

Digital Accessibility Centre Accessibility Audit Report for Cardiff Council – Android App

Company	Cardiff Council
Date	7 th June 2021
DAC Ref.	000769
Version	v1.0
Standard	WCAG 2.1

© 2021 Digital Accessibility Centre Limited, All Rights Reserved

Pursuant to item 7 in our terms and conditions, this report and its findings are intended for the client organization. Any other use of this material that is attributed to Digital Accessibility Centre, including delivery of excerpts, paraphrases, or edited versions to anyone not employed by the client organization must be approved by us in writing.



Document Control

Site/product/app name:	Cardiff Council – Android App
Client:	Cardiff Council
Project lead:	Dan Jolley
User Testing Support:	Matthew Morgan
Technical Auditing Report Author:	Dan Jolley
Quality checked by:	Georgina Williams
Address:	Digital Accessibility Centre Stephen Lloyd Suite (Unit 18) Darcy Business Park Llandarcy Neath SA10 6FG
Contact details:	Gavin.evans@digitalaccessibilitycentre.org 079366 85804 Cam.nicholl@digitalaccessibilitycentre.org 07597 690358
Phone:	01792 815267
Date of audit:	7 th June 2021
Date Report Issued:	15 th June 2021



Contents

Digital Accessibility Centre	1
Accessibility Audit Report for Cardiff Council – Android App	1
Document Control	2
Contents	3
Executive Summary	5
Audit Summary	6
Scope	7
Tasks	
Browser matrix and Assistive Technology (AT) combinations	8
Summary Graphs	9
Analyst Feedback	
WCAG 2.1 Breakdown	10
Audit Results	
High Priority – WCAG A	
Non-Text Content	
Issue ID: DAC_Android_Role_04	
Issue ID: DAC_Android_Role_05	
Non-Text Content - Maps	
Issue ID: DAC_Android_Images_01	
Form Controls - Unlabelled	
Issue ID: DAC_Android_Forms_01	
Issue ID: DAC_Android_Forms_02	
Issue ID: DAC_Android_Forms_03	
Issue ID: DAC_Android_Forms_04	
Issue ID: DAC_Android_Forms_05	
Issue ID: DAC_Android_Forms_06	
Issue ID: DAC_Android_Forms_07	
Unlabelled Buttons	
Issue ID: DAC_Android_Buttons_02	
Heading Structure	
Issue ID: DAC_Android_Headings_01	
Content	
Issue ID: DAC_Android_Content_01	
Sequence	
Issue ID: DAC_Android_Sequence_01	
Use of Colour Alone	
Issue ID: DAC_Android_Colour_Alone_01	
Page Title	
Issue ID: DAC_Android_Page_Title_01	
Focus Order	
Issue ID: DAC_Android_Focus_Order_01	30

Issue ID: DAC_Android_Focus_Order_02	31
Issue ID: DAC_Android_Focus_Order_03	32
Expanding Content	33
Issue ID: DAC_Android_Expanding_Content_01	33
Error Messages	
Issue ID: DAC_Android_Error_Handling_01	34
Roles	35
Issue ID: DAC_Android_Role_01	35
Issue ID: DAC_Android_Role_02	36
Issue ID: DAC_Android_Role_03	37
Medium Priority – WCAG AA	38
Button – Ambiguous Text	38
Issue ID: DAC_Android_Buttons_01	38
Status Message	39
Issue ID: DAC_Android_Status_Message_01	39
Usability Issues	
Non-Text Contrast	40
Issue ID: DAC_Android_Contrast_01	40
Issue ID: DAC_Android_Contrast_02	41
End of Report	41
Appendix I	42
Journeys	42
Appendix II	44
Classification of Accessibility Issues	44
Appendix III	65
The Process	65
CRITERIA	66
DAC Testing Procedure	67

Executive Summary

An accessibility audit for **Cardiff Council Android App** was carried out by the Digital Accessibility Centre (DAC) user/technical team on **7**th **June 2021.**

The App 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 app; wherever these barriers are present, they will also need to be resolved.

The issues identified during the testing process were similar to the issues reported on the iOS app. Form controls were found to be lacking programmatically associated labels, interactive components had no specified role meaning screen reader users may not be aware that they can interact with the elements. There is expanding content which does not announce its state and heading were present visually but were not marked as headings.

There were some issues which were specific to the android app which were not present in the iOS app.

Page titles were not announced correctly meaning screen reader users were not sure that the correct page had loaded. Each page announced as 'menu' which we would assume was linked to the expandable navigation menu.

When pop ups are presented on screen, focus is not programmatically set to the pop-up meaning screen reader users would be unaware that the content is present.

There are issues with the terms and conditions pages, where the content is read in one block instead of allowing screen reader users to swipe through the content.

There are elements which are not read by TalkBack in the correct order which may also be confusing for screen reader users.

There are images which are read as unlabelled buttons which will be confusing for screen reader users.

The issues have been presented in order of the relevant WCAG Success Criteria with high priority WCAG A issues listed first.



Audit Summary

In order for the website to be eligible for a Digital Accessibility Centre certification, and fall in line with WCAG 2.1 requirements, improvements need to be made in the following areas.



Α

Non-Text Content

Non-Text Content - Maps

Form Controls - Unlabelled

Unlabelled Buttons

Heading Structure

Content

<u>Sequence</u>

Use of Colour Alone

Page Title

Focus Order

Expanding Content

Error Messages

Roles



<u>Button – Ambiguous Text</u> <u>Status Message</u>



Scope

Tasks

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

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



Browser matrix and Assistive Technology (AT) combinations

Mobile/ Tablet

User type	Operating System (OS)	Browser	Assistive Technology
Blind	Android	Арр	TalkBack
Dilliu			-
Mobility	Android	Арр	-
Mobility			-
Deaf	Android/ iOS	Арр	-
Colour Blind/ Dyslexia	Android	Арр	Magnification
Low Vision	Android	арр	System inverted colours
LOW VISIOII			



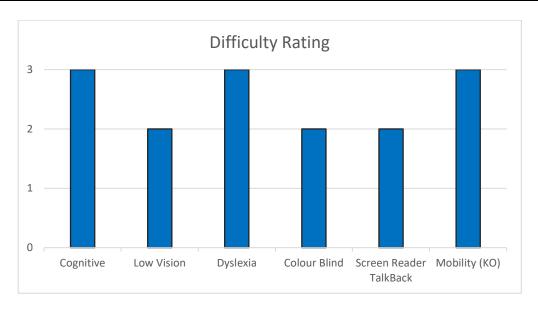
Summary Graphs

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 <u>Classification of Accessibility Issues</u> for more information.

Α		
Priority Level	Number	Percentage: High Priority Results
Number of checkpoints 'Passed'	13 (42%)	N/A 29%
Number of checkpoints 'Failed'	9 (29%)	Pass 42%
Number of checkpoints 'Not Applicable (N/A)'	9 (29%)	Fail 29% Pass Fail N/A

AA		
Priority Level	Number	Percentage: Medium Priority Results
Number of checkpoints 'Passed'	10 (50%)	AA
Number of checkpoints 'Failed'	2 (10%)	N/A 40% Pass 50%
Number of checkpoints 'Not Applicable (N/A)'	8 (40%)	Fail 10% Pass Fail N/A

AAA		
Priority Level	Number	Percentage: Low Priority Results
Number of checkpoints 'Passed'	1 (4%)	AAA Pass 4% Fail 0%
Number of checkpoints 'Failed'	0 (0%)	
Number of checkpoints 'Not Applicable (N/A)'	27 (96%)	N/A 96% Pass Fail N/A



Audit Results

These are the results of the Digital Accessibility Centre accessibility audit by section.

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



High Priority – WCAG A

Non-Text Content

There are icons and images which are marked incorrectly and may confuse screen reader users.

WCAG Reference:

1.1.1 Non-text Content

<u>Understanding Non-text Content</u> | <u>How to Meet Non-text Content</u> (Level A)

4.1.2 Name, Role, Value

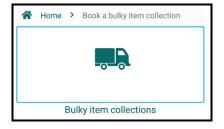
<u>Understanding Name, Role, Value</u> | <u>How to Meet Name, Role, Value</u> (Level A)

Issue ID: DAC Android Role 04

Page title: Book a bulky item collection

Journey: 3 step 1

Screenshot:



There are icons which announce as buttons to TalkBack users. This may be confusing as the button have no alternative text and will be read as an unlabelled button to screen reader users.

Screen reader comments:

"While navigating out of context with TalkBack, I found that although TalkBack provided audible feedback suggesting the presence of buttons, the buttons themselves nor their labels were announced. This was confusing and disorientating because it was unclear to me where TalkBack focus was on-screen. It would benefit users if the buttons could be properly exposed to TalkBack so that users can navigate efficiently and retain their understanding of the screen."



Solution:

Ensure that icons and graphics are not marked as buttons, the icons should either have descriptive alternative text if they are used to convey information, or hidden if not. We would recommend that this icon is hidden.

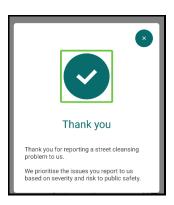


Issue ID: DAC_Android_Role_05

Page title: Littering> Thank you

Journey: 5 step 1

Screenshot:



There is a tick icon to show that an issue has been reported which is announced as 'Success tick button' to screen reader users. This may confuse TalkBack users as the element is not a button.

Solution:

We would recommend using an image with alternative text of 'success' or 'Confirmed' and removing any button mark up from the element. If this is not possible then the icon should be hidden.



Non-Text Content - Maps

There are images which may be confusing for screen reader users.

WCAG Reference:

1.1.1 Non-text Content

<u>Understanding Non-text Content</u> | <u>How to Meet Non-text Content</u> (Level A)

Issue ID: DAC_Android_Images_01

Page title: Where is the fly tipping?

Journey: 4 step 1

Screenshot:



The maps are announced as a series of 'Service' images to TalkBack users.

Solution:

We would recommend that the map is hidden from screen reader users and allow users to select using GPS or address entry only.



Form Controls - Unlabelled

There are form controls which do not have a programmatically associated label.

WCAG Reference:

1.3.1 Info and Relationships

<u>Understanding Info and Relationships</u> | <u>How to Meet Info and Relationships</u> (Level A)

4.1.2 Name, Role, Value

<u>Understanding Name, Role, Value</u> | <u>How to Meet Name, Role, Value</u> (Level A)

Issue ID: DAC_Android_Forms_01

Page title: Home Journey: 1 step 1

Screenshot:



The menu button either reads as unlabelled or 'ok' to TalkBack users which will be confusing as the purpose of the button is not clear.

Screen reader comments:

"The menu button was reported by TalkBack as 'OK'. This was confusing because the purpose of the button is unclear. Unless the user explores closely it appears as if the button may be related to a dialog. Giving buttons labels that clearly reflect the purpose and function of the buttons will clarify their use for the Screen Reader user."

Solution:



Page title: App Settings Journey: 1 step 2

Screenshot:



The toggle switches do not have a programmatically associated label and will read as 'unlabelled' to Talkback users.

This issue applies to all toggle switches.

Screen reader user comments:

"I encountered a button reported both as a 'switch' and a 'button relating to contacting the person who reported the fly tipping. In either case, TalkBack did not feedback that the button had been activated when selected. This is confusing because not only is the element type unclear, but TalkBack users cannot determine if anything has occurred on-screen without taking extra steps. Exposing the changed state of the element to TalkBack would make this process immediate and less time-consuming. Moreover, providing instant feedback will give TalkBack users the same experience as other users of the service."

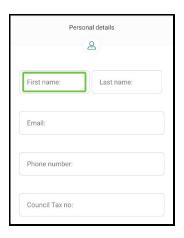
Solution:



Page title: Personal Details

Journey: 1 step 4

Screenshot:



The input fields on the personal details page have a visible label but this is not programmatically associated with the input fields. The visible label text is read multiple times to screen reader users, but not with the input.

Screen reader comments:

"TalkBack presented the edit fields differently to Voiceover. While blank unlabelled text fields were announced, text could also be entered by activating the label and the text field and label in their entirety. This is confusing not only for the multiple entry points, but because the text fields seem to be separate elements. Ensuring that the text fields are correctly label, read as single unit of information and provide only one point of entry should resolve any confusion as well as make text input easier."

"I found that TalkBack repeated each of the text field labels, usually up to three times. This was very time-consuming to listen to and impeded navigation of the form. It would help users if the text field label was announced once, with subsequent announcements being initiated at the user's discretion."

Solution:



Page title: Your details Journey: 3 step 1

Screenshot:



The input fields on the contact details page are not announced correctly to screen reader users. The label is read after the input field.

Screen reader comments:

"I found that TalkBack repeated each of the text field labels, usually up to three times. This was very time-consuming to listen to and impeded navigation of the form. It would help users if the text field label was announced once, with subsequent announcements being initiated at the user's discretion."

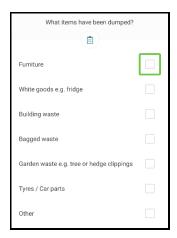
Solution:



Page title: Dumped Items

Journey: 4 step 3

Screenshot:



The checkboxes on the dumped item page appear to be read twice by TalkBack. There is a labelled checkbox which reads correctly first, then an unlabelled checkbox which reads second. This will be confusing for screen reader users

Solution:

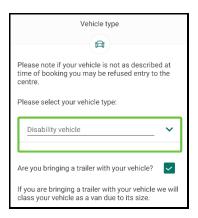
Ensure that there are no unlabelled checkboxes on the page.



Page title: Vehicle Type

Journey: 7 step 2

Screenshot:



The input and checkbox on the vehicle type page do not have a programmatically associated label to allow screen reader users to understand the purpose.

Solution:

Ensure all form controls have a programmatically associated label.



Page title: Croeso | Welcome

Journey: 1 step 1

Screenshot:



There is an image on the welcome page which is marked as a button that has no label. This will be confusing for screen reader users.

Screen reader comments:

"I encountered an unlabelled button the 'Welcome' screen. This was confusing and timeconsuming because there is no way to determine the purpose of the button without activating it. Including descriptive labels for all buttons will allow TalkBack users to navigate the app efficiently and make effective use of its features."

Solution:

We would recommend hiding the image and removing the button markup from the element.



Unlabelled Buttons

There are buttons which do not have an accessible name to allow screen reader user to understand their purpose.

WCAG Reference:

1.3.1 Info and Relationships

<u>Understanding Info and Relationships</u> | <u>How to Meet Info and Relationships</u> (Level A)

4.1.2 Name, Role, Value

<u>Understanding Name, Role, Value</u> | <u>How to Meet Name, Role, Value</u> (Level A)

Issue ID: DAC_Android_Buttons_02

Page title: Your Items Journey: 3 step 1

Screenshot:



When an item is added to the bulky waste collection, there is a 'x' button to remove the item. The button has text of 'Information' This will be confusing for users and may cause them to remove an item from collection. If there is more than one item, all buttons have text of 'information'.

Screen reader comments:

"I found two buttons reported by TalkBack as 'Information' when navigating in context. Activating these buttons did not reveal any new content. Instead, items were deleted. This is problematic not only because the buttons do not identify their true purpose but do not report their association to the individual item. Ensuring that button labels reference the item with which they are linked as well correcting the 'Information' label to read 'Delete' or 'Remove' will allow users to understand and use these buttons."

Solution:

Ensure all buttons have text which is uniquely descriptive of the purpose of the button; such as 'Remove Fridge Freezer'.



Heading Structure

There are heading which appear visually which are not marked appropriately for screen reader users.

WCAG Reference:

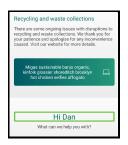
1.3.1 Info and Relationships

<u>Understanding Info and Relationships</u> | <u>How to Meet Info and Relationships</u> (Level A)

Issue ID: DAC Android Headings 01

Page title: Home Journey: 1 step 1

Screenshot:



There are headings present which are not marked as headings meaning TalkBack users are unable to recognise the content as headings or quickly skip between headings on the page. There is a heading of 'Hello' which reads as 'Welcome text' to screen reader users.

Screen reader comments:

"I encountered text on the Home screen that I felt should be a heading. Navigating with standard navigation gestures I found that the text reported by VoiceOver as 'Hello' was separated from other text on the page furthering this belief. Replacing the 'Hello' text as a level 2 heading should maintain the navigational framework often used by Screen Reader users."

"While navigating out of context with TalkBack, I found that although TalkBack provided audible feedback suggesting the presence of headings, the headings themselves nor their associated text were not announced. This was confusing and disorientating because it was unclear to me where TalkBack focus was on-screen. It would benefit users if headings could be properly exposed to TalkBack so that users can navigate efficiently and retain their understanding of the screen."

Solution:

Ensure all headings are marked as headings on all pages.



Content

There is content which cannot be read independently by TalkBack users.

WCAG Reference:

1.3.1 Info and Relationships

<u>Understanding Info and Relationships</u> | <u>How to Meet Info and Relationships</u> (Level A)

2.1.1 Keyboard

<u>Understanding Keyboard</u> | <u>How to Meet Keyboard</u> (Level A)

Issue ID: DAC_Android_Content_01

Page title: Terms and Conditions

Journey: 3 step 1

Screenshot:



The terms and conditions cannot be read line by line by TalkBack users. The entire page is read without pause which may be confusing and hard to understand.

This issue is consistent with all terms and conditions pages.

Screen reader comments:

"The contents of the Terms and Conditions screen was not announced by TalkBack. This had been confirmed to me by the job lead who explained that the on-screen content was 'hidden' from the Screen Reader. This is problematic because there is no way for Screen Reader users to independently view the Terms and Conditions without sighted assistance or without using third party products. It would benefit Screen Reader users if all on-screen content was exposed to TalkBack so that users can make an independent and informed decision regarding their acceptance of the Terms and Conditions."



Solution:

Ensure content can be read correctly by screen reader users. Users should be able to swipe through the content to read it at a manageable pace.



Sequence

There is content which is not read by screen reading software in the order it is presented on the screen.

WCAG Reference:

1.3.2 Meaningful Sequence

<u>Understanding Meaningful Sequence</u> | <u>How to Meet Meaningful Sequence</u> (Level A)

Issue ID: DAC_Android_Sequence_01

Page title: Collection Calendar

Journey: 6 step 1

Screenshot:



When navigating through the collection calendar page in context using TalkBack, the text 'Collection day' and 'Collection type' are read together first followed by the collection date then the collection types. This is not the correct sequence and may be confusing for screen reader users.

This issue also applies to the 'Collection status page' where 'Select a bag or bin status for more information' is not read in the correct sequence.

Solution:

Ensure content is read to screen reader users in the order it is presented visually. Collection day and the date should be read together or in the correct sequence.



Use of Colour Alone

There are elements which rely on colour alone to convey information.

WCAG Reference:

1.4.1 Use of Color

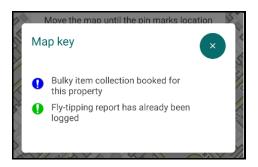
<u>Understanding Use of Color</u> | <u>How to Meet Use of Color</u> (Level A)

Issue ID: DAC_Android_Colour_Alone_01

Page title: Where is the fly tipping?

Journey: 4 step 1

Screenshot:



There is a map key which has a blue exclamation icon for bulky items and a green exclamation mark for fly tipping. Users who are not able to perceive colour may not be aware of the difference between the two icons.

Solution:

We would recommend using a different icon for each element in the key to enable users who are unable to perceive colour to distinguish between the icons.



Page Title

There are pages which do not announce the page title to screen reader users.

WCAG Reference:

2.4.2 Page Titled

<u>Understanding Page Titled</u> | <u>How to Meet Page Titled</u> (Level A)

Issue ID: DAC_Android_Page_Title_01

Page title: All Journey: 1 step 1

Screenshot:



The page title is not announced to TalkBack users when the page loads. This can be confusing for screen reader users as they rely on the page title being announced to understand that the page is correct.

Screen reader comments:

"I could not locate the screen title with TalkBack. This is both confusing and disorientating. This means that users will need to manually find a way of working out which screen they are on. Ensuring that screen titles re announced TalkBack users will allow for greater confidence when using the app and mean that users do not need to rely on contextual elements to try and identify the screen they are navigating."

Solution:

Ensure that page titles are announced correctly to screen reader users.



Focus Order

There are elements which have an unusual focus order and may be confusing for screen reader users.

WCAG Reference:

2.4.3 Focus Order

<u>Understanding Focus Order</u> | <u>How to Meet Focus Order</u> (Level A)

Issue ID: DAC Android Focus Order 01

Page title: Home Journey: 1 step 1

Screenshot:



When the menu is expanded, focus is not given to the menu meaning TalkBack users have to use explore by touch to locate the menu content.

Screen reader comments:

"I found that I had to explore the screen by touch when navigating the menu. Using standard navigation gestures, Screen Reader focus is unable to locate and navigate the menu. It would benefit users if Screen Reader focus was automatically taken to the menu allowing users to navigate the menu far more easily."

Solution:

Ensure focus is managed when a component is expanded. Focus should be placed on the first element within the menu and return to the menu button when the home link is selected.

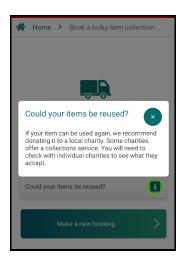


Issue ID: DAC_Android_Focus_Order_02

Page title: Book a bulky item collection

Journey: 3 step 1

Screenshot:



When a Talkback user selects the information button, a pop up is displayed, but focus is not given to the pop up. This will be confusing for users.

Solution:

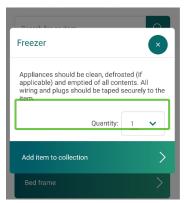
Ensure that focus is programmatically set to pop ups when they appear to allow screen reader users to interact with the components in the expected manner.



Issue ID: DAC_Android_Focus_Order_03

Page title: Your Items
Journey: 3 step 1

Screenshot:



When a screen reader user selects an item from the popular items buttons, a pop up is presented, but focus is not given to the pop up which will be confusing for TalkBack users.

This issue is consistent with all pop ups including the recycling centres page.

Solution:

Ensure focus is programmatically set to pop ups when they appear.



Expanding Content

There is content which expands that does not announce its state to screen reader users.

WCAG Reference:

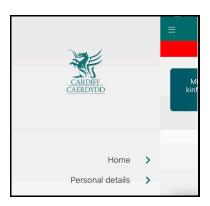
4.1.2 Name, Role, Value

<u>Understanding Name, Role, Value</u> | <u>How to Meet Name, Role, Value</u> (Level A)

Issue ID: DAC_Android_Expanding_Content_01

Page title: Home Journey: 1 step 1

Screenshot:



The menu button does not announce its state of expanded or collapsed to TalkBack users. This may be confusing as users will not be aware of the state of the menu.

Solution:

Ensure that content which expands and collapses announces its state to screen reader users.



Error Messages

Error messages are not presented near the input where the error is committed meaning screen reader users may not be aware that an error has been committed.

WCAG Reference:

3.3.1 Error Identification

<u>Understanding Error Identification</u> | <u>How to Meet Error Identification</u> (Level A)

4.1.3 Status Messages

<u>Understanding Status Messages</u> | <u>How to Meet Status Messages</u> (Level AA)

Issue ID: DAC Android Error Handling 01

Page title: Your details Journey:3 step 1

Screenshot:



Error messages are not presented near the field or input which triggers the error meaning screen reader users may not be aware that an error has been committed without searching for the error.

This issue applies to all error messages.

Screen reader comments:

"When I tried to move on to the next step in the booking process, I found that I need to enter part of an address. However, TalkBack did not announce the presence of an error on the screen. I eventually found it by navigating in context to find the problematic text field. This was confusing and time-consuming. Ensuring that the Screen Reader announces the presence of errors on the screen and that focus is moved to the part of the form containing the error should allow users to correct the issue quickly."

Solution:

Ensure error messages are presented in a way that screen reader users are aware that an error has been committed. Either display an error message at the start of the form and move focus to the error when the form is submitted or use an alert box to ensure screen reader users are aware.



Roles

There are elements which do not have a specified role which means screen reader users may not be aware how to interact with the elements.

WCAG Reference:

4.1.2 Name, Role, Value

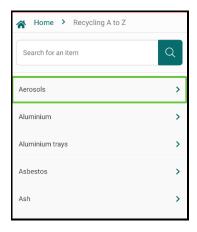
<u>Understanding Name, Role, Value</u> | <u>How to Meet Name, Role, Value</u> (Level A)

Issue ID: DAC Android Role 01

Page title: Recycling A to Z

Journey: 2 step 1

Screenshot:



The links within the recycling a to z have no specified role to allow screen reader users how to interact with the elements.

This issue also applies to the item selection links on the bulky waste collection page, links within the littering section and report it sections.

Solution:

Ensure all interactive components have a specified role to allow screen reader users how to interact with the element.



Issue ID: DAC_Android_Role_02

Page title: Your details Journey: 3 step 1

Screenshot:



The links in the breadcrumb trail do not announce as links for TalkBack users. Users may be unaware that the text can be selected.

Solution:

Ensure all interactive components have a specified role to allow screen reader users how to interact with the element.



Issue ID: DAC_Android_Role_03

Page title: Collection Status

Journey: 8 Step 1

Screenshot:



The selectable elements for each bin status do not announce as interactive components for screen reader users. Users may not be aware that the elements can be selected.

Solution:

Ensure all interactive components have a specified role such as link or button.



Medium Priority - WCAG AA

Button – Ambiguous Text

There are buttons which have text which may not be descriptive enough for screen reader users.

WCAG Reference:

2.4.6 Headings and Labels

<u>Understanding Headings and Labels</u> | <u>How to Meet Headings and Labels</u> (Level AA)

Issue ID: DAC Android Buttons 01

Page title: Book a bulky item collection

Journey: 3 step 1 Screenshot:



There is a button which announces as 'information' but does not inform screen reader users what information will be presented.

Screen reader comments:

"I encountered a button which was reported by talkback as 'information'. The button does not inform users what the information is for. It would be beneficial to have further text such as 'Reuse information' to make the purpose of the button clear."

Solution:

Add text to the accessibility label such as 'Reuse information' to ensure the purpose of the button is clear to screen reader users.



Status Message

There are status messages which are not announced to screen reader users.

WCAG Reference:

4.1.3 Status Messages

<u>Understanding Status Messages</u> | <u>How to Meet Status Messages</u> (Level AA)

Issue ID: DAC_Android_Status_Message_01

Page title: Dumped items>details

Journey:4 step 3

Screenshot:



The text input field has a character limit with a visible character count which is not announced to screen reader users.

This issue applies to all text areas where a character count is present.

Solution:

Ensure that any status messages, where content is updated on the screen such as character counts or error messages are announced to screen reader users when they are presented.



Usability Issues

Non-Text Contrast

There are non-text elements which are difficult to see in dark mode.

WCAG Reference:

N/A - Usability

Issue ID: DAC_Android_Contrast_01

Page title: Recycling A to Z

Journey: 2 step 2

Screenshot:



There are text and non-text elements which remain in the green colour when the app switches to dark mode which may be difficult for some users to see. The home icon, chevrons in the breadcrumb trail and the search button may all be difficult for users to see clearly.

Low vision user comments:

"When I was looking through the recycling a to z list, I struggled to see the chevrons next to each item. This is because the colour scheme used blends with the background which makes it hard to see and select the chevrons, when I tested the colour contrast of the chevrons against the background I found that the colour contrast fails with a ratio of 1.6:1."

Solution:

Ensure that all text and non-text elements are visible when in dark mode.

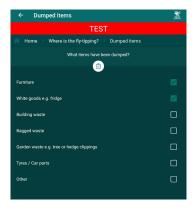


Issue ID: DAC_Android_Contrast_02

Page title: Dumped Items

Journey: 4 step 1

Screenshot:



When in dark mode, the check boxes may be difficult to see int heir checked state because of the green check mark.

Low vision user comments:

"When I selected the items I struggled to see the checkmarks which appeared. This is because the checkmarks blend in with the surrounding checkbox which makes it hard to see and confirm that they have been selected, when I tested the colour contrast of the colour scheme I found that the colour contrast fails with a ratio of 1.8:1 which means that users like myself will struggle to confirm that they have selected the correct checkbox."

Solution:

We would recommend using white check marks when in dark mode to allow all users to see the state of the checkbox.

End of Report



Appendix I

Journeys

1 - General

- 1. Download and accessing the app
- 2. Updating user preferences
- 3. Providing feedback / suggestions around app
- 4. Changing address / personal details
- 5. Check both themes

2 - Waste

- 1. Recycling A-Z
- 2. Search for item in search box
- 3. Search for item by scrolling list

3 - Bulky Items

- 1. Make a new booking search for item via search box and enter text, progress to booking, confirmation email
- 2. Edit an existing booking
- 3. Cancel a booking

4 - Fly-Tipping

- 1. Report Fly-tipping dumped sofa
- 2. Progress using GPS or map
- 3. Progress with or without uploading an image

5 - Littering

- 1. Report litter build up
- 2. Progress using GPS or map
- 3. Progress with or without uploading an image
- 4. Order bags
- 5. Using a Cardiff address order food waste bags



6 - Collection Calendar

- 1. Checking collection day for Cardiff address
- 2. Setting up notifications to receive collection day reminders

7 - Recycling Centre's

- 1. Make a booking for a car / van / adapted vehicle
- 2. Make a booking for a car with a trailer
- 3. Edit a booking
- 4. Cancel a booking

8 - Missed collections

- 1. Check collection status
- 2. Report a missed collection

9 - Report It - Paving damaged

- 1. Report using menu scrolling
- 2. Report through search box

Report through using tabs are the top of the page



Appendix II

Classification of Accessibility Issues

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

Status	Description
Pass (H) Pass (M) Pass (L)	The site meets the requirements of the checkpoint.
Fail (L) Low Priority	The site almost meets the requirements of the checkpoint. Only a small number of minor problems were identified. The site fails to meet the requirements against AAA criteria measured against WCAG 2.1
Fail (M) Medium Priority	The site fails to meet the requirements against AA criteria measured against WCAG 2.1
Fail (H) High Priority	The site 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 site to which the checkpoint would relate.



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:	(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)	(N/A)
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)	(N/A)
Captions (Live): 1.2.4 Captions are provided for all live audio content in synchronized media. (Level AA)	(N/A)
Audio Description (Pre-recorded): 1.2.5 Audio description is provided for all pre-recorded video content in synchronized media. (Level AA)	(N/A)
Sign Language (Pre-recorded): 1.2.6 Sign language interpretation is provided for all pre-recorded audio content in synchronized media. (Level AAA)	(N/A)

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)	(N/A)
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)	(N/A)
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)	(N/A)
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)	Fail (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)	Pass (H)



Orientation: (WCAG 2.1) 1.3.4 Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential. Note: Examples where a particular display orientation may be essential are a bank check, a piano application, slides for a projector or television, or virtual reality content where binary display orientation is not applicable. (Level AA)	Pass (M)
 Identify Input Purpose: (WCAG 2.1) 1.3.5 The purpose of each input field collecting information about the user can be programmatically determined when: The input field serves a purpose identified in the Input Purposes for User Interface Components section; and The content is implemented using technologies with support for identifying the expected meaning for form input data. (Level AA) 	Pass (M)
Identify Purpose: (WCAG 2.1) 1.3.6 In content implemented using mark-up languages, the purpose of User Interface Components, icons, and regions can be programmatically determined. (Level AAA)	(N/A)
Use of Colour: 1.4.1 Colour is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. (Level A)	Fail (H)
Audio Control: 1.4.2 If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level. (Level A)	(N/A)



 Contrast (Minimum): 1.4.3 The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following: Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1; Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement. Logotypes: Text that is part of a logo or brand name has no minimum contrast requirement. (Level AA) 	Pass (M)
Resize text: 1.4.4 Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality. (Level AA)	Pass (M)
 Images of Text: 1.4.5 If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following: Understanding Success Criterion 1.4.5 Customizable: The image of text can be visually customized to the user's requirements; Essential: A particular presentation of text is essential to the information being conveyed. Note: Logotypes (text that is part of a logo or brand name) are considered essential. (Level AA) 	(N/A)



 Contrast (Enhanced): 1.4.6 The visual presentation of text and images of text has a contrast ratio of at least 7:1, except for the following: Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 4.5:1; Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement. Logotypes: Text that is part of a logo or brand name has no minimum contrast requirement. (Level AAA) 	(N/A)
Low or No Background Audio: 1.4.7 For pre-recorded audio-only content that (1) contains primarily speech in the foreground, (2) is not an audio CAPTCHA or audio logo, and (3) is not vocalization intended to be primarily musical expression such as singing or rapping, at least one of the following is true: Understanding Success Criterion 1.4.7 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.	(N/A)
Note: Per the definition of "decibel," background sound that meets this requirement will be approximately four times quieter than the foreground speech content. (Level AAA)	



 Visual Presentation: 1.4.8 For the visual presentation of blocks of text, a mechanism is available to achieve the following: Understanding Success Criterion 1.4.8 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. (Level AAA) 	(N/A)
Images of Text (No Exception): 1.4.9 Images of text are only used for pure decoration or where a particular presentation of text is essential to the information being conveyed. Note: Logotypes (text that is part of a logo or brand name) are considered essential. (Level AAA)	(N/A)
Reflow: (WCAG 2.1) 1.4.10 Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for: • Vertical scrolling content at a width equivalent to 320 CSS pixels; • Horizontal scrolling content at a height equivalent to 256 CSS pixels. Except for parts of the content which require two-dimensional layout for usage or meaning. Note: 320 CSS pixels is equivalent to a starting viewport width of 1280 CSS pixels wide at 400% zoom. For web content which are designed to scroll horizontally (e.g. with vertical text), the 256 CSS pixels is equivalent to a starting viewport height of 1024px at 400% zoom. Note: Examples of content which 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. (Level AA)	(N/A)



 Non-text Contrast: (WCAG 2.1) 1.4.11 The visual presentation of the following have a contrast ratio of at least 3:1 against adjacent color(s): User Interface Components Visual information required to identify user interface components and states, except for inactive components or where the appearance of the component is determined by the user agent and not modified by the author; Graphical Objects Parts of graphics required to understand the content, except when a particular presentation of graphics is essential to the information being conveyed. (Level AA) 	Pass (M)
 Text Spacing: (WCAG 2.1) 1.4.12 presentation of graphics is essential to the information being conveyed. 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: Line height (line spacing) to at least 1.5 times the font size; Spacing following paragraphs to at least 2 times the font size; Letter spacing (tracking) to at least 0.12 times the font size; Word spacing to at least 0.16 times the font size. Exception: Human languages and scripts that do not make use of one or more of these text style properties in written text can conform using only the properties that exist for that combination of language and script. (Level AA) 	(N/A)



Content on Hover or Focus: (WCAG 2.1)

1.4.13 Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true:

Dismissible

A mechanism is available to dismiss the additional content without moving pointer hover or keyboard focus, unless the additional content communicates an input error or does not obscure or replace other content;

Hoverable

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

Persistent

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

Exception: The visual presentation of the additional content is controlled by the user agent and is not modified by the author.

Note: Examples of additional content controlled by the user agent include browser tooltips created through use of the HTML title attribute.

Note: Custom tooltips, sub-menus, and other nonmodal popups that display on hover and focus are examples of additional content covered by this criterion.

(Level AA)

(N/A)





Principle 2: Operable – User interface components and navigation must be operable.

Keyboard: 2.1.1 All functionality of the content is operable through a keyboar interface without requiring specific timings for individual keystroke except where the underlying function requires input that depends path of the user's movement and not just the endpoints.	on the
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 moinput or other input methods in addition to keyboard operation. (Level A)	ıt Tan (11)
No Keyboard Trap: 2.1.2 If keyboard focus can be moved to a component of the page a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires mor unmodified arrow or tab keys or other standard exit methods, the advised of the method for moving focus away.	e than
Note: Since any content that does not meet this success criterion of interfere with a user's ability to use the whole page, all content on Web page (whether it is used to meet other success criteria or not meet this success criterion. (Level A)	the
Keyboard (No Exception): 2.1.3 All functionality of the content is operable through a keyboar interface without requiring specific timings for individual keystroke (Level AAA)	ΙΙΝΙΔΙ



 Character Key Shortcuts: (WCAG 2.1) 2.1.4 If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true: Turn off: A mechanism is available to turn the shortcut off; Remap: A mechanism is available to remap the shortcut to 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. (Level A) 	(N/A)
 Timing Adjustable: 2.2.1 For each time limit that is set by the content, at least one of the following is true: Turn off: The user is allowed to turn off the time limit before encountering it; 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 longer than 20 hours. 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. (Level A) 	(N/A)



Pause, Stop, Hide:

<u>2.2.2</u> For moving, <u>blinking</u>, scrolling, or auto-updating information, all of the following are true:

Understanding Success Criterion 2.2.2

- 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 <u>pause</u>, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is <u>essential</u>; and
- Auto-updating: For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential.

Note: For requirements related to flickering or flashing content, refer to Guideline 2.3.

Note: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion.

Note: Content that is updated periodically by software or that is streamed to the user agent is not required to preserve or present information that is generated or received between the initiation of the pause and resuming presentation, as this may not be technically possible, and in many situations could be misleading to do so.

Note: An animation that occurs as part of a preload phase or similar situation can be considered essential if interaction cannot occur during that phase for all users and if not indicating progress could confuse users or cause them to think that content was frozen or broken.

(Level A)

No Timing:

<u>2.2.3</u> Timing is not an <u>essential</u> part of the event or activity presented by the content, except for non-interactive <u>synchronized media</u> and <u>real-time events</u>.

(Level AAA)

Pass (H)

(N/A)



Interruptions: 2.2.4 Interruptions can be postponed or suppressed by the user, except interruptions involving an emergency . (Level AAA)	(N/A)
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)	(N/A)
Timeouts: (WCAG 2.1) 2.2.6 Users are warned of the duration of any <u>user inactivity</u> 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)	(N/A)
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)	Pass (H)
Three Flashes: 2.3.2 Web pages do not contain anything that flashes more than three times in any one-second period. (Level AAA)	(N/A)



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)	(N/A)
Bypass Blocks: 2.4.1 A mechanism is available to bypass blocks of content that are repeated on multiple Web pages. (Level A)	(N/A)
Page Titled: 2.4.2 Web pages have titles that describe topic or purpose. (Level A)	Fail (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)	Pass (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)	Fail (M)



Focus Visible: 2.4.7 Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. (Level AA)	Pass (M)
Location: 2.4.8 Information about the user's location within a set of Web pages is available. (Level AAA)	Pass (L)
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)	(N/A)
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)	(N/A)
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)	Pass (H)





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: No Down-Event The down-event of the pointer is not used to execute any part of the function; Abort or Undo Completion of the function is on the up-event, and a mechanism is available to abort the function before completion or to undo the function after completion; Up Reversal The up-event reverses any outcome of the preceding down-event; Essential Completing the function on the down-event is essential. Note: Functions that emulate a keyboard or numeric keypad key press are considered essential. Note: This requirement applies to web content that interprets pointer actions (i.e. this does not apply to actions that are required to operate the user agent or assistive technology). (Level A)	Pass (H)
Label in Name: (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. Note: A best practice is to have the text of the label at the start of the name. (Level A)	Pass (H)



 Motion Actuation: (WCAG 2.1) 2.5.4 Functionality that can be operated by device motion or user motion can also be operated by <u>user interface components</u> and responding to the motion can be disabled to prevent accidental actuation, except when: Supported Interface The motion is used to operate functionality through an <u>accessibility supported interface</u>; Essential The motion is <u>essential</u> for the function and doing so would invalidate 	(N/A)
the activity. (Level A)	
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: • Equivalent The target is available through an equivalent link or control on the same page that is at least 44 by 44 CSS pixels; • Inline The target is in a sentence or block of text; • User Agent Control The size of the target is determined by the user agent and is not modified by the author; • Essential A particular presentation of the target is essential to the information being conveyed. (Level AAA)	(N/A)
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 <u>essential</u> , required to ensure the security of the content, or required to respect user settings. (Level AAA)	(N/A)



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

Language of Page: 3.1.1 The default human language of each Web page can be programmatically determined. (Level A)	Pass (H)
Language of Parts: 3.1.2 The	



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 <u>user interface component</u> does not automatically cause a <u>change of context</u> 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)	(N/A)
Error Identification: 3.3.1 If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text. (Level A)	Fail (H)
Labels or Instructions: 3.3.2 Labels or instructions are provided when content requires user input. (Level A)	Pass (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)	Pass (M)





 Error Prevention (Legal, Financial, Data): 3.3.4 For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true: Reversible: Submissions are reversible. Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. (Level AA) 	(N/A)
 Help 3.3.5 Context-sensitive help is available. Provide instructions and cues in context to help inform completion and submission. (Level AAA) 	(N/A)
 Error Prevention (All): 3.3.6 For Web pages that require the user to submit information, at least one of the following is true: Reversible: Submissions are reversible. Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. (Level AAA) 	(N/A)



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. (Level A)	Pass (H)
Name, Role, Value: 4.1.2 For all <u>user interface components</u> (including but not limited to: form elements, links and components generated by scripts), the <u>name</u> and <u>role</u> can be <u>programmatically determined</u> ; states, properties, and values that can be set by the user can be <u>programmatically set</u> ; and notification of changes to these items is available to <u>user agents</u> , including <u>assistive technologies</u> .	Fail (H)
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)	
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)	Fail (M)



Appendix III

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 standard 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.

65



CRITERIA

High

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

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

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.





DAC Testing Procedure

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

User Testing

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

NVDA: a screen reader and application used by those who are blind.

ZoomText: a magnification application used by those with low vision.

JAWS: a screen reader used by blind people to access pages.

Dragon Naturally Speaking: voice activated software used by those that do not use a conventional input device such as a keyboard or mouse.

Switch Access: used by those with severe mobility impairments to input commands to a computer.

Keyboard Only: some users with mobility impairments have difficulty making precise movements required by pointing devices such as a mouse; therefore, a keyboard is used as the exclusive input device.

Readability: Manual checks were made to assess the suitability of a page for those with colour blindness and dyslexia.

Deaf/Hard of hearing: Manual checks were made to assess the suitability of a page for those with hearing impairments.

Learning difficulties: Manual checks were made to assess the suitability of a page for those with learning difficulties.

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 website with further credibility and quality.

