



Digital Accessibility Centre

Accessibility Audit Report for HS2 Main Website

| | |
|----------|------------------------------|
| Company | HS2 |
| Date | 2 nd January 2024 |
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| Version | v1.0 Draft |
| Standard | WCAG 2.1 |

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Document Control

| | |
|-----------------------------------|--|
| Site/product/app name: | HS2 Main Website |
| Client: | HS2 |
| Project lead: | Owain Jones |
| User Testing Support: | Sam Schwartz |
| Technical Auditing Report Author: | Owain Jones |
| Quality checked by: | Deborah Roberts |
| Address: | Digital Accessibility Centre Stephen Lloyd Suite (Unit 18) D'arcy Business Park Llandarcy Neath SA10 6FG |
| Contact details: | Deborah.Roberts@digitalaccessibilitycentre.org Gavin.evans@digitalaccessibilitycentre.org 079366 85804 Cam.nicholl@digitalaccessibilitycentre.org 07597 690358 |
| Phone: | 01792 815267 (DAC Offices) |
| Date of audit: | 2 nd January 2024 |
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Executive Summary

An accessibility audit for HS2 Main Website was carried out by the Digital Accessibility Centre (DAC) user/technical team on 2nd January 2024.

The HS2 Main Website was assessed against the Web Content [Accessibility Guidelines WCAG 2.1](#).

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 website; wherever these barriers are present, they will also need to be resolved.

As the '360 Interchange Station Virtual Tour' is the subject of a separate audit, then the embedded version of it found on the home page has not been considered and issues repeated here, except for how it interfaces with the home page and the issues that its embedding there has caused.

Also the Supply Chain map, which utilises Microsoft's 'Power BI', has not been considered here, as it is a third party app. Although, Microsoft provides a [WCAG-based VPAT for Power BI](#) for download.

Our cognitive user tester had minor issues with the visual appearance of links, styled as buttons, not providing sufficient visual cues to make it obvious to them that the link was actionable, as its appearance and phrasing were too close to that of looking like boxed inset text instead. Overall, though, they felt that the site was nice and accessible, with most elements working as they expected.

Our low vision user tester encountered some major issues, particularly related to screen magnification and page reflow, as some components became cluttered and difficult to use. Though they were, overall, able to see, read and interact with the website, and expressed that they would visit the site in the future, if needed.

Our voice activation user tester encountered major issues that meant that they were not able to access all elements independently and required some assistance to complete the journey. Our keyboard only user tester also encountered major issues that meant they were also unable to complete the journey independently as well. Much of this was related to the 'In your area map' graphical map component.

Our screen reader user tester did complete their journey independently. However, they encountered some major challenges in accessing content related to the 'In your area' map. Which resulted in them missing some of the available information, as the text only version of the graphical map is not informationally and functionally equivalent.



The initial page, due to its embedding of the '360 Interchange Station Virtual Tour' in an iframe on the page, featured two main landmarks, two skip links, two cookie notices, which proved particularly perplexing for them to navigate.

Though, overall, they could access all components of this service excluding the graphical map, they felt the overall user experience was not a seamless one.

A number of 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 2.1 success criteria, could be improved to benefit the overall user experience.

Issues are organised in the report by the WCAG 2.1 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 website is measured against the Web Accessibility Initiative's (WAI) Web Content Accessibility Guidelines 2.1 (WCAG 2.1) to give accurate feedback on any non-compliant issues.

For the website to be eligible for a Digital Accessibility Centre AA certification, and fall in line with WCAG 2.1 requirements, all A and AA issues must be resolved.

Areas of the website which fail to meet the WCAG 2.1 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 AAA and [Usability feedback](#) section of the report are also addressed to ensure a fully accessible, usable, and inclusive service.



A

[Duplicate Main Regions](#)

[Skip Links](#)

[Focus Order](#)

[Focus](#)

[Link Purpose \(Link Only\)](#)

[Redundant Alt Text](#)

[External Links](#)

[Mobile Map Inaccessible](#)

[Label in Name](#)

[Visually Hidden Heading](#)

[Headings](#)

[Non-text Content](#)

[Keyboard Inaccessible](#)

[Sensory Characteristics](#)

[Audio Description or Media Alternative](#)



AA

[Non-text Contrast](#)

[Resize Text](#)

[Reflow](#)



Scope

Tasks

Brief Task and/or URLs are listed below along with the specific browser and AT set.

URL: <https://www.hs2.org.uk/>

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-project-update/>

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-and-the-integrated-rail-plan/>

URL: <https://www.hs2.org.uk/the-route/london-to-west-midlands/>

URL: <https://www.hs2.org.uk/the-route/crewe-to-manchester/>

URL: <https://www.hs2.org.uk/in-your-area/map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network>

URL: <https://www.hs2.org.uk/why/capacity/>

URL: <https://www.hs2.org.uk/why/carbon/>

URL: <https://www.hs2.org.uk/building-hs2/trains/>

URL: <https://www.hs2.org.uk/building-hs2/viaducts-and-bridges/>

URL: <https://www.hs2.org.uk/in-your-area/assistance-for-property-owners/>

URL: <https://www.hs2.org.uk/events/>

URL: <https://www.hs2.org.uk/events/hs2-and-bbv-drop-in-burton-green-village-hall/>

URL: <https://www.hs2.org.uk/supply-chain/direct-contract-opportunities/>

URL: <https://www.hs2.org.uk/supply-chain/supply-chain-maps/>

URL: <https://www.hs2.org.uk/about-us/our-people/>

URL: <https://www.hs2.org.uk/people/alan-foster/>

URL: <https://www.hs2.org.uk/about-us/our-documents/>

URL: <https://www.hs2.org.uk/about-us/our-documents/northamptonshire-construction-look-ahead-autumn-2023/>

See [Appendix I](#) for a full list of tasks and instructions



Browser matrix and Assistive Technology (AT) combinations

Desktop

| User type | Operating System (OS) | Browser | Assistive Technology |
|--|-----------------------|-------------------------|---|
| Blind | Windows | Chrome (Latest version) | JAWS 2019 or above |
| | | Chrome (Latest version) | NVDA (Latest version) |
| Mobility | Windows | Chrome (Latest version) | Dragon Voice Activation v15 or above |
| Mobility | Windows | Chrome (Latest version) | Keyboard |
| | | Chrome (Latest version) | Keyboard |
| Deaf | Windows | Chrome (Latest version) | - |
| Colour Blind/ Dyslexia | Windows | Chrome (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 |



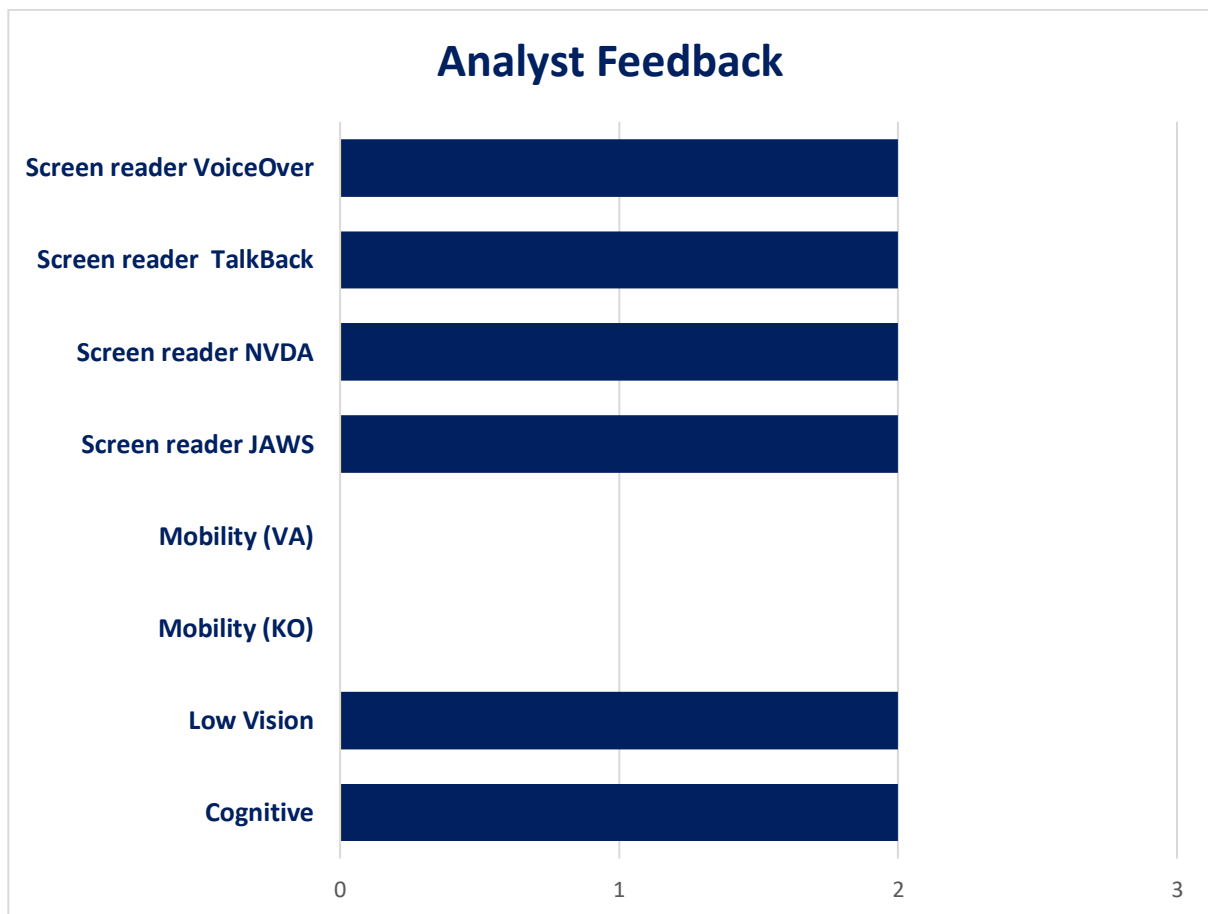
Summary Graphs

Analyst Feedback

Our analysts provided their overall feedback on the website.

This was rated from 0 – could not complete to 3 – Completed independently, no issues.

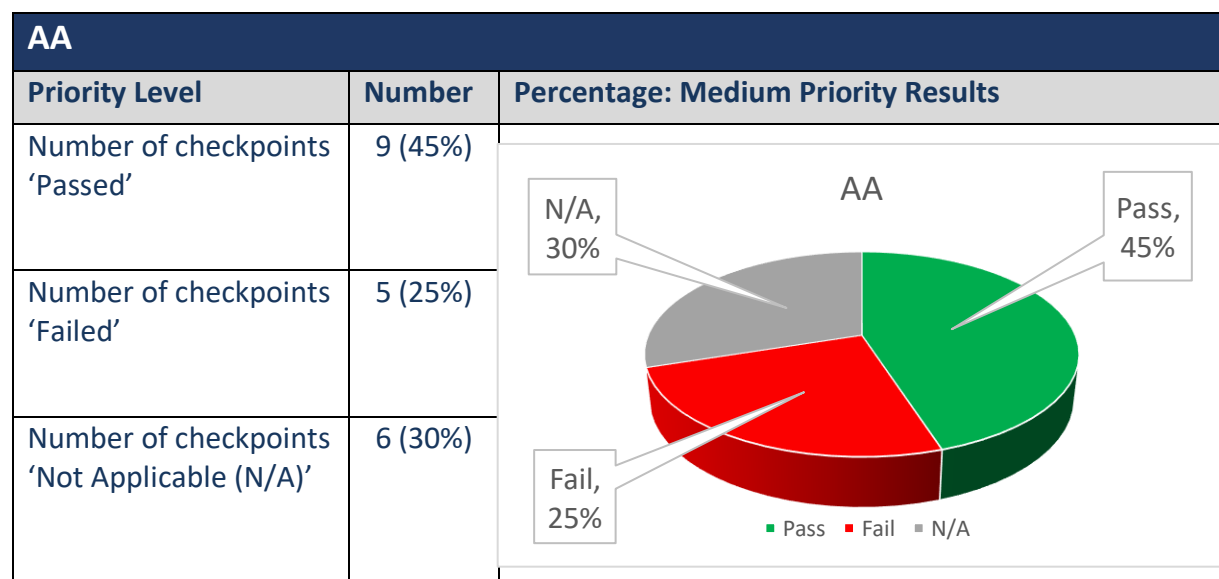
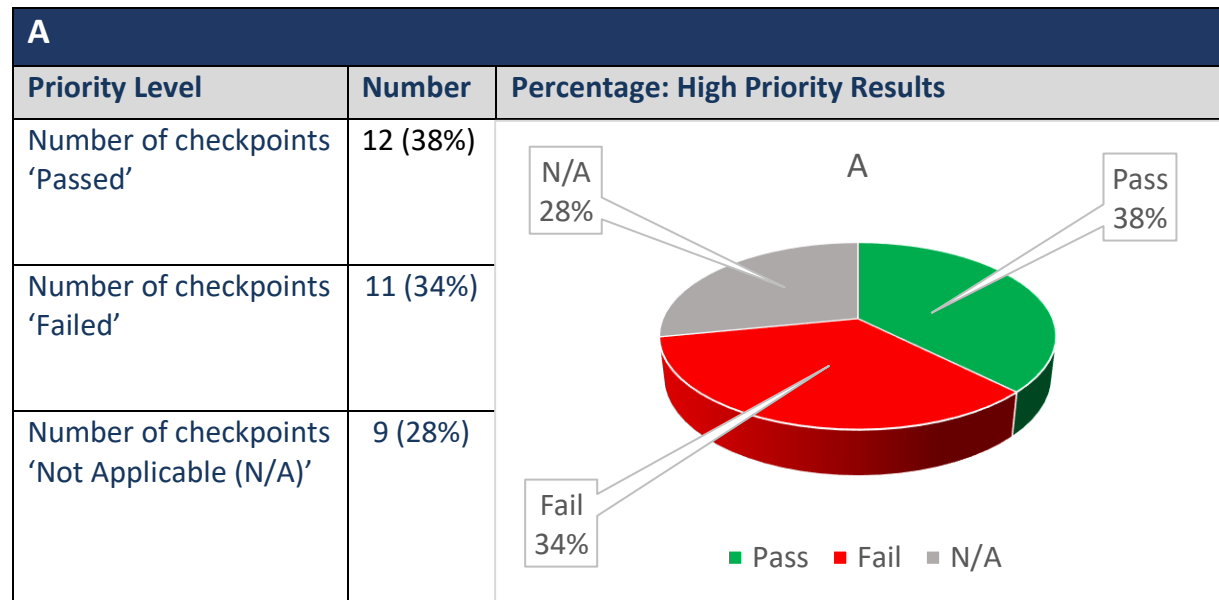
| Key: | |
|------|---|
| 0 | Could not complete on my own |
| 1 | Completed independently but with major issues |
| 2 | Completed independently but with minor issues |
| 3 | Completed independently, no issues |



WCAG 2.1 Breakdown

The graphs below detail the number of checkpoints that passed, failed or were not applicable to the website.

Please refer to the [Classification of Accessibility Issues](#) for more information.



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 2.1 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 2.1 A. For the website to fall in line with WCAG 2.1 requirements, all A issues must be resolved.

Duplicate Main Regions

Inclusion of other page in iframe redundantly doubles up the main region and skip links.

WCAG Reference:

1.3.1 Info and Relationships (Level A)

[Understanding Info and Relationships](#) | [How to Meet Info and Relationships](#)

2.4.1 Bypass Blocks (Level A)

[Understanding Bypass Blocks](#) | [How to Meet Bypass Blocks](#)

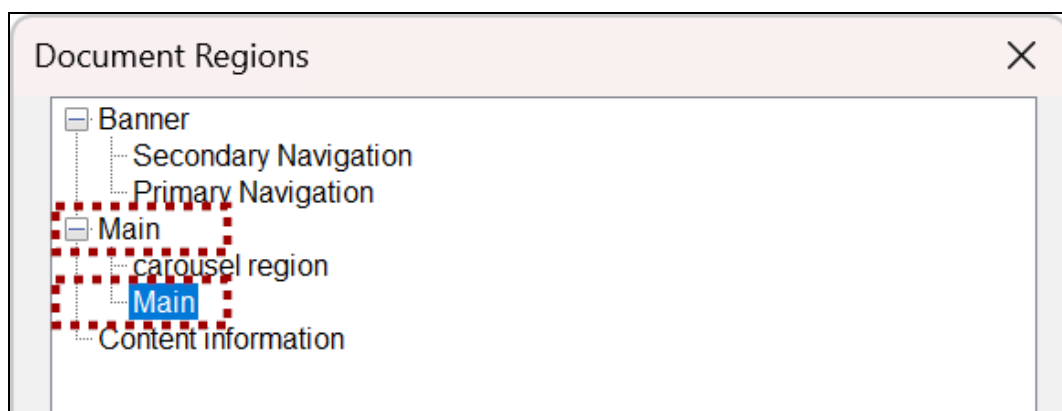
Issue ID: DAC_Duplicate_Main_Regions_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage - HS2'

Journey: 1.1

Screenshot:



On the HS2 home page, due to the inclusion of the '360 Interchange virtual tour' within an iframe on the page, thereby including another complete document within the page, this results in bringing in that other page's skip link, cookie notice and main region within the homepage's own main region.

This doubling up of the skip link mechanism creates conflict and user confusion, where two sections of the page have the duplicated `id` of 'main' (which is invalid HTML, as the `id` attribute must be unique within a page).

Also, as discussed by [Technique ARIA11: Using ARIA landmarks to identify regions of a page](#), if there are multiple regions of the same type, then they should also be labelled through ARIA (e.g. the `aria-label` attribute) to uniquely distinguish them.

There is a second 'go to content' skip link, included from the other page, within the page's main region. Where both of these skip links target the duplicated id of 'main'.

To compound the issue, this included second skip link does not become visible when focused (see issue [DAC Focus Visible 01](#)), and has no useful effect as the iframe's main region begins immediately after this skip link, so there is nothing to be skipped.

This affects keyboard users, as the second skip link is an invisible tab stop for keyboard users and, for screen reader users, they confusingly encounter a 'Go to content' skip link in the middle of the page's content.

Current code ref(s):

body

```
<body [...]>
  [...]
  <a class="skip-to-content js-skip-to-content" id="top" href="#main">Go to
content</a>
  <div class="wrap no-margin">
    [...]
    <main class="page" id="main" tabindex="-1">
      [...]
      <iframe width="640" height="360"
src="https://360.hs2.org.uk/interchange/" title="Showcasing one of the world's
most environmentally-friendly railway stations" allowfullscreen="">
        [...]
        <body class="en">
          <a class="skip-to-content-link" href="#main">Skip to content</a>
          <main id="main">
            [...]
          </main>
        </body>
      </iframe>
    </main>
  </div>
  [...]
</body>
```

Screen reader user comments:

"I identified two main landmarks on this page, causing difficulty in discerning the focal point of crucial information. Ideally there should be a singular main landmark on a page, to effectively signify the pivotal content. Simplifying the page structure to incorporate only one main landmark would enhance clarity and user experience."



Screen reader user comments:

"I encountered a second 'skip to content' link subsequent to a heading level two reading 'Showcasing one of the world's most environmentally friendly railway stations.' This was perplexing as conventionally I anticipate a skip link to be positioned at the commencement of a webpage, directly after the page title.

My screen reader indicated that the focus was positioned mid-page. This anomaly suggests to me a potential amalgamation of two distinct webpages.

Regardless of the cause, the current layout is perplexing and disorientating. I would advocate for a simplified page, segregating information into two or three separate pages for enhanced usability."

Screen reader user comments:

"Above the second carousel I located a 'skip to content' link. As a skip link is announced at the top of the page I do not understand the purpose of the second skip link."

Examples of additional instances:

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:

When there are multiple regions of the same type, ensure that they are uniquely and descriptively labelled to distinguish them. When there are multiple skip links on a page, ensure that they utilise different target id attributes to avoid them clashing and ensuring that they function correctly.

Ideally, to minimise user confusion, the page should only possess one skip link, one cookie banner and a single main region.

Consider that the 'Visit Interchange Station Virtual Tour' button that follows the iframe takes the user to the dedicated site of the virtual tour, that its direct inclusion on the home page only complicates the page and, through the added complication, does not present either element in its best light.

In this light, consider replacing the iframe embed with an image of the tour, encouraging users to visit the dedicated site instead.



Skip Links

An insufficient mechanism to bypass blocks of content that are repeated on multiple Web pages was present.

WCAG Reference:

2.4.1 Bypass Blocks (Level A)

[Understanding Bypass Blocks](#) | [How to Meet Bypass Blocks](#)

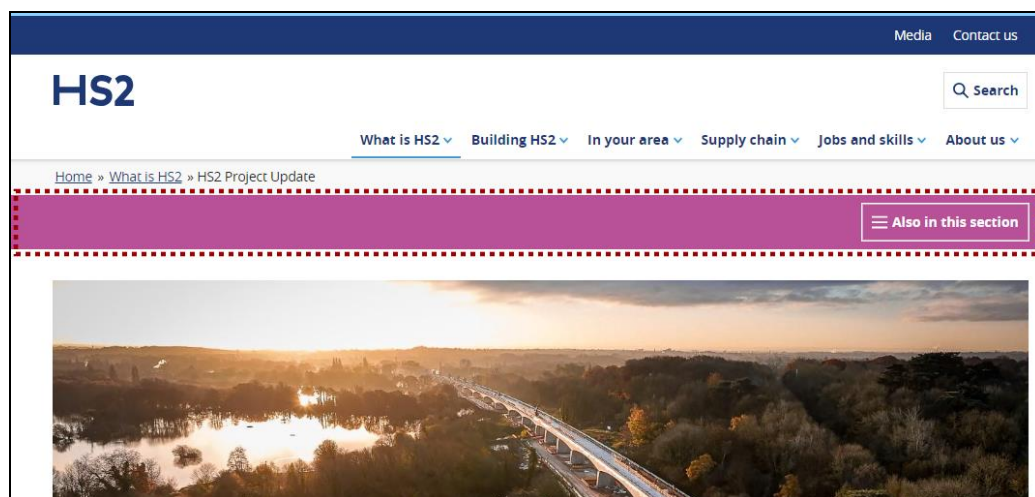
Issue ID: DAC_Skip_Links_02

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-project-update/>

Page title: 'HS2 Project Update – HS2'

Journey: 1.2

Screenshot:



On the 'H2 Project Update' page and subsequent pages throughout the journey, there is a repeated block of navigational content, labelled 'In this section', which provides links to the related pages within the current section of the website.

Being located at the start of the main region, the skip link does not bypass it and take the user to the beginning of the main primary content of the page.

This affects keyboard users, including screen reader users, as the skip link is not wholly skipping over all of the repeated blocks of navigational content.

Current code ref(s):

body

```
<body class="page-template-default page page-id-40213 page-child parent-pageid-8836 ie js-mobile-nav" [...]>
  [...]
  <a class="skip-to-content js-skip-to-content" id="top" href="#main">Go to content</a>
  <div class="wrap no-margin">
    <header class="global-header" id="global-header">
      [...]
    </header>
    <main class="page" id="main" tabindex="-1">
      <nav [...] aria-label="In this section">
        [...]
      </nav>
      <div class="page__main">
        <article class="container-outer">
          [...]
        </article>
      </div>
      [...]
    </main>
    [...]
  </div>
  [...]
</body>
```

Screen reader user comments:

"I found a navigation menu at the start of the main landmark. This led to a frustrating experience as it made me uncertain as to where the main content actually began. It would be beneficial if there was not a navigation menu located right at the beginning of the main landmark. Locating this navigation menu elsewhere would provide me with a more streamline experience."



Examples of additional instances:

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament – HS2'

Journey: 1.3

Current code ref(s):

body

```
<body class="page-template-default page page-id-31803 page-child parent-  
pageid-8836 ie js-mobile-nav" [...]>  
  [...]<br>  
  <a class="skip-to-content js-skip-to-content" id="top" href="#main">Go to  
content</a>  
  <div class="wrap no-margin">  
    <header class="global-header" id="global-header">  
      [...]<br>  
    </header>  
    <main class="page" id="main" tabindex="-1">  
      <nav [...] aria-label="In this section">  
        [...]<br>  
      </nav>  
      <div class="page__main">  
        <article class="container-outer">  
          [...]<br>  
        </article>  
      </div>  
    </main>  
  </div>  
  [...]<br>  
</body>
```



URL: <https://www.hs2.org.uk/in-your-area/local-community-webpages/crewe-to-manchester/>

Page title: 'Crewe to Manchester (Phase 2b – Western Leg) – HS2'

Journey: 1.6

Current code ref(s):

body

```
<body class="page-template-default page page-id-31791 page-child parent-  
pageid-18528 ie js-mobile-nav" [...]>  
  [...]<br>  
  <a class="skip-to-content js-skip-to-content" id="top" href="#main">Go to  
content</a>  
  <div class="wrap no-margin">  
    <header class="global-header" id="global-header">  
      [...]<br>  
    </header>  
    <main class="page" id="main" tabindex="-1">  
      <nav [...] aria-label="In this section">  
        [...]<br>  
      </nav>  
      <div class="page__main">  
        <article class="container-outer">  
          [...]<br>  
        </article>  
      </div>  
      [...]<br>  
    </main>  
    [...]<br>  
  </div>  
  [...]<br>  
</body>
```



URL: <https://www.hs2.org.uk/what-is-hs2/>

Page title: 'What is HS2 – HS2'

Journey: 1.8

Current code ref(s):

body

```
<body class="page-template page-template-page-templates page-template-landing-
page page-template-page-templateslanding-page-php page page-id-8836 page-
parent ie js-mobile-nav" [...]>
  [...]
  <a class="skip-to-content js-skip-to-content" id="top" href="#main">Go to
content</a>
  <div class="wrap no-margin">
    <header class="global-header" id="global-header">
      [...]
    </header>
    <main class="page" id="main" tabindex="-1">
      <nav [...] aria-label="In this section">
        [...]
      </nav>
      <div class="homepage-carousel margin-none slick-initialized slick-
slider slick-dotted" role="region" aria-label="carousel">
        [...]
      </div>
      [...]
    </main>
    [...]
  </div>
  [...]
</body>
```

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 a mechanism, such as a skip link, to bypass repeated blocks of content across a set of pages is provided and that this mechanism provides direct access to the primary content of the page.

In this instance, the 'In this section' navigation should be moved from the beginning of the main region, outside of it, such as to the end of the header region immediately preceding it, following the breadcrumb trail.



Example:

```
<body [...]>
  [...]
  <a class="skip-to-content js-skip-to-content" id="top" href="#main">Go to
content</a>
  <div class="wrap no-margin">
    <header class="global-header" id="global-header">
      [...]
      <nav [...] aria-label="In this section">
        [...]
      </nav>
    </header>
    <main class="page" id="main" tabindex="-1">
      <div class="page__main">
        <article class="container-outer">
          [...]
        </article>
      </div>
    </main>
    [...]
  </div>
  [...]
</body>
```

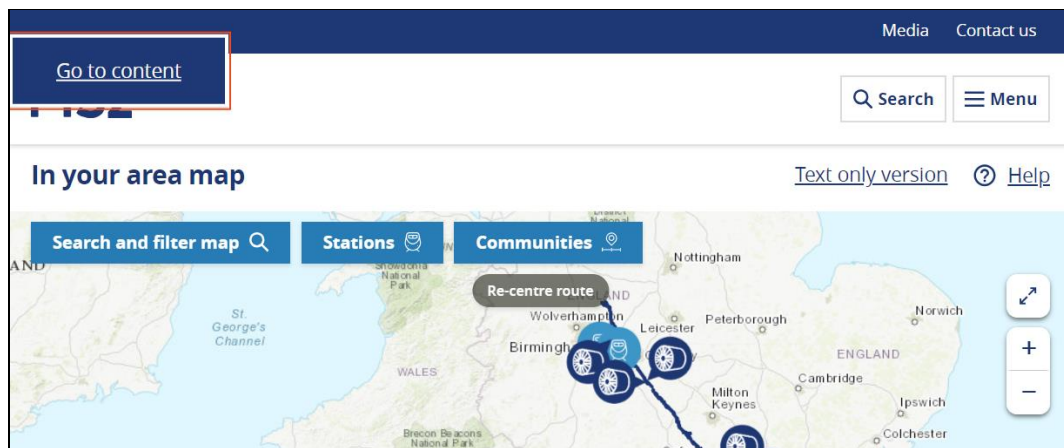


URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, the 'Go to content' skip link does not work as the target of the link (`#main`) does not exist on the page.

This affects keyboard users, including screen reader users, who rely on the presence of a working skip link as a navigational aid to bypass blocks of repeated content and jump immediately to the page's primary content.

Current code ref(s):

body

```
<body class="page-template page-template-page-templates page-template-work-items
page-template-map-page page-template-page-templateswork-itemsmap-page-php page
page-id-16084 page-parent page-child parent-pageid-17 ie js-mobile-nav" [...]>
  [...]
  <a class="skip-to-content js-skip-to-content" id="top" href="#main">Go to
content</a>
  <div class="wrap no-margin">
    [...]
    <main id="js-work-items" tabindex="-1" class="page page-work-items-map work-
items margin-none">
      [...]
    </main>
    [...]
  </div>
  [...]
</body>
```

Examples of additional instances:

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 a functioning mechanism is available to bypass blocks of content that are repeated on multiple Web pages. Ensure that the ID destination specified actually exists in the code.

In this instance, as the main region does already have an `id="js-work-items"` attribute applied to it and as `ids` must be unique, then it may not have another `id` attribute applied to it.

Therefore, it might be necessary to coordinate the skip link and JavaScript targets, by re-targeting any JavaScript to use an `id` of `main` or, alternatively, to use the target of `js-work-items` in the skip link.

Example:

```
<a class="skip-to-content js-skip-to-content" id="top" href="#main">Go to
content</a>
[...]  
<main id="main" tabindex="-1" class="page page-work-items-map work-items margin-
none">
  [...]  
</main>
```

(While ensuring any JavaScript targeting `js-work-items` is re-targeted to `main` instead.)



Focus Order

There were issues with the logical order of the keyboard focus through the page.

WCAG Reference:

2.4.3 Focus Order (Level A)

[Understanding Focus Order](#) | [How to Meet Focus Order](#)

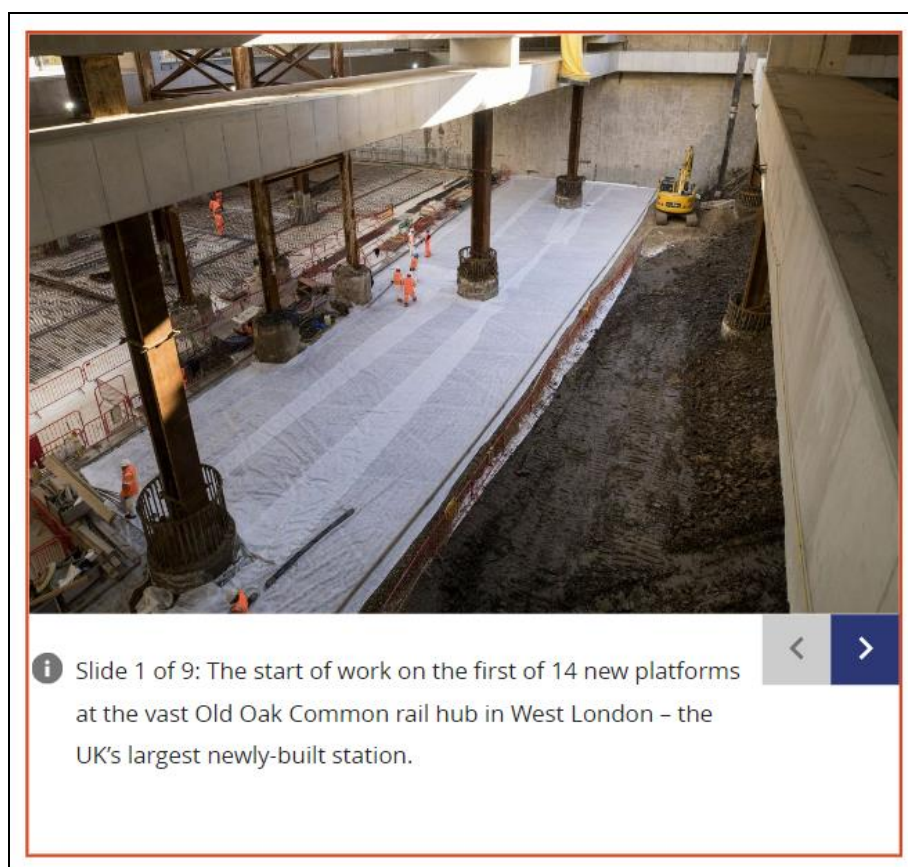
Issue ID: DAC_Focus_Order_01

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-project-update/>

Page title: 'HS2 Project Update – HS2'

Journey: 1.2

Screenshot:



On the 'HS2 Project Update' page, under the 'HS2 Project Update, January 2024' H2 heading, there is a carousel of captioned images, where, upon actioning the 'Previous' and 'Next' carousel controls, the focus is moved to the non-interactive carousel component itself each time.

This affects keyboard users, including screen reader users, to have to continually navigate back to the carousel controls with every change of slide and could leave such users confused to have non-actionable components receiving focus.



Current code ref(s):

#main > div.page__main > article > div.container-inner > div.container-component_image_carousel.component-constrained

```
<div class="container-component_image_carousel component-constrained">
  <section data-component="carousel" aria-roledescription="carousel">
    <div class="carousel__track" [...] tabindex="0" aria-live="polite">
      <figure class="media media-viewport carousel__track__slide js-current"
role="group" aria-roledescription="slide" aria-label="slide 1 of 9" style="left:
0px;">
        <div class="media__inner 3:2">
          <picture class="object-fit js-object-fit">
            [...]
          </picture>
        </div>
        <figcaption>
          <p><span>Slide 1 of 9:</span> The start of work [...]</p>
        </figcaption>
      </figure>
      <figure class="media media-viewport carousel__track__slide js-hidden"
role="group" aria-roledescription="slide" aria-label="slide 2 of 9" style="left:
816.667px;">
        <div class="media__inner 3:2">
          <picture class="object-fit js-object-fit">
            [...]
          </picture>
        </div>
        <figcaption>
          <p><span>Slide 2 of 9:</span> Over 130,000 tonnes of [...]</p>
        </figcaption>
      </figure>
      [...]
    </div>
    <ul class="js-carousel-controls clean-list no-margin-top" aria-
label="carousel controls" style="display: flex; position: absolute; right: 0px;
top: 544.438px;">
      <li>
        <button class="button js-previous" aria-label="Previous slide"
disabled="">
          [...]
        </button>
      </li>
      <li>
        <button class="button js-next" aria-label="Next slide">
          [...]
        </button>
      </li>
    </ul>
  </section>
</div>
```

Keyboard only user comments:

"My focus went onto the whole of the image slide show component. I found this confusing as I expect my focus to only go onto actionable elements, not onto areas of the page."



Examples of additional instances:

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 focusable components receive focus in an order that preserves meaning and operability. Ensure that non-actionable components do not receive focus without good reason.

Generally, forcing the focus to move should be minimised, as it can confuse and disorientate users to find the focus move somewhere unexpectedly. Leave the focus on the actioned control (unless the action, by its nature, involves moving focus, such as opening a pop-up or dialog. Although, once closed, focus should ideally return to the initiating control once more).

See [WAI-ARIA: Auto-Rotating Image Carousel Example with Buttons for Slide Control](#) for an example and discussion of accessible carousels.

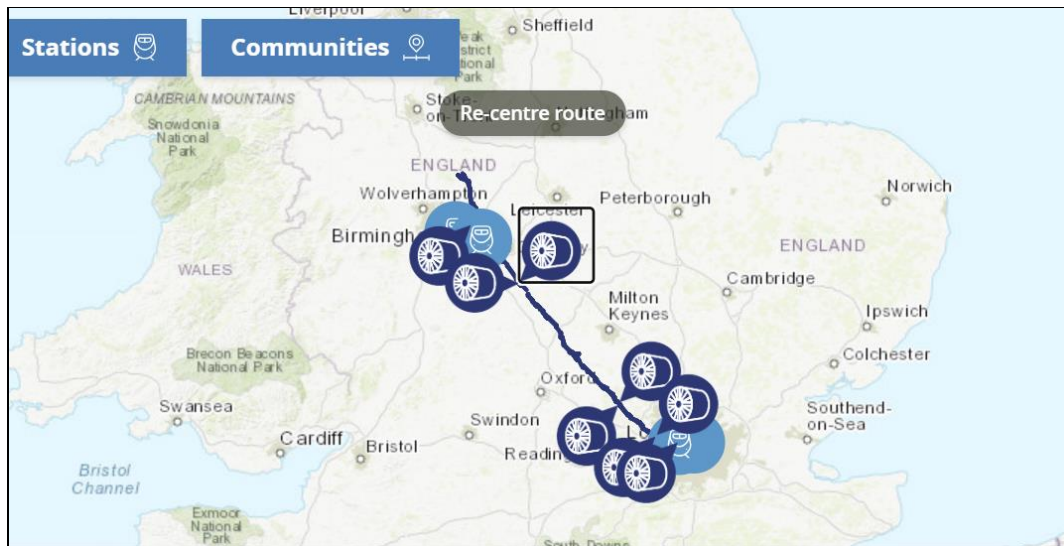


URL: https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-net_work,tbm

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, there are a number of dark blue focusable pins (relating to the tunnel boring machines) on the map, which do not seem to have any obvious logical ordering to them.

This affects keyboard users, as they are unable to predict where their focus will move to next and, as such, it would also be difficult for them to ascertain where in the sequence of pins they currently are.

This also affects voice activation users because, as there are no visible labels for directly selecting a pin by name, they need to resort to using keyboard voice commands to manually tab through the pins and, therefore, experience the same issue as keyboard users.

Current code ref(s):

#work-items-map-wrapper > div.leaflet-pane.leaflet-map-pane > div.leaflet-pane.leaflet-marker-pane

```
<div class="leaflet-pane leaflet-marker-pane">
  
  
  [...]
</div>
```

Keyboard only user comments:

"The tabbing order when going through the pins on the map is random. As a result, I did not know where my next keypress is going to take me."

Voice activation user comments:

"The pins on the map do not get picked up by Dragon. This meant that I had to use keyboard commands to tab onto them. As the tabbing order on the pins is not logical I found this difficult to do."

Examples of additional instances:

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 focusable components receive focus in an order that preserves meaning and operability. Focus should ideally travel from the top left of the page to the bottom right of the page (following the natural reading order).

In this instance, the pins could be ordered left-to-right or by distance along the HS2 track (as appears to already be the case with the station pins). Having a clear logical defined order would allow keyboard users to easily predict which pin they will be tabbing to next, as well as how many more tabs would be required to reach a certain pin or the end of the group of pins.



URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, under the 'Search and filter map' options, pins are added and removed immediately to the map, as the pin categories and property scheme options are selected and unselected.

In this context, the naming and purpose of the 'Show on map' button is non-descriptive and inaccurate, and as the user focus is not taken to the results on the map then it effectively acts as a second close button for the options sidebar.

This affects screen reader users, as they cannot see what content has been added and removed from the map in making their options selections, so it is vital for them that the 'Show on map' button functions as promised, bringing their focus to the map pins.

Current code ref(s):

```
#map-filters-options > form > div > button
```

```
<button class="button custom-map-filters__actions__submit">Show on map</button>
```

Screen reader user comments:

"I found the 'search and filter map' feature difficult to use. After expanding the 'search and filter map' button, inputting requested information, and hitting on the 'show on map' button, nothing seemed to happen according to the screen reader. It would be helpful if the screen reader focus landed on whatever results were brought up."

Examples of additional instances:

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 focusable components receive focus in an order that preserves meaning and operability.

In this instance, as the 'Show on map' button text promises, the focus should be taken to the map pins, when actioned.

Effectively the 'Search and filter map' options sidebar is functioning as a dialog and should follow the [WAI-ARIA: Dialog \(Modal\) Pattern](#). In this instance, this is fulfilling the need, with a dialog, that when the user has chosen to close it, that focus returned to the element that activated the dialog.

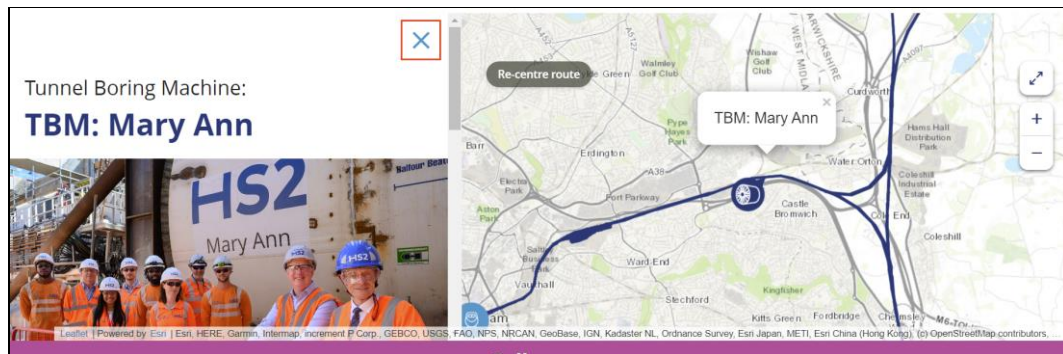


URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, when a pin is selected, a 'details' sidebar appears containing the pin's related article. In effect, as the code's choice of naming this sidebar component a 'dialog' suggests, this is logically akin to a button opening up a dialog and, as such, the focus should be taken into the sidebar 'dialog', which does not occur.

This affects screen reader users, as they are unaware that content has been added to the page nor where to find it in the focus order.

Current code ref(s):

#work-items__station-dialog

```
<div id="work-items__station-dialog" aria-modal="true" role="dialog" aria-  
labelledby="work-items__station-dialog_title" class="work-items__dialog-base  
work-items__dialog-base--alt js-map-sidebar" style="">  
  <button class="button maps-sidebar__close">  
    <span class="visuallyhidden">Close station information</span>  
    [...]  
  </button>  
  <div class="work-items-dialog_title">  
    <h2 id="work-items__station-dialog_title" class="size--xxl">Birmingham  
Curzon Street</h2>  
  </div>  
  [...]  
</div>
```


Screen reader user comments:

“Navigating the ‘stations’ and ‘communities’ buttons were straightforward, but I faced difficulty identifying when results were displayed and swiftly finding the presented information. This became time-consuming, requiring exploration of the page to locate the information brought up by interacting with these buttons. It would be beneficial if the screen reader focus automatically shifted to the displayed information upon pressing Enter on any of the options when the ‘stations’ and ‘communities’ buttons are expanded.”

Examples of additional instances:

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 focus is taken to the dialog when it appears or is placed within it when navigation continues.

Focus should remain within the dialog until the user has chosen to close it and focus returned to the element that activated the dialog.

See [WAI-ARIA: Dialog \(Modal\) Pattern](#) for a discussion and example of an accessible dialog pattern.



URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, from the 'Enter Fullscreen View' button, there is an additional invisible tab stop on a non-interactive div wrapper for the map.

This affects all sighted keyboard users, as they will be unable to determine where the keyboard focus currently resides whilst navigating on the page, leaving them confused and potentially disorientated should they lose track of where the keyboard focus currently is.

Current code ref(s):

#work-items-map-wrapper

```
<div id="work-items-map-wrapper" class="route-map-container margin-none leaflet-  
container leaflet-touch leaflet-retina leaflet-fade-anim leaflet-grab leaflet-  
touch-drag leaflet-touch-zoom" tabindex="0" style="position: relative;">  
  [...]  
</div>
```

Keyboard only user comments:

"There is a missing tab after the expand button. At this point I did not know where my focus had gone."

Examples of additional instances:

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 all interactive elements receive a clear and visible focus indicator.

In this instance, as the element is non-interactive and cannot be actioned, there seems to be no reason for the `tabindex="0"` attribute. Consider removing it entirely.



Focus

Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.

WCAG Reference:

2.4.3 Focus Order (Level A)

[Understanding Focus Order](#) | [How to Meet Focus Order](#)

2.4.7 Focus Visible (Level AA)

[Understanding Focus Visible](#) | [How to Meet Focus Visible](#)

Issue ID: DAC_Focus_01

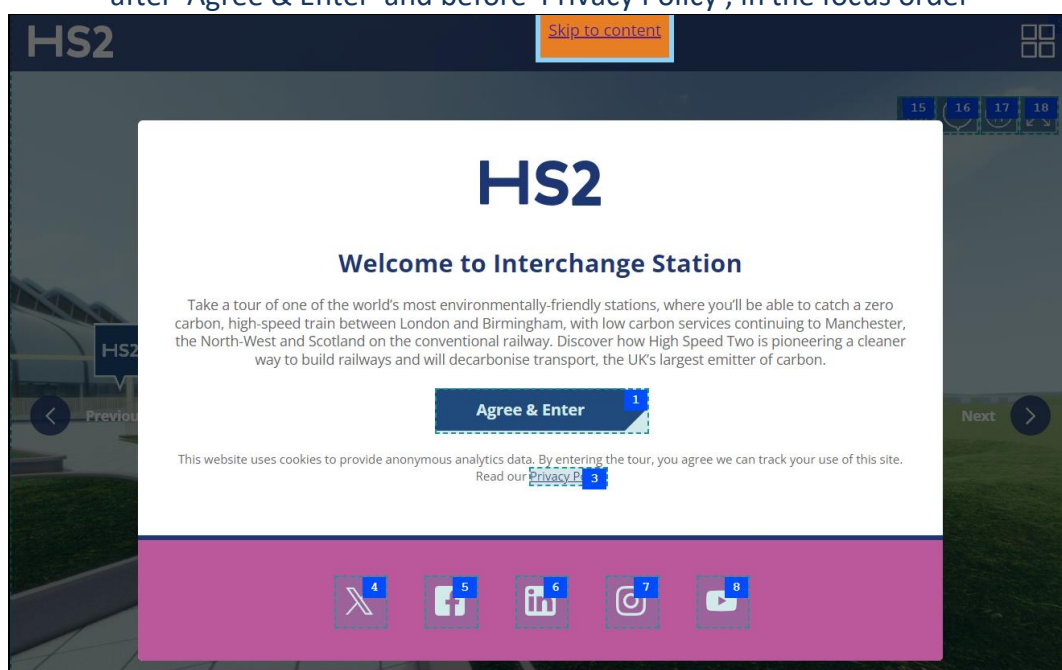
URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:

Skip link and tab order made visible to show that it is second, after 'Agree & Enter' and before 'Privacy Policy', in the focus order



On the HS2 home page, under the 'Showcasing one of the world's most environmentally-friendly railway stations' H2 heading, there is the '360 Interchange virtual tour' included within an iframe.

As mentioned in issue [DAC Duplicate Main Regions 01](#), as the virtual tour is its own page within the iframe, it brings with it its own skip link, cookie notice and main region to the page.

This second skip link is invisible to keyboard users, as the splash screen and header elements within the virtual tour have been given explicit `z-index` values (8000 and 6666 respectively), which brings them forward, visually obscuring the skip link (which would otherwise become visible when focused).

Furthermore, the 'Agree and Enter' button within the virtual tour iframe has had the attribute of `tabindex="5"` applied to it, in order to force it ahead of the second skip link in the focus order (as it deals with agreeing to cookies).

This, therefore, affects where keyboard users will encounter this invisible tab stop, as it will follow 'Agree and Enter' before cookies are accepted (as the `tabindex` on this button forces it ahead of where it would naturally fall) or it will follow 'Find out more', on the main page, after the cookie notice has been dismissed.

Current code ref(s):

body

```
<body class="en" screen_capture_injected="true">
  <a class="skip-to-content-link" href="#main">Skip to content</a>
  <main id="main">
    <!-- SPLASH SCREEN -->
    <div id="splash-outer">
      [...]
      <div class="content">
        [...]
        <div class="upper">
          <h1 id="splash-title">Welcome to Interchange Station</h1>
          [...]
          <a href="#" id="start" class="btn audio-on close-splash"
role="button" tabindex="5" onclick="playAudio();" aria-label="Agree and
Enter">Agree & Enter</a>
          [...]
        </div>
        [...]
      </div>
      [...]
    </div>
    [...]
  </div>
  [...]
  <div id="wrapper">
    [...]
    <header>
      [...]
    </header>
  </div>
</main>
[...]
```



CSS:

```
.skip-to-content-link
{
  background: #e77e23;
  height: 30px;
  left: 50%;
  padding: 8px;
  position: absolute;
  transform: translateY(-100%);
  transition: transform 0.3s;
}

#splash-outer
{
  [...]
  z-index: 8000;
  [...]
}

header
{
  [...]
  z-index: 6666;
  [...]
}
```

Keyboard only user comments:

"There is a missing tab between the 'accept & enter' button and the 'privacy policy' link. At this point I did not know where my focus has gone."
(Before cookies are accepted)

Keyboard only user comments:

"There is a missing tab after the 'find out more' button. At this point I did not know where my focus has gone."
(After cookies are accepted)

Examples of additional instances:

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 all interactive elements such as links receive a clear and visible focus indicator, and are not obscured by other elements.

In this instance, if the skip link is given a higher `z-index` value than the header or splash screen, then it will become visible when focused.

Example:

```
.skip-to-content-link
{
  [...]
  z-index: 9999;
}
```



Avoid using a positive `tabindex` attribute to change the focus order. Consider placing the cookie banner first in source order, before the skip link, and implementing it as a modal, as detailed at [WAI-ARIA: Dialog \(Modal\) Pattern](#).



Link Purpose (Link Only)

Links were encountered that were not descriptive of their purpose / destination when browsing out of context.

WCAG Reference:

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 \(Link Only\)](#)

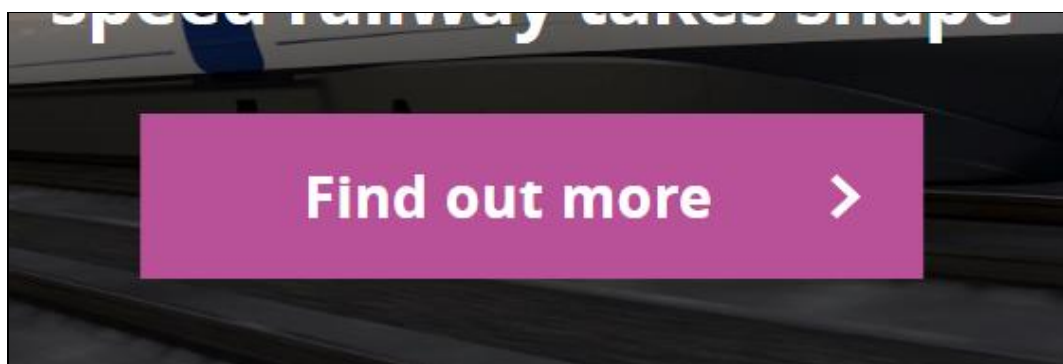
Issue ID: DAC_Link_Purpose_Link_Only_01

URL: <https://www.hs2.org.uk/>

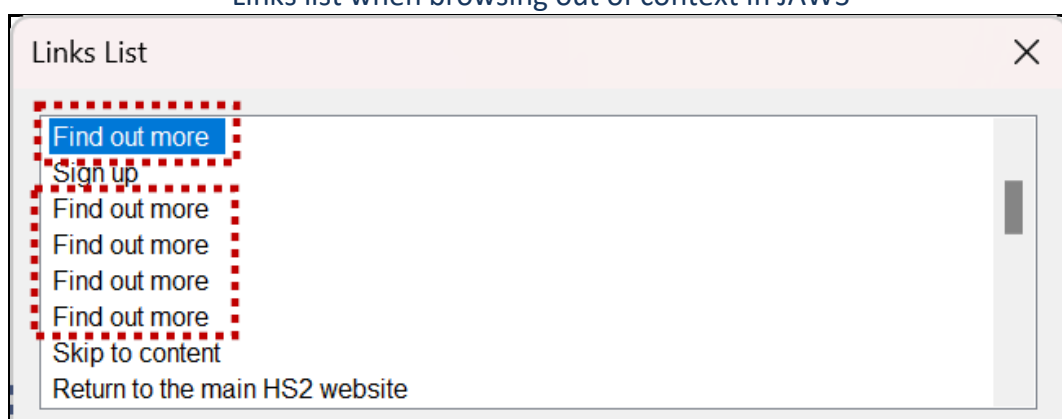
Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



Links list when browsing out of context in JAWS



On the 'Homepage – HS2' page and subsequent pages throughout the site, there are multiple 'Find out more' links that provide insufficient context for screen reader users, when browsing out of context, to differentiate these links from each other and understand their context to know whether to action a particular link or not. This may lead to confusion and



give users less control over the page as they will not understand the purpose of the link and whether they want to activate it.

Current code ref(s):

```
#main > div.homepage-carousel.margin--none.slick-initialized.slick-slider.slick-dotted > div >
div > div.slick-slide.slick-current.slick-active > div > div > div > div > a
<a class="button button-primary button-tertiary media__inner__caption__button"
href="https://mediacentre.hs2.org.uk/news/hs2-on-track-for-pivotal-12-months-as-
high-speed-railway-takes-shape" target="_blank" rel="noreferrer noopener"
tabindex="-1">
  Find out more
</a>
```

Screen reader user comments:

"When tabbing through the home page I located multiple 'find out more' links. These links can be problematic for JAWS users because they often lack descriptive information. JAWS relies on clear and informative link text to help users navigate websites. If the link text is vague, like "find out more," it doesn't provide meaningful context, making it challenging for users with screen readers to understand the purpose or destination of these link. This affects JAWS and VoiceOver."

Screen reader user comments:

"I found multiple links with the same link text, for example, 'Find out more.' This created a really frustrating experience when navigating out of context, as I was not able to tell the difference between these links and whether or not these links had a separate purpose to one another. It would be really helpful if links were given unique link text."

Examples of additional instances:

URL: <https://www.hs2.org.uk/>
Page title: 'Homepage – HS2'
Journey: 1.1

Current code ref(s):

```
#main > div.homepage-carousel.margin--none.slick-initialized.slick-slider.slick-dotted >
div > div > div.slick-slide.slick-current.slick-active > div > div > div > div > a
<a class="button button-primary button-tertiary media__inner__caption__button"
href="https://mediacentre.hs2.org.uk/news/more-jobs-and-business-
opportunities-created-as-hs2s-workforce-passes-30-000-milestone"
target="_blank" rel="noreferrer noopener">
  Find out more
</a>
```



URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Current code ref(s):

```
#main > div:nth-child(3) > div > div > div:nth-child(1) > div.group__item.fifty-fifty__text > div > a
```

```
<a class="button button-primary button-primary-secondary button-tertiary" href="https://www.hs2.org.uk/building-hs2/">
```

Find out more

```
</a>
```

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Current code ref(s):

```
#main > div:nth-child(3) > div > div > div:nth-child(2) > div.group__item.fifty-fifty__text > div > a
```

```
<a class="button button-primary button-primary-secondary button-tertiary" href="https://www.hs2.org.uk/in-your-area/">
```

Find out more

```
</a>
```

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 a link's purpose can be determined when navigating out of the context of the page reading the link text alone.

The best method for doing so is to provide the context within the visible link text itself, where appropriate, so that all users are informed. For example, 'Find out more about HS2'.

But appreciating that there's often a presentational need for brevity (to fit links within tight spaces or because the link is within paragraph text) or that a link's context is only ambiguous when browsing out of context, then the missing context can be provided to screen reader users through the use of visually hidden text.

Example:

```
<a class="button button-primary button-tertiary media__inner_caption_button" href="["...]" target="_blank" rel="noreferrer noopener" tabindex="-1">
```

Find out more

about Building HS2

```
</a>
```



Redundant Alt Text

Image alternative text redundantly duplicates accompanying caption.

WCAG Reference:

1.1.1 Non-text Content (Level A)

[Understanding Non-text Content](#) | [How to Meet Non-text Content](#)

Issue ID: DAC_Redundant_Alt_Text_01

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-project-update/>

Page title: 'HS2 Project Update – HS2'

Journey: 1.2

Screenshot:



On the 'HS2 Project Update' page and subsequent pages throughout the journey, there are images which feature both alternative text and a visible caption underneath.

This affects screen reader users, as both the alternative text and the visible caption will be announced by their screen reading software, needlessly repeating the same information twice.



Current code ref(s):

#main > div.page__main > article > div.container-outer > div > div

```
<div class="media media-full">
  <div class="media__inner">
    <picture>
      [...]
      
    </picture>
  </div>
  <div class="media__caption"> The Colne Valley Viaduct will be the longest rail
bridge in the UK.</div>
</div>
```

Screen reader user comments:

"I identified instances of duplicated text, where identical content is presented consecutively, leading to a tedious and time-consuming user experience. For example, the graphic is announced with the description 'The Colne Valley Viaduct will be the longest rail bridge in the UK.' And subsequently needlessly reiterated immediately following the graphic. It would enhance usability if the screen reader omitted detection of redundant occurrences, for example, not picking up on the graphic."

Examples of additional instances:

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament - HS2'

Journey: 1.3

Current code ref(s):

#main > div.page__main > article > div.container-outer > div > div

```
<div class="media media--full">
  <div class="media__inner">
    <picture>
      [...]
      
    </picture>
  </div>
  <div class="media__caption">Houses of Parliament at sunset.</div>
</div>
```



URL: <https://www.hs2.org.uk/in-your-area/local-community-webpages/crewe-to-manchester/>

Page title: 'Crewe to Manchester (Phase 2b – Western Leg) - HS2'

Journey: 1.6

Current code ref(s):

#main > div.page__main > article > div.container-outer > div > div

```
<div class="media media--full">
  <div class="media__inner">
    <picture>
      [...]
      
    </picture>
  </div>
  <div class="media__caption"> Aerial panoramic view of the Manchester city
centre skyline.</div>
</div>
```

URL: <https://www.hs2.org.uk/building-hs2/trains/>

Page title: 'Trains - HS2'

Journey: 1.9

Current code ref(s):

#main > div.page__main > article > div.container-outer > div > div

```
<div class="media media--full">
  <div class="media__inner">
    <picture>
      [...]
      
    </picture>
  </div>
  <div class="media__caption"> Early visualisation of a HS2 train.</div>
</div>
```

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 all inline images have an alt attribute with a value that describes the context of the image or if decorative ensure that the alt attribute's value is nulled.

In this instance, the image can be considered decorative to the caption below it and be given null alt text.



Example:

```
<div class="media media-full">
  <div class="media__inner">
    <picture>
      [...]
      
    </picture>
  </div>
  <div class="media__caption">The Colne Valley Viaduct will be the longest rail
bridge in the UK.</div>
</div>
```



External Links

Non-text content presented did not have a text alternative, and is also non-decorative content inserted through CSS.

WCAG Reference:

1.1.1 Non-text Content (Level A)

[Understanding Non-text Content](#) | [How to Meet Non-text Content](#)

1.3.1 Info and Relationships (Level A)

[Understanding Info and Relationships](#) | [How to Meet Info and Relationships](#)

Issue ID: DAC_External_Links_01

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament – HS2'

Journey: 1.3

Screenshot:



On the 'H2 in Parliament' page, underneath the 'High Speed Rail (London to West Midlands) Bill' H2 heading, and consistently throughout the website thereafter, when links (styled as buttons, in the case) have an external destination, this is visually indicated with a graphic which has no textual equivalent for screen reader users.

Further, as discussed in [F87: Failure of Success Criterion 1.3.1 due to inserting non-decorative content by using :before and :after pseudo-elements and the 'content' property in CSS](#), the addition of non-decorative content through the `:after` pseudo-element is also a failure of 1.3.1 Info and Relationships, as low vision users who need to customise their CSS in order to view content according to their needs, could lose this content should their customised CSS interfere with and block the insertion of this essential content.

Current code ref(s):

```
#main > div.page__main > article > div.container-inner > div:nth-child(2) > div > p:nth-child(3) > a
```

```
<a class="link-internal button button-subtle"
href="https://www.gov.uk/government/news/full-speed-ahead-as-hs2-gets-royal-assent">
  The Bill secured Royal Assent on 23 February 2017
</a>
```



CSS:

```
.page__main a.button[href^="http://"]:not([href*="hs2.org.uk"]):after,  
.page__main a.button[href^="https://"]:not([href*="hs2.org.uk"]):after,  
.page__main a.button[href^="//"]:not([href*="hs2.org.uk"]):after  
{  
    background-image: url("../svg/external_link_icon_white.svg");  
}  
  
.page__main a[href^="http://"]:not([href*="hs2.org.uk"]):after,  
.page__main a[href^="https://"]:not([href*="hs2.org.uk"]):after,  
.page__main a[href^="//"]:not([href*="hs2.org.uk"]):after  
{  
    background-image: url("../svg/external_link_icon.svg");  
    background-size: 100% 100%;  
    content: "";  
    display: inline-block;  
    height: 0.6666666667rem;  
    margin: 0.1111111111rem 0 0.1111111111rem 0.1666666667rem;  
    width: 0.6666666667rem;  
    vertical-align: text-top;  
}
```

Examples of additional instances:

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament – HS2'

Journey: 1.3

Current code ref(s):

#main > div.page__main > article > div.container-inner > div:nth-child(2) > div > p:nth-child(4) > a

```
<a class="link-internal button button-subtle"  
href="https://www.gov.uk/government/collections/high-speed-rail-london-west-  
midlands-bill">
```

View the Phase One Hybrid Bill documents and the details about its progress through Parliament on GOV.UK

```
</a>
```

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament – HS2'

Journey: 1.3

Current code ref(s):

#main > div.page__main > article > div.container-inner > div:nth-child(4) > div > p:nth-child(4) > a

```
<a class="link-internal button button-subtle"  
href="https://www.gov.uk/government/news/phase-2a-act-to-bring-hs2-to-the-  
north">
```

The Bill secured Royal Assent on 11 February 2021

```
</a>
```



URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament – HS2'

Journey: 1.3

Current code ref(s):

```
#main > div.page__main > article > div.container-inner > div:nth-child(4) > div > p:nth-child(5) > a
<a class="link-internal button button-subtle"
href="https://www.gov.uk/government/collections/high-speed-rail-west-midlands-to-crewe-bill">
  View the Phase 2a Hybrid Bill documents and the details about its progress
  through Parliament on GOV.UK
</a>
```

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 important non-decorative information is not added through CSS and ensure that all inline images have an alt attribute with a value that describes the context of the image or if decorative ensure that the alt attributes value is nulled.

Consider, in this instance, that the simplest method, informing all users, would be to include '(external link)' within the visible link text itself, leaving the background image as being decorative.

But, alternatively, appreciating that there's often a presentational need for brevity (to fit links within confined spaces or because the link is within paragraph text), then the missing context can be provided to screen reader users through the use of visually hidden text instead.

In that case, add visually hidden text for screen reader users, and ensure that the icon graphic is inserted in the HTML directly (though as there is visually hidden text, this icon image is then decorative with null alt text).

Example:

```
<a class="link-internal button button-subtle"
href="https://www.gov.uk/government/news/full-speed-ahead-as-hs2-gets-royal-assent">
  The Bill secured Royal Assent on 23 February 2017
  
  <span class="visuallyhidden">&nbsp;(external link)</span>
</a>
```

CSS:

```
.external-icon
{
  height: 0.6666666667rem;
  margin: 0.1111111111rem 0 0.1111111111rem 0.1666666667rem;
  width: 0.6666666667rem;
}
```



Mobile Map Inaccessible

The 'text only' accessible alternative link disappears on mobile.

WCAG Reference:

1.4.10 Reflow (Level AA)

[Understanding Reflow](#) | [How to Meet Reflow](#)

3.3.2 Labels or Instructions (Level A)

[Understanding Labels or Instructions](#) | [How to Meet Labels or Instructions](#)

Issue ID: DAC_Mobile_Map_Inaccessible_01

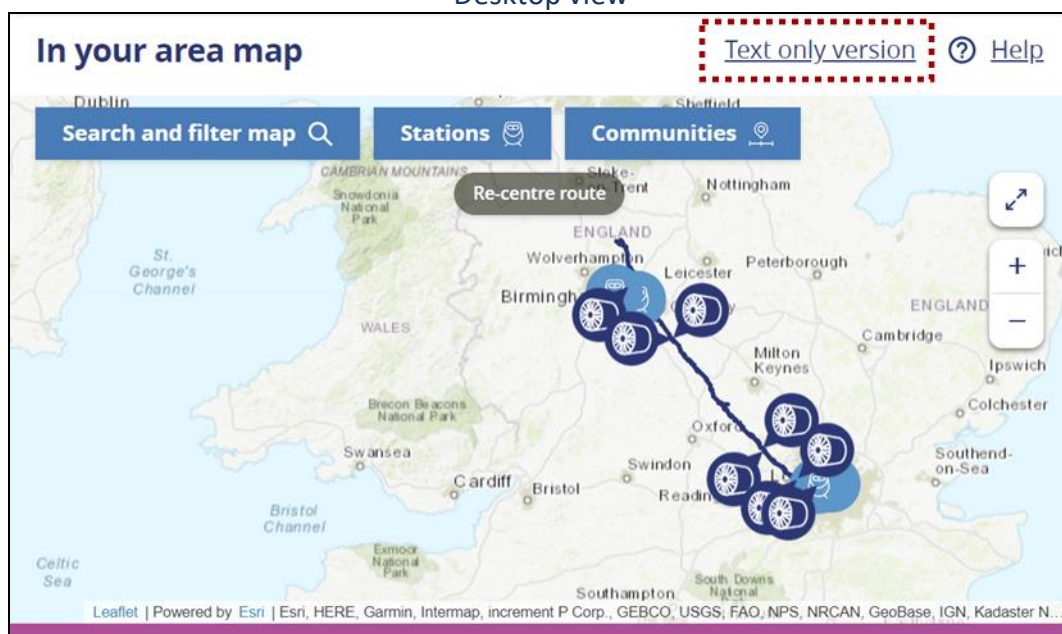
URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

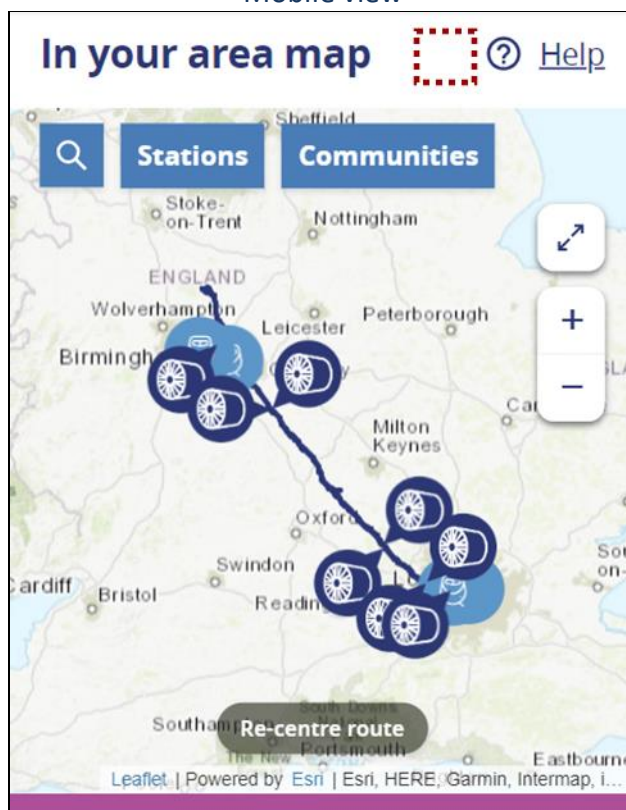
Journey: 1.7

Screenshot:

Desktop view



Mobile view



On the 'In Your Area map' page, when in mobile view, the 'Text only version' link is removed for lack of screen space. But this quite seriously affects screen reader, keyboard and voice activation users, as the 'In your Area' map, like all map components, is difficult to operate.

Current code ref(s):

```
#work-items-map-wrapper > div.leaflet-pane.leaflet-map-pane > div.leaflet-pane.leaflet-marker-pane
```

```
<div class="leaflet-pane leaflet-marker-pane">
  
  
  [...]
</div>
```

Screen reader user comments:

"Regarding Talkback, I could not use the 'search and filter map' feature and I could not find a text version either."

Screen reader user comments:

"I struggled to interact with the map all together mentioned on this page. This means I and other screen reader users are missing information that others can access. It would be helpful if there was a text description of the information available in the map."

Screen reader user comments:

"I do appreciate however there is a text version of this information, accessible via the 'text only version' link. However, on Talkback, I could not use the 'search and filter map' feature and I could not find a text version either."

Voice activation user comments:

"The pins on the map do not get picked up by Dragon. This meant that I had to use keyboard commands to tab onto them. As the tabbing order on the pins is not logical I found this difficult to do."

Examples of additional instances:

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

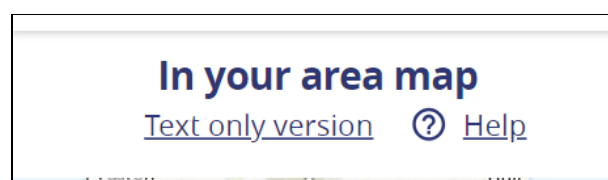
Solution:

Ensure that, when reflowing the page, functionality is not lost.

In this instance, when in mobile view and there's insufficient horizontal space to include both the 'text only version' and 'help' options, consider that it should collapse into an expandable menu instead. So that all functionality is retained.

Ensure that vital functionality is not removed, when the page is reflowed to smaller sizes. Consider that when horizontal space is limited that there are other strategies to make space that preserve all functionality.

Such as collapsing the 'Text only version' and 'Help' options into a dropdown menu. Or that the 'In your area map' heading and these options could be stacked vertically.

Example:

Label in Name

Text which visually labelled a component did not correspond with the words associated with the component programmatically.

WCAG Reference:

1.3.1 Info and Relationships (Level A)

[Understanding Info and Relationships](#) | [How to Meet Info and Relationships](#)

2.5.3 Label in Name (Level A)

[Understanding Label in Name](#) | [How to Meet Label in Name](#)

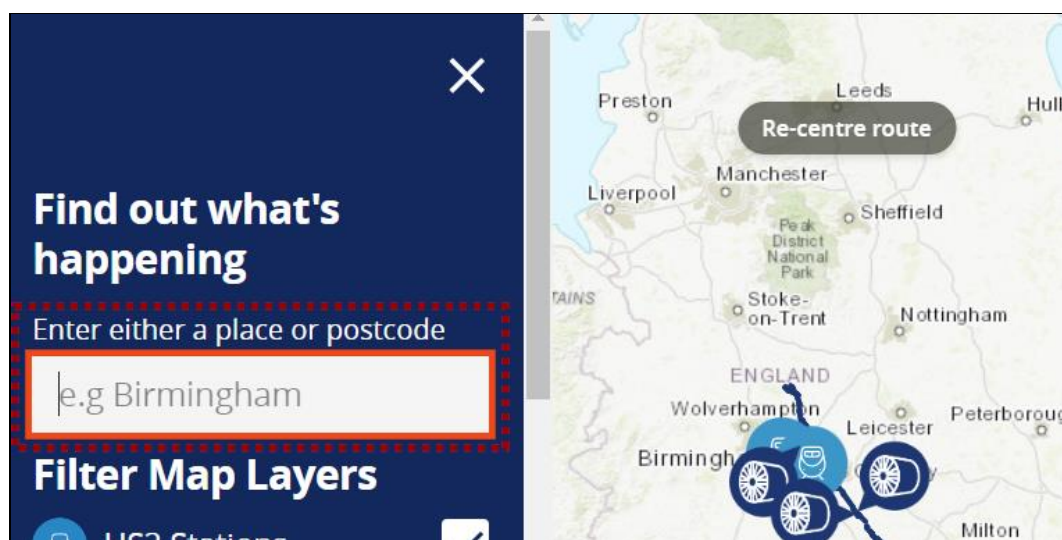
Issue ID: DAC_Label_In_Name_01

URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, under the 'Search and filter map' options, the search field is not correctly programmatically associated with the 'Enter either a place or postcode' visual label above it.

Whilst the label possesses a `for` attribute, it references the `id` of a containing `div` rather than the input itself. Therefore, the programmatic association between the visual label and the input field is not made and, as such, the accessible name for the input field falls back on being derived from its 'Location Search' `title` attribute.

This affects voice activation users, who might attempt to select the input field by the visual label they see, through voice command (e.g. 'click Enter either a place or postcode') and find that they cannot select it as this does not correspond to the input field's accessible name.

Though the voice command 'click Location Search' would successfully select the control by its actual accessible name, this is not provided visually that they are unlikely to correctly guess the hidden accessible name of the field.

Current code ref(s):

```
#map-filters-options > div:nth-child(2) > form
```

```
<form class="work-items__field">
  <label for="work-items__address-filter" class="work-item__field-label">Enter
  either a place or postcode</label>
  <div id="work-items__address-filter" class="work-items__address-filter">
    <div class="geocoder-control geocoder-control-expanded">
      <input class="geocoder-control-input leaflet-bar" title="Location Search"
      placeholder="e.g Birmingham">
      [...]
    </div>
  </div>
</form>
```

Examples of additional instances:

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 the accessible name is the same as the visible label or that the accessible name contains a match for the string of the visible label.

In this instance, ensure that the programmatic association between label and input is made, by placing the `id="work-items__address-filter"` attribute on the input, rather than its containing div.

Example:

```
<form class="work-items__field">
  <label for="work-items__address-filter" class="work-item__field-label">Enter
  either a place or postcode</label>
  <div id="work-items__address-filter" class="work-items__address-filter">
    <div class="geocoder-control geocoder-control-expanded">
      <input id="work-items__address-filter" class="geocoder-control-input
      leaflet-bar" title="Location Search" placeholder="e.g Birmingham">
      [...]
    </div>
  </div>
</form>
```

Note that the programmatic association made by the `for` and `id` attributes, between label and input, overrides the `title` attribute on the input, making the accessible name for the input be 'Enter either a place or postcode', rather than 'Location Search', as currently set.



Visually Hidden Heading

Until a search is performed, the visually hidden heading has no content to introduce.

WCAG Reference:

1.3.1 Info and Relationships (Level A)

[Understanding Info and Relationships](#) | [How to Meet Info and Relationships](#)

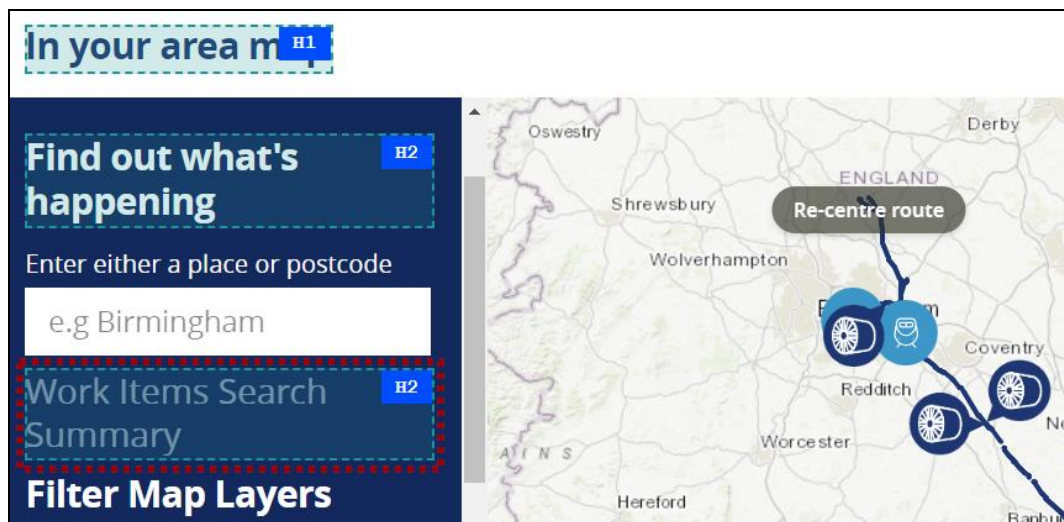
Issue ID: DAC_Hidden_Heading_01

URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

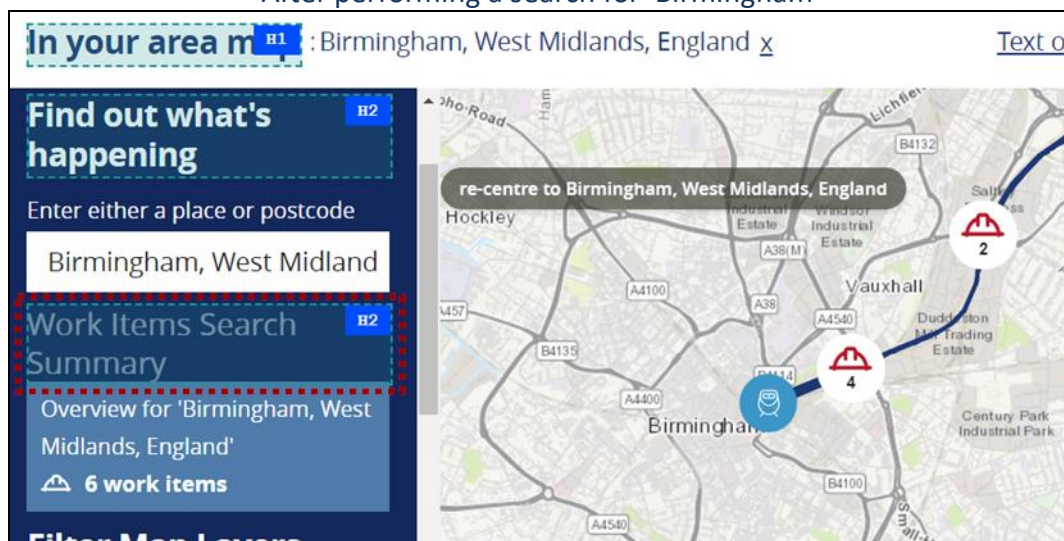
Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



After performing a search for 'Birmingham'



On the 'In your area map' page, under the 'Search and filter map' options, there is a visually hidden H2 heading of 'Work Items Search Summary' to introduce an overview of how many work items matched the search.

But this heading exists on the page prior to a search being carried out and is announced by screen readers, despite not introducing any content.

This affects screen reader users, as they could be left confused as to what the heading is introducing and could mistake the 'Filter Map Layers' content below it (which is not introduced by a heading), as being the 'Work Items Search Summary' when it is not.

Current code ref(s):

```
#map-filters-options > div.work-items__listing-details
<div class="work-items__listing-details" style="">
  <h2 class="visuallyhidden">Work Items Search Summary</h2>
  <div role="status">
    <!--→
    <div>
      <!--→
    </div>
  </div>
</div>
```

Examples of additional instances:

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 heading markup is used when content is acting as a heading and introducing content.

In this instance, until a search is performed and a results summary has been added to the page, the heading introducing that content should also be hidden from screen reader users as well.

One possibility is to add the `aria-hidden="true"` attribute to the heading until there is content for the heading to introduce.



Headings

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](#)

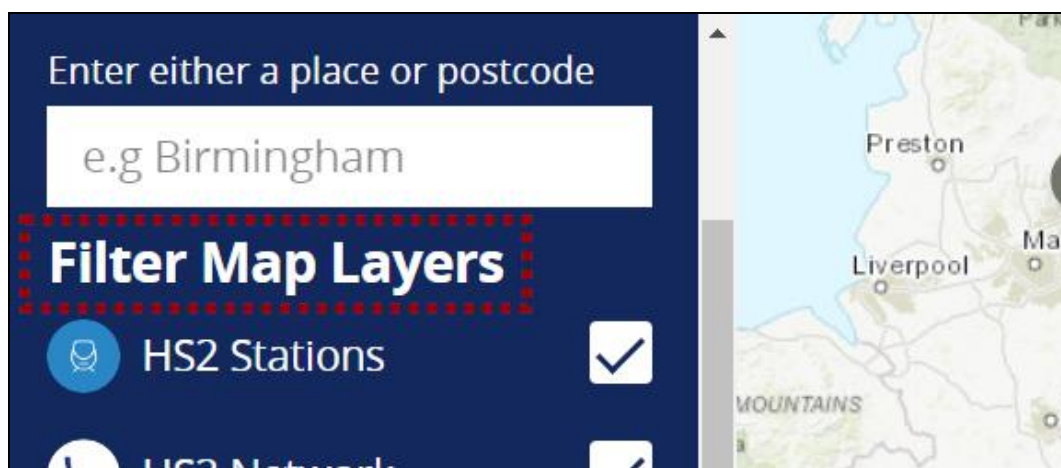
Issue ID: DAC_Headings_01

URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map - HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, the legend 'Filter Map Layers' has been styled as a heading and, logically, behaves as a heading, introducing content, but is not a heading.

Current code ref(s):

#map-filters-options > form > fieldset:nth-child(1)

```
<fieldset>
  <legend class="heading h4">Filter Map Layers</legend>
  [...]
</fieldset>
```

Examples of additional instances:

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 heading markup is used when content is acting as a heading and introducing content. The heading markup must indicate the appropriate heading level for the content. In this instance, the heading is a sibling of the 'Find out what's happening' and (hidden) 'Work Items Search Summary' H2 headings.

Example:

```
<fieldset>
  <legend class="heading h4"><h2>Filter Map Layers</h2></legend>
  [...]
</fieldset>
```



Non-text Content

Non-text content presented did not have a text alternative that served the equivalent purpose.

WCAG Reference:

1.1.1 Non-text Content (Level A)

[Understanding Non-text Content](#) | [How to Meet Non-text Content](#)

4.1.2 Name, Role, Value (Level A)

[Understanding Name, Role, Value](#) | [How to Meet Name, Role, Value](#)

(no role="button")

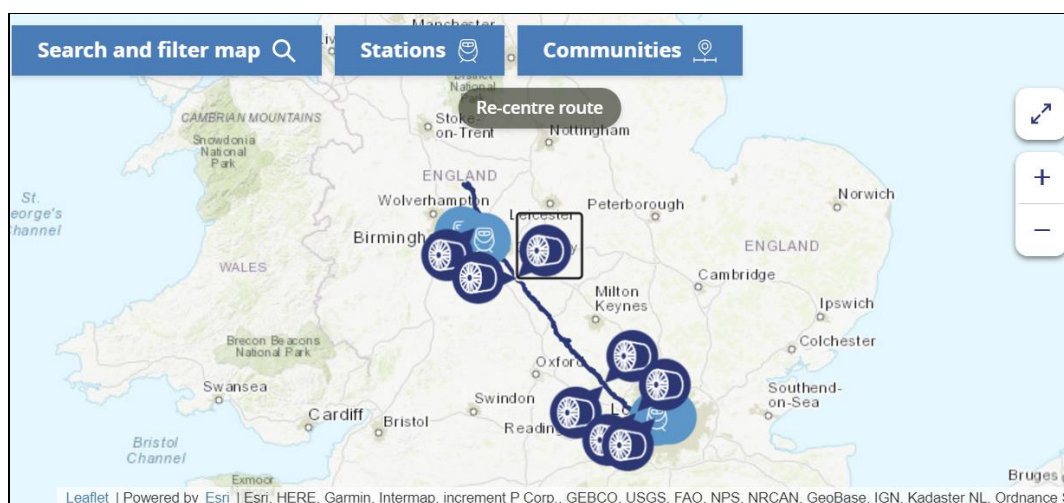
Issue ID: DAC_NonText_Content_01

URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, the pins on the map are images with a `tabindex="0"` attribute applied to them, so that they can take keyboard focus (and through JavaScript, they are actionable to bring up a 'details' sidebar).

But, in contradiction to the `tabindex` attribute making them focusable, these images have been given null alternative text, declaring them decorative and to be ignored by screen readers.

Therefore, when screen reader users alight on these pins, the screen reader has nothing to announce, yet as a focusable element, it also needs to announce to screen reader users where they are. This contradiction causes issues with screen reader software.

In practice, the JAWS screen reader is confused by the contradictory directives and repeats the last announcement it made, repeating 'Zoom in button'. Whilst the NVDA screen reader remains perfectly silent, but without audio feedback, a screen reader user does not know if the focus has moved nor where it has moved to.

In addition, though these images are functionally behaving as buttons, they have not been given a `role="button"` ARIA role.

This greatly affects screen reader users, as it essentially makes the map component unusable to them.

Current code ref(s):

#work-items-map-wrapper > div.leaflet-pane.leaflet-map-pane > div.leaflet-pane.leaflet-marker-pane

```
<div class="leaflet-pane leaflet-marker-pane">
  
  
  [...]
</div>
```

Examples of additional instances:

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 all inline images have an alt attribute with a value that describes the context of the image or if decorative ensure that the alt attributes value is nulled.

In this instance, the pin images should all be given alternative text that includes the type of pin (e.g. 'Tunnel Boring Machine', 'HS2 Station', 'Archaeology', etc.), so that screen readers are made aware of which category of pin is focused, followed by the pin's name (that is, the title of the 'sidebar' article that is opened when selecting the pin).

For example, 'Tunnel Boring Machine: Mary Ann' or 'HS2 Station: Birmingham Curzon Street'. Which will allow screen reader users to know which pin currently has focus and, therefore, which article the selection of the pin will open.



Example:

```
<div class="leaflet-pane leaflet-marker-pane">
  
  
  [...]
</div>
```

See also issue [DAC Keyboard Inaccessible 01](#) for a discussion on the consideration of how to implement custom elements like this.



Keyboard Inaccessible

Not all functionality is available from a keyboard.

WCAG Reference:

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_Keyboard_Inaccessible_01

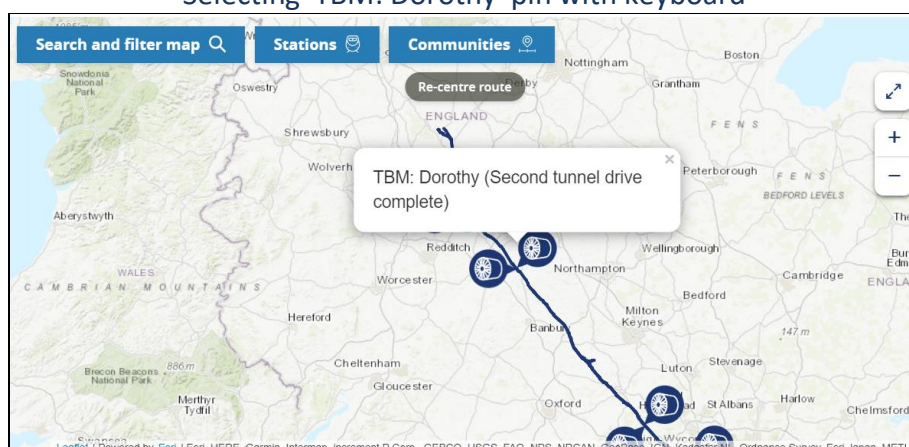
URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:

Selecting 'TBM: Dorothy' pin with keyboard



Selecting 'TBM: Dorothy' pin with mouse



On the 'In your area map' page, whilst selecting a pin via the keyboard does bring up the 'speech bubble' description of the pin, it does not provide the equivalent functionality as selecting the pin via the mouse. Where the map is zoomed and panned to centre the pin and the pin's details appear as a 'sidebar' to the map.

This affects not only keyboard users directly, but also screen reader users and voice activation users, as screen readers make use of the keyboard interface and, in this instance, as the pins have no visible labels, voice activation users need to make use of keyboard to manually tab through the pins, as a keyboard user would.

Current code ref(s):

```
#work-items-map-wrapper > div.leaflet-pane.leaflet-map-pane > div.leaflet-pane.leaflet-marker-pane
```

```
<div class="leaflet-pane leaflet-marker-pane">
  
  
  [...]
</div>
```

Examples of additional instances:

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:

Ensuring that the keyboard interface functions correctly is vital not only for keyboard only users directly, but also because other assistive technologies, such as screen readers, rely on it. Or, as with voice activation in this instance, provide users access to keyboard commands as an alternative where voice activation is not directly supported.

We strongly recommend using standard HTML elements to ensure that roles, states and controls are exposed correctly, enabling all users regardless of assistive technology to access and interact with them.

Because when implementing custom components, such as the pins on the map, it becomes the author's responsibility to ensure that all accessibility features are exposed and functional. Whereas the use of standard HTML elements guarantees the browser's built-in accessibility features and it more directly expresses the semantical intent of the component to user agents and assistive technologies.



The main considerations when implementing custom elements:

1. Ensure that the element is focusable and that users are able to gain access via the keyboard and determine this clearly
2. Ensure that the element is operable via keyboard alone
3. Ensure that the element operates as expected using the standard keys
4. Ensure a clear indication of focus
5. Ensure that the element is labelled and is exposed as an accessible name in accessibility APIs
6. Ensure that the role is exposed in accessibility APIs i.e. role="button"
7. Ensure that all states and properties are clearly defined and exposed in accessibility APIs
8. Ensure that in high contrast mode the control is visible and usable in High Contrast Mode (colour inversion)

In this instance, consider that the pins would better be implemented as buttons (the nearest standard HTML element in terms of behaviour). Which, unlike images, are container elements, able to include the pin image within it. They could also accommodate visually hidden text for screen reader users or visible labels for voice activations (although, with the close proximity of pins on the map, avoiding obscured visible labels would be an additional challenge), which would be automatically picked up as its accessible name.

Example:

```
<div class="leaflet-pane leaflet-marker-pane">
  <button style="transform-origin: center; transform: translate3d(625px, 473px,
0px); z-index: 180">
    <img class="pin-image" alt="">
    <span class="visually-hidden">TBM: Mary Ann</span>
  </button>
  <button style="transform-origin: center; transform: translate3d(625px, 473px,
0px); z-index: 473">
    <img class="pin-image" alt="">
    <span class="visually-hidden">TBM: Lydia</span>
  </button>
  [...]
</div>
```



Sensory Characteristics

Instructions provided for understanding and operating content were reliant solely on sensory characteristics of components such as shape, colour, size, visual location, orientation, or sound.

WCAG Reference:

1.3.3 Sensory Characteristics (Level A)

[Understanding Sensory Characteristics](#) | [How to Meet Sensory Characteristics](#)

Issue ID: DAC_Sensory_Characteristics_01

URL: <https://www.hs2.org.uk/supply-chain/supply-chain-map/>

Page title: 'Supply Chain Map – HS2'

Journey: 1.15

Screenshot:

How to get the best out of the maps

View the geographic spread of businesses working with HS2:

- Search by region and or constituency
- Boxes in blue show the number of businesses, while the table lists the company name and size
- For data protection reasons, micro and small businesses names have been redacted
- To return or see another view, refilter on region again or select 'all'

On the 'Supply Chain Map' page, under the 'How to get the best out of the maps' H3 heading, there is a list of items where the second item depends on a user's capability to see the shape and colour of the described 'Boxes in blue'.

This affects low vision and screen readers users who may not be able to understand instructions if they rely solely on a description of the shape, colour and / or location of content.

Current code ref(s):

#main > div.page__main > article > div.container-inner > div.container-component_text.component-constrained > div > ul

```
<ul>
  <li>Search by region and or constituency</li>
  <li>Boxes in blue show the number of businesses, while the table lists the
company name and size</li>
  <li>For data protection reasons, micro and small businesses names have been
redacted</li>
  <li>To return or see another view, refilter on region again or select
'all'</li>
</ul>
```



Examples of additional instances:

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 instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, colour, size, visual location, orientation, or sound.

Providing additional information in any instructions other than a sensory characteristic, like shape or colour or location, will allow users to understand the instructions even if they cannot perceive that shape, colour or location.



Audio Description or Media Alternative

A video was present that requires audio description or a media alternative.

WCAG Reference:

1.2.3 Audio Description or Media Alternative (Pre-recorded) (Level A)

[Understanding Audio Description or Media Alternative \(Pre-recorded\)](#) | [How to Meet Audio Description or Media Alternative \(Pre-recorded\)](#)

1.2.5 Audio Description (Pre-recorded) (Level AA)

[Understanding Audio Description \(Pre-recorded\)](#) | [How to Meet Audio Description \(Pre-recorded\)](#)

1.2.8 Media Alternative (Pre-recorded) (Level AAA)

[Understanding Media Alternative \(Pre-recorded\)](#) | [How to Meet Media Alternative \(Pre-recorded\)](#)

Issue ID: DAC_Audio_Description_Or_Media_Alternative_01

URL: <https://www.hs2.org.uk/building-hs2/trains/>

Page title: 'Trains - HS2'

Journey: 1.9

Screenshot:



On the 'Trains' page, there is a video that, whilst providing open captions, also conveys images of text that are not accessible to some users, as neither audio descriptions nor text transcript of the video content is available.

This means that non-sighted users and / or individuals whose vision is too poor to reliably read captions or images of text may be unable to access the visual content and are not receiving equivalent information to other users.

Current code ref(s):

```
#main > div.page__main > article > div.container-inner > div.container--  
component_video.component-constrained.component-constrained--wide > div  
<div class="container--component_video plain">  
  <div class="component component-video media media--viewport media--video">  
    <lite-youtube videoid="5Z8qPg8IoaI" playlabel="Play HS2 awards contracts to  
build next generation of high-speed trains" videotitle="HS2 awards contracts to  
build next generation of high-speed trains" style="background-image:  
url('https://i.ytimg.com/vi/5Z8qPg8IoaI/maxresdefault.jpg');" class="lyt-  
activated"><button type="button" class="lty-playbtn"><span class="lyt-visually-  
hidden">Play HS2 awards contracts to build next generation of high-speed  
trains</span></button><iframe width="560" height="315" title="Play HS2 awards  
contracts to build next generation of high-speed trains" allow="accelerometer;  
autoplay; encrypted-media; gyroscope; picture-in-picture" allowfullscreen=""  
src="https://www.youtube-  
nocookie.com/embed/5Z8qPg8IoaI?autoplay=1"></iframe></lite-youtube>  
  </div>  
  <a class="component-video__link"  
href="https://www.youtube.com/watch?v=5Z8qPg8IoaI&t=9s" target="_blank"  
rel="noreferrer noopener">Watch on YouTube <span class="visuallyhidden">- HS2  
awards contracts to build next generation of high-speed trains</span></a>  
</div>
```

Examples of additional instances:

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 the video has either an accompanying audio description or a media alternative, such as a text transcript, for WCAG 2.1 Level A compliance.

Whilst Success Criterion 1.2.3 Audio Description or Media Alternative (Pre-recorded), which is required for level A compliance, does not proscribe which of these to use, it asks that at least one of them is present.

Audio description must be provided for Level AA compliance.

The audio description can be provided as an alternative second audio track to the video, as advised in [Technique G78: Providing a second, user-selectable, audio track that includes audio descriptions](#). Although, if the video lacks sufficient audio 'gaps' in which to add the audio description, then the timings might prove impossible with the original unaltered video.

Alternatively, a second audio described version of the video can be provided, as detailed in [Technique G173: Providing a version of a movie with audio descriptions](#). Which might prove easier to implement by editing sufficient gaps and pauses into the action, to accommodate the audio description.



The user can then be offered the choice of which version suits them.

For Level AAA compliance, a text transcript should be provided. This could be provided below the video (next to the 'Watch on YouTube' link that already exists) using the HTML details / summary element, which can be expanded to read the transcript, if required.

Example:

```
<details>
  <summary>Text transcript for HS2 awards contracts to build next generation of
high-speed trains</summary>
  <div>
    [ text transcript of video ]
  </div>
</details>
```

Note that providing a text transcript like this can be of benefit to search engine indexing as well, as search engine crawlers can parse text and index the page according to the transcript content.

Also note that it is the unnarrated open captions, the captions that introduce the speakers and end card text that is proving problematic here, as the majority of the video is of a 'talking heads' format, with the visuals only being of a decorative / illustrative nature. It is not necessary to audio describe all the visuals, but to ensure that the essential information is conveyed and equivalent for all users.



Medium Priority WCAG Level AA

The following section contains areas that failed to meet WCAG 2.1 AA. For the website to fall in line with WCAG 2.1 requirements, all A and AA issues must be resolved.

Non-text Contrast

The visual presentation of interface components did not have a contrast ratio of at least 3:1 against adjacent colours.

WCAG Reference:

1.4.11 Non-text Contrast (Level AA)

[Understanding Non-text Contrast](#) | [How to Meet Non-text Contrast](#)

Issue ID: DAC_NonText_Contrast_01

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament – HS2'

Journey: 1.3

Screenshot:



On the 'H2 in Parliament' page, underneath the 'High Speed Rail (London to West Midlands) Bill' H2 heading, and consistently throughout the website thereafter, when links (styled as buttons, in the case) have an external destination, this is visually indicated with a graphic that has insufficient contrast against the adjacent background colour of the 'button'.

If a graphic is needed to understand the content or functionality of the webpage then it should be perceivable by people with low vision without the need for contrast-enhancing assistive technology.

This affects low vision users, who have a visual impairment and require a higher contrast to be able to see content, as low contrast graphics are more difficult to perceive and may be completely missed by people with a visual impairment.

Contrast Values:

Background: #E5E5E5

Icon colour: #FFFFFF

Contrast ratio: 1.26:1



Current code ref(s):

```
#main > div.page__main > article > div.container-inner > div:nth-child(2) > div > p:nth-child(3) > a
```

```
<a class="link-internal button button-subtle"
href="https://www.gov.uk/government/news/full-speed-ahead-as-hs2-gets-royal-assent">
  The Bill secured Royal Assent on 23 February 2017
</a>
```

CSS:

```
.page__main a.button[href^="http://"]:not([href*="hs2.org.uk"]):after,
.page__main a.button[href^="https://"]:not([href*="hs2.org.uk"]):after,
.page__main a.button[href^="//"]:not([href*="hs2.org.uk"]):after
{
  background-image: url("../svg/external_link_icon_white.svg");
}

.page__main a[href^="http://"]:not([href*="hs2.org.uk"]):after,
.page__main a[href^="https://"]:not([href*="hs2.org.uk"]):after,
.page__main a[href^="//"]:not([href*="hs2.org.uk"]):after
{
  background-image: url("../svg/external_link_icon.svg");
  [...]
}
```

Examples of additional instances:

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament – HS2'

Journey: 1.3

Current code ref(s):

```
#main > div.page__main > article > div.container-inner > div:nth-child(2) > div > p:nth-child(4) > a
```

```
<a class="link-internal button button-subtle"
href="https://www.gov.uk/government/collections/high-speed-rail-london-west-midlands-bill">
  View the Phase One Hybrid Bill documents and the details about its progress through Parliament on GOV.UK
</a>
```



URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament – HS2'

Journey: 1.3

Current code ref(s):

#main > div.page__main > article > div.container-inner > div:nth-child(4) > div > p:nth-child(4) > a

```
<a class="link-internal button button-subtle"
href="https://www.gov.uk/government/news/phase-2a-act-to-bring-hs2-to-the-north">
    The Bill secured Royal Assent on 11 February 2021
</a>
```

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament – HS2'

Journey: 1.3

Current code ref(s):

#main > div.page__main > article > div.container-inner > div:nth-child(4) > div > p:nth-child(5) > a

```
<a class="link-internal button button-subtle"
href="https://www.gov.uk/government/collections/high-speed-rail-west-midlands-to-crewe-bill">
    View the Phase 2a Hybrid Bill documents and the details about its progress
    through Parliament on GOV.UK
</a>
```

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 contrasts used are visible and meet 3:1 against adjacent colours. If a graphic is the only way to identify the nature of, or important information regarding, a control (such as that a link is external and will be taking the user away from the site), then that visual indicator must have sufficient contrast against adjacent colours, so that it is perceptible to low vision users.



Resize Text

Text could not be resized to 200% without text being clipped, truncated or obscured.

WCAG Reference:

1.4.4 Resize text (Level AA)

[Understanding Resize text](#) | [How to Meet Resize text](#)

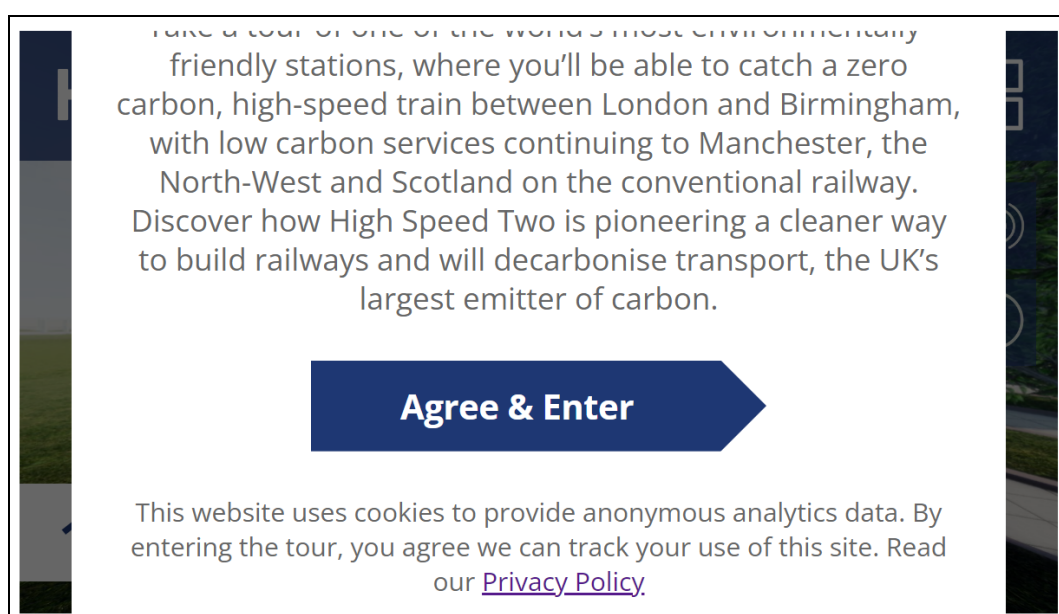
Issue ID: DAC_Resize_Text_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page, as the '360 Interchange virtual tour' has been included on the page within an iframe that is only a limited fraction of the available area on the page (CSS reserves a 16:9 aspect ratio, based on the width of the page, minus 2.22rem of padding either side, that cannot exceed 64.44rem maximum width) and this area does not expand nor scroll to accommodate any overflow then, when the cookie banner is displayed and the text has been resized to 200%, content is clipped beyond the edges of the frame and becomes inaccessible.

This affects low vision users who need to magnify the text size in order to see content, as functionality is lost to them.

Current code ref(s):

#main > div:nth-child(4) > div > div > figure > div:nth-child(1)

```
<div class="container-inner">
  <div class="component component-model media">
    <div class="media--model 16:9">
      <iframe width="640" height="360"
src="https://360.hs2.org.uk/interchange/" title="Showcasing one of the world's
most environmentally-friendly railway stations" allowfullscreen="">
    </iframe>
  </div>
</div>
</div>
```

Low vision user comments:

"When I wanted to take the virtual tour, I struggled to use the tour because the window for the virtual tour is small which has made the contents of the webpage because hard to see, read and interact with."

Examples of additional instances:

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 users can resize text up to 200% without content becoming clipped, truncated or obscured.

In this instance, consider the proposed solution in issue [DAC Duplicate Main Regions 01](#), to not include the tour directly on the home page and rather provide a thumbnail teasing it, directing users to visit the dedicated virtual tour site linked below it.

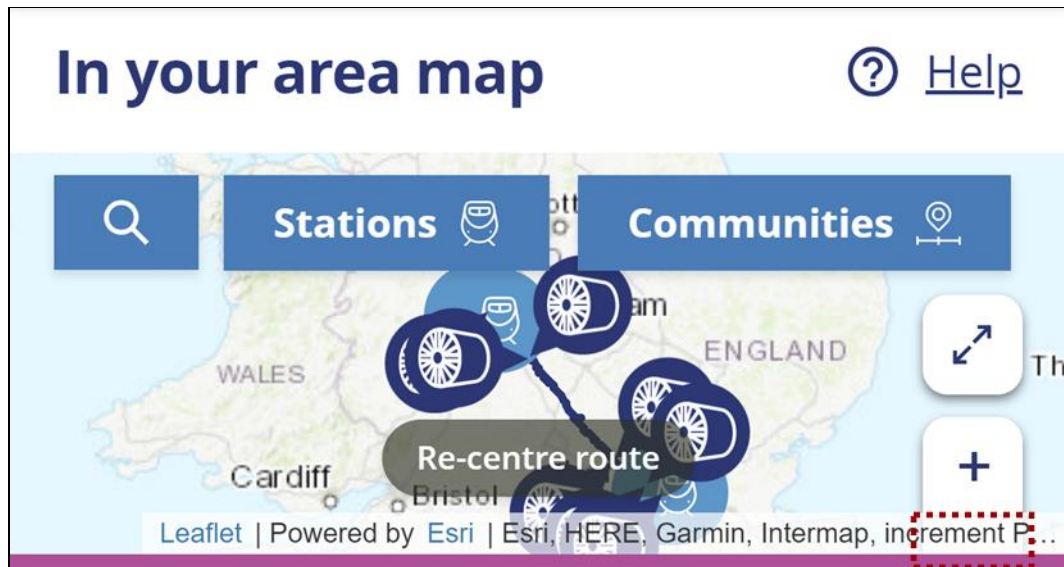


URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, at mobile resolutions or when the page is magnified to 200% and above, the zoom out control for the map can become clipped off the bottom edge of the page.

Current code ref(s):

#js-work-items > div.work-items__map-heading

```
<div class="work-items__map-heading">
  <div class="container">
    <h1 class="heading size--xl">In your area map</h1>
    <!--
    <div class="work-items__map-heading_controls">
      <a href="/in-your-area/search-current-works/" id="map-text-only-link"
class="work-items__help-dialog_action" style="">Text only version</a>
      <button id="help-dialog-button" aria-controls="work-items__map-dialog"
class="js-map-sidebar-control work-items__help-dialog_action" style="">
        <svg xmlns="http://www.w3.org/2000/svg" focusable="false" aria-
hidden="true" width="24" height="25" viewBox="0 0 24 25">
          [...]
        </svg>
        Help
      </button>
    </div>
  </div>
</div>
```

Low vision user comments:

“When I was testing reflow, I wanted to explore the map but I found that due to the browser’s width and height that the map had not resized to fit the new parameters. This means that users who view the website in reflow which is the following dimensions with a window zoom of 400% - 1024x1280.”

Examples of additional instances:

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 users can resize text up to 200% without content becoming clipped, truncated or obscured.

In this instance, consider re-orientating the controls, or collapsing them within a menu, to ensure that the 'zoom out' button is not clipped off the bottom edge of the frame, potentially losing low vision users access to vital functionality in controlling the map.



Reflow

Content could not be presented without loss of information or functionality, and without requiring scrolling in two dimensions when reflow settings were applied.

WCAG Reference:

1.4.10 Reflow (Level AA)

[Understanding Reflow](#) | [How to Meet Reflow](#)

Issue ID: DAC_Reflow_01

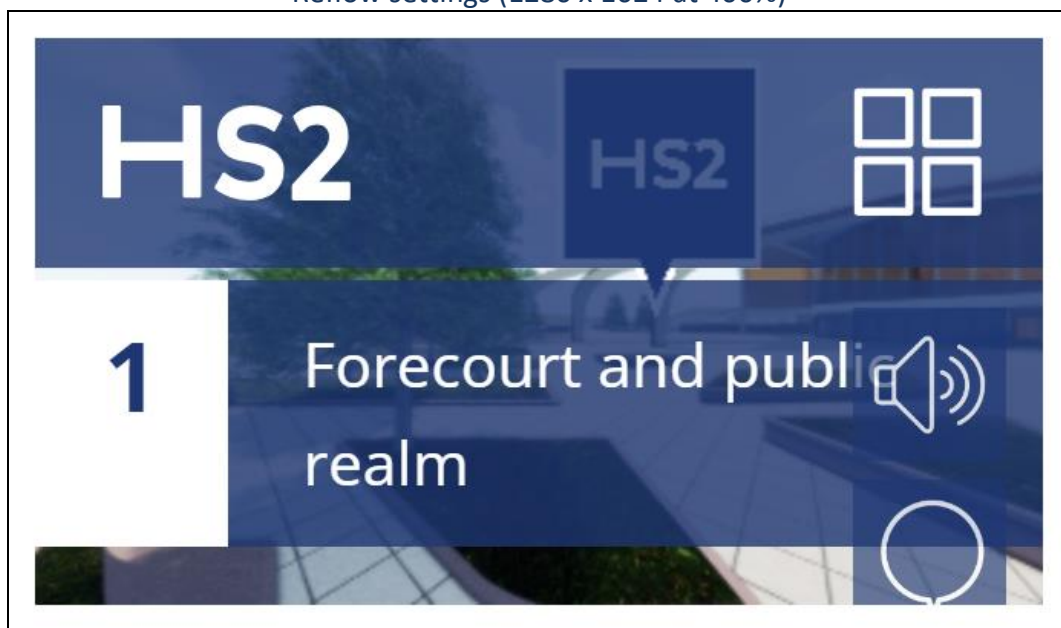
URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:

Reflow settings (1280 x 1024 at 400%)



On the HS2 home page, as the '360 Interchange virtual tour' has been included on the page within an iframe that is only a limited fraction of the available area on the page (CSS reserves a 16:9 aspect ratio, based on the width of the page, minus 2.22rem of padding either side, that cannot exceed 64.44rem maximum width) and this area does not expand nor scroll to accommodate any overflow, then content is too easily clipped when zoomed or at lower resolutions.

This affects all users, as clipping can occur at mobile resolutions. But, in particular, low vision users who require screen magnification to see content will be especially affected as functionality (controls) are lost.



Current code ref(s):

#main > div:nth-child(4) > div > div > figure > div:nth-child(1)

```
<div class="container-inner">
  <div class="component component-model media">
    <div class="media--model 16:9">
      <iframe width="640" height="360"
src="https://360.hs2.org.uk/interchange/" title="Showcasing one of the world's
most environmentally-friendly railway stations" allowfullscreen="">
    </iframe>
  </div>
</div>
</div>
```

CSS:

```
.container-inner
{
  margin: 0 auto;
  max-width: 64.444444444rem;
  padding: 0 1.111111111rem;
  width: 100%;
}

[class*="16:9"]
{
  height: 0;
  padding-top: 56.25%;
}

.component-model iframe
{
  bottom: 0;
  height: 100%;
  left: 0;
  position: absolute;
  right: 0;
  top: 0;
  width: 100%;
}
```

Low vision user comments:

"When I wanted to take the virtual tour, I struggled to use the tour because the window for the virtual tour is small which has made the contents of the webpage because hard to see, read and interact with."

Examples of additional instances:

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 content can be presented in a single column without a loss of information and without navigating in two dimensions except for content that requires it such as images and / or tables. This may enable people with low vision to read or distinguish page content without requiring the use of assistive technology such as a screen magnifier.

Consider the proposed solution in issue [DAC Duplicate Main Regions 01](#), to not include the tour directly on the home page and rather provide a thumbnail teasing it, directing users to visit the dedicated virtual tour site linked below it.



Low Priority WCAG Level AAA

Areas of the website which fail to meet the WCAG 2.1 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.

Change on Request

A change of context occurred which caused disorientation for some users.

WCAG Reference:

3.2.5 Change on Request (Level AAA)

[Understanding Change on Request](#) | [How to Meet Change on Request](#)

Issue ID: DAC_Change_On_Request_01

URL: <https://www.hs2.org.uk/what-is-hs2/>

Page title: 'What is HS2 – HS2'

Journey: 1.8

Screenshot:

HS2 funding

The Government has committed funding for the delivery of Phase One (London to West Midlands).

The Department for Transport's [6-monthly report to Parliament](#) provides an overview of the funding and schedule for the HS2 project.

On the 'What is HS2?' page, there is a link that opens in a new tab, but which neither visually nor programmatically forewarns users that this will be the case.

This affects all users, but in particular it affects screen reader users, as opening a new tab alters the navigation. As it starts a new history thread in the browser and, therefore, the 'back' button, or using the ALT + left arrow keyboard combination, does not work to return the user to the previous page, rather the new tab needs to be closed instead.

Therefore, an unexpected and unannounced change of context could leave screen reader users confused and disorientated that the usual navigational controls do not behave as expected.



Current code ref(s):

```
#main > div:nth-child(8) > div > div
```

```
<div class="component component-text">
  <h3 class="heading size--xl">HS2 funding</h3>
  [...]
  <p>
    The Department for Transport's 
    <a href="https://www.gov.uk/government/speeches/hs2-6-monthly-report-to-parliament-november-2023" target="_blank" rel="noopener">6-monthly report to Parliament</a>
    &nbsp;provides an overview of the funding and schedule for the HS2 project.
  </p>
</div>
```

Cognitive user comments:

"The link '6-monthly report to Parliament' opens into a new tab with no warning to the user. This is unpredictable behaviour that can leave users confused on how to navigate back to the previous page if they were unaware a new tab had opened. I would always expect links or buttons to have something to tell the users clearly that it will open to a new tab."

Examples of additional instances:

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:

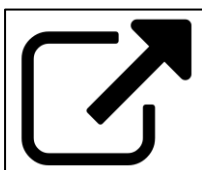
Ensure that when a change of context occurs, such as opening a new window or tab, users are informed of this prior to activating the element.

The best method for doing so is to provide the text '(opens in a new tab)' within the visible link text, so that all users are informed.

Example:

```
<a target="_blank" href="#">  
    How to open a new page (opens in a new tab)  
</a>
```

Note: it is better if the information is visible and not hidden, so that it is equally accessible to all. But appreciating that there's often a presentational need for brevity – to fit links within tight spaces or because the link is within paragraph text (as is the case in this instance) – an alternative is to supply visually hidden text for screen readers, whilst visually using the universally-recognised 'opens in a new tab / window' icon for sighted users (using a null alt for the image so it is ignored by screen readers):



Example:

```
<a href="#" target="_blank">  
  How to open a new page  
  <span class="visually-hidden">(opens in a new tab)</span>  
    
</a>
```

CSS:

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



Contrast Enhanced

Colours used failed to meet the required contrast ratios to meet the WCAG 2.1 enhanced success criteria.

WCAG Reference:

1.4.6 Contrast (Enhanced) (Level AAA)

[Understanding Contrast \(Enhanced\)](#) | [How to Meet Contrast \(Enhanced\)](#)

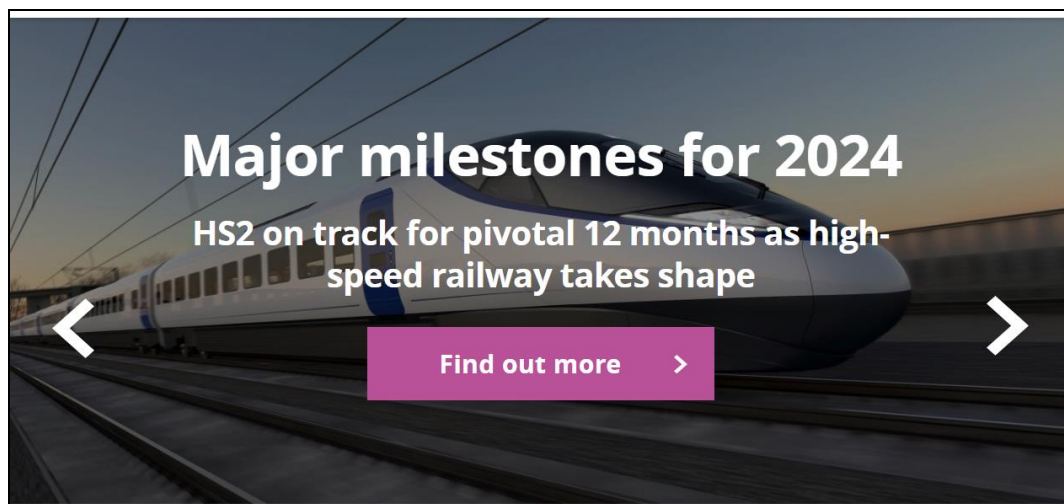
Issue ID: DAC_Contrast_Enhanced_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page, in the 'hero' carousel, there is text overlaying an image background which, in part, fails to meet the WCAG 1.4.6 Contrast (Enhanced) requirements.

In addition, text superimposed on images with varying levels of contrast is, in practice, difficult for low vision users to parse, even when technically within all WCAG requirements, as the constant variations of contrast tend to make the letter outlines harder to discern.

This affects low vision users who require greater contrast to be able to read text.

Contrast values:

Background: #8F8F8F (one of the brightest pixels near the text)

Text colour: #FFFFFF

Font size: 54px / 32px

Contrast ratio: **3.23:1**



Current code ref(s):

```
#main > div.homepage-carousel.margin-none.slick-initialized.slick-slider.slick-dotted > div >
div > div:nth-child(3) > div > div > div > div
<div class="media__inner__caption heading">
  <h2 class="">Major milestones for 2024</h2>
  <p class="media__inner__caption__sub-title">HS2 on track for pivotal 12 months
as high-speed railway takes shape</p>
  [...]
</div>
```

CSS:

```
.media__inner__caption
{
  color: #fff;
  [...]
}
```

Low vision user comments:

"When I first loaded into the website, I struggled to see and read the information over the slideshow because I found the font would blend into the background image which makes it harder to see and read. This means that users like me will also struggle to see and read the information as they scroll through each image. This issue persists throughout the slideshow."

Examples of additional instances:

URL: <https://www.hs2.org.uk/>
Page title: 'Homepage – HS2'
Journey: 1.1

Contrast values:

| | |
|-----------------|---|
| Background: | #838587 (one of the brightest pixels near the text) |
| Text colour: | #FFFFFF |
| Font size: | 54px / 32px |
| Contrast ratio: | 3.70:1 |

Current code ref(s):

```
#main > div.homepage-carousel.margin-none.slick-initialized.slick-slider.slick-dotted >
div > div > div:nth-child(4) > div > div > div > div
<div class="media__inner__caption heading">
  <h2>Bridges</h2>
  <p class="media__inner__caption__sub-title">New images show construction
progress of Britain's longest rail bridge</p>
  [...]
</div>
```



URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Contrast values:

Background: #8D8D82 (one of the brightest pixels near the text)

Text colour: #FFFFFF

Font size: 54px / 32px

Contrast ratio: **3.35:1**

Current code ref(s):

```
#main > div.homepage-carousel.margin-none.slick-initialized.slick-slider.slick-dotted >
div > div > div:nth-child(5) > div > div > div > div
<div class="media__inner__caption heading">
  <h2>Birmingham control centre</h2>
  <p class="media__inner__caption__sub-title">Major earthworks milestone as
plans for new railway 'nerve centre' take shape</p>
  [...]
</div>
```

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Contrast values:

Background: #8E8B83 (one of the brightest pixels near the text)

Text colour: #FFFFFF

Font size: 54px / 32px

Contrast ratio: **3.40:1**

Current code ref(s):

```
#main > div.homepage-carousel.margin-none.slick-initialized.slick-slider.slick-dotted >
div > div > div:nth-child(2) > div > div > div > div
<div class="media__inner__caption heading">
  <h2>Project Update</h2>
  <p class="media__inner__caption__sub-title">The HS2 Project Update
showcases how we continue to deliver Britain's new high-speed railway.</p>
  [...]
</div>
```

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



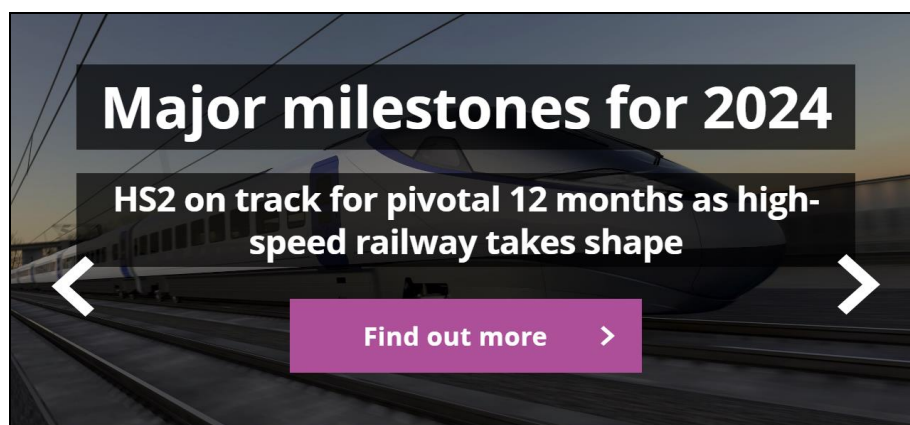
Solution:

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**

Where text is being overlaid over a background image of varying contrasts, it is recommended that the text be backed by an opaque or barely transparent background colour to strengthen the contrast and letter shapes

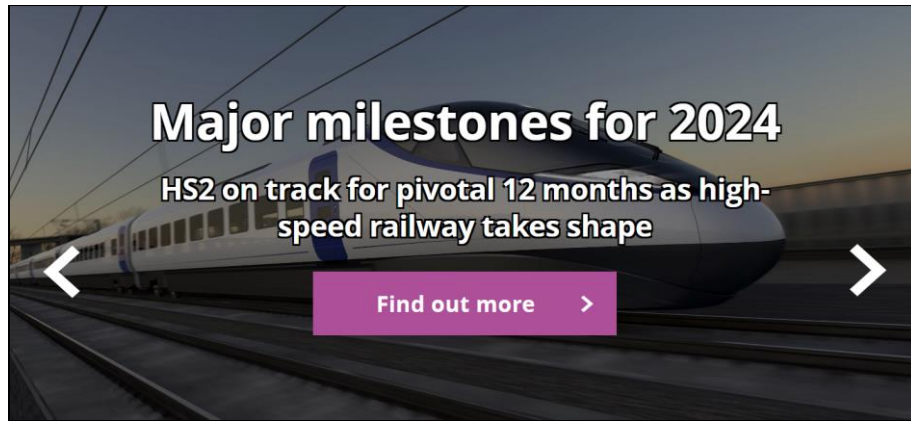


Example:

```
.media__inner__caption h2,  
.media__inner__caption p  
{  
  background: rgba(0,0,0,0.67);  
  padding: 4px;  
}
```

Alternatively, the contrast between the text and background image can be enhanced in a more focused way, by providing an outline to the text:





Example:

```
.media__inner__caption h2,  
.media__inner__caption p  
{  
  text-shadow: -2px -2px 0 #000,  
               2px -2px 0 #000,  
               -2px 2px 0 #000,  
               2px 2px 0 #000;  
}
```

(Note that the CSS property `-webkit-text-stroke` can be used to directly provide a text outline, but as the 'webkit' within its name implies, it is a webkit-specific property, where `text-shadow` is more universally supported, though requires creating 4 shadows at each of the diagonals to simulate an outline.)

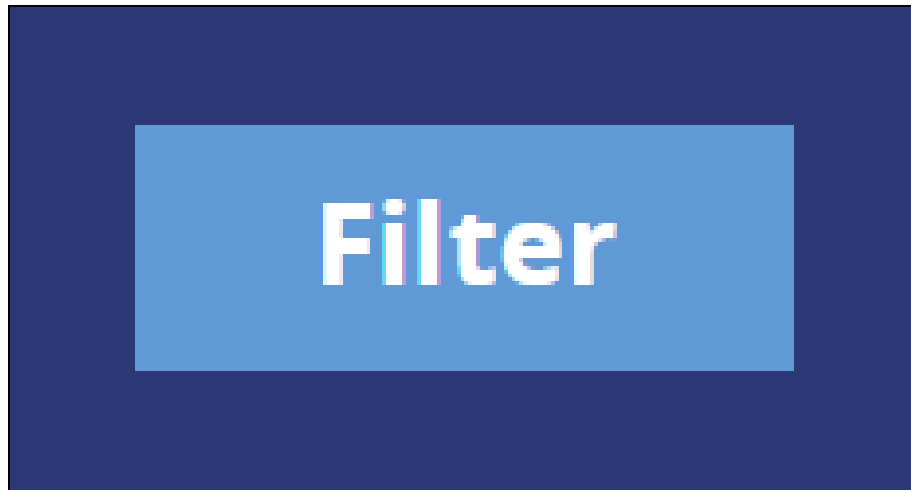


URL: <https://www.hs2.org.uk/supply-chain/direct-contract-opportunities/>

Page title: 'Direct contract opportunities – HS2'

Journey: 1.14

Screenshot:



On the 'Direct contract opportunities' page, within the form, there is a 'Filter' button which fails WCAG 1.4.6 Contrast (Enhanced) requirements.

This affects low vision users who require greater contrast to be able to read text.

Contrast Values:

Background: #3F99D6
Text colour: #FFFFFF
Font size: 1.055rem / 19px (bold)
Contrast ratio: **3.12:1**

Current code ref(s):

```
#supplier_opportunities_form > div > div:nth-child(4) > button  
<button type="submit" class="button button-secondary margin-third">  
  Filter  
</button>
```

CSS:

```
.button-secondary.button-secondary  
{  
  background-color: #3f99d6;  
  color: #fff;  
  font-size: 1.0555555556rem;  
  [...]  
}
```



Low vision user comments:

“Throughout my testing, I found it difficult to see, read and select the filters button because I found the colour scheme of the button would blend making it hard to see and read. When I tested the colour scheme of the button I found that the colour scheme used for the buttons fails with a ratio of 3.1:1 at AA rating which means that users like myself will struggle to interact with this button and other buttons with the same colour scheme throughout the website.”

Examples of additional instances:

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:

Provide enough contrast between text and its background so that it can be read by people with moderately low vision (who do not use contrast-enhancing assistive technology).

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 2.1 may prove challenging for users of the website.

Cookie Confirmation (Usability)

The cookie confirmation notice is not dismissible.

Reference:

Usability

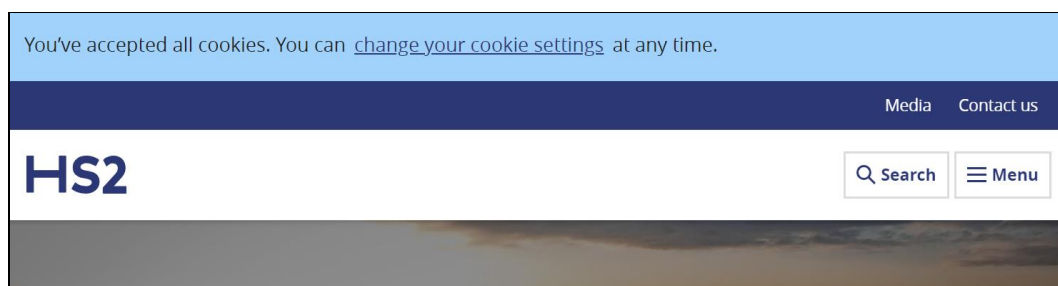
Issue ID: DAC_Cookie_Confirmation_Usability_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page and subsequent pages throughout the journey, after cookies have been accepted, a cookie acceptance confirmation is shown. But there is no means provided of dismissing this message and it persists there, adding an additional navigational obstacle for keyboard users, including screen readers, to traverse.

Current code ref(s):

#cookie-consent-container

```
<div class="cookie-message" id="cookie-consent-container" aria-label="Cookie Policy" aria-live="polite" style="display: block;">
  <div class="cookie-message__inner cookie-message__inner-accepted container site-container">
    <div class="cookie-message__intro">
      <p>You've accepted all cookies. You can <a href="/cookie-settings">change your cookie settings</a> at any time.</p>
    </div>
  </div>
</div>
```

Screen reader user comments:

"Upon accepting all cookies, I observed a persistent message on the page confirming that I had accepted all cookies. This seemed redundant and added to the time required for navigation. Implementing a button to hide this message would enhance user experience."



Examples of additional instances:

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:

Consider adding a means of dismissal for the message, such as a 'Hide cookie message' button or a close button. Please refer to [GOV.UK Design System: Cookie Banner \(When the user has accepted cookies\)](#) for a good example implementation.



Skip Link (Usability)

The skip link utilises vague phraseology.

Reference:

Usability

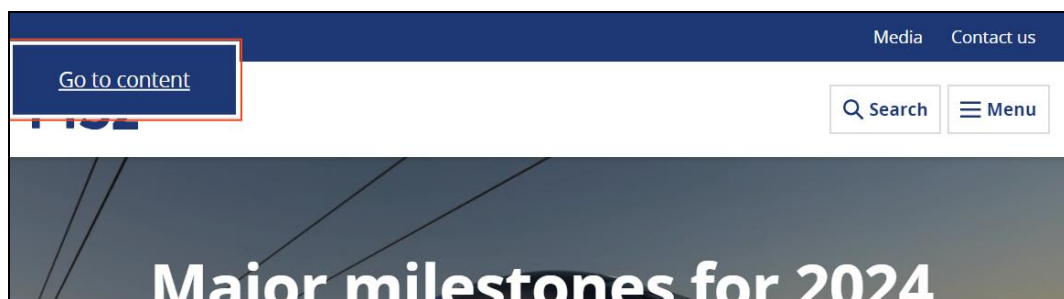
Issue ID: DAC_Skip_Link_Usability_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page and subsequent pages throughout the journey, the skip link is phrased vaguely as 'Go to content', lacking the exact context of which content the user will be going to. Such a phrasing is unfamiliar to most screen reader users, from their experience, and may cause them pause in their certainty that it is, indeed, the skip link.

Current code ref(s):

#top

```
<a class="skip-to-content js-skip-to-content" id="top" href="#main">  
  Go to content  
</a>
```

Screen reader comments:

"When using the cursor keys with JAWS I located a 'go to content' link. Using 'go to content' instead of 'Skip to main content' may cause confusion, as it does not accurately convey its purpose for users who rely on screen readers to skip repetitive page elements."

Screen reader comments:

"I noticed that the 'go to content' link had vague text, potentially causing uncertainty for screen reader users about its destination until testing. This ambiguity results in a time-consuming experience. It would be beneficial if the link utilised clearer text, for example, 'go to the main content.'"



Examples of additional instances:

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:

Consider modifying the phrasing of the link text to a more familiar favourite like 'Skip to main content', which makes the purpose and destination of the link clear.



Page Titles (Usability)

Some page titles and their corresponding H1 headings do not match.

Reference:

Usability

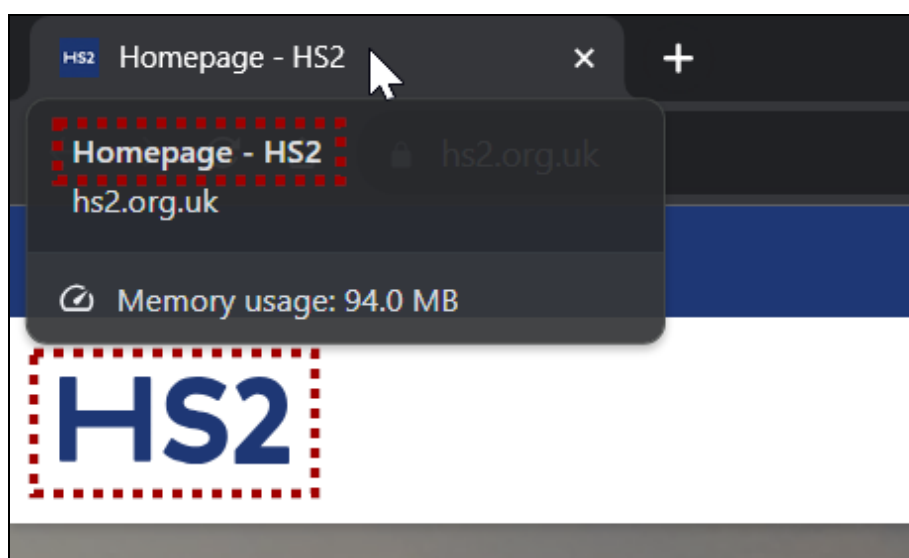
Issue ID: DAC_Page_Titles_Usability_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page and some pages later in the journey, the page title and H1 heading do not match.

It is best practice to ensure that the page title and H1 heading match each other, so that a screen reader user is aware of the name and purpose of the page, as these are, for screen reader users, the primary means of identification of the page they are currently on.

Current code ref(s):

head > title

```
<title>Homepage - HS2</title>
```

#nav--primary > div > h1

```
<h1 class="logo">
  
</h1>
```



Screen reader user comments:

“While viewing the page I discovered that the page title and h1 did not possess matching content. This does not reflect standard practice, which indicates that the content should match to ensure that screen reader users entering the page at either the h1 or the page title can understand the purpose of the page. Providing a page title and h1 that possess matching content will ensure that screen reader users are aware of where they are located within the service.”

Screen reader user comments:

“The page title was unclear, and it did not reflect the usual page title layout. A screen reader user must listen to ‘home page’ before ‘HS2,’ making it a little time consuming to navigate. A more helpful page title like ‘High Speed Train Two – Home Page – HS2’ would assist screen reader users in quickly grasping the purpose and services offered.”

Examples of additional instances:

URL: <https://www.hs2.org.uk/events/>

Page title: 'Events Archive - HS2'

Journey: 1.12

Current code ref(s):

head > title

```
<title>Events Archive - HS2</title>
```

#main > div.container-outer.page__header.no-margin--top > div > div.group.group--row > h1

```
<h1 class="heading size--xxxl">Events</h1>
```

URL: <https://www.hs2.org.uk/about-us/our-documents/>

Page title: 'Documents Archive - HS2'

Journey: 1.18

Current code ref(s):

head > title

```
<title>Documents Archive - HS2</title>
```

#main > div.container-outer.page__header > div > div.group.group--row > h1

```
<h1 class="heading size--xxxl">Our Documents</h1>
```

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:

Consider ensuring that the page title and H1 heading match.

In the particular instance of the home page, then the issue [DAC Headings Usability 01](#) (of the H1 heading being within the header) should also be addressed and that the page title be made to match the H1 heading that has been moved to below the 'hero' carousel.



Headings (Usability)

There are ordering issues with the heading structure.

Reference:

Usability

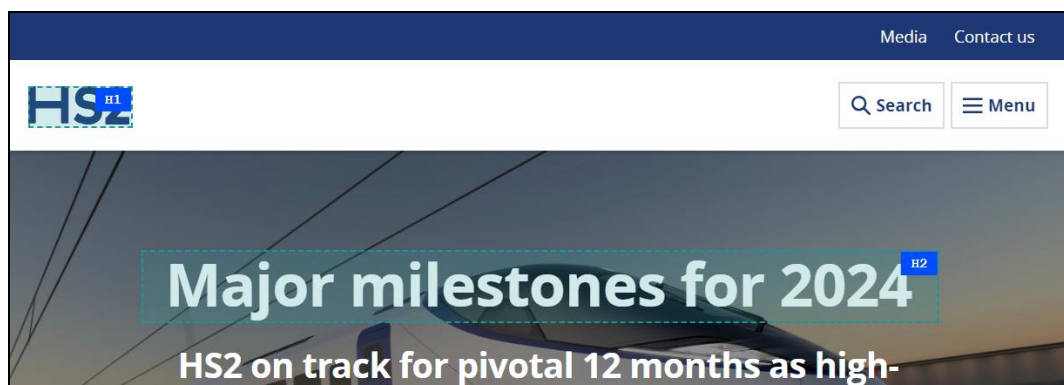
Issue ID: DAC_Headings_Usability_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page, the logo in the header has been rendered as the H1 heading for the page.

This is an issue for screen reader users, as this means that the skip link jumps over the H1 heading for the page. Or, conversely, if the screen reader user browses by headings to the H1 heading, they find themselves within the header and not, as is usual and expected, at the beginning of the main content.

Current code ref(s):

body

```
<body class="home page-template page-template-page-templates page-template-home-  
page page-template-page-templateshome-page-php page page-id-17130 ie js-mobile-  
nav" screen_capture_injected="true">  
  [...]  
  <a class="skip-to-content js-skip-to-content" id="top" href="#main">Go to  
content</a>  
  <div class="wrap no-margin">  
    <header class="global-header" id="global-header">  
      [...]  
      <nav id="nav--primary" class="nav--primary" aria-label="Primary" data-  
apollo-name="Navigation">  
        <div class="nav--primary__inner">  
          <h1 class="logo">  
              
          </h1>  
          [...]  
        </div>  
        [...]  
      </nav>  
    </header>  
    <main class="page" id="main" tabindex="-1">  
      [...]  
    </main>  
    [...]  
  </div>  
  [...]  
</body>
```

Screen reader user comments:

“Encountering a heading level one within the primary navigation landmark was unusual, as a heading level one typically denotes the commencement of important content and should be positioned at the outset of the main landmark. The presence of a heading level one within a navigation landmark introduces confusion and prolongs the process of identifying crucial information on the page. It would be beneficial if a heading level one was not incorporated within a navigation landmark.”

Screen reader user comments:

“The first main landmark on the page did not possess a heading level one. I would expect a heading level one to be located at the start of a main landmark to signify the beginning of the most significant content on the page. It would be helpful if there was a level one heading at the start of the main landmark.”

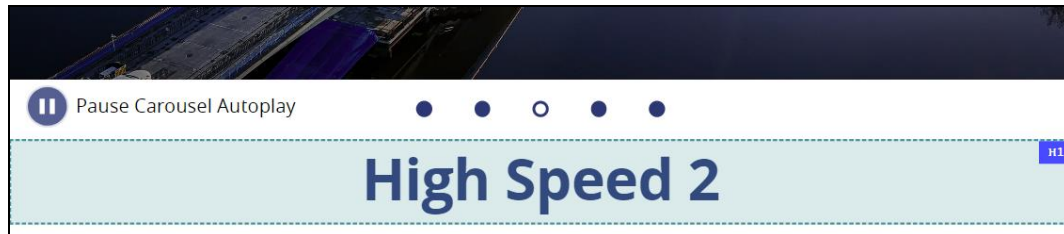
Examples of additional instances:

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:

Consider retaining the consistency of other pages on the site and placing an explicit H1 heading after the carousel, such as 'High Speed 2' or 'Welcome to HS2', to introduce the page itself (which should, as best practice, also match the page title). Whilst removing the H1 heading wrapper from the logo in the header.

Example:

Whilst it is best practice for the H1 heading to be the first element of the main region of the page (the first element encountered after taking the skip link), it is a common deviation to present it after any 'hero' content, such as a carousel or banner image.

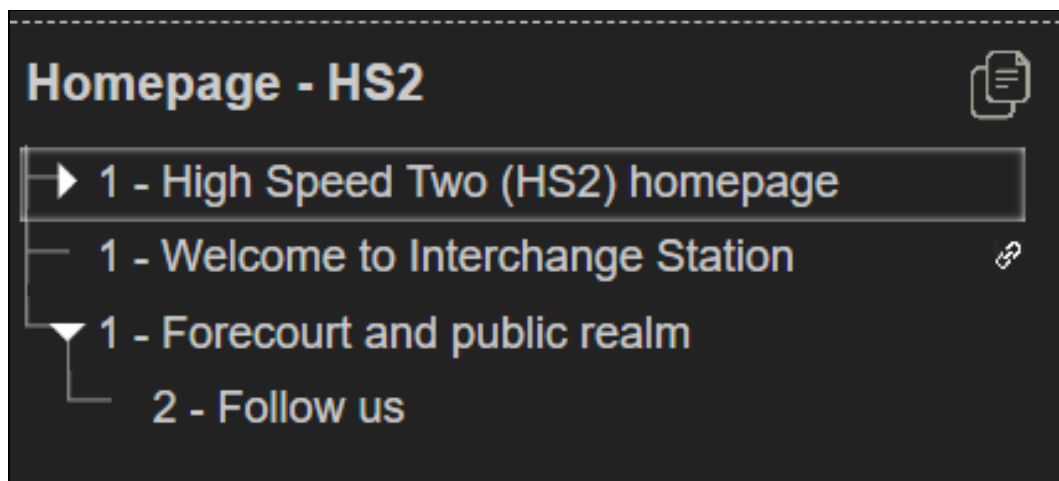


URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page, due to the inclusion of the '360 Interchange Virtual Tour' as an iframe on the page, then the iframe's two H1 headings (itself an issue but the content of the virtual tour is a separate audit and beyond scope here) have been also included into the home page, resulting in potentially confusion for screen reader users, who are accustomed to the presence of only a single H1 heading that identifies and introduces the page itself.

Current code ref(s):

#nav--primary > div > h1

```
<h1 class="logo" data-element-id="headingsMap-0-0">
  
</h1>
```

#splash-title

```
<h1 id="splash-title">Welcome to Interchange Station</h1>
```

#container > div.pano-info > a.pano-title

```
<a class="pano-title">
  <h1 class="panorama-title">Forecourt and public realm</h1>
  <span class="expand-info">1</span>
</a>
```

Screen reader user comments:

"I observed several headings set at a level one on this page, which is not recommended. This practice leads to a confusing and time consuming screen reader user experience as it hinders the clear identification of the most crucial content placement. It would be beneficial if the page maintained only one heading level one for improved clarity."

Examples of additional instances:

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:

Consider that it is best practice to only have a single H1 heading, typically found at the beginning of the main region and corresponding to the page title, on a page for clear and unambiguous identification of which page a screen reader is currently on, to aid their ability to navigate the site.

As considered in issue [DAC Duplicate Main Regions 01](#), the inclusion of the virtual tour as an iframe within the home page causes conflict and confusion, as all the included page's accessibility elements (skip link, main region, h1 heading) are being added midway through a page and are clashing / duplicating with its parent page's accessibility features.



Focus Order (Usability)

There were issues with the logical order of the keyboard focus through the page.

Reference:

Usability

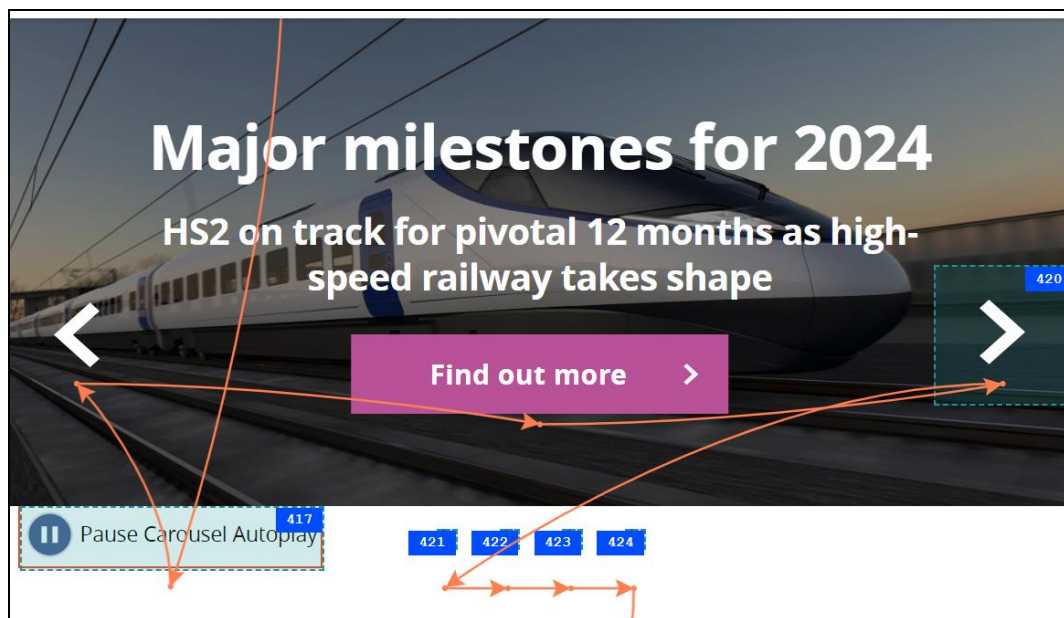
Issue ID: DAC_Focus_Order_Usability_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page, the first 'hero' carousel at the top of the main region has an unexpected focus order. Where the focus moves first to the 'Pause / Start Carousel Autoplay' button, which is visually at the bottom of the carousel, before moving visually back up to the carousel itself.

Whilst the button is first in source order, CSS has been used to visually reposition it at the bottom of the carousel.

Having a logical focus order can benefit low vision users, such as those requiring screen magnification who often only see a small portion of the page or who have visual impairments or reading difficulties.

Current code ref(s):

```
#main > div.homepage-carousel.margin-none.slick-initialized.slick-slider.slick-dotted
<div class="homepage-carousel margin-none slick-initialized slick-slider slick-
dotted" role="region" aria-label="carousel">
  <button type="button" class="slick-autoplay-toggle-button">
    <span class="slick-pause-icon" aria-hidden="true">
      <svg xmlns="http://www.w3.org/2000/svg" viewBox="0 0 47 47" height="45px"
width="45px" aria-hidden="true" focusable="false">
        [...]
      </svg>
      Pause Carousel Autoplay
    </span>
    <span class="slick-play-icon" aria-hidden="true" style="display: none;">
      <svg xmlns="http://www.w3.org/2000/svg" viewBox="0 0 47 47" height="45px"
width="45px" aria-hidden="true" focusable="false">
        [...]
      </svg>
      Start Carousel Autoplay
    </span>
    <span class="slick-pause-text slick-sr-only">Pause Carousel Autoplay</span>
    <span class="slick-play-text slick-sr-only" style="display: none">Start
Carousel Autoplay</span>
  </button>
  [...]
</div>
```

CSS:

```
.slick-autoplay-toggle-button
{
  background: rgba(0,0,0,0);
  bottom: 0.1111111111rem;
  left: 0.5555555556rem;
  position: absolute;
}
```

Keyboard only user comments:

“My focus went onto the pause button below the carousel after the ‘about us’ link. I found this a little confusing as I was expecting my focus to go onto the elements in the carousel before the pause button.”

Examples of additional instances:

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 focusable components receive focus in an order that preserves meaning and operability. Focus should ideally travel from the top left of the page to the bottom right of the page (following the natural reading order).

Due to the pause/play button occurring first in the DOM, consider placing the button before the carousel so that all users are given the opportunity to pause and play the content as they wish. This will alleviate the frustration caused by not knowing whether they are able to stop the auto-play of the carousel until they have scrolled.



Contrast (Usability)

Contrast ratios could exceed enhanced WCAG requirements.

Reference:

Usability

Issue ID: DAC_Contrast_Usability_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page, there are a number of pink-purple buttons that, whilst technically passing WCAG Contrast (Enhanced) requirements by being exactly the 4.5:1 contrast ratio that is required to pass, it sits exactly on the boundary of failure and could still potentially cause low vision users issues.

Contrast Values:

Background: #B85197
Text colour: #FFFFFF
Font size: 1.333rem / 24px
Contrast ratio: **4.5:1**

Current code ref(s):

```
#main > div.homepage-carousel.margin--none.slick-initialized.slick-slider.slick-dotted > div > div > div:nth-child(3) > div > div > div > div > a
```

```
<a class="button button--primary button--tertiary media__inner__caption__button" href="https://mediacentre.hs2.org.uk/news/hs2-on-track-for-pivotal-12-months-as-high-speed-railway-takes-shape" target="_blank" rel="noreferrer noopener">Find out more</a>
```



CSS:

```
.button--tertiary.button--tertiary
{
  background-color: #b85197;
  color: #fff;
}
```

Low vision user comments:

“When I wanted to find out more about the 'Major milestones for 2024' I struggled to read the 'Find out more' button because for me the colour scheme blends which makes it difficult to see and read. Though the colour scheme for the button passes, some users like me will struggle to read and select the button.”

Examples of additional instances:

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:

Consider that the WCAG contrast ratio requirements are the minimum acceptable ratios and that there should be a 'margin of error' applied to comfortably exceed the minimum ratio, to ensure that it is clear to all low vision users.

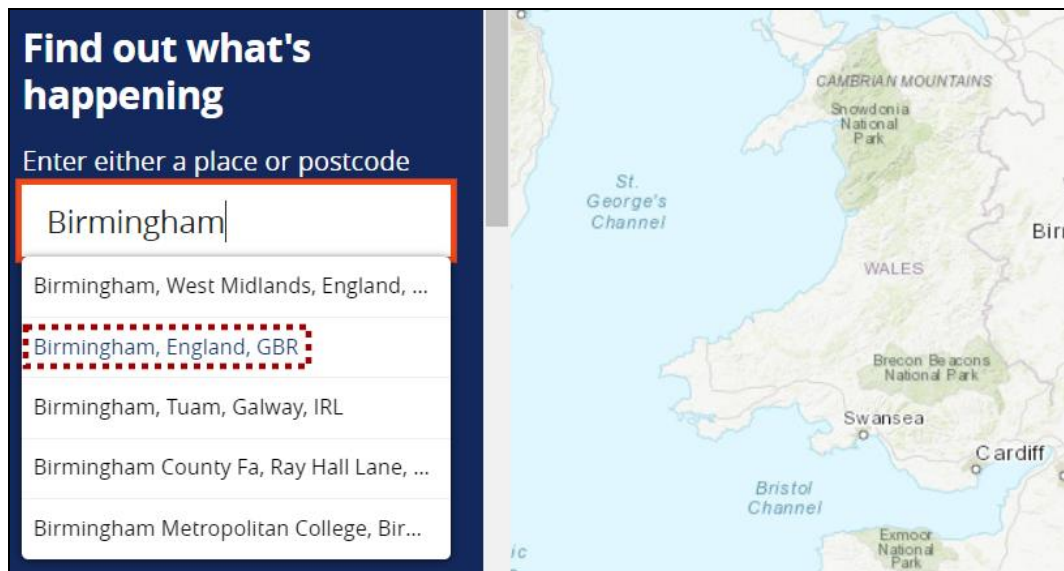


URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map - HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, when the 'Search and filter map' option has been selected and its corresponding 'sidebar' is open, under the 'Find out what's happening' H2 heading, there is a text field (labelled 'Enter either a place or postcode') with a dropdown of suggestions that appears as one enters text.

When navigating through the suggestions, the contrast difference between the focused and unfocused states, allowing a user to see which suggestion is currently in focus, is extremely low (so low in contrast that this could prove an issue for any sighted user, not only low vision users exclusively). It is difficult to clearly see which suggestion is in focus.

It is worth noting that were this audit assessed to WCAG 2.2 criteria, rather than WCAG 2.1 criteria, then this issue would actually be a WCAG failure of the new 2.4.13 Focus Appearance success criterion that has been added in the newer version. But, under the assessed WCAG 2.1 criteria, it only qualifies as a usability issue here.

Contrast values:

Unfocused state: #000000

Focused state: #153363

Contrast ratio: 1.69:1



Current code ref(s):

#work-items__address-filter > div

```
<div class="geocoder-control geocoder-control-expanded">
  <input class="geocoder-control-input leaflet-bar" title="Location Search"
placeholder="e.g Birmingham">
  <div class="geocoder-control-suggestions leaflet-bar" style="display: block;
max-height: 475px;">
    <div class="">
      <ul class="geocoder-control-list">
        <li class="geocoder-control-suggestion">Birmingham, West Midlands,
England, GBR</li>
        <li class="geocoder-control-suggestion geocoder-control-
selected">Birmingham, England, GBR</li>
        [...]
      </ul>
    </div>
  </div>
</div>
```

CSS:

```
.geocoder-control-suggestions .geocoder-control-suggestion.geocoder-control-
selected,
.geocoder-control-suggestions .geocoder-control-suggestion:hover
{
  background: #ffffff;
  color: #153363;
}

.geocoder-control-suggestions.leaflet-bar
{
  color: #000;
  z-index: 15;
}
```

Examples of additional instances:

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:

Consider increasing the contrast between the focused and unfocused state of the suggestions to at least a contrast ratio of 3:1, as if this site were assessed against the WCAG 2.2 success criteria, this would be a Level AAA requirement.

Also consider that this contrast could be further enhanced by, for example, also changing the background colour or providing additional differences between the focused and unfocused states.



Dragon Tags (Usability)

CSS rules interfere with the Dragon voice activation software's rendering.

Reference:

Usability

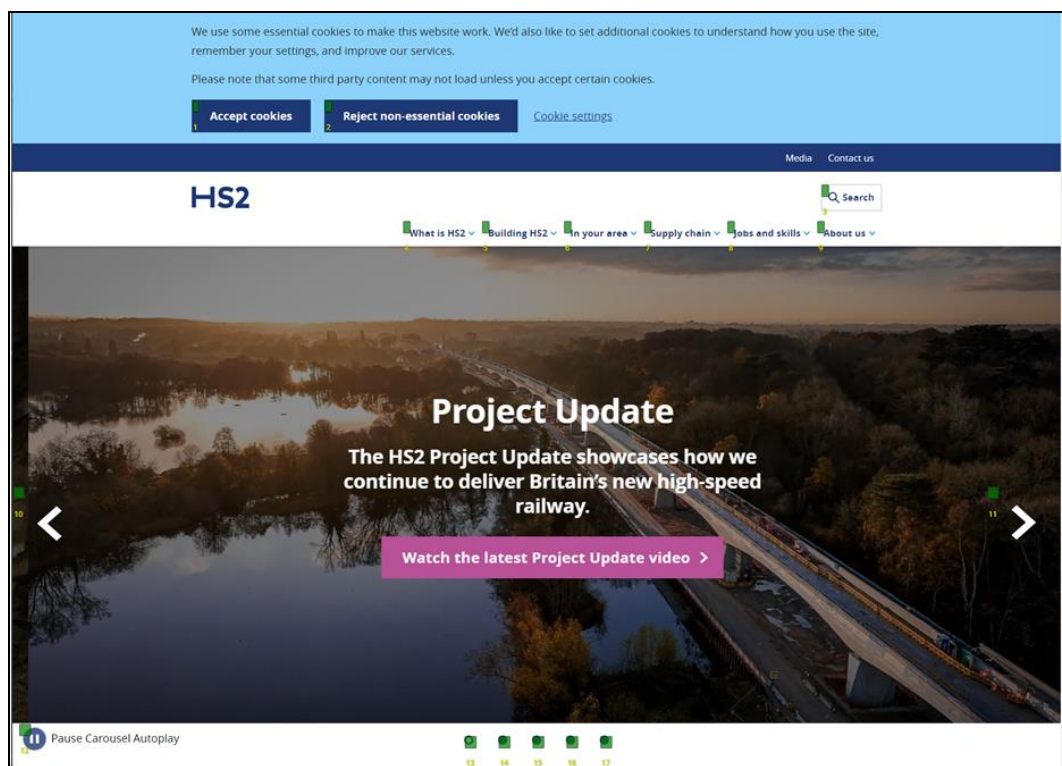
Issue ID: DAC_Dragon_Tags_Usability_01

URL: <https://www.hs2.org.uk/>

Page title: 'Homepage – HS2'

Journey: 1.1

Screenshot:



On the HS2 home page and throughout the site, when Dragon voice activation users use a voice command that has multiple possible elements (such as 'click button' or 'click link' when the page has multiple buttons or links that might be clicked on), then Dragon adds numbered boxes to each element, so that the voice activation user can choose which element they wish to be clicked on by saying 'choose 1' or 'choose 4' and so forth).

But due to a very generic CSS selector, which matches anything that is followed immediately by anything else and adds a 'margin-top' space between the elements, this is interfering with Dragon's rendering of its numbered boxes, that the numbers are appearing below, rather than inside, the green boxes.

This affects Dragon voice activation users, as the numbers are no longer backed by the green boxes as a background and could end up overlaying and clashing with other content, making them difficult to see and, therefore, select elements in this way.

Current CSS:

```
***  
{  
  margin-top: 2.777777778em;  
}  
  
.margin--none,  
.margin--none ***  
{  
  margin-top: 0;  
}
```

Voice activation user comments:

“The Dragon tags are not appearing correctly on this site. This meant that the yellow numbers are not appearing in the green squares. As a result I found it very difficult to see the numbers.”

Examples of additional instances:

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:

Consider that this CSS rule is extremely generic that it matches nearly everything, unless the CSS class 'margin--none' is applied, that it is bound to interfere with other elements, such as those that could be added by assistive technologies like Dragon.

Consider the principle that CSS selectors should be conservative and most selective in their scope to avoid unwanted interference with other elements. That margins between elements should be selectively added by application of a CSS class, rather than for it to apply to almost everything and then require the application of a 'margin--none' CSS class to disable it.



Button Style (Usability)

Links styled as buttons do not provide sufficient visual cues to be actionable.

Reference:

Usability

Issue ID: DAC_Button_Style_Usability_01

URL: <https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>

Page title: 'HS2 in Parliament - HS2'

Journey: 1.3

Screenshot:



On the 'H2 in Parliament' page, underneath the 'High Speed Rail (London to West Midlands) Bill' H2 heading, and consistently throughout the website thereafter, there are links (styled as buttons) which are not obviously perceived, in their current form, as being actionable.

This is exacerbated, in the case of the 'The Bill secured Royal Assent on 23 February 2017' and other similarly phrased link text, by the link text not being phrased in the imperative tone to suggest that it performs any action (in contrast to the 'View the Phase One Hybrid Bill...' link text, which is explicitly an action, as it is phrased in the imperative and leads with a verb).

Other than the extremely low contrast 'external link' white icon (see issue [DAC NonText Contrast 02](#)) then there are no obvious visual cues that these are links (styled as buttons), as opposed to, for example, boxed inset text.

This potentially affects all sighted users, but particularly cognitive users, as they could miss that these are actionable links.



Current code ref(s):

```
#main > div.page__main > article > div.container-inner > div:nth-child(2) > div
<div class="component component-text">
  [...]
  <p>
    <a class="link-internal button button--subtle"
href="https://www.gov.uk/government/news/full-speed-ahead-as-hs2-gets-royal-
assent">
      The Bill secured Royal Assent on 23 February 2017
    </a>
  </p>
  <p>
    <a class="link-internal button button--subtle"
href="https://www.gov.uk/government/collections/high-speed-rail-london-west-
midlands-bill">
      View the Phase One Hybrid Bill documents and the details about its
progress through Parliament on GOV.UK
    </a>
  </p>
</div>
```

CSS:

```
.button--subtle.button--subtle
{
  background-color: #e5e5e5;
  color: #1e3775;
}
```

Cognitive user comments:

"The buttons 'The Bill secured Royal Assent' and 'View the Phase One Hybrid Bill..' are difficult to perceive as buttons as they have no visual indication that they are actionable beyond the mouse cursor changing. This can be difficult for a wide range of users who may not see the cursor change or may be expecting some kind of visual update as is normally seen with actionable elements on the page. Without any indication that these elements are actionable, they can be overlooked and instil confusion on the user navigating."

Examples of additional instances:

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:


Consider ensuring that these links, if they are to be styled as buttons, should have an appearance that clearly visually suggests this. That the current 'button--subtle' CSS class, with its problematic colour contrast issues, is too visually subtle.

Consider also that there are some defined button styles in the site's stylesheet already, which can be applied here that makes it more visually clear that these are 'buttons' and retain consistency with the rest of the site. This would also usefully solve the colour contrast issues with these links as well.



Example:

The Bill secured Royal Assent on 23 February 2017 

View the Phase One Hybrid Bill documents and the details about its progress through Parliament on GOV.UK 



Accessible Alternative (Usability)

Text only accessible alternative is not informationally and functionally equivalent.

Reference:

Usability

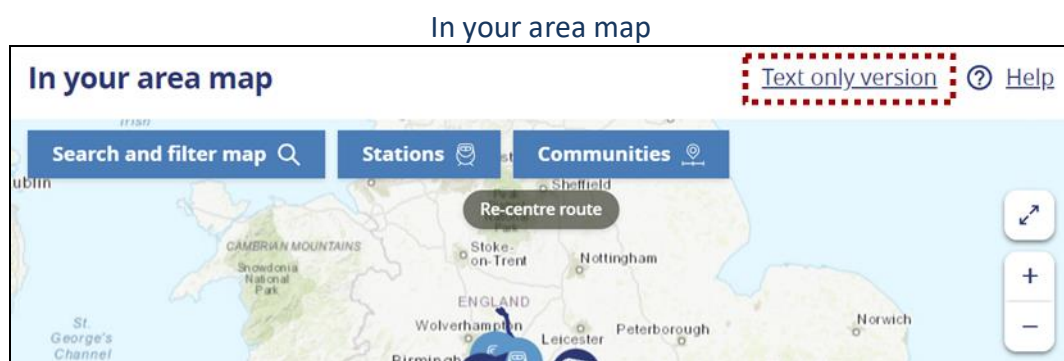
Issue ID: DAC_Accessible_Alternative_Usability_01

URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, there is a 'Text only version' link, which promises to provide an accessible alternative for those users who cannot make use of the visual map component (which, as this audit details, has various issues for many groups of users). And having an accessible alternative to an inaccessible component would be a permissible exemption to these issues, as there is an accessible route for users to take.

But in order to be a true accessible alternative, the text only version must have equivalent information and functionality. Yet the text only version only deals with information on HS2 construction works, and it does not also detail the additional information (such as the HS2

stations, the tunnelling boring machines, the archaeological projects, the green corridor projects, etc.) and, therefore, is not a true accessible equivalent to the graphical map.

Current code ref(s):

#map-text-only-link

```
<a href="/in-your-area/search-current-works/" id="map-text-only-link" class="work-items__help-dialog__action" style="">  
  Text only version  
</a>
```

Examples of additional instances:

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:

Consider introducing the equivalent information and functionality to the text only version as is found in the graphical map, so that it represents an accessible alternative route for users struggling with the issues of the graphical map.



Dragon Checkboxes (Usability)

Checkboxes are not selectable using Dragon voice activation.

Reference:

Usability

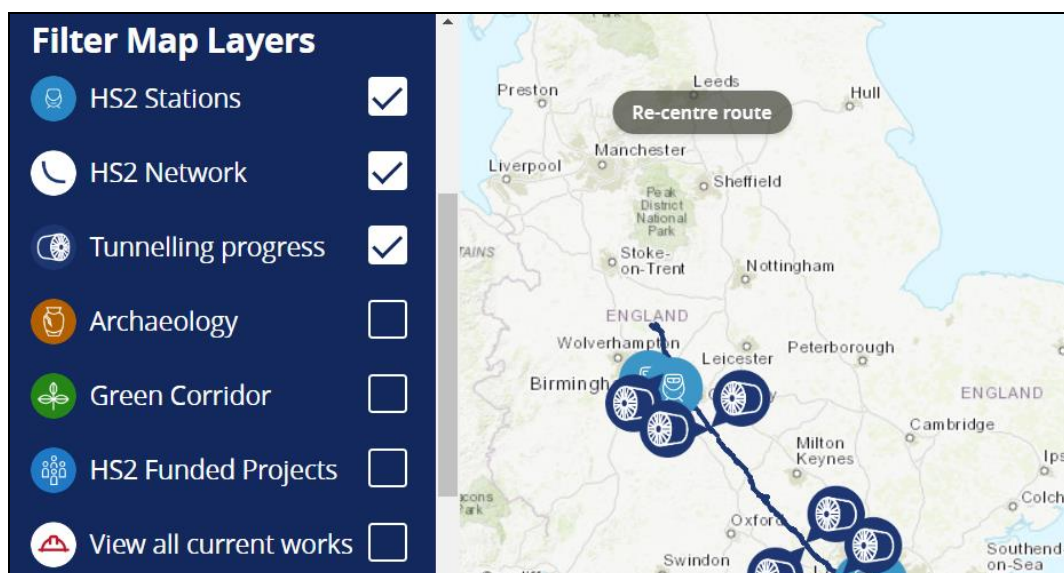
Issue ID: DAC_Dragon_Checkboxes_Usability_01

URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Screenshot:



On the 'In your area map' page, within the 'Search and filter map' options, under the 'Filter Map Layers' legend, there is a fieldset of checkboxes for enabling and disabling the layers of pins on the map by their type.

For aesthetic reasons, as the degree of CSS manipulation of native HTML checkboxes is limited, these native HTML checkboxes which underlie the HTML form functionality have been hidden off-screen using CSS, in visual preference to a custom checkbox graphic.

But Dragon voice activation software takes the visibility of controls into account and, detecting that the native HTML checkboxes are off-screen and, therefore, not visible to the user, it does not take them into consideration for voice commands.

This affects Dragon voice activation users, as they will find themselves unable to select the checkboxes by voice command to enable or disable the map layers.



Current code ref(s):

#map-filters-options > form > fieldset:nth-child(1)

```
<fieldset>
  <legend class="heading h4">Filter Map Layers</legend>
  <label for="layer-filter-list_hs2-stations" class="custom-map-filter custom-
map-filter--icon custom-map-filter_hs2-stations custom-map-filter--true">
    <input type="checkbox" name="layer-filter-list" id="layer-filter-list_hs2-
stations" class="custom-filter__checkbox-input" value="40">
    <span class="custom-filter__span-label">HS2 Stations</span>
  </label>
  <label for="layer-filter-list_hs2-network" class="custom-map-filter custom-
map-filter--icon custom-map-filter_hs2-network custom-map-filter--true">
    <input type="checkbox" name="layer-filter-list" id="layer-filter-list_hs2-
network" class="custom-filter__checkbox-input" value="">
    <span class="custom-filter__span-label">HS2 Network</span>
  </label>
  [...]
</fieldset>
```

CSS:

```
.custom-map-filter input[type=checkbox]
{
  height: auto;
  position: absolute;
  top: 0;
  left: -3em;
}
```

Examples of additional instances:

URL: <https://www.hs2.org.uk/in-your-area/in-your-area-map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network,tbm>

Page title: 'In your area map – HS2'

Journey: 1.7

Current code ref(s):

#map-filters-options > form > fieldset:nth-child(2)

```
<fieldset>
  <legend class="heading h4 custom-filters-container__heading">Property
schemes maps</legend>
  <label for="layer-filter-list_keyplan_phase1" class="custom-map-filter
custom-map-filter__keyplan_phase1 custom-map-filter--false">
    <input type="checkbox" name="layer-filter-list" id="layer-filter-
list_keyplan_phase1" class="custom-filter__checkbox-input" value="44">
    <span class="custom-filter__span-label">Phase 1</span>
  </label>
  <label for="layer-filter-list_keyplan_phase2a" class="custom-map-filter
custom-map-filter__keyplan_phase2a custom-map-filter--false">
    <input type="checkbox" name="layer-filter-list" id="layer-filter-
list_keyplan_phase2a" class="custom-filter__checkbox-input" value="44">
    <span class="custom-filter__span-label">Phase 2a</span>
  </label>
  [...]
</fieldset>
```



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 the underlying native HTML checkboxes remain on-screen, so that they are accessible to Dragon voice activation users. The use of the `opacity: 0` property will render it invisible, in preference to the custom checkbox graphics.

Also note that, for safety, it's recommended to ensure that the checkboxes have a reasonable width and height set, as these are also properties that Dragon uses to detect whether a control is visible.

Example:

```
.custom-map-filter input[type=checkbox]
{
  height: 44px;
  width: 44px;
  position: absolute;
  top: 1em;
  left: 1em;
  opacity: 0;
}
```



End of report



Journeys

Journey 1

1. Home page
<https://www.hs2.org.uk/>
2. Project update
<https://www.hs2.org.uk/what-is-hs2/hs2-project-update/>
3. Parliament
<https://www.hs2.org.uk/what-is-hs2/hs2-in-parliament/>
4. Integrated rail plan (not found)
<https://www.hs2.org.uk/what-is-hs2/hs2-and-the-integrated-rail-plan/>
5. London to west midlands (not found)
<https://www.hs2.org.uk/the-route/london-to-west-midlands/>
6. Crewe to Manchester
<https://www.hs2.org.uk/the-route/crewe-to-manchester/>
7. HS2 Network
<https://www.hs2.org.uk/in-your-area/map/#7/52.4530/-1.4880/filter=hs2-stations,hs2-network>
8. What is HS2
<https://www.hs2.org.uk/what-is-hs2/>
9. Trains
<https://www.hs2.org.uk/building-hs2/trains/>
10. Viaducts and Bridges
<https://www.hs2.org.uk/building-hs2/viaducts-and-bridges/>
11. Land affected - Assistance for property owners
<https://www.hs2.org.uk/in-your-area/assistance-for-property-owners/>
12. Events
<https://www.hs2.org.uk/events/>



13. BBV Drop in

<https://www.hs2.org.uk/events/hs2-and-bbv-drop-in-burton-green-village-hall/>

14. Direct contract opportunities

<https://www.hs2.org.uk/supply-chain/direct-contract-opportunities/>

15. Supply chain maps

<https://www.hs2.org.uk/supply-chain/supply-chain-map/>

16. Our People

<https://www.hs2.org.uk/about-us/our-people/>

17. Alan Foster

<https://www.hs2.org.uk/people/alan-foster/>

18. Our Documents

<https://www.hs2.org.uk/about-us/our-documents/>

19. Look ahead autumn 2023

<https://www.hs2.org.uk/about-us/our-documents/northamptonshire-construction-look-ahead-autumn-2023/>



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 website meets the requirements of the checkpoint. |
| Fail (M) Medium Priority | The website fails to meet the requirements against AA criteria measured against WCAG 2.1 |
| Fail (H) High Priority | The website fails to meet the requirements against A criteria measured against WCAG 2.1 and more severe accessibility issues were identified. |
| Not Applicable (N/A) | No content was found on the website to which the checkpoint would relate. |
| Out of scope | Areas which fail to meet the requirements against AAA criteria measured against WCAG 2.1 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: Understanding Success Criterion 1.2.1 <ul style="list-style-type: none"> • 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) | Fail (H) |
| 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) | Fail (M) |



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| 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 it's 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) | Fail (H) |



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|---|------------------------------------|
| <p>Orientation: (WCAG 2.1)</p> <p>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.</p> <p>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.</p> <p>(Level AA)</p> | <p>Pass (M)</p> |
| <p>Identify Input Purpose: (WCAG 2.1)</p> <p>1.3.5 The purpose of each input field collecting information about the user can be programmatically determined when :</p> <ul style="list-style-type: none"> • 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. <p>(Level AA)</p> | <p>Pass (M)</p> |
| <p>Identify Purpose: (WCAG 2.1)</p> <p>1.3.6 In content implemented using mark-up languages, the purpose of User Interface Components, icons, and regions can be programmatically determined.</p> <p>(Level AAA)</p> | <p>Out of scope</p> |
| <p>Use of Colour:</p> <p>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.</p> <p>(Level A)</p> | <p>Pass (H)</p> |
| <p>Audio Control:</p> <p>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.</p> <p>(Level A)</p> | <p>Not Applicable (N/A)</p> |



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| <p>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:</p> <ul style="list-style-type: none"> • 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 minimum contrast requirement. <p>(Level AA)</p> | <p>Pass (M)</p> |
| <p>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.</p> <p>(Level AA)</p> | <p>Fail (M)</p> |
| <p>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: Understanding Success Criterion 1.4.5</p> <ul style="list-style-type: none"> • 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. <p>Note: Logotypes (text that is part of a logo or brand name) are considered essential.</p> <p>(Level AA)</p> | <p>Pass (M)</p> |



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| <p>Contrast (Enhanced):</p> <p>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:</p> <ul style="list-style-type: none"> • 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 minimum contrast requirement. <p>(Level AAA)</p> | <p>Out of scope</p> |
| <p>Low or No Background Audio:</p> <p>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:</p> <p>Understanding Success Criterion 1.4.7</p> <ul style="list-style-type: none"> • 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. <p>Note: Per the definition of "decibel," background sound that meets this requirement will be approximately four times quieter than the foreground speech content.</p> <p>(Level AAA)</p> | <p>Out of scope</p> |



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| <p>Visual Presentation:</p> <p>1.4.8 For the visual presentation of blocks of text, a mechanism is available to achieve the following:</p> <p>Understanding Success Criterion 1.4.8</p> <ol style="list-style-type: none"> 1. Foreground and background colours can be selected by the user. 2. Width is no more than 80 characters or glyphs (40 if CJK). 3. Text is not justified (aligned to both the left and the right margins). 4. 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. 5. 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. <p>(Level AAA)</p> | <p>Out of scope</p> |
| <p>Images of Text (No Exception):</p> <p>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.</p> <p>Note: Logotypes (text that is part of a logo or brand name) are considered essential.</p> <p>(Level AAA)</p> | <p>Out of scope</p> |
| <p>Reflow: (WCAG 2.1)</p> <p>1.4.10 Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for :</p> <ul style="list-style-type: none"> • Vertical scrolling content at a width equivalent to 320 CSS pixels; • Horizontal scrolling content at a height equivalent to 256 CSS pixels. <p>Except for parts of the content which require two-dimensional layout for usage or meaning.</p> <p>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.</p> <p>Note: Examples of content which require two-dimensional layout are images, maps, diagrams, video, games, presentations, data tables, and interfaces where it is necessary to keep toolbars in view while manipulating content.</p> <p>(Level AA)</p> | <p>Fail (M)</p> |



| | |
|---|------------------------|
| <p>Non-text Contrast: (WCAG 2.1)</p> <p>1.4.11 The visual presentation of the following have a contrast ratio of at least 3:1 against adjacent color(s):</p> <ul style="list-style-type: none"> • 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. <p>(Level AA)</p> | <p>Fail (M)</p> |
| <p>Text Spacing: (WCAG 2.1)</p> <p>1.4.12 presentation of graphics is essential to the information being conveyed.</p> <p>In content implemented using mark-up 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:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>(Level AA)</p> | <p>Pass (M)</p> |



| | |
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| <p>Content on Hover or Focus: (WCAG 2.1)</p> <p>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:</p> <ul style="list-style-type: none"> • 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. <p>Exception: The visual presentation of the additional content is controlled by the user agent and is not modified by the author.</p> <p>Note: Examples of additional content controlled by the user agent include browser tooltips created through use of the HTML title attribute.</p> <p>Note: Custom tooltips, sub-menus, and other nonmodal popups that display on hover and focus are examples of additional content covered by this criterion.</p> <p>(Level AA)</p> | <p>Not Applicable (N/A)</p> |
|--|--|



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.

(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



| | |
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| <p>Character Key Shortcuts: (WCAG 2.1)</p> <p>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:</p> <ul style="list-style-type: none"> • Turn off: A mechanism is available to turn the shortcut off; • Remap: A mechanism is available to remap the shortcut to use one or more non-printable keyboard characters (e.g. Ctrl, Alt, etc); • Active only on focus: The keyboard shortcut for a user interface component is only active when that component has focus. <p>(Level A)</p> | <p>Not Applicable (N/A)</p> |
| <p>Timing Adjustable:</p> <p>2.2.1 For each time limit that is set by the content, at least one of the following is true:</p> <ul style="list-style-type: none"> • Turn off: The user is allowed to turn off the time limit before encountering it; • 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; • 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; • 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; • Essential Exception: The time limit is essential and extending it would invalidate the activity; • 20 Hour Exception: The time limit is longer than 20 hours. <p>Note: This success criterion helps ensure that users can complete tasks 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.</p> <p>(Level A)</p> | <p>Not Applicable (N/A)</p> |



| | |
|--|----------------------------|
| <p>Pause, Stop, Hide: 2.2.2 For moving, blinking, scrolling, or auto-updating information, all of the following are true: Understanding Success Criterion 2.2.2</p> <ul style="list-style-type: none"> • 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. <p>Note: For requirements related to flickering or flashing content, refer to Guideline 2.3.</p> <p>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.</p> <p>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.</p> <p>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)</p> | <p>Pass (H)</p> |
| <p>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)</p> | <p>Out of scope</p> |



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| <p>Interruptions: 2.2.4 Interruptions can be postponed or suppressed by the user, except interruptions involving an emergency. (Level AAA)</p> | Out of scope |
| <p>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)</p> | Out of scope |
| <p>Timeouts: (WCAG 2.1) 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)</p> | Out of scope |
| <p>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. (Level A)</p> | Pass (H) |
| <p>Three Flashes: 2.3.2 Web pages do not contain anything that flashes more than three times in any one-second period. (Level AAA)</p> | Out of scope |



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| Animation from Interactions: (WCAG 2.1) 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) | Fail (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) |



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| <p>Focus Visible: 2.4.7 Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. (Level AA)</p> | <p>Fail (M)</p> |
| <p>Location: 2.4.8 Information about the user's location within a set of Web pages is available. (Level AAA)</p> | <p>Out of scope</p> |
| <p>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)</p> | <p>Out of scope</p> |
| <p>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)</p> | <p>Out of scope</p> |
| <p>Pointer Gestures: (WCAG 2.1) 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)</p> | <p>Not Applicable (N/A)</p> |



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| <p>Pointer Cancellation: (WCAG 2.1) 2.5.2 For functionality that can be operated using a single pointer, at least one of the following is true:</p> <ul style="list-style-type: none"> • 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. <p>Note: Functions that emulate a keyboard or numeric keypad key press are considered essential.</p> <p>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).</p> <p>(Level A)</p> | <p>Pass (H)</p> |
| <p>Label in Name: (WCAG 2.1) 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.</p> <p>Note: A best practice is to have the text of the label at the start of the name.</p> <p>(Level A)</p> | <p>Fail (H)</p> |



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| <p>Motion Actuation: (WCAG 2.1) 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:</p> <ul style="list-style-type: none"> • 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. <p>(Level A)</p> | <p>Not Applicable (N/A)</p> |
| <p>Target Size (WCAG 2.1): 2.5.5 The size of the target for pointer inputs is at least 44 by 44 CSS pixels except when:</p> <ul style="list-style-type: none"> • 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. <p>(Level AAA)</p> | <p>Out of scope</p> |
| <p>Concurrent Input Mechanisms (WCAG 2.1): 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.</p> <p>(Level AAA)</p> | <p>Out of scope</p> |



Principle 3: Understandable – Information and the operation of user interface must be understandable.

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| 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 |



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| On Focus: 3.2.1 When any 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 |
| 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) |



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| <p>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:</p> <ul style="list-style-type: none"> • 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. <p>(Level AA)</p> | <p>Not Applicable (N/A)</p> |
| <p>Help 3.3.5 Context-sensitive help is available.</p> <ul style="list-style-type: none"> • Provide instructions and cues in context to help inform completion and submission. <p>(Level AAA)</p> | <p>Out of scope</p> |
| <p>Error Prevention (All): 3.3.6 For Web pages that require the user to submit information, at least one of the following is true:</p> <ul style="list-style-type: none"> • 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. <p>(Level AAA)</p> | <p>Out of scope</p> |



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:

[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.

NOTE

This criterion has been removed from WCAG 2.2. In WCAG 2.1 and 2.0 this Success Criterion should be considered as **always satisfied** for any content using HTML or XML.

(Level A)

Pass (H)

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 (WCAG 2.1)

[4.1.3](#) In content implemented using mark-up 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)



The Process

The website is measured against the Web Accessibility Initiative's (WAI) Web Content Accessibility Guidelines 2.1 (WCAG 2.1) to give an 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 website 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 website.

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 website 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 2.1 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 2.1 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 2.1 AA Standard, these issues were found to hinder users.



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.

