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| Report for Ellen’s B&B Website |
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# Introduction

With the advent of screen readers, the internet can now be for everyone, to quote Vinton Cerf - “The internet *is* for everyone.” However, the onus is on the individual web designer to make sure that this is implemented. Accessibility is also beneficial to the site owner too, as it helps to promote the site higher in the search engine listings.

# Improving the Accessibility of the Website

Firstly, I have tried to adhere to the general principle of having a text equivalent for *every* non-text element so there is always something there for the screen reader to read back to its user.

2.1 Headings

I have endeavoured to keep my headings consistent throughout the site. Headings, which when read aloud by screen readers can be configured to be emphasised differently, e.g. vocalised very strongly for <h1> and by comparison more softly for <h5>.

## 2.2 Aria Landmark Role

A valuable tool I used to improve accessibility was the ‘Landmark Role’ aspect of ARIA, Accessible Rich Internet Application which was developed by the W3C’s Web Accessibility Initiative (WAI).

Visually challenged visitors using screen readers such as JAWS or NVDA can have them configured to jump to specific parts of a web page. Using ARIA’s ‘landmarks’ it is possible to identify particular sections or elements of your web pages with specific semantic definitions as landmarks to enable this functionality.

A tag such as ***role="contentinfo"*** can be inserted into an element to communicate to the screen reader that this div, paragraph etc. contains pertinent content information that the visitor might be interested in.

The tag ***role="alert”,*** which is normally used to alert the screen reader to dynamic alerts, was useful on the alert box on the home page, where upon a user’s mouse on-click event, causes a pop up an alert which displays information about the B & B’s Trip Advisor’s awards.

Of importance, I believe is the tag; ***role="presentation”***. Many elements on a web site have a purely presentational, aesthetic functionality, which for the visually challenged visitor can at best be a distraction from relevant content. This role enables this screen reader to ignore or skip these purely ‘visual’ elements.

I used this on the home page’s ‘zoom box’ element which enlarges images when the visitor’s mouse hovers over them.

## 2.3 Alt Tags – Alternative Text Descriptions

Another simple and sometimes underrated accessibility tool is the ‘alt’ attribute. This gives a screen reader content that can be read aloud to the site visitor who can’t see its associated image. I did find it a time-consuming task to compose a lot of alt tags for all the images I have on the site, but after researching screen readers on You Tube to see them in action, it is obvious how invaluable a resource they are for the visually challenged visitor.

I have used the alt attribute throughout the entire site, especially on the gallery page.

2.4 Hyperlinks & Navigation

Where used, I have endeavoured to make all hyperlinks descriptive. When a screen reader is reading aloud all the links on a page its user, links such as ‘more information’ or ‘click here’ aren’t as useful as something more informative, such as; ‘contact details for the B&B’ that I used on the FAQ page.

For increased accessibility, I chose not to use images for my main navigation, NAV section. I also put simple, plain text links at the bottom of each page in the site map.

## 2.5 Colour Contrast Ratio

Throughout the site, I have tried to implement a high colour contrast between the text and background elements. For visitors with colour perception deficiencies this can be the difference between being able to read your content or not.

Initially I choose an image of the Atlantic Ocean as the background, but while aesthetically pleasing, it made the text more difficult to read. I tried several other images with the same negative result.

I finally settled on a small, textured, traditional wall paper type image that tiles nicely and has a small file size. This gives a warm, subtle effect that is much better than a blank background or single colour, while still distinctly contrasting with the black text colour used. It is probably also a better fit for the older demographic of visitor who may visit this type of site.

## 2.6 Forms

On the ‘Contact Us’ page I have included a form for the user to make a booking request, it includes areas for the user to input name, email, dates, requests etc.

On the form, I implemented the ‘label’ element which associates each form control with a corresponding text description. This has several benefits for accessibility;

The descriptive text associated with each input control can be read aloud by screen readers allowing the user to know which input control they are currently working with.

Also, the user can click anywhere around the label text and the cursor will move into that control input, making navigation around the form easier.

# 3. Search Engine Optimisation (SEO)

There are several techniques that can contribute to better search engine optimisation for a website. Each, individually, will possibly produce only marginal gains, but when combined, can be very effective in gaining a higher rank within the search engine listings.

## 3.1 Page Titles

These should be unique but also describe as accurately as possible the page they are associated with.

I have used descriptive page titles such as;

* Ellen Smith’s B&B - Galway City, Ireland
* Accommodation & room types available at Ellen’s B&B, Galway, Ireland
* Sightseeing & adventure activities available at Ellen’s B&B, Galway, Ireland

## 3.2 Description Meta Tags

Again, as with page titles, these should be accurately descriptive of the page content that they are associated with. For example, for the home page I used the following;

“Ellen’s B&B is located by the waterside in Galway City, on the west coast of Ireland. Luxuriously refurbished. Host Ellen is always on hand with a warm Irish welcome and delicious breakfasts. Non-smoking. All rooms on-suite.”

## 3.3 Image Optimisation

Already optimised for accessibility, images with good, descriptive ‘alt’ attributes will be better indexed by the search engines, a double benefit.

## 3.4 Protecting the site’s reputation

On a site such as this that has many links to other external sites that are beyond its control, we don’t want another site’s possible bad search engine reputation to in any way effect ours.

On pages such as ‘Sightseeing’, I have implemented the ‘rel = “nofollow” attribute in all the anchor tags to put separation between Ellen’s site and all other external sites.

## 3.5 Future development

For future development when the site is deployed live I would also recommend;

* Using a descriptive URL that will help with search engine ranking, ideally containing the full name and the location, e.g. EllensBandBGalwayIreland.ie – deliberately dropping the apostrophe.
* Submitting an XML site map to google and the other search engines, this can only be done once the site is deployed to live.
* Breadcrumbs, if the site goes deeper than the single level structure implemented to date.
* Enabling Google Analytics on the site, using some simple copy & paste code from Google that will give access to a dashboard where all the site’s performance metrics can be reviewed and analysed.
* Website has been tested and works on Chrome, Firefox, Opera and Microsoft Edge. There are however issues with some versions Internet Explorer on some, but not all systems.

# 4. Personal reflection

Developing Ellen’s site has been both rewarding and quite challenging.

If I were to undertake such a project again I would separate this project out into its component parts and use these as future templates to work from. I would continue to do this during any future development work undertaken, to try and always be adding to my own personal palette of techniques that can be quickly implemented and shown to the customer for approval.

In industry, it would be preferable to be able to work with the client both before work commenced on the site, and during development to make sure that what is being developed is a good match with the client’s vision.

Design and styling issues such as colour selection, logo and image placement would be much easier to resolve if the customer has pre-existing promotional material such as brochures, logo etc. which could be used as the foundation from which to choose colours and type fonts etc.

On a technical note, I would spend more time initially making sure that everything on a draft or template home page has been allocated its own class or ID before adding new pages with new elements to the site. Once several pages were active it was sometimes quite time consuming to track down the origin of a styling or formatting issue. Initially, I temporarily changed elements to odd colours to track down such issues, later using Firefox’s developer edition to troubleshoot.

Developing this site feels like a voyage that has been undertaken, where the journey itself is as valuable as the destination reached. I feel this particularly, about web site accessibility, having developed a new appreciation for the impact that screen readers can have on the lives of the visually challenged, and in the process, developing the belief that making any website you develop accessible is your ethical responsibility.

In future development, I will spend more time developing image ‘alt’ tags as I proceed through a project, rather than as a requirement or afterthought.

# 5. Bibliography

Felke-Morris,T., 2015. Web Development and Design Foundations with HTML5 7th ed. Horton et al., Harlow: Pearson Education

McGrath, M., 2015. JavaScript in Easy Steps 5th ed.Warwickshire: In Easy Steps Limited

Websites:

* [www.w3.org](http://www.w3.org) (including their HTML & CSS validators)
* <https://www.sitepoint.com/how-to-use-aria-effectively-with-html5>
* Google, Search Engine Optimization Starter Guide

# 6. Logbook of website activities

