

# Welcome

## Before we get started

1. Today's webinar is scheduled to last 1 hour including Q&A
2. Click the CC button for Closed Captions
3. BSL interpretation is available
4. This webinar is being recorded and will be available on the website alongside additional resources within 7 days
5. Say hello in the chat (select "Everyone" from the dropdown) and ask questions using the Q+A button. You can also use the reaction buttons! 🤔 🎉 😊

# Get free one-to-one support from our Tech Champions



**Katherine**

eCommerce and Merchandising



**Adam**

CRM and Box Office Ticketing



**Dean**

Digital Content Creation



**James**

Data Analytics and Insights



**Jack**

Audience Data Collection



**Nicola**

Social Media



**Roberta**

Digital Accessibility



**Monica**

Search Engine Optimisation



**Katy**

Paid Social Media



**Andy**

Web Design



**Momin**

Search Engine Marketing



**Jacqueline**

Email Marketing

Different Breed ®

# Enhancing user experience for hidden impairments.

Craig Pryde, 14th January 2025



**Digital Culture  
Network**





## Who am I?

- Founder of Different Breed ®, a disabled-led tech for good startup that advocates for inclusion through B2B software.
- Ex-software engineer at ATG, Viva Tickets & tech lead at various digital agencies across the UK.
- I'm autistic and I stammer (speech disability) and I couldn't talk fluently till I was in my 20's.
- I use a method of word swapping and humour to deal with my condition.

 [craigpryde](https://www.linkedin.com/in/craigpryde)

 [craig@differentbreed.events](mailto:craig@differentbreed.events)



## Living with a hidden impairments

**Phone Calls** - I find these incredibly stressful and filled with anxiety. I can't get the first word out and people can't see me.

**Stranger Danger** - Starting a discussion with a stranger is very tough and at times can leave the wrong impression.

**Isolation** - When speech is a struggle you spend a lot of time alone as the majority of the world operates in a spoken way.

**Events & Music** - These are my escape. The power of live events is that it brings people together regardless of race, ability or situation. It's the one place I can feel equal.

# **Have you thought about people like me when it comes to accessibility?**

Most haven't... 70-80% of disabilities are not visible.

- **What is a hidden impairment?**
- **Common challenges for hidden impairments**
- **Live demo**
- **Charting your accessibility journey**
- **Q&A**

# What is a hidden impairment?

An example of a hidden impairment is a visual impairment, this is a condition that affects an individual's ability to see, ranging from mild vision loss to complete blindness.

**1 in 12**

Men

**1 in 200**

Women

---

Are Colour Blind

(8% of men, ~0.5% of women).

Achromatopsia Effects 1 in 30'000 - 40'000

**Over 2**

**Million People**

Live With Sight Loss

**1 in 5**

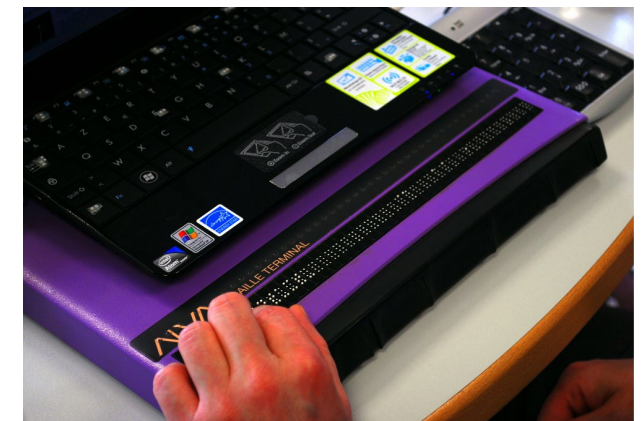
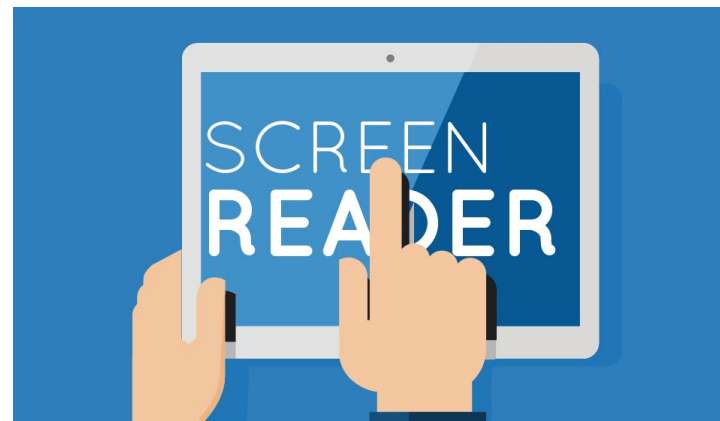
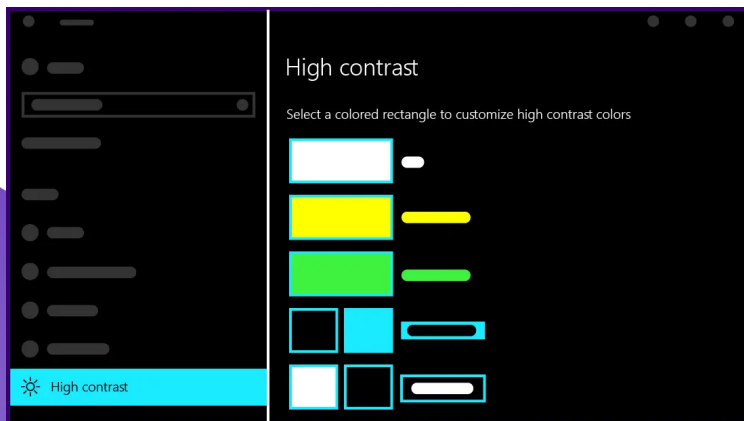
**People**

Will Live With Sight  
Loss In Their Lifetime



# How do people with a hidden impairment navigate the web?

People with hidden impairments rely on assistive technologies to access and interact with digital content.



- **What is a hidden impairment?**
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# Common challenges for hidden impairments



**Struggle to Navigate  
Experiences**



**Reliance on Visual  
Feedback**



**Dependence on Phone  
Lines**



**Increased Demand  
On Support**



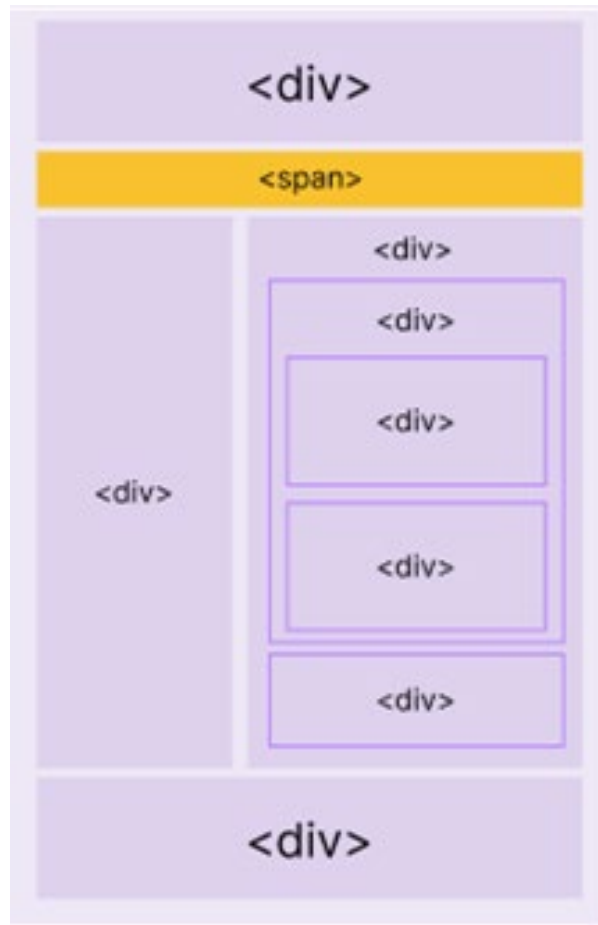
**Lost Revenue**



**Missed Connections**

# Challenge: The way we structure pages

## Non Semantic HTML



## No Clear Structure

Non-semantic HTML uses `<div>` and `<span>` tags, providing no meaningful grouping or context.

## Confuses Assistive Technology

Screen readers cannot identify page sections or navigate efficiently without landmarks.

## Headings Misused

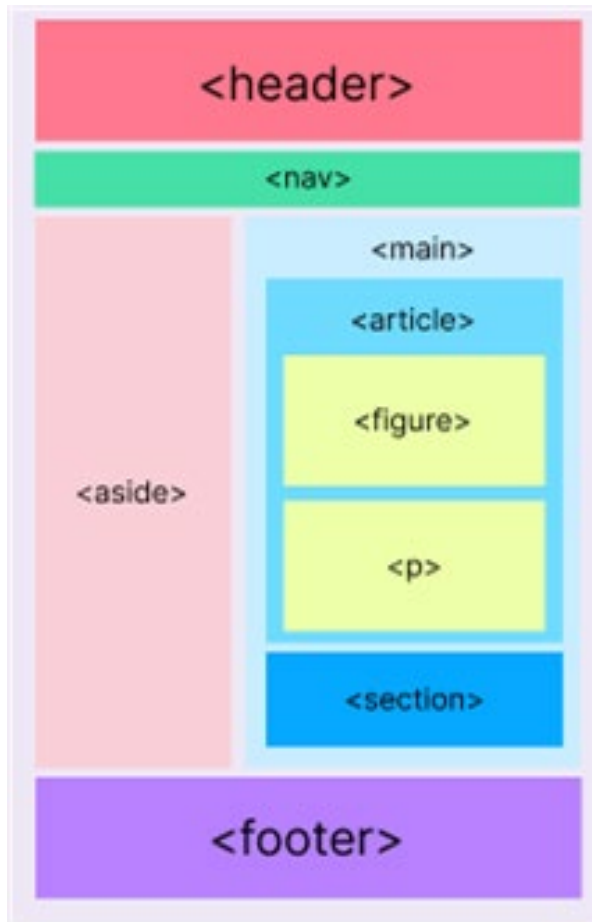
Headings are styled visually (e.g., for size or boldness) instead of reflecting the page's hierarchy.

## Poor User Experience

Users with disabilities face increased frustration and abandonment due to unclear navigation and structure.

# Solution: The way we structure pages

## Semantic HTML



## Clear Structure

Semantic HTML provides clear content grouping and meaningful context, making it easier to understand the page layout.

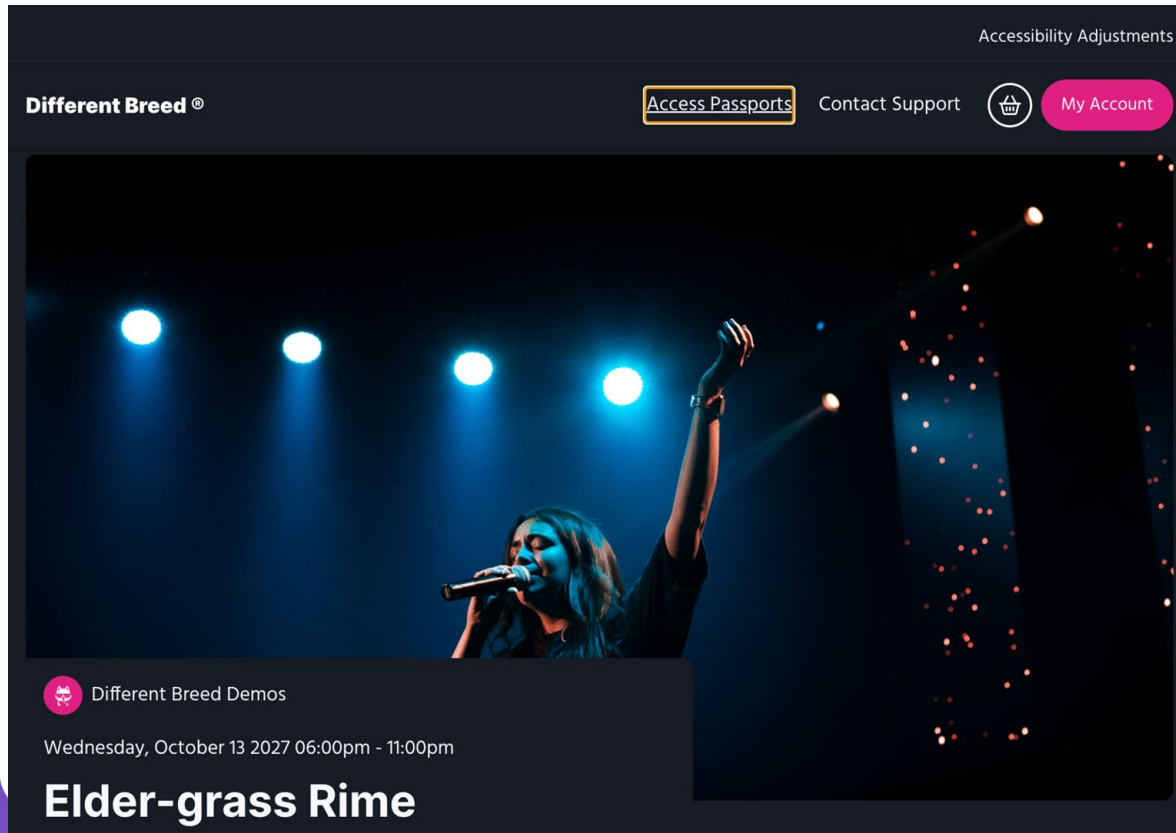
## Easier for Assistive Technology

Landmarks and semantic tags allow screen readers to identify sections and navigate efficiently, improving accessibility.

## Proper Use of Headings

Correctly structured headings group content naturally, enabling users to skip through sections and find what they need quickly.

# Challenge: Excessive navigation



## Mega Menus Create Overhead

Users must navigate through large, repetitive menus on every page, even when they're trying to access the main content.

## Repetitive Navigation

Users need to perform the same actions (e.g., tabbing through a long menu) on every step of their journey, wasting time and increasing frustration.

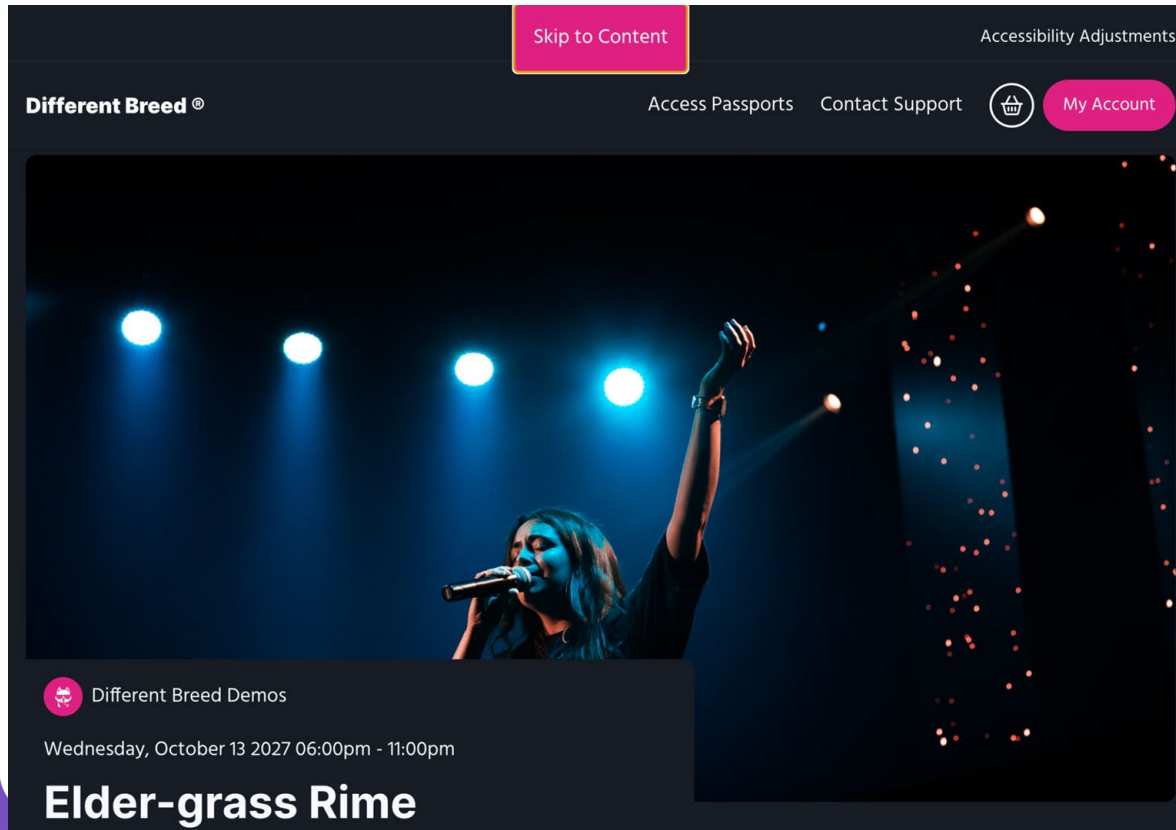
## No Direct Access

Without skip links or jump-to features, users are forced to tab sequentially through entire pages to get to key content or features.

**28 Menu Items = 28 Tabs Per Page (4 x Pages In Flow: 112 Tabs)**



## Solution: Links that skip to desired areas



**Skip To Landmarks** - Provide links that let users jump directly to key sections, such as the main content or footer, avoiding repetitive tabbing through navigation menus.

**Go Beyond With Skip To Features** - On important pages, include skip links to natural next steps, like checkout or basket review, to streamline the user journey.


**28 Menu Items = 1 Tabs Per Page + Skip To Content (4 x Pages In Flow: 4 Tabs)**

# Challenge: Visual changes and context

Add To Cart



1



**Elder-grass Rime**  
Experience the fictional Elder-grass Rime music event from an exclusive raised platform. Unique vantage point tickets available.

[View Event](#)

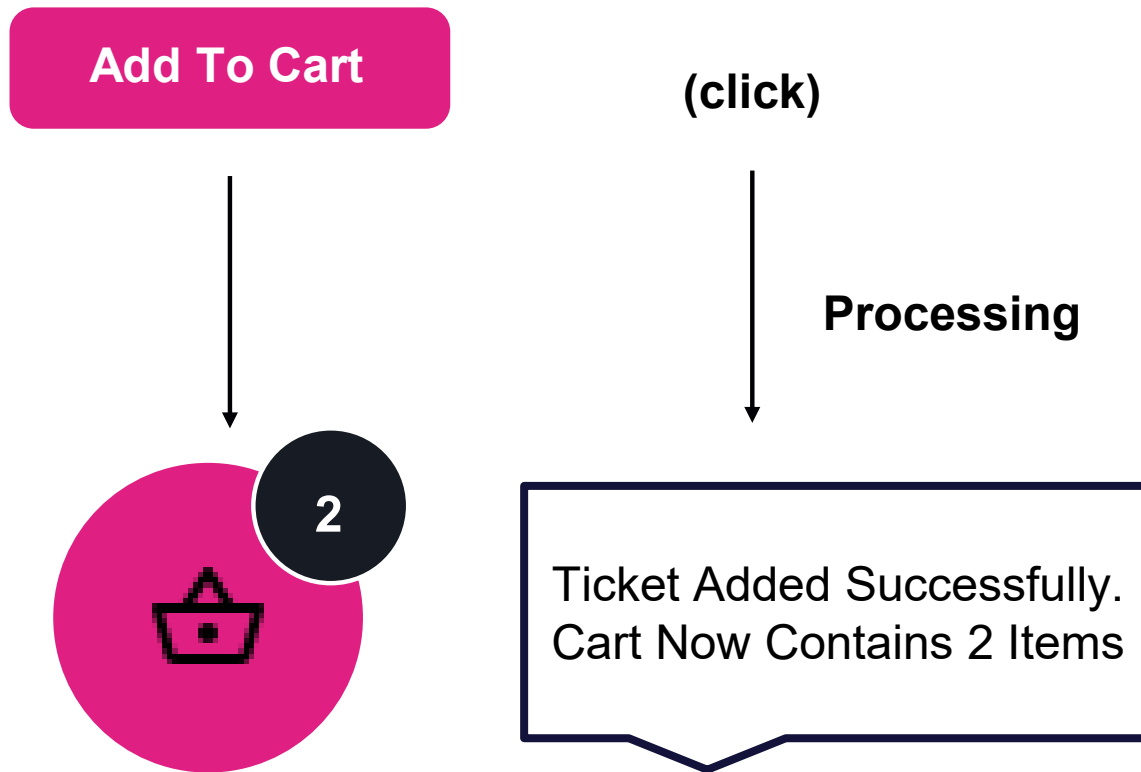
## Navigation Links

Links like “View Event” or “Learn More” rely on visible context, but screen readers only announce the link title, leaving users unsure of its purpose.

## Feedback On Actions

Visual updates (e.g., popovers, cart icons) are missed by screen readers, leaving assistive tech users unaware of key interactions.

## Solution: Provide feedback and context



**Design For Non-Visual Feedback** - Use announcements like “Cart Updated” or “Error: Tickets are no longer available” to inform users of the results of their actions.

**Drive Meaning With Context** - Enhance button and link labels with details that provide clarity. For example:

- Instead of “View Event,” use “View Event: Dinosaur Exhibit.”
- Instead of “Add to Cart,” use “Add 2 x General Admission Tickets to Cart.”

# Challenge: Reliance on colour for feedback

**Your Seats**

<b>A14</b>	£20.00
Balcony	
<b>A15</b>	£20.00
Balcony	
<b>A16</b>	£20.00
Balcony	

Invalid Selection, Leaves Single Empty Seat In Row

---

**Processing Fee's** + £2.50

Lorem ipsum dolor sit amet, consectetur adipiscing elit.  
Nunc vel elit tempor est porta rutrum sit amet at urna...

---

<b>A15</b>	£20.00
Balcony	
<b>A16</b>	£20.00
Balcony	

Invalid Selection, Leaves Single Empty Seat In Row

**Reliance On Colour Alone** - Error states, like "Invalid Selection," are shown only in red text, making them indistinguishable for users with protan colour blindness and causing confusion.

**Confusing for Assistive Tech Users** - Without text or auditory cues, screen reader users cannot understand the issue or how to resolve it.

# Solution: Contrast and alternative feedback

**Your Seats**

A14	£20.00
Balcony	
A15	£20.00
Balcony	
A16	£20.00
Balcony	

Invalid Selection, Leaves Single Empty Seat In Row

---

**Processing Fee's**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc vel elit tempor est porta rutrum sit amet at urna...

Checkout

---

**Your Seats**

A14	£20.00
Balcony	
A15	£20.00
Balcony	
A16	£20.00
Balcony	

Invalid Selection, Leaves Single Empty Seat In Row

---

**Processing Fee's** + £2.50

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc vel elit tempor est porta rutrum sit amet at urna...

---

Order Total: **£62.50**

Checkout

## Ensure High-Contrast Colours -

Choose a palette that meets a minimum contrast ratio of 3:1 to ensure all users can distinguish elements.

**Introduce Indicators** - Add text or symbols to error messages and important statuses to ensure feedback is clear and distinguishable.

**Provide Feedback** - Ensure when a field is invalid it provides the appropriate ARIA attributes to ensure the error is indicated to screen reader users.

# How do we test for web page structure, feedback and colour?

## Unstructured Pages

- Use [WAVE](#) or [Lighthouse](#) to analyze [headings](#) and [landmarks](#).
- Test navigation with a [screen reader](#).

## Excessive Navigation

- Use Tab and Shift+Tab to test skip links.
- Check for proper [semantic tags](#) (e.g., <nav>, <main>).

The image shows a screenshot of the WAVE web accessibility evaluation tool. The tool's interface includes a header with the WAVE logo and 'powered by WebAIM', a search bar with the URL 'https://differentbreed.events', and a 'Styles' toggle set to 'ON'. Below this is a 'Structure' panel with tabs for Summary, Details, Reference, Order, Structure, and Contrast. The 'Structure' panel displays a tree view of the page's content, starting with a 'Main' container, followed by an 'h1' heading: 'We empower people with disabilities to book tickets online with ease and independence, just like everyone else.' Below the h1 are several 'h2' and 'h3' headings: 'What We Do', 'Accessible Ticketing', 'Eligibility Handled For You', 'Allocate Companion Tickets', 'Real-Time Analytics', 'Access Control', 'Allocate Assistive Technology & Sell Add-ons', and 'Reserve Assistive Technology'.

Overlaid on the right side of the screenshot is a dark-themed website interface for 'Different Breed'. The website has a navigation menu with items like 'Solutions', 'About', and 'Utility Navigation'. Various accessibility icons are overlaid on the website, including a globe icon labeled '\*en\*', a magnifying glass icon, a speech bubble icon, and a 'Code' icon. The text 'The following apply to the entire page' is visible at the top right of the website overlay.

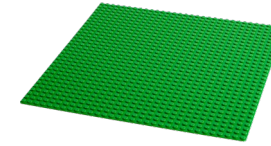


- **What is a visual impairment?**
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## Charting your accessibility journey

1. Take Stock Of Where You Are
2. Find Your Interest
3. Start To Understand Your Audience
4. Involve Us In Your Testing
5. Enjoy The Journey



[WCAG 2.2](#)

[WAI-ARIA](#)

[POUR](#)



**Customer Surveys**

**User Groups**

**A/B Testing**

**Access Audits**

**Secret Shoppers**

**Webinars**



**Accessibility Road Map**

# How can Different Breed ® help you do this?

1. Meet The Needs Of Your Customers
2. Understanding Your Audience
3. Improve With Feedback
4. Anticipate Demand

Start Free: <https://differentbreed.events>



The screenshot displays the 'Different Breed Demos' section of 'The Great British Theatre Access Guide'. It features a grid of eight accessibility categories, each with a title, a brief description, and a 'Selected' indicator (a star icon). The categories are: Visual Impairments (VI), Hearing Impairments (HI), Mobility & Physical Disabilities (MPD), Chronic Illnesses & Fatigue (CIF), Mental Health & Emotional Support (MHE), Speech & Communication Disabilities (SC), Neurodivergent & Sensory Needs (NS), and Cognitive Disabilities (CD). The 'Selected' indicator is highlighted in a pink bar at the bottom of the category card.

**VI**  
**Visual Impairments**  
For individuals with partial or no vision, who may rely on aids like screen readers or tactile guidance.  
★ Selected

**HI**  
**Hearing Impairments**  
For people who are deaf or hard of hearing and may use hearing aids or sign language.

**MPD**  
**Mobility & Physical Disabilities**  
For those who have difficulty walking, use wheelchairs, or need support getting around due to physical conditions.

**CIF**  
**Chronic Illnesses & Fatigue**  
For those with long-term health conditions that cause fatigue or require breaks and easy access to medical support.


**MHE**  
**Mental Health & Emotional Support**  
For individuals managing anxiety, PTSD, or other mental health conditions who may need calm spaces or extra flexibility.

**SC**  
**Speech & Communication Disabilities**  
For non-verbal individuals or those with speech difficulties who may use communication devices or require additional support from staff.  
★ Selected

**NS**  
**Neurodivergent & Sensory Needs**  
For those with conditions like autism or sensory processing disorders, who may need quieter environments or clear instructions.

**CD**  
**Cognitive Disabilities**  
For individuals with memory, problem-solving, or comprehension difficulties who may benefit from simplified instructions, visual aids, or extra time.

# Together, we can be a Different Breed ®

 [craigpryde](#)   @ [craig@differentbreed.events](mailto:craig@differentbreed.events)



# Q&A



# Get in Touch



**[digitalnetwork@arts council.org.uk](mailto:digitalnetwork@arts council.org.uk)**



**[digitalculturenetwork.org.uk](http://digitalculturenetwork.org.uk)**



**[@ace\\_dcn](#)**



**[Showcase/Digital-Culture-Network](#)**



**[DigitalCultureNetwork](#)**



# Digital Culture Network

# Useful Resources

## Automated Tools

- Use [WebAIM's Contrast Checker](#) to test text and background contrast.
- Run [Lighthouse's Accessibility Audit](#) in Chrome DevTools to identify colour-related issues.

## Simulations and Manual Testing

- Simulate Colour-Blindness using [Chrome's developer tools](#) or tools like Sim Daltonism.
- Test in Monochrome mode to verify usability without relying on colour.
- [Enable High Contrast Modes](#) on devices to ensure readability under reduced colour perception.

The image shows a digital interface for a contrast checker. It is divided into two main sections: 'Foreground' and 'Background'. Each section contains a 'Hex Value' input field, a 'Color Picker' (represented by a horizontal bar), and an 'Alpha' input field. Below these are 'Lightness' sliders. The 'Foreground' section shows a hex value of #FFFFFF, a white color picker, an alpha of 1, and a lightness slider set to the maximum. The 'Background' section shows a hex value of #222B36, a dark blue color picker, and a lightness slider set to a low value. Below these two sections, a green-bordered box displays the 'Contrast Ratio' as 14.31:1.

Property	Value
Foreground Hex Value	#FFFFFF
Background Hex Value	#222B36
Alpha	1
Contrast Ratio	14.31:1