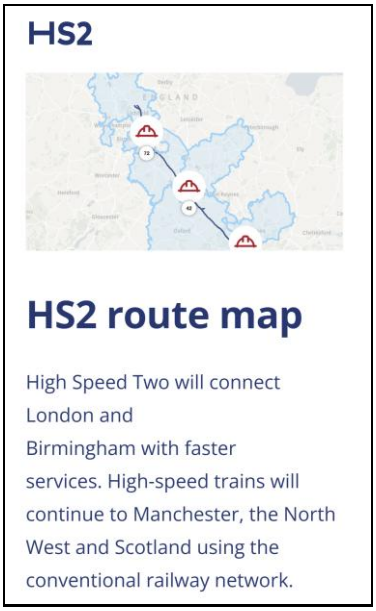
There were multiple h1's on the same page.

Reference:
Usability

Issue ID: DAC_Headings_usability_01

URL: www.hs2.org.uk/map/
Page title: Route map - HS2
Journey: Journey 1 step 4

Screenshot:



There are multiple h1's on the same page. This is due to a visually hidden and a visual h1 that is present. The h1 usually introduces the primary content on the page so blind users can ascertain the structure and layout of the page.

Two h1's may be disorientating for some screen reader used although this did not pose an accessibility barrier for our analyst testing the page.

Current code ref(s):
#hs2main > div > h1

```
<h1 class="hidden-h1 visuallyhidden">HS2 route map</h1>
<h1 class="heading h1 sidebar-intro__heading">HS2 route map</h1>
```

Screen reader comments:
"While browsing this service out of context using the JAWS hot key 'H', I discovered two headings were at level 1 on this page.

Having duplicate headings at level 1 is confusing, as you would only expect to find only one.

This is because it is best practise and a common expectation for screen reader users to find that the heading 1 will introduce or be closely associated with the start of the main content so having several headings at level, one can make it difficult to quickly locate this section and become orientated on this service.

It would be helpful if only one heading at level one was present to ensure the Smoove navigation of this service.
Please note this was discovered with JAWS, NVDA, not present with VoiceOver or TalkBack. This was a low impact issue for me."

Solution:
It is best practice to only have one h1 on the page. Remove the visually hidden h1 as it is not required.

Colour contrast/Images

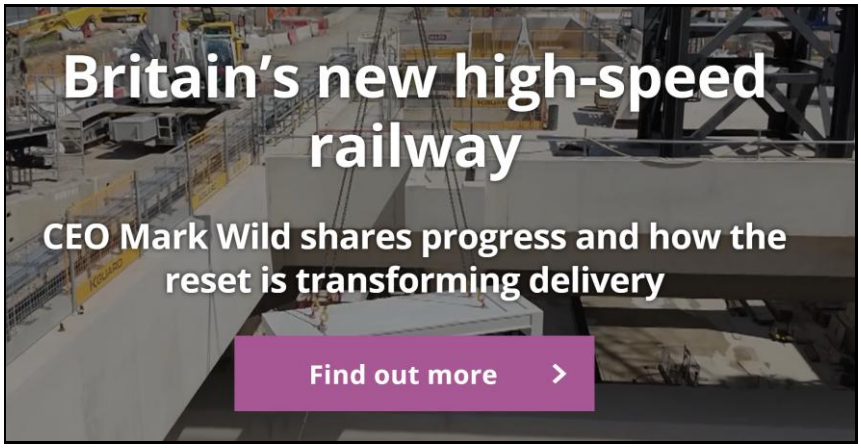
Text on top of an image was distracting for our low vison analyst.

WCAG Reference:
Usability

Issue ID: DAC_Colour_contrast_images_usability_01

URL: https://www.hs2.org.uk/
Page title: Homepage - HS2
Journey: Journey 1 step 1

Screenshot:



Although the text is large and bold, the background image is visually distracting. When the text and the image are together, it can be highly problematic for users with visual limitations.

Text is most readable when it is presented on a solid background. When text is placed over an image like this one, there is an increased risk of information being missed.

Current code ref(s):
#hs2main > div.homepage-carousel.homepage-carousel--slides.margin--none.slick-initialized.slick-slider.slick-dotted > div.slick-list.draggable > div > div.slick-slide.slick-current.slick-active > div > div > div > div.media__inner__caption.heading > h2

```
<h2 class="size--xxl">Britain's new high-speed railway</h2>
```

Low vision user comments:
"I had some difficulty reading the text in the section just below the main menu. The text is very large and bold, but the background is distracting. I have Nystagmus, a condition that causes my eyes to move involuntarily. I found that my eyes were often being drawn to the various aspects of the background image. This has resulted in me misreading the information. Only the text on the button 'Find out more' is clear to me.

Text is at its most readable to me when it’s on a solid background. When it’s not I will end up missing information. This was a medium impact issue for me.”

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:
Consider placing the text on a solid background to avoid any glare from the text on the image.

Buttons

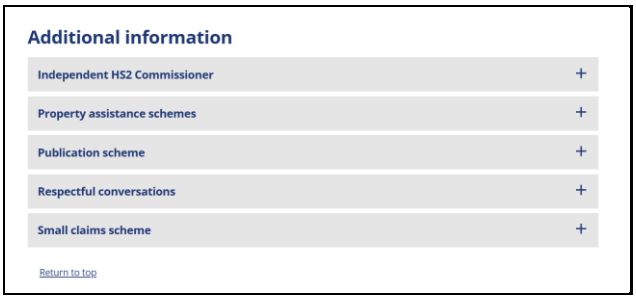
Buttons were problematic for our low vison analyst.

Reference:
Usability

Issue ID: DAC_Buttons_usability_01

URL: https://www.hs2.org.uk/contact-us/
Page Title: Contact us – HS2
Journey: Journey 1 step 9

Screenshot:



The positioning of the icons for the buttons was problematic for our low vison analyst. When users rely on magnifying the page to improve readability, the icons disappear therefore the functionality of the buttons may be unclear.

Current code ref(s):
#additional-information > div > div > div > h3:nth-child(1) > button

```
<button aria-expanded="false" aria-controls="collapsible-0">Independent HS2
Commissioner</button>
```

Low vision user comments:
"The are several expandable topics under the title 'Additional information.' However, the titles of these topics look more like links to different pages. This is because the '+' icons for each of them are too far to the right.

The icons are outside the magnifiers field of view most of the time. I can't see as much of a page at a time as a sighted user, so I need components and their indicators to be more compact. This was a high impact issue for me."

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:
Consider repositioning the '+' icon so that it is closer to the button text. This will provide a clear visual cue for user with visual limitations that may require a certain level of magnification.

Multimedia

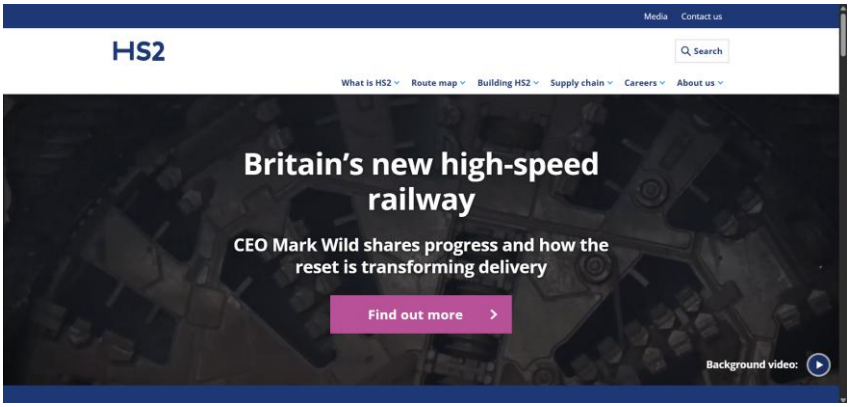
Video content was problematic for our testing team.

Reference:
Usability

Issue ID: DAC_Multimedia_usability_01

URL: https://www.hs2.org.uk/
Page title: Homepage – HS2
Journey: Journey 1 step 1

Screenshot:



The video was problematic for our screen reader analyst. This is because when played, the controls disappeared. This then forced focus to jump to the top of the page whilst still playing the video. This was highly disorienting.

Low vision user comments:
"After exiting full screen on the videos on the homepage I found myself back at the top of the page. This was confusing as the videos are about halfway down the page and I didn't use the scroll wheel while I was watching them.

Sudden shifts in view with no explanation cause navigation issues for users with low vision. It already takes us enough time to get used to navigating websites due to our limited vision and the magnifiers own limited field of view. This was a medium impact issue for me."

Screen reader user comments:
"When I activated the 'Play' button I found that the video played straight away.

This was unanticipated as I assumed that I would be taken to the options for the video so I could interact with the media controls myself, choosing to start the video when I wanted.

It took me sometime to locate the video controls as I was battling with the contents of the video playing and JAWS talking.

It would be preferable if this video did not play automatically on the activation of this button, therefor giving myself and other screen reader users a chance to familiarise ourselves with the media controls.
This was found while testing with JAWS, NVDA, VoiceOver and TalkBack. This was a high impact issue for me."

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:
By changing YouTube's embed options, you can enable/disable autoplay or ensure controls are visible when the video loads.

Users must be able to immediately stop playback with simple commands (for instance, by pressing the spacebar).

Visual cue

Our low vision/cognitive analyst felt that an additional visual cue on hover would be beneficial.

WCAG Reference:
Usability

Issue ID: DAC_Visual_cue_usability_01

URL: https://www.hs2.org.uk/what-is-hs2/
Page title: What is HS2 - HS2
Journey: Journey 1 step 2

Screenshot:

There was no visual cue for mouse users to indicate that the button was selectable. This was identified by our low vision analyst and may be an issue for other users in a non-testing environment. This was because the cursor property in the CSS was not set.

Current code ref(s):
#global-header > nav.stacked-nav-container.margin--none > div > div > button

```
<button style="display: flex;" class="button" data-trigger="sectionnav" aria-expanded="false"> <svg focusable="false" aria-hidden="true" xmlns="http://www.w3.org/2000/svg" width="18" height="18" fill="none" viewBox="0 0 18 18"><path class="menu--open" fill="currentColor" d="M0 2 h18v2h-18z M0 8 h18v2h-18z M0 14 h18v2h-18z"></path><path class="menu--close" fill="currentColor" d="M14.657 16.071 1.929 3.343 3.343 1.93l12.728 12.728z M1.93 14.657 14.656 1.929l1.414 1.414L3.343 16.071z"></path></svg> Also in this section </button>
```

Low vision user comments:
"The 'Also in this section' drop-down doesn't provide feedback under mouse hover, including changes to the cursor.

Lack of feedback causes navigation issues. Many users with low vision rely heavily on feedback from components because it helps us make sense of where we are on a page, and what can be interacted with amongst all the other content.

When the keyboard is used to navigate to this drop-down the outline becomes slightly bolder. This feedback isn't helpful because it's barely visible. This was a high impact issue for me."

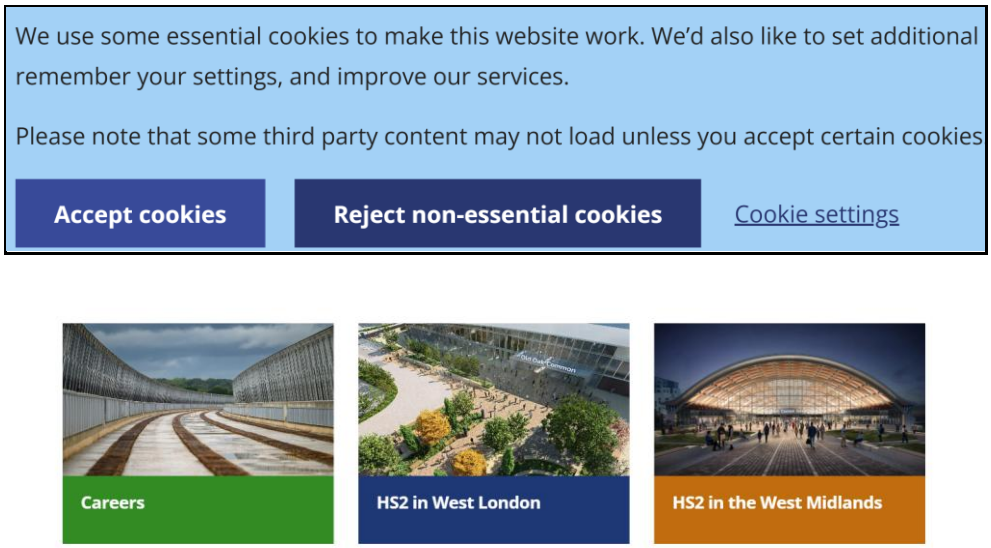
Additional instances of this issue exist on other pages throughout the website; wherever this issue occurs, they too will need to be resolved.

Solution:
We recommend using the CSS property cursor: pointer; which will provide a visual cue for mouse users.

Issue ID: DAC_Visual_cue_usability_02

URL: https://www.hs2.org.uk/
Page title: Homepage – HS2
Journey: Journey 1 step 1

Screenshot:



A slight colour change was identified on hover; however, our low vision analyst did not feel that this was enough of a visual cue.

Current code ref(s):
#cookie-consent-container > div > div.cookie-message__actions > button:nth-child(1)

```
<button class="cookie-message__button">Accept cookies</button>
```

Low vision user comments 1:
"The buttons in the 'Cookies' modal change to a lighter blue under mouse hover. I didn't have any trouble seeing this change, but I know many other users with low vision who will. The two shades of blue used don't seem to be vastly different from each other.

There's also the issue of the cursor not changing its appearance when interacting with these buttons. It just remains as an arrow. Changes to the cursor is what I usually rely on when navigating, though colour changes do help too. If it weren't for the buttons changing appearance, I'd have difficulty navigating to these buttons.

Changes in the cursor and components help users with low vision make sense of where we are on a page, and what can be interacted with amongst all the other content. This was a low impact issue for me."

Low vision user comments 2:
"Just like the buttons the blue link 'Cookies settings' changes to a lighter blue under mouse hover. I couldn't see this change because it doesn't show up as clearly though text as it does through a full background colour change. The cursor changes appearance, which is helpful to me. However, this change isn't helpful to many users with low vision.

This varies between visual impairments, but it's usually related to each persons' field of vision. I have some central vision, and I use a large cursor, so I can usually pick up on mouse hover feedback like this.

When the keyboard is used to navigate to this link it becomes outlined in orange and white. I could see this feedback without issue, but I'm not sure how well the orange and white contrast against the light blue background. This was a medium impact issue for me."

Additional instances of this issue exist on other pages throughout the website; wherever this issue occurs, they too will need to be resolved.

Solution:
We recommend an additional visual cue in the way of the hover state when a user has placed their cursor over an interactive element. The same visual cue provided on focus (the focus indicator) could be used on mouse hover.

Keyboard navigation

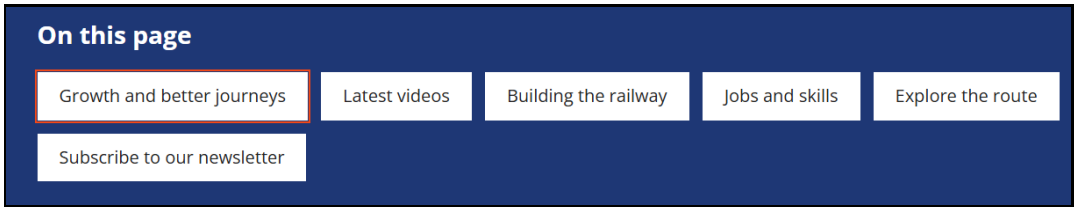
Colour contrast issues were encountered by our keyboard-only analyst.

WCAG Reference:
Usability

Issue ID: DAC_Keyboard_navigation_usability_01

URL: https://www.hs2.org.uk/
Page title: Homepage - HS2
Journey: Journey 1 step 1

Screenshot:



Although the colour contrast ratio of the focus indicator against the background is exactly 3:1, our keyboard-only analyst felt that the colour combination was difficult to decipher. This may be an issue for other users that rely on the keyboard as a way of navigating that also have visual limitations.

This issue is consistent across other pages whereby the focus indicator is against the same colour background.

Current code ref(s):
#hs2main > div:nth-child(2) > div > div > div > ul > li:nth-child(1) > a

```
<a href="#growth-and-better-journeys">Growth and better journeys</a>

a:focus, a.button:focus {
    outline: 0.1111111111rem solid #f04819;

.hs2v2 .container-jump-links {
    background: #1e3775;
```

Keyboard-only user comments:
"The colour contrast for the focus highlighting on the 'growth and better journeys' checkbox is poor making the highlighting very hard to notice.

Poor highlighting makes it difficult to track when the keyboard focus is on this particular element making it easy to lose one's way when navigating via keyboard. This issue will be made far worse for those who are visually impaired which would make interacting with this element extremely difficult.

I would have expected for the highlighting to be far clearer for the checkbox like it has been for the other interactive elements encountered so far.
This was a medium impact issue for me but would be high for other users who also have low vision.”

Additional instances of this issue may exist on other pages throughout the service; wherever this issue occurs, they too will need to be resolved.

Solution:
Consider colour combinations that have a higher contrast ratio against adjacent colours.

End of report

Appendix I

Journeys

1. https://www.hs2.org.uk/
    a. Test the page
2. https://www.hs2.org.uk/what-is-hs2/
    a. Test the page
3. https://www.hs2.org.uk/what-is-hs2/hs2-project-update/
    a. Test the page
4. https://www.hs2.org.uk/map/
    a. Test the page
5. https://www.hs2.org.uk/map/search-current-works/
    a. Test the page
6. https://www.hs2.org.uk/supply-chain/direct-contract-opportunities/
    a. Test the page
7. https://www.hs2.org.uk/careers/careers-with-our-supply-chain/
    a. Test the page
8. https://www.hs2.org.uk/jobs-and-skills/careers-with-our-supply-chain/jobs
    a. Test the page
9. https://www.hs2.org.uk/contact-us/
    a. Test the page
10. https://www.hs2.org.uk/about-us/board-and-executive-team/
    a. Test the page
11. https://www.hs2.org.uk/people/mark-wild/
    a. Test the page

Appendix II

Classification of Accessibility Issues

The following scoring system was used to indicate the status of the sites with regards to each W3C WAI checkpoint up to and including Level AA:

Status	Description
Pass (M) Medium Priority **Pass (H) High Priority**	The service meets the requirements of the checkpoint.
Fail (M) Medium Priority	The service fails to meet the requirements against AA criteria measured against WCAG 2.2
Fail (H) High Priority	The service fails to meet the requirements against A criteria measured against WCAG 2.2 and more severe accessibility issues were identified.
Not Applicable (N/A)	No content was found on the service to which the checkpoint would relate.
Out of scope	Areas which fail to meet the requirements against AAA criteria measured against WCAG 2.2 are not in scope for the purposes of this audit.

Principle 1: Perceivable – Information and users interface components must be presentable to users in ways they can perceive.	
Non-text Content: 1.1.1 All non-text content that is presented to the user has a text alternative that serves the equivalent purpose. **(Level A)**	**Fail (H)**
Audio-only and Video-only (Pre-recorded): 1.2.1 For pre-recorded audio-only and pre-recorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labelled as such: • **Pre-recorded Audio-only** An alternative for time-based media is provided that presents equivalent information for pre-recorded audio-only content. • **Pre-recorded Video-only** Either an alternative for time-based media or an audio track is provided that presents equivalent information for pre-recorded video-only content. **(Level A)**	**Not Applicable (N/A)**
Captions (Pre-recorded): 1.2.2 Captions are provided for all pre-recorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labelled as such. **(Level A)**	**Pass (H)**
Audio Description or Media Alternative (Pre-recorded): 1.2.3 An alternative for time-based media or audio description of the pre-recorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labelled as such. **(Level A)**	**Not Applicable (N/A)**
Captions (Live): 1.2.4 Captions are provided for all live audio content in synchronized media. **(Level AA)**	**Not Applicable (N/A)**
Audio Description (Pre-recorded): 1.2.5 Audio description is provided for all pre-recorded video content in synchronized media. **(Level AA)**	**Not Applicable (N/A)**
Sign Language (Pre-recorded): 1.2.6 Sign language interpretation is provided for all pre-recorded audio content in synchronized media. **(Level AAA)**	**Out of scope**

Extended Audio Description (Pre-recorded): 1.2.7 Where pauses in foreground audio are insufficient to allow audio descriptions to convey the sense of the video, extended audio description is provided for all pre-recorded video content in synchronized media. **(Level AAA)**	**Out of scope**
Media Alternative (Pre-recorded): 1.2.8 An alternative for time-based media is provided for all pre-recorded synchronized media and for all pre-recorded video-only media. **(Level AAA)**	**Out of scope**
Audio-only (Live): 1.2.9 An alternative for time-based media that presents equivalent information for live audio-only content is provided. **(Level AAA)**	**Out of scope**
Info and Relationships: 1.3.1 Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (**Level A)**	**Fail (H)**
Meaningful Sequence: 1.3.2 When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined. **(Level A)**	**Pass (H)**
Sensory Characteristics: 1.3.3 Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound. **(Level A)**	**Not Applicable (N/A)**
Orientation: 1.3.4 Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential. Note: Examples where a particular display orientation may be essential are a bank check, a piano application, slides for a projector or television, or virtual reality content where binary display orientation is not applicable. **(Level AA)**	**Pass (M)**

Identify Input Purpose: 1.3.5 The purpose of each input field collecting information about the user can be programmatically determined when: • The input field serves a purpose identified in the Input Purposes for user interface components section; and • The content is implemented using technologies with support for identifying the expected meaning for form input data. **(Level AA)**	**Pass (M)**
Identify Purpose: 1.3.6 In content implemented using mark-up languages, the purpose of User Interface Components, icons, and regions can be programmatically determined. **(Level AAA)**	**Out of scope**
Use of Colour: 1.4.1 Colour is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. **(Level A)**	**Pass (H)**
Audio Control: 1.4.2 If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level. **(Level A)**	**Not Applicable (N/A)**
Contrast (Minimum): 1.4.3 The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following: • **Large Text** Large-scale text and images of large-scale text have a contrast ratio of at least 3:1; • **Incidental** Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement. • **Logotypes** Text that is part of a logo or brand name has no contrast requirement. **(Level AA)**	**Fail (M)**
Resize text: 1.4.4 Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality. **(Level AA)**	**Pass (M)**

Images of Text: 1.4.5 If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following: • **Customizable** The image of text can be visually customized to the user's requirements; • **Essential** A particular presentation of text is essential to the information being conveyed. **Note**: Logotypes (text that is part of a logo or brand name) are considered essential. **(Level AA)**	**Pass (M)**
Contrast (Enhanced): 1.4.6 The visual presentation of text and images of text has a contrast ratio of at least 7:1, except for the following: • **Large Text** Large-scale text and images of large-scale text have a contrast ratio of at least 4.5:1; • **Incidental** Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement. • **Logotypes** Text that is part of a logo or brand name has no contrast requirement. **(Level AAA)**	**Out of scope**
Low or No Background Audio: 1.4.7 For pre-recorded audio-only content that (1) contains primarily speech in the foreground, (2) is not an audio CAPTCHA or audio logo, and (3) is not vocalization intended to be primarily musical expression such as singing or rapping, at least one of the following is true: • **No Background** The audio does not contain background sounds. • **Turn Off** The background sounds can be turned off. • **20 dB** The background sounds are at least 20 decibels lower than the foreground speech content, with the exception of occasional sounds that last for only one or two seconds. **Note*:*** Per the definition of "decibel," background sound that meets this requirement will be approximately four times quieter than the foreground speech content. **(Level AAA)**	**Out of scope**

Visual Presentation: 1.4.8 For the visual presentation of blocks of text, a mechanism is available to achieve the following: • Foreground and background colours can be selected by the user. • Width is no more than 80 characters or glyphs (40 if CJK). • Text is not justified (aligned to both the left and the right margins). • Line spacing (leading) is at least space-and-a-half within paragraphs, and paragraph spacing is at least 1.5 times larger than the line spacing. • Text can be resized without assistive technology up to 200 percent in a way that does not require the user to scroll horizontally to read a line of text on a full-screen window. **(Level AAA)**	**Out of scope**
Images of Text (No Exception): 1.4.9 Images of text are only used for pure decoration or where a particular presentation of text is essential to the information being conveyed. **Note:** Logotypes (text that is part of a logo or brand name) are considered essential. **(Level AAA)**	**Out of scope**
Reflow: 1.4.10 Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for: • Vertical scrolling content at a width equivalent to 320 CSS pixels; • Horizontal scrolling content at a height equivalent to 256 CSS pixels. Except for parts of the content which require two-dimensional layout for usage or meaning. **Note:** 320 CSS pixels is equivalent to a starting viewport width of 1280 CSS pixels wide at 400% zoom. For web content which are designed to scroll horizontally (e.g. with vertical text), the 256 CSS pixels is equivalent to a starting viewport height of 1024px at 400% zoom. **Note:** Examples of content which requires two-dimensional layout are images required for understanding (such as maps and diagrams), video, games, presentations, data tables (not individual cells), and interfaces where it is necessary to keep toolbars in view while manipulating content. It is acceptable to provide two-dimensional scrolling for such parts of the content. **(Level AA)**	**Pass (M)**

Non-text Contrast: 1.4.11 The visual presentation of the following have a contrast ratio of at least 3:1 against adjacent colour(s): • **User Interface Components** Visual information required to identify user interface components and states, except for inactive components or where the appearance of the component is determined by the user agent and not modified by the author; • **Graphical Objects** Parts of graphics required to understand the content, except when a particular presentation of graphics is essential to the information being conveyed. **(Level AA)**	**Fail (M)**
Text Spacing: 1.4.12 In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all of the following and by changing no other style property: • Line height (line spacing) to at least 1.5 times the font size; • Spacing following paragraphs to at least 2 times the font size; • Letter spacing (tracking) to at least 0.12 times the font size; • Word spacing to at least 0.16 times the font size. Exception: Human languages and scripts that do not make use of one or more of these text style properties in written text can conform using only the properties that exist for that combination of language and script. **(Level AA)**	**Pass (M)**

Content on Hover or Focus: 1.4.13 Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true: • **Dismissible** A mechanism is available to dismiss the additional content without moving pointer hover or keyboard focus, unless the additional content communicates an input error or does not obscure or replace other content; • **Hoverable** If pointer hover can trigger the additional content, then the pointer can be moved over the additional content without the additional content disappearing; • **Persistent** The additional content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid. **Exception:** The visual presentation of the additional content is controlled by the user agent and is not modified by the author. **Note:** Examples of additional content controlled by the user agent include browser tooltips created through use of the HTML title attribute. **Note:** Custom tooltips, sub-menus, and other nonmodal popups that display on hover and focus are examples of additional content covered by this criterion. **(Level AA)**	**Fail (M)**

Principle 2: Operable – User interface components and navigation must be operable.	
Keyboard: 2.1.1 All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. **Note:** This exception relates to the underlying function, not the input technique. For example, if using handwriting to enter text, the input technique (handwriting) requires path-dependent input but the underlying function (text input) does not. **Note:** This does not forbid and should not discourage providing mouse input or other input methods in addition to keyboard operation. **(Level A)**	**Fail (H)**
No Keyboard Trap: 2.1.2 If keyboard focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away. **Note:** Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference. **(Level A)**	**Pass (H)**
Keyboard (No Exception): 2.1.3 All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes. **(Level AAA)**	**Out of scope**
Character Key Shortcuts: 2.1.4 If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true: • **Turn off** A mechanism is available to turn the shortcut off; • **Remap** A mechanism is available to remap the shortcut to include one or more non-printable keyboard keys (e.g., Ctrl, Alt); • **Active only on focus** The keyboard shortcut for a user interface component is only active when that component has focus. **(Level A)**	**Not Applicable (N/A)**

Timing Adjustable: 2.2.1 For each time limit that is set by the content, at least one of the following is true: • **Turn off** The user is allowed to turn off the time limit before encountering it; or • **Adjust** The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or • **Extend** The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or • **Real-time Exception** The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or • **Essential Exception** The time limit is essential and extending it would invalidate the activity; or • **20 Hour Exception** The time limit is longer than 20 hours. **Note:** This success criterion helps ensure that users can complete Journeys without unexpected changes in content or context that are a result of a time limit. This success criterion should be considered in conjunction with Success Criterion 3.2.1, which puts limits on changes of content or context as a result of user action. **(Level A)**	**Not Applicable (N/A)**

Pause, Stop, Hide: 2.2.2 For moving, blinking, scrolling, or auto-updating information, all of the following are true: • **Moving, blinking, scrolling** For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and • **Auto-updating** For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential. **Note:** For requirements related to flickering or flashing content, refer to Guideline 2.3. **Note:** Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference. **Note:** Content that is updated periodically by software or that is streamed to the user agent is not required to preserve or present information that is generated or received between the initiation of the pause and resuming presentation, as this may not be technically possible, and in many situations could be misleading to do so. **Note:** An animation that occurs as part of a preload phase or similar situation can be considered essential if interaction cannot occur during that phase for all users and if not indicating progress could confuse users or cause them to think that content was frozen or broken. **(Level A)**	**Pass (H)**
No Timing: 2.2.3 Timing is not an essential part of the event or activity presented by the content, except for non-interactive synchronized media and real-time events. **(Level AAA)**	**Out of scope**
Interruptions: 2.2.4 Interruptions can be postponed or suppressed by the user, except interruptions involving an emergency. **(Level AAA)**	**Out of scope**
Re-authenticating: 2.2.5 When an authenticated session expires, the user can continue the activity without loss of data after re-authenticating. **(Level AAA)**	**Out of scope**

Timeouts: 2.2.6 Users are warned of the duration of any user inactivity that could cause data loss, unless the data is preserved for more than 20 hours when the user does not take any actions. **Note:** Privacy regulations may require explicit user consent before user identification has been authenticated and before user data is preserved. In cases where the user is a minor, explicit consent may not be solicited in most jurisdictions, countries or regions. Consultation with privacy professionals and legal counsel is advised when considering data preservation as an approach to satisfy this success criterion. **(Level AAA)**	**Out of scope**
Three Flashes or Below Threshold: 2.3.1 Web pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds. **Note:** Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference. **(Level A)**	**Not Applicable (N/A)**
Three Flashes: 2.3.2 Web pages do not contain anything that flashes more than three times in any one second period. **(Level AAA)**	**Out of scope**
Animation from Interactions: 2.3.3 Motion animation triggered by interaction can be disabled, unless the animation is essential to the functionality or the information being conveyed. **(Level AAA)**	**Out of scope**
Bypass Blocks: 2.4.1 A mechanism is available to bypass blocks of content that are repeated on multiple Web pages. **(Level A)**	**Pass (H)**
Page Titled: 2.4.2 Web pages have titles that describe topic or purpose. **(Level A)**	**Pass (H)**
Focus Order: 2.4.3 If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability.. **(Level A)**	**Fail (H)**

Link Purpose (In Context): 2.4.4 The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general. **(Level A)**	**Fail (H)**
Multiple Ways: 2.4.5 More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process. **(Level AA)**	**Pass (M)**
Headings and Labels: 2.4.6 Headings and labels describe topic or purpose. **(Level AA)**	**Pass (M)**
Focus Visible: 2.4.7 Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. **(Level AA)**	**Pass (M)**
Location: 2.4.8 Information about the user's location within a set of Web pages is available. **(Level AAA)**	**Out of scope**
Link Purpose (Link Only): 2.4.9 A mechanism is available to allow the purpose of each link to be identified from link text alone, except where the purpose of the link would be ambiguous to users in general. **(Level AAA)**	**Out of scope**
Section Headings: 2.4.10 Section headings are used to organize the content. **Note:** "Heading" is used in its general sense and includes titles and other ways to add a heading to different types of content. **Note:** This success criterion covers sections within writing, not user interface components. User interface components are covered under Success Criterion 4.1.2. **(Level AAA)**	**Out of scope**
Focus Not Obscured (Minimum): (WCAG 2.2) 2.4.11 When a user interface component receives keyboard focus, the component is not entirely hidden due to author-created content. **(Level AA) [New 2.2]**	**Not Applicable (N/A)**
Focus Not Obscured (Enhanced): (WCAG 2.2) 2.4.12 When a user interface component receives keyboard focus, no part of the component is hidden by author-created content. **(Level AAA) [New 2.2]**	**Out of scope**

Focus Appearance: (WCAG 2.2) 2.4.13 When the keyboard focus indicator is visible, an area of the focus indicator meets all the following: • is at least as large as the area of a 2 CSS pixel thick perimeter of the unfocused component or sub-component, and • has a contrast ratio of at least 3:1 between the same pixels in the focused and unfocused states. Exceptions: • The focus indicator is determined by the user agent and cannot be adjusted by the author, or • The focus indicator and the indicator's background color are not modified by the author. **Note** What is perceived as the user interface component or sub-component (to determine the perimeter) depends on its visual presentation. The visual presentation includes the component's visible content, border, and component-specific background. It does not include shadow and glow effects outside the component's content, background, or border. **Note** Examples of sub-components that may receive a focus indicator are menu items in an opened drop-down menu, or focusable cells in a grid. **Note** Contrast calculations can be based on colors defined within the technology (such as HTML, CSS and SVG). Pixels modified by user agent resolution enhancements and anti-aliasing can be ignored. **(Level AAA) [New 2.2]**	**Out of scope**

Pointer Gestures: 2.5.1 All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential. **Note:** This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology). **(Level A)**	**Not Applicable (N/A)**
Pointer Cancellation: 2.5.2 For functionality that can be operated using a single pointer, at least one of the following is true: • **No Down-Event** The down-event of the pointer is not used to execute any part of the function; • **Abort or Undo** Completion of the function is on the up-event, and a mechanism is available to abort the function before completion or to undo the function after completion; • **Up Reversal** The up-event reverses any outcome of the preceding down-event; • **Essential** Completing the function on the down-event is essential. **Note:** Functions that emulate a keyboard or numeric keypad key press are considered essential. **Note:** This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology). **(Level A)**	**Pass (H)**
Label in Name: 2.5.3 For user interface components with labels that include text or images of text, the name contains the text that is presented visually. **Note:** A best practice is to have the text of the label at the start of the name. **(Level A)**	**Fail (H)**

Motion Actuation: 2.5.4 Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when: • **Supported Interface** The motion is used to operate functionality through an accessibility supported interface; • **Essential** The motion is essential for the function and doing so would invalidate the activity. **(Level A)**	**Pass (H)**
Target Size (Enhanced) 2.5.5 The size of the target for pointer inputs is at least 44 by 44 CSS pixels except when: • **Equivalent** The target is available through an equivalent link or control on the same page that is at least 44 by 44 CSS pixels; • **Inline** The target is in a sentence or block of text; • **User Agent Control** The size of the target is determined by the user agent and is not modified by the author; • **Essential** A particular presentation of the target is essential to the information being conveyed. **(Level AAA)**	**Out of scope**
Concurrent Input Mechanisms : 2.5.6 Web content does not restrict use of input modalities available on a platform except where the restriction is essential, required to ensure the security of the content, or required to respect user settings. **(Level AAA)**	**Out of scope**
Dragging Movements: (WCAG 2.2) 2.5.7 All functionality that uses a dragging movement for operation can be achieved by a single pointer without dragging, unless dragging is essential or the functionality is determined by the user agent and not modified by the author. **Note:** This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology). **(Level AA) [New 2.2]**	**Not Applicable (N/A)**

Target Size (Minimum): (WCAG 2.2) 2.5.8 The size of the target for pointer inputs is at least 24 by 24 CSS pixels, except where: • **Spacing:** The target does not overlap any other target and has a target offset of at least 24 CSS pixels to every adjacent target; • **Equivalent:** The function can be achieved through a different control on the same page that meets this criterion. • **Inline:** The target is in a sentence, or is in a bulleted or numbered list, or its size is otherwise constrained by the line-height of non-target text; • **User agent control:** The size of the target is determined by the user agent and is not modified by the author; • **Essential:** A particular presentation of the target is essential or is legally required for the information being conveyed; **Note:** Targets that allow for values to be selected spatially based on position within the target are considered one target for the purpose of the success criterion. Examples include sliders with granular values, color pickers displaying a gradient of colors, or editable areas where you position the cursor. **Note:** For inline targets the line-height should be interpreted as perpendicular to the flow of text. For example, in a language displayed top to bottom, the line-height would be horizontal. **(Level AA) [New 2.2]**	**Pass (M)**

Principle 3: Understandable – Information and the operation of user interface must be understandable.	
Language of Page: 3.1.1 The default human language of each Web page can be programmatically determined. **(Level A)**	**Pass (H)**
Language of Parts: 3.1.2 The human language of each passage or phrase in the content can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text. **(Level AA)**	**Not Applicable (N/A)**
Unusual Words: 3.1.3 A mechanism is available for identifying specific definitions of words or phrases used in an unusual or restricted way, including idioms and jargon. **(Level AAA)**	**Out of scope**
Abbreviations: 3.1.4 A mechanism for identifying the expanded form or meaning of abbreviations is available. **(Level AAA)**	**Out of scope**
Reading Level: 3.1.5 When text requires reading ability more advanced than the lower secondary education level after removal of proper names and titles, supplemental content, or a version that does not require reading ability more advanced than the lower secondary education level, is available. **(Level AAA)**	**Out of scope**
Pronunciation: 3.1.6 A mechanism is available for identifying specific pronunciation of words where meaning of the words, in context, is ambiguous without knowing the pronunciation. **(Level AAA)**	**Out of scope**
On Focus: 3.2.1 When any user interface component receives focus, it does not initiate a change of context. **(Level A)**	**Pass (H)**

On Input: 3.2.2 Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behaviour before using the component. **(Level A)**	**Pass (H)**
Consistent Navigation: 3.2.3 Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user. **(Level AA)**	**Pass (M)**
Consistent Identification: 3.2.4 Components that have the same functionality within a set of Web pages are identified consistently. **(Level AA)**	**Pass (M)**
Change on Request: 3.2.5 Changes of context are initiated only by user request or a mechanism is available to turn off such changes. **(Level AAA)**	**Out of scope**
Consistent Help: (WCAG 2.2) 3.2.6 If a web page contains any of the following help mechanisms, and those mechanisms are repeated on multiple web pages within a set of web pages, they occur in the same relative order to other page content, unless a change is initiated by the user: • Human contact details; • Human contact mechanism; • Self-help option; • A fully automated contact mechanism. **Note:** Help mechanisms may be provided directly on the page, or may be provided via a direct link to a different page containing the information. **Note:** For this Success Criterion, the same relative order can be thought of as how the content is ordered when the page is serialized. The visual position of a help mechanism is likely to be consistent across pages for the same page variation (e.g., CSS break-point). The user can initiate a change, such as changing the page's zoom or orientation, which may trigger a different page variation. This criterion is concerned with relative order across pages displayed in the same page variation (e.g., same zoom level and orientation). **(Level A) [New 2.2]**	**Not Applicable (N/A)**
Error Identification: 3.3.1 If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text. **(Level A)**	**Not Applicable (N/A)**

Labels or Instructions: 3.3.2 Labels or instructions are provided when content requires user input. **(Level A)**	**Fail (H)**
Error Suggestion: 3.3.3 If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content. **(Level AA)**	**Not Applicable (N/A)**
Error Prevention (Legal, Financial, Data): 3.3.4 For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true: • **Reversible:** Submissions are reversible. • **Checked:** Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. • **Confirmed:** A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. **(Level AA)**	**Not Applicable (N/A)**
Help: 3.3.5 Context-sensitive help is available. Provide instructions and cues in context to help inform completion and submission. **(Level AAA)**	**Out of scope**
Error Prevention (All): 3.3.6 For Web pages that require the user to submit information, at least one of the following is true: • **Reversible** Submissions are reversible. • **Checked** Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. • **Confirmed** A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. **(Level AAA)**	**Out of scope**

Redundant Entry: (WCAG 2.2) 3.3.7 Information previously entered by or provided to the user that is required to be entered again in the same process is either: • auto-populated, or • available for the user to select. **Except when**: • re-entering the information is essential, • the information is required to ensure the security of the content, or • previously entered information is no longer valid. **(Level A) [New 2.2]**	**Not Applicable (N/A)**
Accessible Authentication: (WCAG 2.2) 3.3.8 A cognitive function test (such as remembering a password or solving a puzzle) is not required for any step in an authentication process unless that step provides at least one of the following: • **Alternative:** Another authentication method that does not rely on a cognitive function test. • **Mechanism:** A mechanism is available to assist the user in completing the cognitive function test. • **Object Recognition:** The cognitive function test is to recognize objects. • **Personal Content:** The cognitive function test is to identify non-text content the user provided to the website. **Note:** "Object recognition" and "Personal content" may be represented by images, video, or audio. **Note:** Examples of mechanisms that satisfy this criterion include: 1. support for password entry by password managers to reduce memory need, and 2. copy and paste to reduce the cognitive burden of re-typing. **(Level AA) [New 2.2]**	**Not Applicable (N/A)**
Accessible Authentication (Enhanced): (WCAG 2.2) 3.3.9 A cognitive function test (such as remembering a password or solving a puzzle) is not required for any step in an authentication process unless that step provides at least one of the following: **Alternative:** Another authentication method that does not rely on a cognitive function test. **Mechanism:** A mechanism is available to assist the user in completing the cognitive function test. **(Level AAA) [New 2.2]**	**Out of scope**

Principle 4: Robust – Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies	
Parsing: WCAG 2.2 4.1.1 In content implemented using mark-up languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features. **Note:** Start and end tags that are missing a critical character in their formation, such as a closing angle bracket or a mismatched attribute value quotation mark are not complete. **(Level A) [Changed 2.2]** **Note: Change in 2.2: Obsolete and removed** This criterion was originally adopted to address problems that Assistive Technology had directly parsing HTML. Assistive Technology no longer has any need to directly parse HTML and, consequently, these problems no longer exists. Accessibility errors failed by this criterion also fail other criteria. This criterion no longer has utility and is removed; the reference has been left for historical purposes to show the original intent. **Note:** This criterion has been removed from WCAG 2.2. In WCAG 2.1 and 2.0, Success Criterion 4.1.1 Parsing should be considered as **always satisfied** for any content using HTML or XML.	**Not applicable (N/A)**
Name, Role, Value: 4.1.2 For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies. **Note:** This success criterion is primarily for Web authors who develop or script their own user interface components. For example, standard HTML controls already meet this success criterion when used according to specification. **(Level A)**	**Fail (H)**
Status Messages 4.1.3 In content implemented using markup languages, status messages can be programmatically determined through role or properties such that they can be presented to the user by assistive technologies without receiving focus. **(Level AA)**	**Not Applicable (N/A)**

Appendix III

The Process

The service is measured against the Web Accessibility Initiative's (WAI) Web Content Accessibility Guidelines 2.2 to give accurate feedback on any non-compliant issues. To attain our accreditation all A and AA criteria must be achieved.

To give a more accurate review of the service the DAC team employ two differing testing processes.

The first is a manual technical audit using automated tools and the second a dedicated team of user testers with differing disabilities test using a range of adaptive technologies. The findings of both testing teams are then combined to give the client far more accurate feedback on the service.

By using the testing team in conjunction with an automated procedure a more accurate set of results are made available.

This report combines technical auditing with disabled user feedback. The test does not list each specific area that requires change but highlights patterns of problems where they exist. Each section of the report includes a qualifying statement of pass, fail or recommendation to help developers quickly identify which parts of the service need the most urgent attention.

CRITERIA

High Priority

The digital product has one or more issues that urgently need remediation. There will be a list of actions that the developers need to address to make sure that the product is functional for users of assistive technology.

Medium Priority

The digital product has one or more issues that need remediation before meeting the WCAG 2.2 AA Standard. There will be a list of actions that the developers need to address to make sure that the product meets the expectations of the DAC testing team.

Low Priority

The digital product has one or more issues that would cause minor barriers to users of assistive technology. While not necessary to meet the WCAG 2.2 AA Standard, these issues affect users negatively and should be remediated.

Usability

The digital product may have one or more issues that could cause minor difficulties to users of assistive technology. While not necessary to meet the WCAG 2.2 AA Standard, these issues were found to hinder users.

DAC Testing Procedure

The service is tested by a team of experienced auditors and analysts, many of who are disabled individuals and users of adaptive technology. The combination of subjective pan-disability user feedback and comprehensive technical auditing allows us to measure how the service performs technically and practically, thereby offering an essential added dimension to our test results that other methods of testing cannot provide.

User Testing

Manual accessibility checking was conducted by a team of disabled individuals, using a range of adaptive technologies (hardware and software designed to facilitate the use of computers by people with disabilities). This may include:

NVDA: a screen reader and application used by those who are blind.
ZoomText: a magnification application used by those with low vision.
JAWS: a screen reader used by blind people to access pages.
Dragon Naturally Speaking: voice activated software used by those that do not use a conventional input device such as a keyboard or mouse.
Switch Access: used by those with severe mobility impairments to input commands to a computer.
Keyboard Only: some users with mobility impairments have difficulty making precise movements required by pointing devices such as a mouse; therefore, a keyboard is used as the exclusive input device.
Readability: Manual checks were made to assess the suitability of a page for those with colour blindness and dyslexia.
Deaf/Hard of hearing: Manual checks were made to assess the suitability of a page for those with hearing impairments.
Learning difficulties: Manual checks were made to assess the suitability of a page for those with learning difficulties.
Reflow: tests with screen size of 1280 x 1024px, at 400% browser magnification
Text Spacing: tests with larger Line height, and larger Paragraph, Word and Letter spacing.

Technical Auditing

Technical auditing involves the experienced application of a number of technical auditing and standards compliance assessment tools. This combined with an extensive knowledge of WCAG, its application and wider global practice provides the DAC service with further credibility and quality.