Power BI Accessibility Report

The original version of this report was produced by Evy Coe, Digital Accessibility Officer at Norfolk County Council, Published on 20 May 2025.

It is related to the Power BI accessibility advice from Norfolk County Council.

Summary

Worcestershire County Council (WCC) aims to ensure our digital content is inclusive and accessible for as many people as possible, including disabled people.

As a UK public sector body, the Accessibility Regulations 2018 require us to ensure our web browser-based digital content meets at least the AA standard of the Web Content Accessibility Guidelines (WCAG) version 2.2 (with some exceptions).

We use Power BI as our data presentation and visualisation tool of choice. Its intuitive interface allows users to easily create and share interactive dashboards and reports, making complex data accessible and understandable. This ease of use ensures staff can rapidly leverage data insights without needing extensive technical expertise.

Additionally, Power BI integrates with other Microsoft products, enhancing our overall digital ecosystem. We have found we are unable to create and share Power BI content that conforms to WCAG 2.2 AA due to five key issues. We would welcome Microsoft's support to help us overcome the barriers we have identified to enable us to produce Power BI content that conforms to WCAG 2.2 AA. This will enable us to continue to use Power BI and produce inclusive content that is accessible for as many people as possible.

Methodology

Norfolk County Council developed, published and tested a Power BI report to determine how to apply accessible design to Power BI content and if it is possible to create a Power BI report that conforms to WCAG 2.2 AA: This is the report referred to throughout

this document: Norfolk County Council Norfolk Health and Wellbeing Profiles Power BI report

Development

Norfolk County Council then developed the original version of the report following Microsoft's online advice on Power BI accessibility and using their own understanding of digital accessibility best practice.

Publication

Norfolk County Council then published the original version of this report to the web. They chose this method of publication because this is the format used by many organisations to share Power BI content with public audiences via external and internal-facing websites.

Testing

Norfolk County Council then subjected the report to rigorous internal accessibility testing during the development period. After they published the report, they then engaged an external user experience consultancy, Web Usability, to audit the report against WCAG 2.2 AA.

Findings

Working with Web Usability, Norfolk County Council identified five instances of non-compliance with WCAG 2.2 level A and AA success criteria in the Norfolk Health and Wellbeing Profiles Power BI report.

At Worcestershire County Council, we echo Norfolk County Council by welcoming Microsoft's support to help us overcome the barriers that have been identified to enable us to produce Power BI content that conforms to WCAG 2.2 AA.

Issues found in Power BI reports

Issue 1: Content does not reflow

WCAG 1.4.10 Reflow requires 'content can be presented without loss of information

or functionality, and without requiring scrolling in two dimensions for:

- vertical scrolling content at a width equivalent to 320 CSS pixels
- horizontal scrolling content at a height equivalent to 256 CSS pixels

The only exception is parts of the content that require two-dimensional layout for usage or meaning, like tables, maps and charts.

Norfolk County Council were unable to build the report in a way that, when viewed in a web browser, the information is presented in a single column, and users do not need to scroll in two dimensions to access the content when zoomed in up to 400% (using either browser zoom or Power BI zoom functionality).

Figure 1: Screenshot of page 2 of the report at display resolution 1280 x 1024 and Power BI zoom at 400%.

This fails WCAG 1.4.10 Reflow.

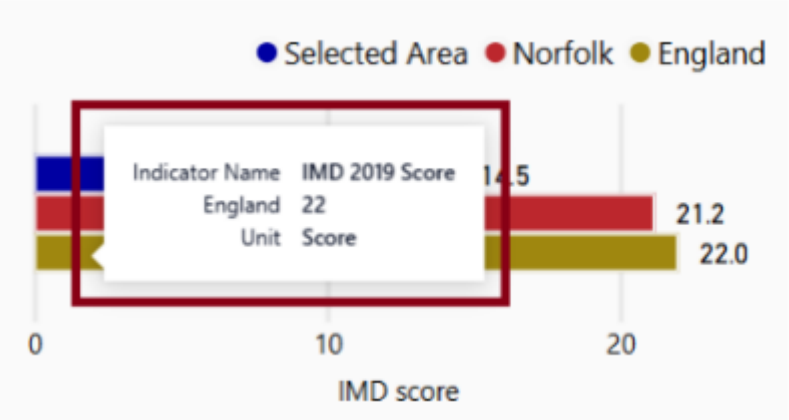
Issue 2: Limited keyboard navigation

WCAG 2.1.1 Keyboard requires 'all functionality of the content is operable through a keyboard interface.'

Norfolk County Council have been unable to include visuals that are fully accessible to keyboard users. This is because the information boxes that appear when hovering over some visuals cannot be made visible when navigating via keyboard. They found during

testing that screen readers will read out the content, but keyboard navigation users who do not use screen readers are unable to access it.

Figure 2: Screenshot showing an example of an element inaccessible to keyboard users in the deprivation score visual on page 5 of the report.



This fails WCAG 2.1.1 Keyboard.

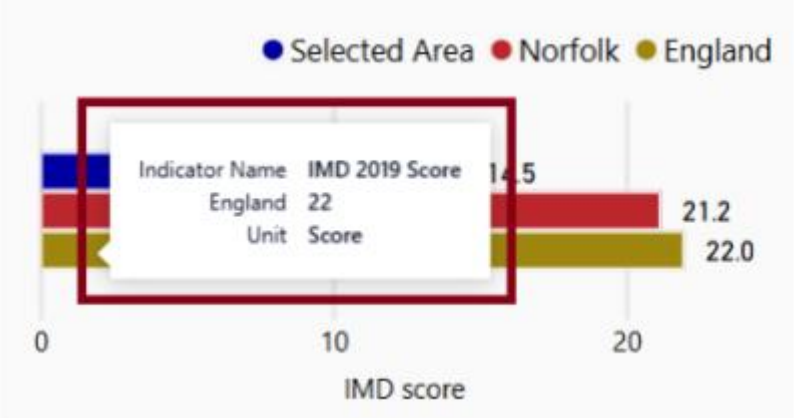
Issue 3: Text not hoverable

WCAG 1.4.13 Content on Hover or Focus requires 'where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden the following are true:

- **dismissible**: a mechanism is available to dismiss the additional content without moving pointer hover or keyboard focus, unless the additional content communicates an input error or does not obscure or replace other content
- **hoverable**: if pointer hover can trigger the additional content, then the pointer can be moved over the additional content without the additional content disappearing
- **persistent**: the additional content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid.'

Throughout the report, information boxes appear on hover. Norfolk County Council have been unable to ensure that it is possible to move the mouse away from the trigger point and hover over this new content.

Figure 3: Screenshot showing an example of an information box that appears on hover that is not hoverable in the deprivation score visual on page 5 of the report



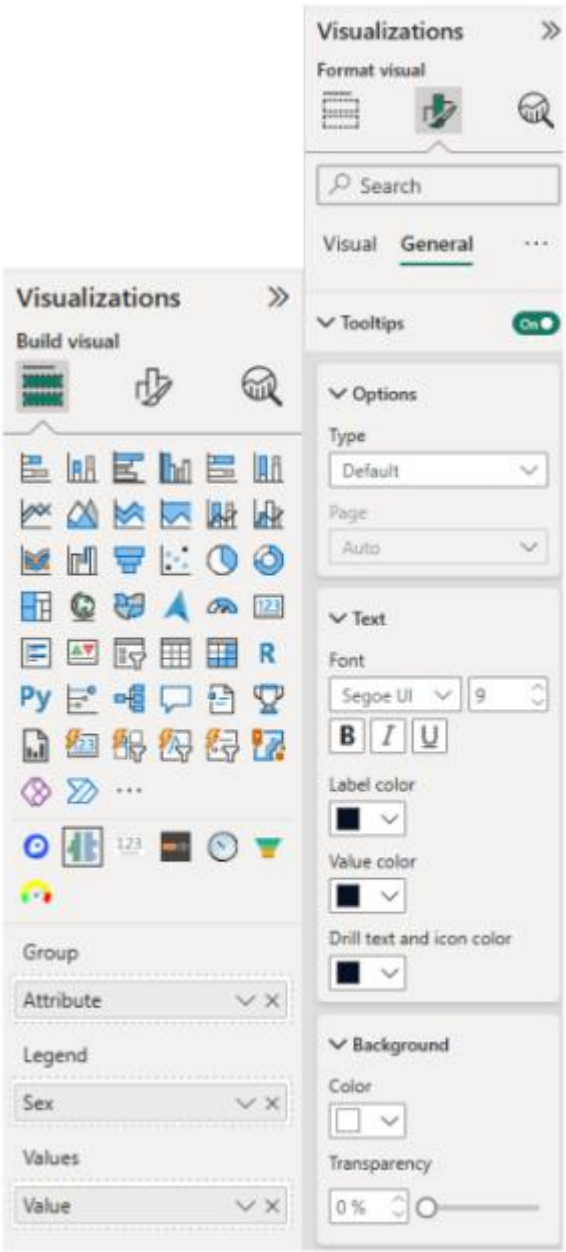
This fails WCAG 1.4.13 Content on Hover or Focus.

Issue 4: Visuals rely on colour coding to communicate information

WCAG 1.4.1 Use of Colour requires 'colour is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.'

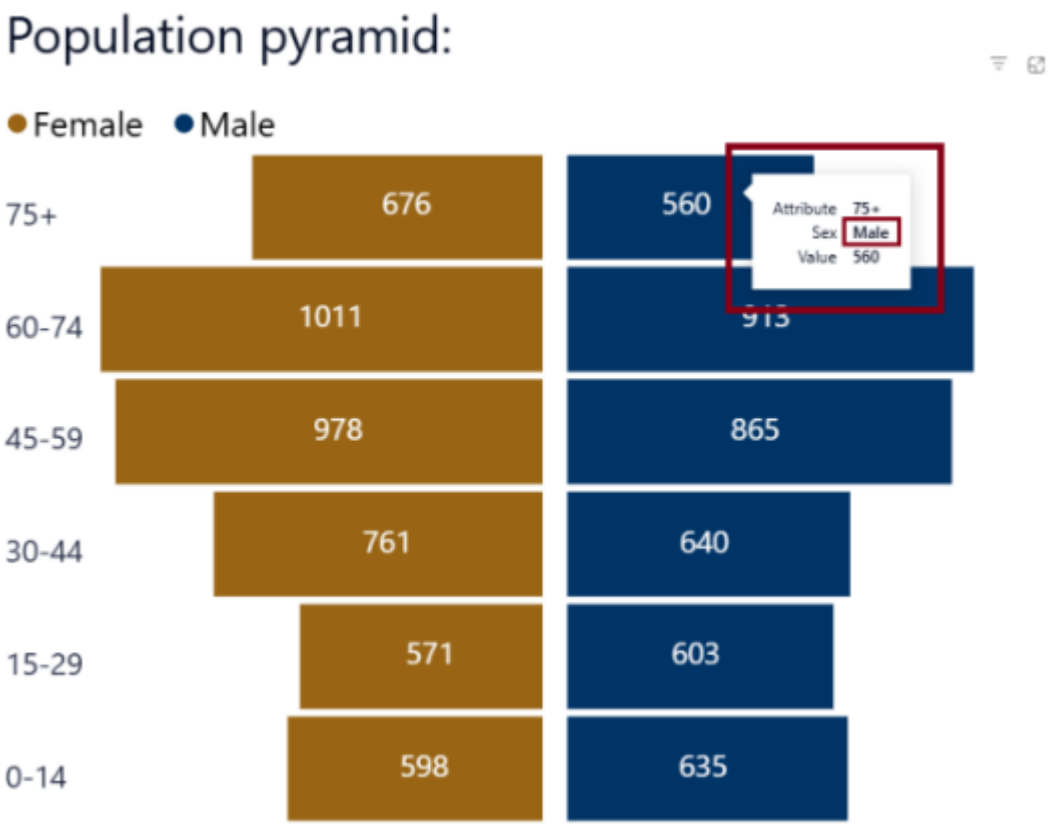
Norfolk County Council have used colour coding to help users to identify data types in visuals. As this is not accessible for colour blind users, they have applied data labels to explain the colour coding.

Figures 4a and 4b: Screenshots showing how they have applied labels to the 'Population pyramid' visual on page 3 of the report.



However, these labels are presented in information boxes that have accessibility issues (they are inaccessible via keyboard navigation and appear on hover but are not hoverable - see **issue 2** and **issue 3** above).

Figure 4c: Screenshot showing an example of a label presented in an information box on the 'Population pyramid' visual on page 3 of the report.



This means that they cannot provide accessible labels to help users identify data types if they can't perceive or understand the colour coding. This means the visuals rely on colour to communicate meaning, which fails WCAG 1.4.1 Use of Colour.

Issue 5: Limited ability to implement an accessible heading structure

WCAG 1.3.1 Info and Relationships requires 'information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.'

Norfolk County Council have included visible headings in the report and attempted to apply headings tags to ensure this content is recognised as headings by assistive technologies.

However, they were unable to apply a heading 1 tag to the main heading in the report ('Norfolk Health and Wellbeing Profiles') because it is not available as an option in the accessibility section of the text box properties.

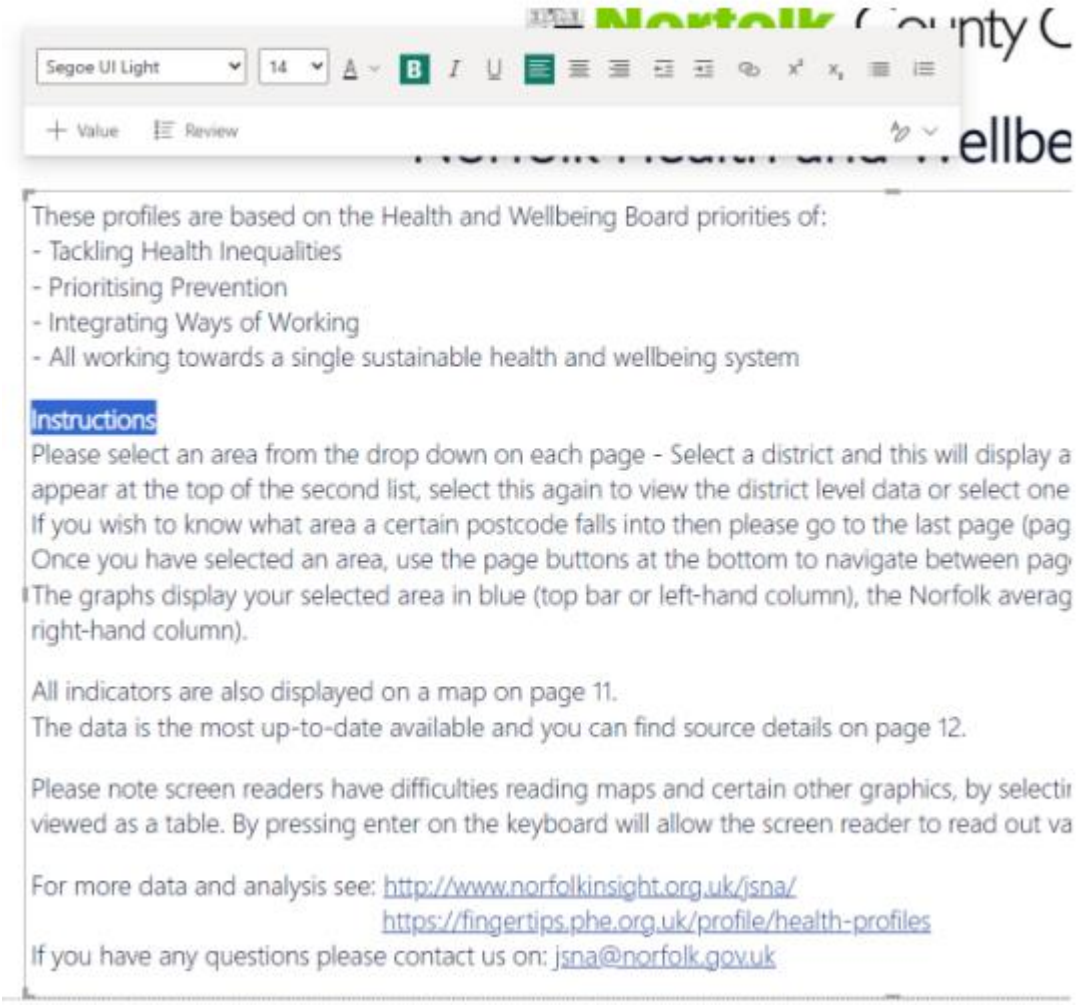
Figure 5a: Screenshot showing that there is no option to apply a heading 1 tag to the main heading in the report.

They have also found that the report contains a visually hidden heading 2, which we are unable to edit or remove.

Figure 5b: Screenshot showing the visually hidden heading in the report HTML.

Finally, they found that Power BI only allows users to apply heading tags to whole text boxes, not specific text within them. This means they were unable to apply heading tags to heading text when it is included in a text box with other, non-heading text.

Figure 5c: Screenshot showing the inability to apply a heading tag to the heading text ‘Instructions’ on page 1 of the report because it is in a text box with other, non-heading text.



It is impractical for users to have to work around this by creating a dedicated text box for every heading in their report.

This means that they have been unable to apply heading tags to text in the report that looks like and functions as headings. These headings therefore can't be programmatically identified as headings by assistive technologies, which fails WCAG 1.3.1 Info and Relationships.

At Worcestershire County Council we have used this guidance and testing to understand and relay the limitations of us using Power BI.