



## Web & User Interface Design Assignment

# BUSY BEEKEEPERS

01/12/2016

Submitted by:

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## **Introduction**

This is a website designed to provide assistance to people interested in keeping honey bees and those who would be considered as beginners to bee keeping. The website will deliver basic information about bees and bee keeping right through to what is involved in successfully harvesting the rewards – ‘Honey’.

The website contains seven links in the navigation bar placed at the top of the home page just under the header section. The main body contains the information to be delivered depending on the page visited i.e. the gallery page includes a video, images and an explanation. The courses webpage allows the user to complete an application form for a course and the bee facts webpage contains some interesting facts about bees. The footer on each page is similar. The layout and style is simple, clear and developed with the target audience in mind.

## **Section 2:**

### **1. Use of CSS.**

The Skeleton framework supplied 3 style sheets. Some of the code within these files was changed and altered as required. These changes are marked throughout the code /\*changed\*/. A file called my\_styles.css was created to include all new css code.

These 4 external stylesheets are linked to the individual html pages via the link tag.

Classes, pseudo classes and ids were incorporated into all stylesheets both the skeleton and the my styles css files.

CSS3 usage included borders on images, CSS3 colours and rounded corners.

### **2. Use of HTML.**

Pages set up with the appropriate html tags.

HTML 5 tags used include <section>, <header>, <footer>, <nav> and <section>.

These were incorporated in my styles and base .css files.

### **3. Use of HTML and CSS code address responsiveness.**

CSS describes how HTML elements are to be displayed on screen, paper, or in other media. This saves a lot of work and can control the responsiveness of multiple web pages all at once.

Responsive Web Design is about using CSS and HTML code to resize, hide, shrink, enlarge, or move the content to make it look good on any screen. The layout changes based on the size and capabilities of the device.

Media queries are applied to CSS styles to allow easy change in styles based on the characteristics of a device being used to view the webpage. These characteristics include display type, width, height, orientation, and even resolution. Media queries are used in the busy beekeeper's website to address responsiveness.

### **4. JavaScript.**

The JavaScript code is saved in the Project.js file.

These are two scripts I created to pop up messages on the courses page.

```
function mysubmit() {  
    alert("Your application has been submitted, Thank you!");  
}  
  
function myalert() {  
    alert("Your details have been deleted, Please start again!");  
}
```

The script below was sourced from W3Schools for the responsive navigation bar. It allows the navigation bar to be responsive and inserts the hamburger icon when the screen size reduces.

```

function mynav() {

    var x = document.getElementById("myTopnav");

    if (x.className === "topnav") {

        x.className += " responsive";

    } else {

        x.className = "topnav";

    }
}

```

This is a script that I sourced from W3Schools to search for suppliers on the bee supplies page. On entering a value in the search box the code searches the suppliers.

```

function mySupply() {

    var input, filter, table, tr, td, i;

    input = document.getElementById("myInput");

    filter = input.value.toUpperCase();

    table = document.getElementById("myTable");

    tr = table.getElementsByTagName("tr");

    for (i = 0; i < tr.length; i++) {

        td = tr[i].getElementsByTagName("td")[0];

        if (td) {

            if (td.innerHTML.toUpperCase().indexOf(filter) > -1) {

                tr[i].style.display = "";

            } else {

                tr[i].style.display = "none";

            }
        }
    }
}

```

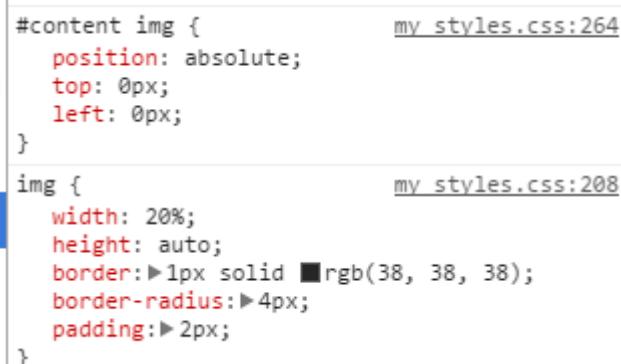
## 5. Use of images.

Images are incorporated in the Gallery. The images were placed in a container and a responsive class was set up in my\_styles to allow for screen size changes. In the desktop view the images are displayed 4 across the screen. As the screen sizes reduces the number of images displayed across the row reduces. In addition to this, when the user clicks on the image, it enlarges on a new page.

The images area also given a description underneath and a CSS3 boarder is placed around them.

An image is also used in the header of the website (as a logo image - a flower with a bee). This image reduces in size when the screen size reduces. In addition to this it is a link back to the home page.

The code to allow the image to be responsive as the screen size reduces is placed in the my\_styles.css file. And can be view in the screen shot below.



```
#content img {           my styles.css:264
    position: absolute;
    top: 0px;
    left: 0px;
}

img {                   my styles.css:208
    width: 20%;
    height: auto;
    border: 1px solid #rgb(38, 38, 38);
    border-radius: 4px;
    padding: 2px;
}
```

## 6. Use of other Technologies:

1. A video of feeding bees is included in the gallery page.

An iframe is used on the Contacts page to include a google maps location map.

A form is used on the courses page to register for a course.

2. I believe that the technologies used are appropriate for the theme of the site.

- i. The gallery page allows the user, who is new to bee keeping, to view what some of the elements of the hobby that may be of benefit. the video incorporated into this page allows the user to see what it like when bees are fed correctly. They can get an enlarged image on a new page (allows for visual impairments). The videos

and images are the best way of describing what a particular situation looks like and as one of the main themes of this site is to educate new beekeeper's, video technology is very appropriate. If there had been more time, addition videos/photos or even new sections could have been added. It is very simple for the user to access this technology.

- ii. The iframe used for the google maps location map is a very useful technology that will assist users to find the location of Busybeekers. It is very user friendly, which is one of the main themes of the website.
- iii. The use of a simple form allows to user to register for a course. It is simple to navigate and allows the user to be places on a course that is appropriate to their level.

## **Section 3:**

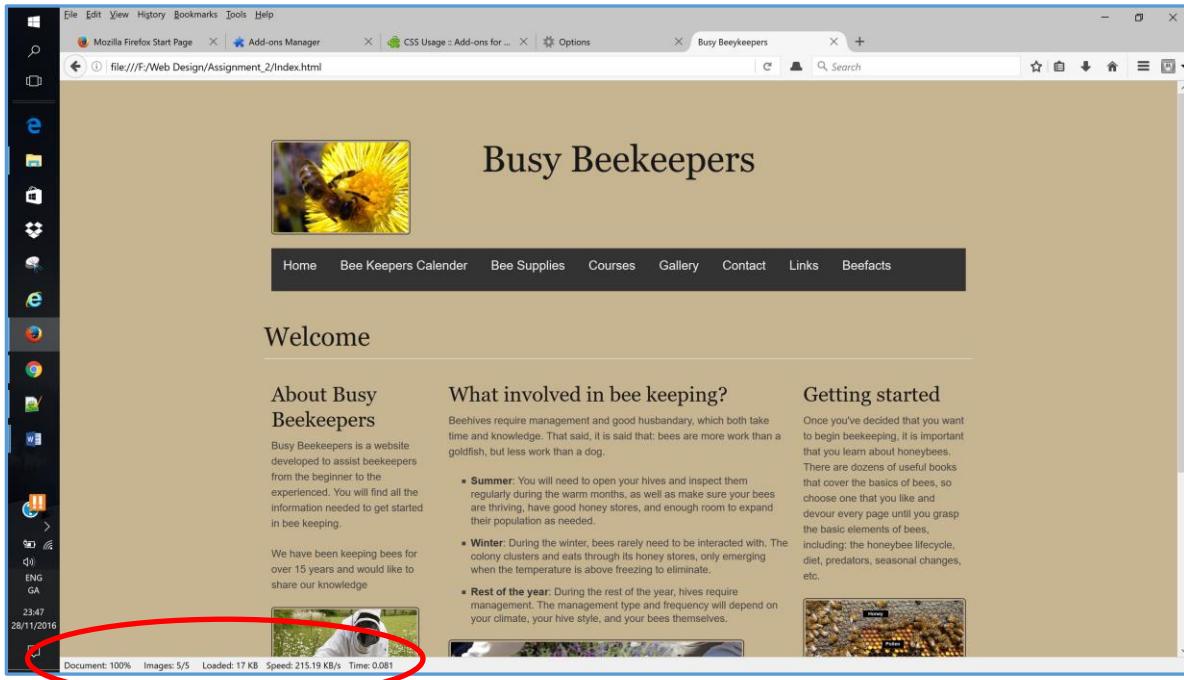
This part of the assignment will test and evaluate the website. Most of the Firefox and Chrome add ons/extensions required the website to be hosted. This is the link to the Busy Beekeepers website: <https://d15125917.github.io/busy-beekeepers/index.html> . The website was hosted through my account on github.

### **Part A: Website Information**

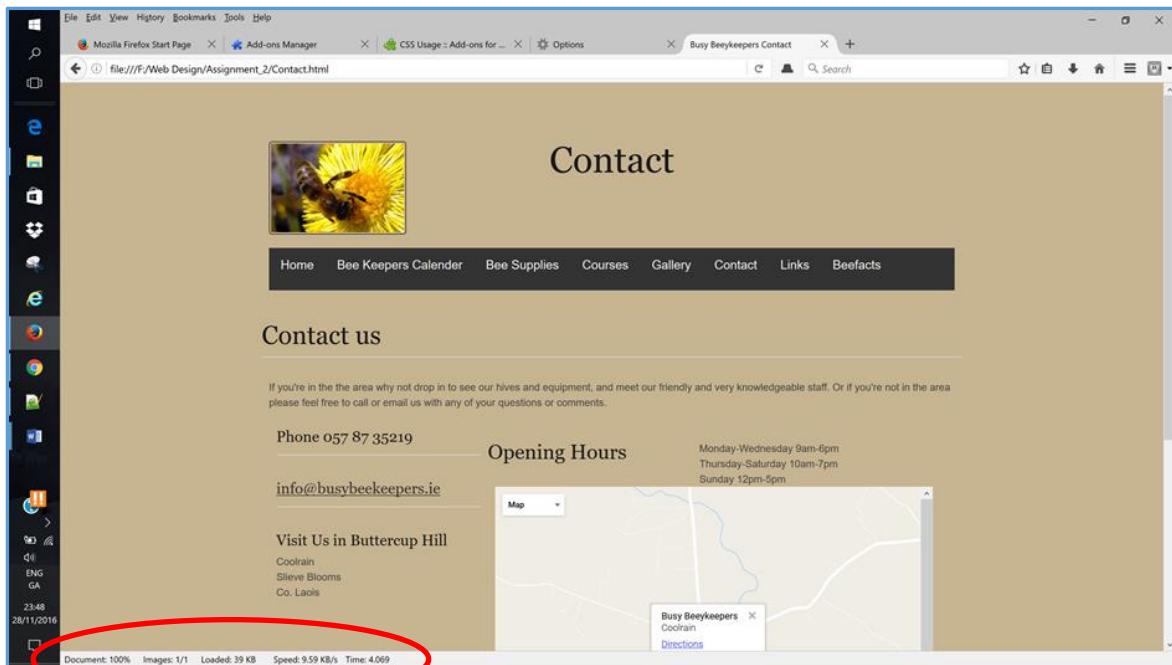
- i. 163 of 267 lines used in my\_styles are actual code (excluding spaces and descriptions.)
- ii. 48 lines of adjusted code in the base.css file sourced from skeleton. These lines are marked 'Changed' in that file. There was also about 6 line of new code entered into the different classes in this file.
- iii. CSS framework:
  1. The Skeleton framework was used in the creation of this website.
  2. The 3 files downloaded from <http://getskeleton.com> are stored in the css folder. They are accessed from the html file by placing a link in the head section of the file e.g. <link rel="stylesheet" href="css/skeleton.css">. The skeleton and layout file remain unaltered. The base css file has been edited and changed to allow for the theme of the website.
  3. The main reason for using this framework was because of its ability to allow websites to be developed that are very responsive from the desktop or laptop down to the smartphone.
    - a. Skeletons grid system allows for ease when considering mobile devices.
    - b. Incorporates css best practices.
    - c. Includes styled forms and buttons etc.

## **Part B Speed Testing**

This section deals with the speed of the website. The first method of checking the load speed was to use the Extended Status Bar for Firefox. This tool allows an un-hosted website to be tested for speed. The home page was initially checked and the status bar at the bottom of the screen shot below shows a load speed of 215.19KB/s seconds. It also shows the percentage, time and loaded size.

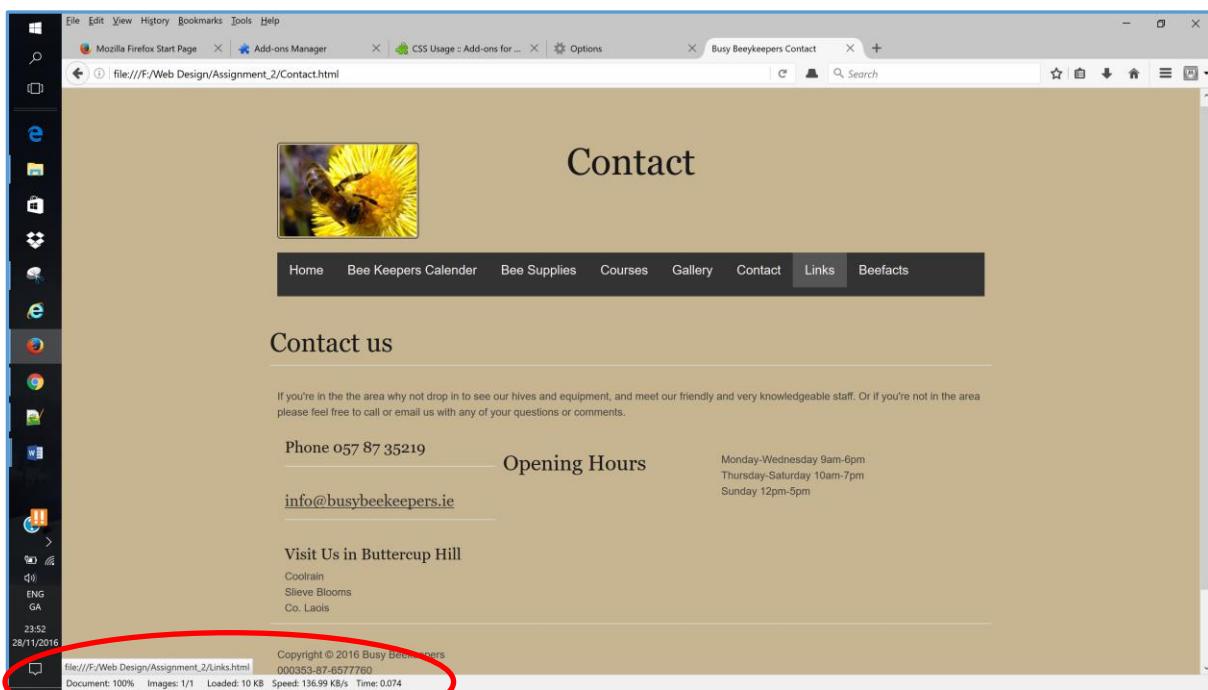


The next page tested was the Contact page. A speed of 9.59KB/s and a load time of 4 seconds was returned. This can be seen in the screen shot below. The reason for the slow load time and speed is due to the iframe containing the link to google maps.



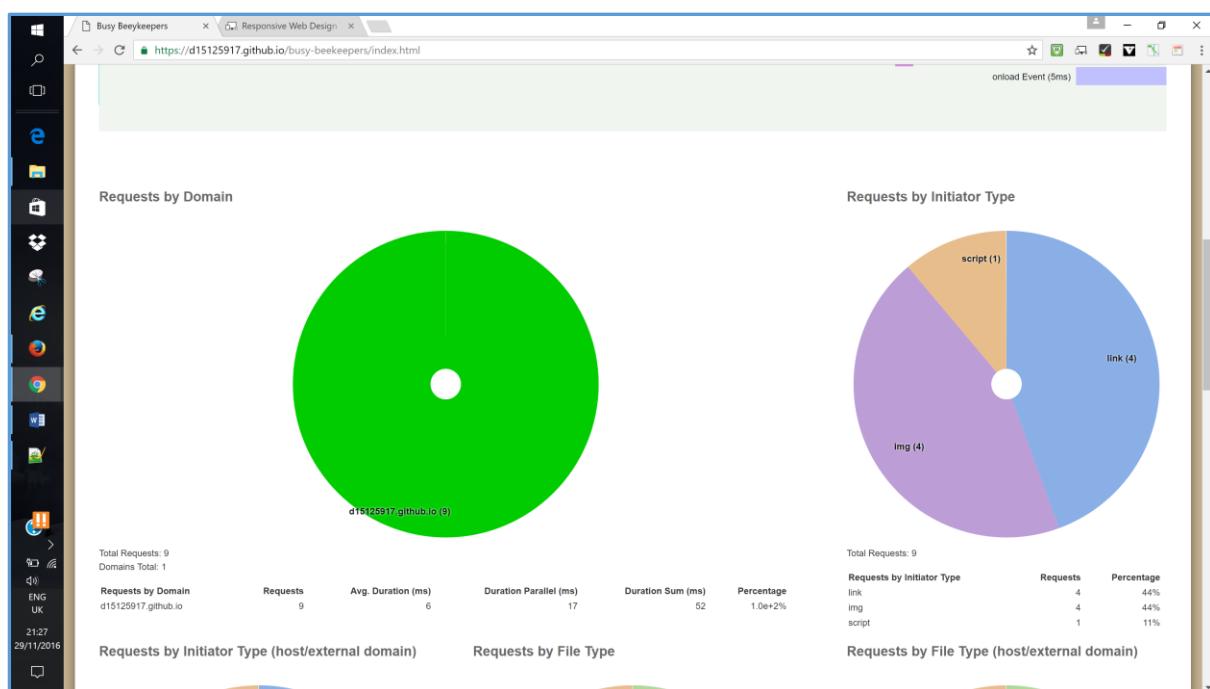
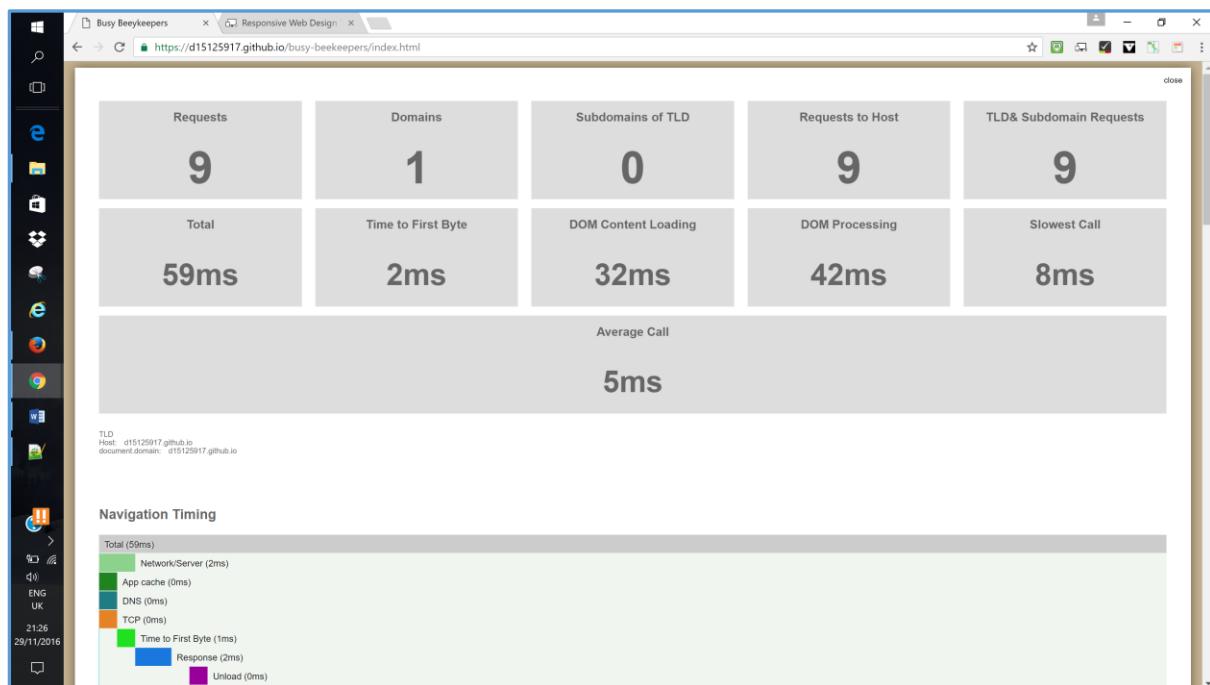
```
<div class="ten columns omega">
<!--iframe src="http://www.map.ie/create-google-map/map.php?width=100&amp;height=600&amp;hl=en&amp;q=Coolrain+(Busy%20Beekeepers)&ie=UTF8&amp;t=&amp;z=14&amp;iwloc=A&amp;output=embed" height="450" width="600"></iframe>-->
</div>
</div>
```

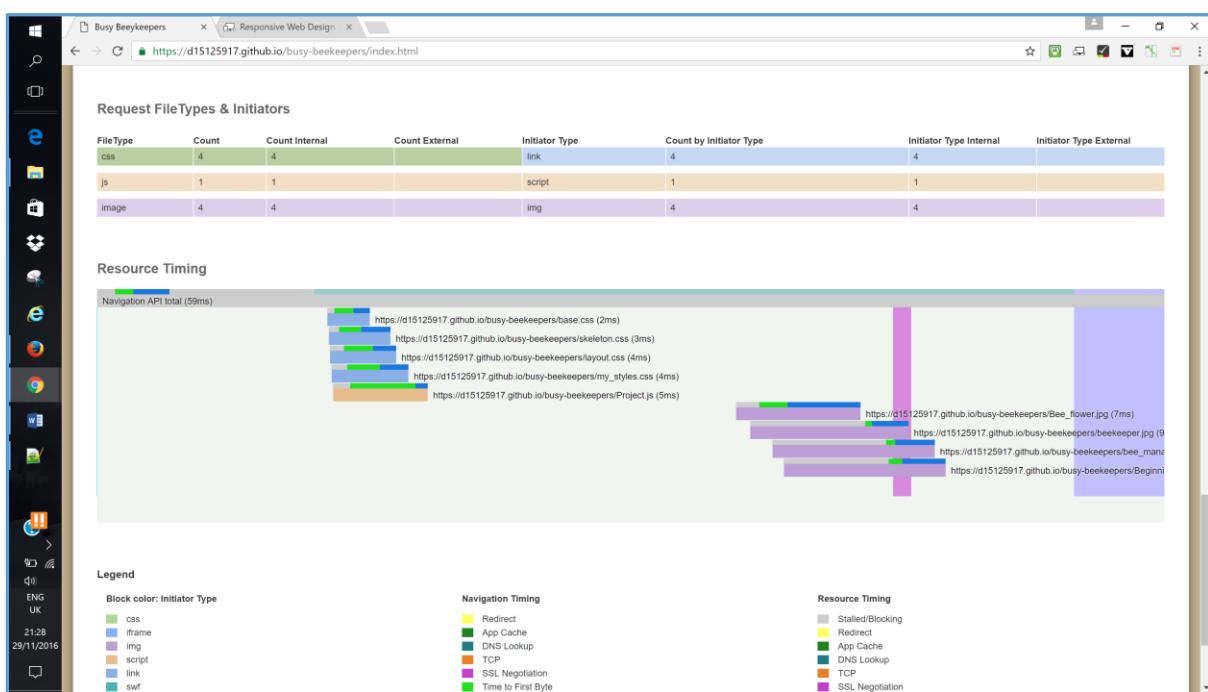
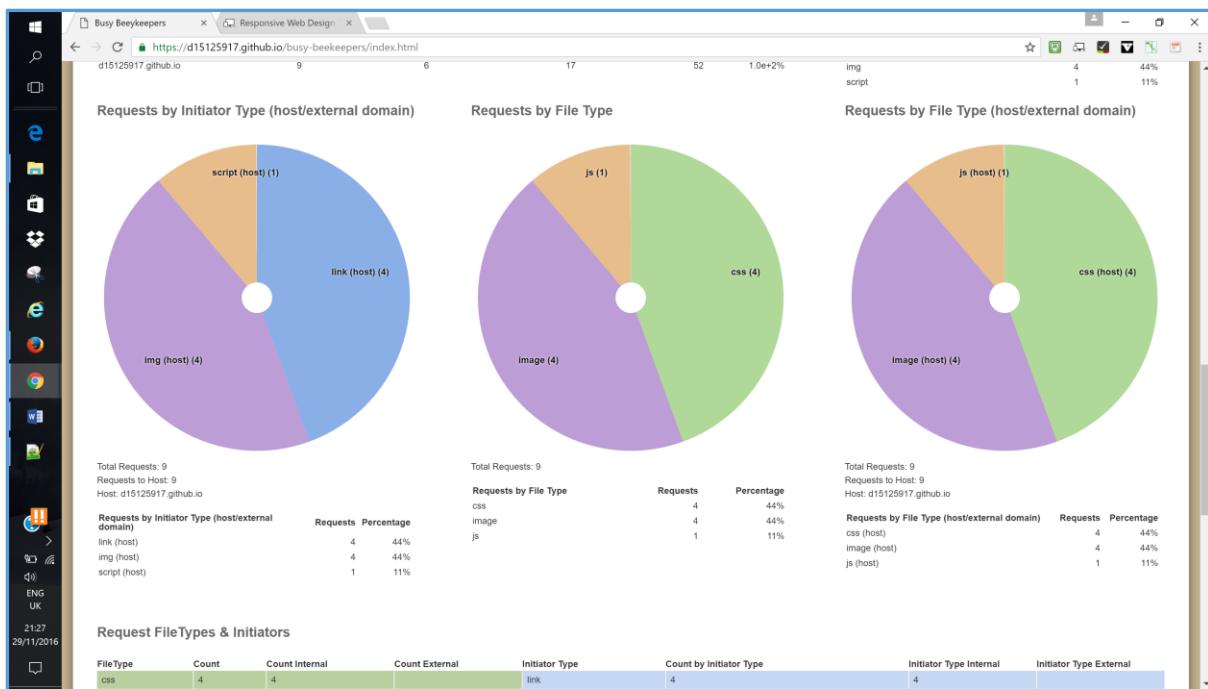
The code for the iframe was disconnected in the contact.html file. This can be seen in the sample of code above. This page was tested again and the speed increased to 136.99 KB/s and a load time of .074 seconds (below).



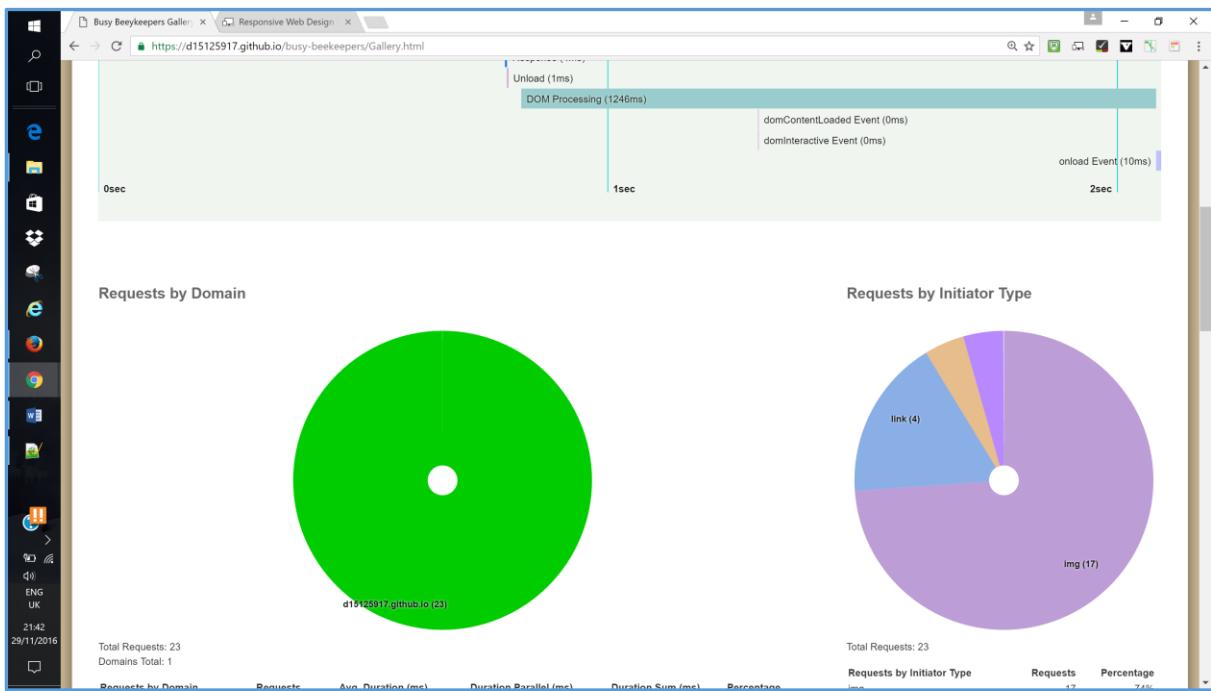
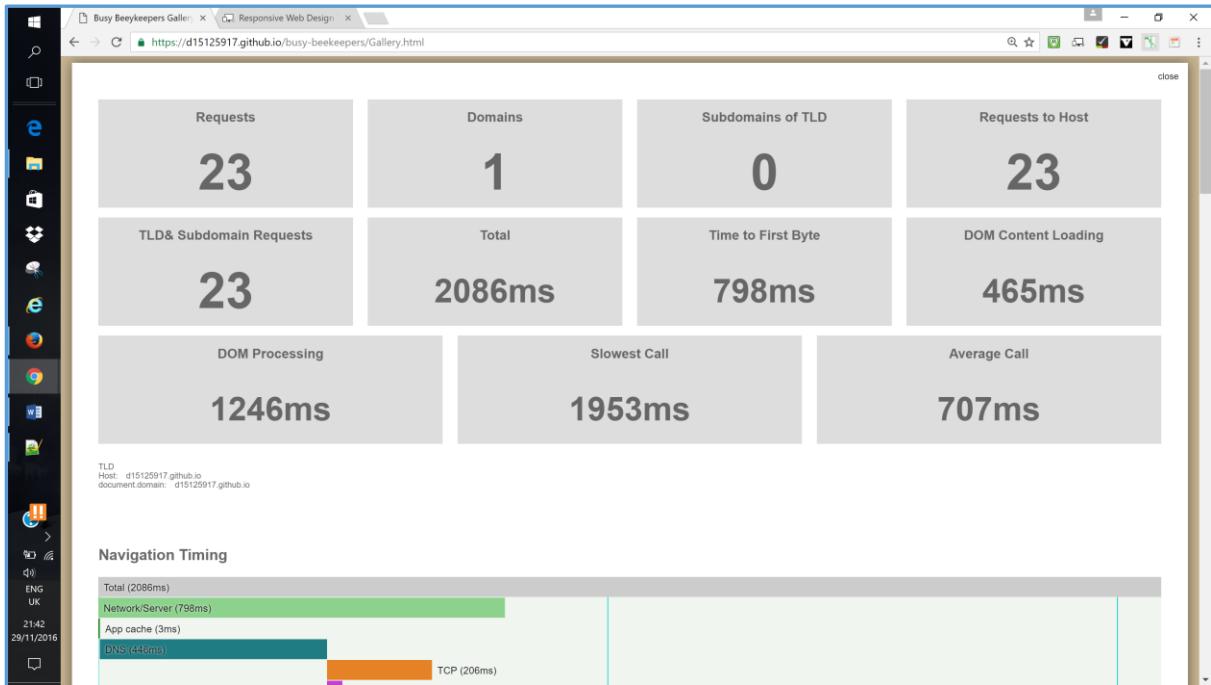
The nest speed test of the home page carried out using the performance analyser, a chrome add on. This add on requires the website to be hosted. It helps to analyse the current page through the Resource Timing API, Navigation Timing API and User Timing, requests by type, domain, load times, marks and more.

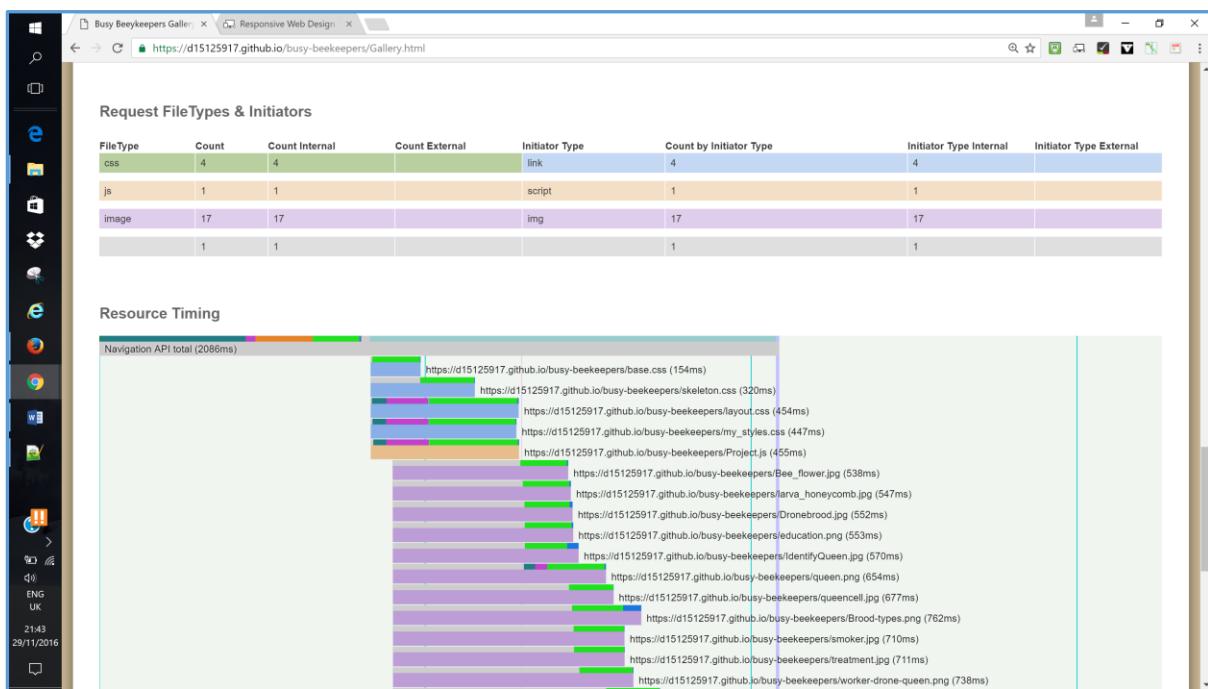
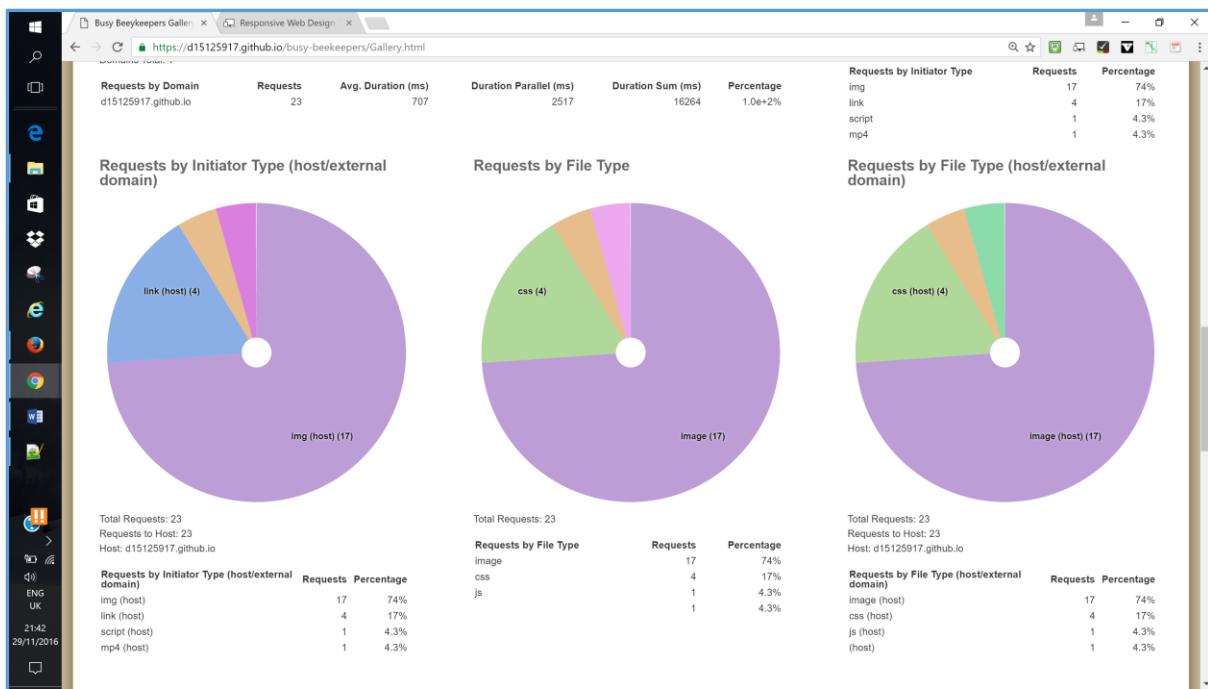
The screen shots below show the full result of the test. The main item of relevance here is the total time, which is 59ms. The next 4 screen shots show the results of this test.

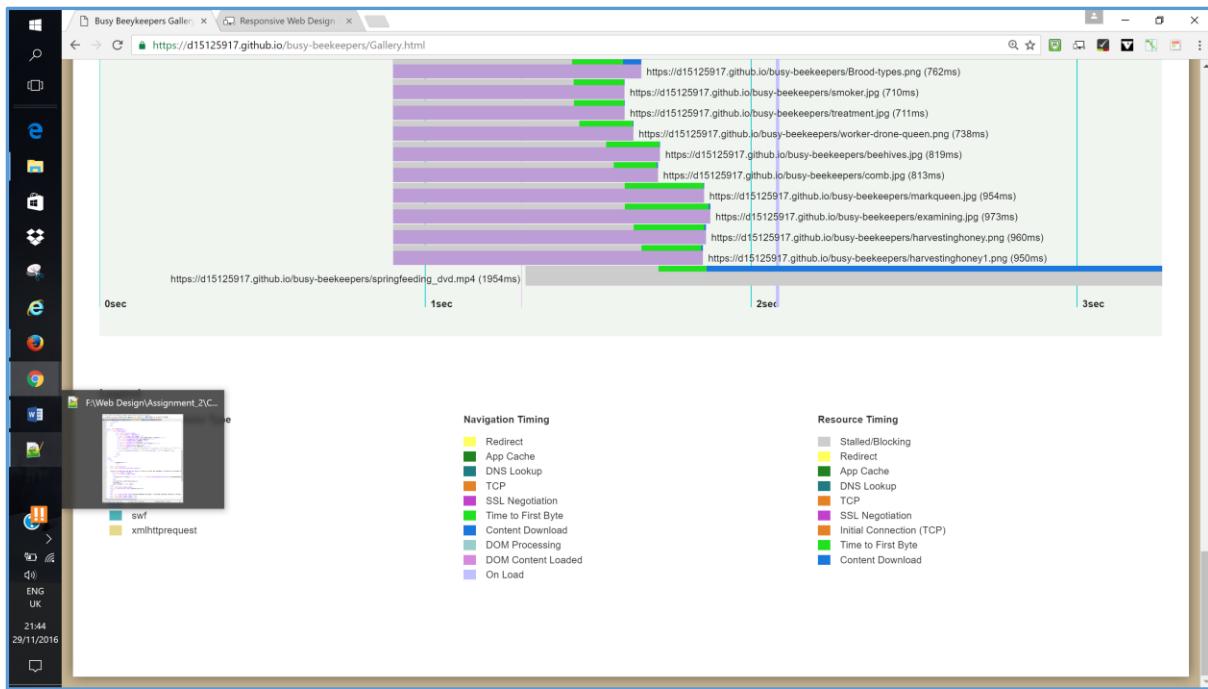




The next page tested using this add on was the gallery page. The screen shots below show the full result of the test. The main item of relevance here is the total time, which is 1.2 seconds (1246ms). The next 5 screen shots show the results of this test.

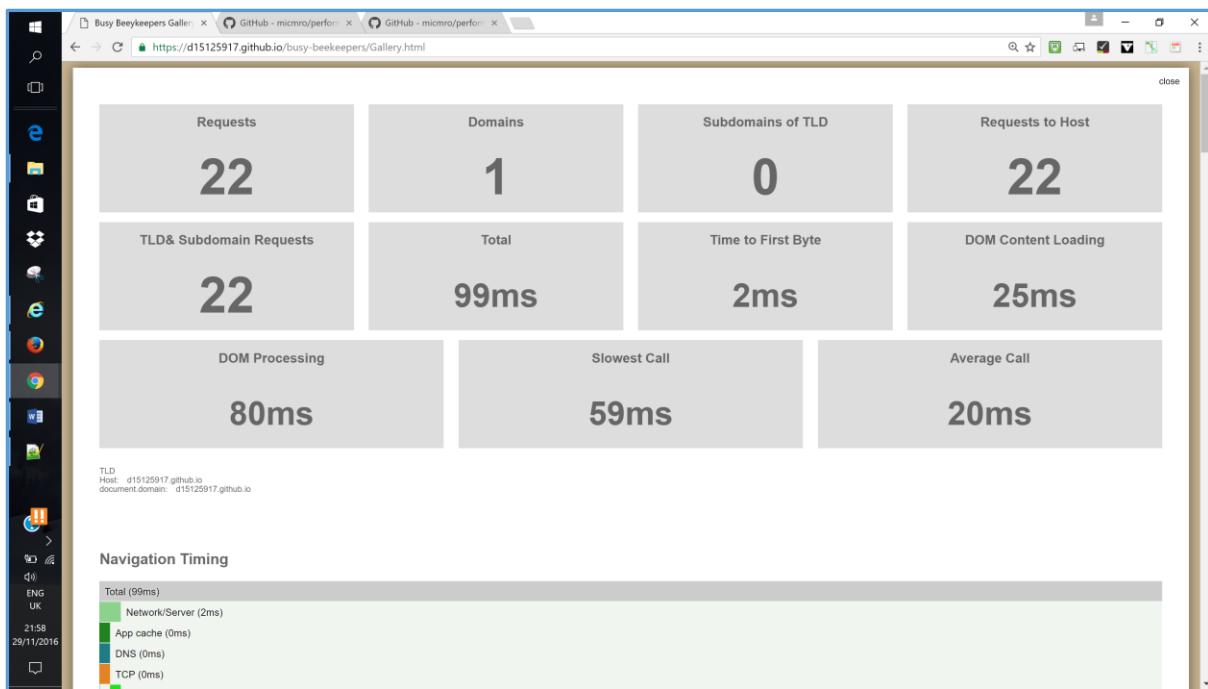




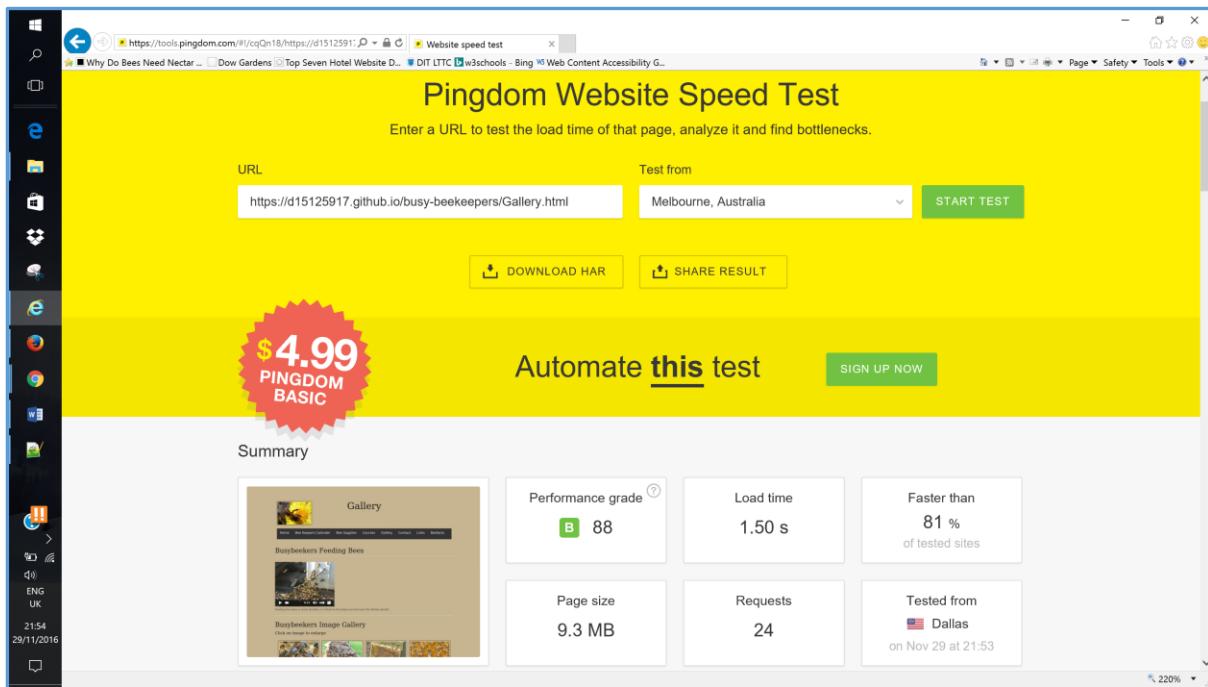


```
<!--<video width="320" controls >
  <source src="video/springfeeding_dvd.mp4" type="video/mp4">
    <source src="video/springfeeding_ogg.mp4" type="video/ogg">
</video>-->
```

The code for the video was disconnected in the gallery.html file. This can be seen in the sample of code above. The screenshot below shows the results when the video in the gallery page was removed. The main item of relevance here is the total time, which is 99 ms, significantly faster than when the webpage included the iframe. The screen shot below show the results of this test.



The next speed test carried out was undertaken using an online facility provided by Pingdom. The gallery page was tested and a load time of 1.5 seconds was returned. The screen shot below shows this result.



The video was removed from the code, seen below and the site was retested, screen shot below. The speed increased to .815 seconds.

```
<!--<video width="320" controls >
<source src="video/springfeeding_dvd.mp4" type="video/mp4">
<source src="video/springfeeding_ogg.mp4" type="video/ogg">
</video>-->
```

Pingdom Website Speed Test

Enter a URL to test the load time of that page, analyze it and find bottlenecks.

URL: <https://d15125917.github.io/busy-beekeepers/Gallery.html> Test from: Melbourne, Australia START TEST

DOWNLOAD HAR SHARE RESULT

\$4.99 PINGDOM BASIC

Automate [this](#) test SIGN UP NOW

Summary

Performance grade	Load time	Faster than
B 88	815 ms	93 % of tested sites
Page size	Requests	Tested from
7.2 MB	23	USA Dallas on Nov 29 at 22:01

## Additional Testing

Additional checks carried out during the development and testing process included a check of the HTML code.

The home page html code was entered into the <https://validator.w3.org> validator and the following errors were found:

Use the Message Filtering button below to hide/show particular messages, and to see total counts of errors and warnings.  
Message Filtering

1. **Error** Stray start tag `<html>`.  
From line 2, column 7; to line 3, column 16  
`m1><html><html lang="en"> ↵<!-`
2. **Error** The `align` attribute on the `<h1>` element is obsolete. [Use CSS instead.](#).  
From line 42, column 6; to line 42, column 71  
`/a> ↵       <h1 class="remove-bottom" align="center" style="margin-top: 80px"> Busy`
3. **Error** Bad value `Bee Supplies.html` for attribute `href` on element `<a>`: Illegal character in path segment: space is not allowed.  
From line 60, column 10; to line 60, column 37  
`<li><a href="Bee Supplies.html">Bee Su`  
Syntax of URL:  
Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in [NFC](#) and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) \* + - . / : ; = ? @ \_ ~ generally must be [percent-encoded](#). For example, the pipe character () must be encoded as %7C.

Document checking completed.

These errors were corrected and code re entered and the screen shot below shows that no errors were found.

Nu Html Checker

This tool is an ongoing experiment in better HTML checking, and its behavior remains subject to change

Showing results for `Index.html`

Checker Input

Show  source  outline  image report

Check by   No file chosen

Uploaded files with `xhtml` or `.xht` extensions are automatically processed as XHTML.

Use the Message Filtering button below to hide/show particular messages, and to see total counts of errors and warnings.  
Message Filtering

Document checking completed. No errors or warnings to show.

Image report

The `img` elements of the page are shown below categorized by their type of textual alternative. Please review that the images in each group match that group's definition.

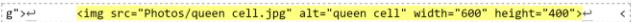
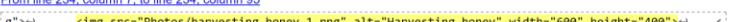
Images with textual alternative

The following images have textual alternatives. Please review that the textual alternatives make sense considering the purpose of the image in the context of the page and that phrases like "Image of ..." are avoided. Note that iconic images that are redundant with text next to them or purely decorative should have `alt=""` instead.

Image	Textual alternative	Location
<code>Not resolvable</code>	bee flower	From line 40, column 5; to line 40, column 96
<code>Not resolvable</code>	photos/beeker	From line 86, column 4; to line 86, column 94
<code>Not resolvable</code>	photos/beginning_1	From line 98, column 4; to line 98, column 105
<code>Not resolvable</code>	photos/beehive management	From line 105, column 4; to line 105, column 99

The Gallery page html code was entered into the <https://validator.w3.org> validator and the following 20 errors were found:

1.	<b>Error</b> Stray start tag <code>html</code> .
	From line 2, column 7 to line 3, column 16 `m1><html><html lang="en"> </><`
2.	<b>Error</b> The <code>align</code> attribute on the <code>h1</code> element is obsolete. Use CSS instead.
	From line 41, column 6 to line 41, column 71 `</a><` <code>&lt;h1 class="remove-bottom" align="center" style="margin-top: 80px"&gt; Galle</code>
3.	<b>Error</b> Bad value <code>Bee Supplies.html</code> for attribute <code>href</code> on element <code>a</code> : Illegal character in path segment: space is not allowed.
	From line 59, column 10 to line 59, column 37 `<li><a href="Bee Supplies.html">Bee Su` Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character ( ) must be encoded as %7C.
4.	<b>Error</b> Stray end tag <code>head</code> .
	From line 75, column 1 to line 75, column 7 `<`  </head></body>
5.	<b>Error</b> Start tag <code>body</code> seen but an element of the same type was already open.
	From line 76, column 1 to line 76, column 6 `></head><` <body><` <h2>
6.	<b>Error</b> Bad value <code>Photos/Drone brood.jpg</code> for attribute <code>href</code> on element <code>a</code> : Illegal character in path segment: space is not allowed.
	From line 103, column 5 to line 103, column 53 `img"><` <code>&lt;a target=_blank href="Photos/Drone brood.jpg"&gt;</code> Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character ( ) must be encoded as %7C.
7.	<b>Error</b> Bad value <code>Photos/Drone brood.jpg</code> for attribute <code>src</code> on element <code>img</code> : Illegal character in path segment: space is not allowed.
	From line 104, column 7 to line 104, column 83 `g"><` <code>&lt;img src="Photos/Drone brood.jpg" alt="drone brood" width="600" height="400"&gt;&lt;`</code> Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character ( ) must be encoded as %7C.
8.	<b>Error</b> Bad value <code>Photos/Identify Queen.jpg</code> for attribute <code>href</code> on element <code>a</code> : Illegal character in path segment: space is not allowed.
	From line 119, column 5 to line 119, column 66 `img"><` <code>&lt;a target=_blank href="Photos/Identify Queen.jpg"&gt;</code> Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character ( ) must be encoded as %7C.
9.	<b>Error</b> Bad value <code>Photos/Identify Queen.jpg</code> for attribute <code>src</code> on element <code>img</code> : Illegal character in path segment: space is not allowed.
	From line 120, column 7 to line 120, column 89 `g"><` <code>&lt;img src="Photos/Identify Queen.jpg" alt="Identify Queen" width="600" height="400"&gt;&lt;`</code> Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character ( ) must be encoded as %7C.
10.	<b>Error</b> Bad value <code>Photos/queen cell.jpg</code> for attribute <code>href</code> on element <code>a</code> : Illegal character in path segment: space is not allowed.
	From line 140, column 5 to line 140, column 62 `img"><` <code>&lt;a target=_blank href="Photos/queen cell.jpg"&gt;</code> Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character ( ) must be encoded as %7C.

11.	<b>Error</b> Bad value Photos/queen cell.jpg for attribute src on element img : Illegal character in path segment: space is not allowed. From line 141, column 7 to line 141, column 18 
	Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character () must be encoded as %7C.
12.	<b>Error</b> Bad value Photos/harvesting honey.png for attribute href on element a : Illegal character in path segment: space is not allowed. From line 225, column 5 to line 225, column 18 <a href="Photos/harvesting honey.png"></a>
	Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character () must be encoded as %7C.
13.	<b>Error</b> Bad value Photos/harvesting honey.png for attribute src on element img : Illegal character in path segment: space is not allowed. From line 226, column 7 to line 226, column 18 
	Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character () must be encoded as %7C.
14.	<b>Error</b> Bad value Photos/harvesting honey 1.png for attribute href on element a : Illegal character in path segment: space is not allowed. From line 233, column 5 to line 233, column 18 <a href="Photos/harvesting honey 1.png"></a>
	Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character () must be encoded as %7C.
15.	<b>Error</b> Bad value Photos/harvesting honey 1.png for attribute src on element img : Illegal character in path segment: space is not allowed. From line 234, column 7 to line 234, column 18 
	Syntax of URL: Any URL. For example: /hello, #canvas, or http://example.org/. Characters should be represented in <a href="#">NFC</a> and spaces should be escaped as %20. Common non-alphanumeric characters other than ! \$ & ' ( ) * + - . / : ; = ? @ _ ~ generally must be <a href="#">percent-encoded</a> . For example, the pipe character () must be encoded as %7C.
16.	<b>Error</b> Start tag body seen but an element of the same type was already open. From line 246, column 1 to line 246, column 6 <div></div>
17.	<b>Error</b> End tag for html seen, but there were unclosed elements. From line 247, column 1 to line 247, column 7 <div></div>
18.	<b>Error</b> Unclosed element div. From line 90, column 1 to line 90, column 24 <h4></h4> <div></div>

These errors were addressed and the code was uploaded again. The following screenshot was the result of applying the corrections:

The screenshot shows the Nu Html Checker interface. At the top, it says "Showing results for Gallery.html". Below that, there's a "Checker Input" section with options for "Show" (source, outline, image report) and "Check by" (file upload, choose file). It also mentions that uploaded files with .xhtml or .xht extensions are automatically processed as XHTML. A "Check" button is present. Below this, a message filtering section allows hiding/showing particular messages and counts of errors and warnings. A green bar at the bottom indicates "Document checking completed. No errors or warnings to show." The "Image report" section shows a table of images with textual alternatives and their locations.

Image	Textual alternative	Location
Not resolvable	bee flower	From line 39, column 5; to line 39, column 96
Not resolvable	Larva_honeycomb	From line 94, column 7; to line 94, column 91
Not resolvable	drone brood	From line 102, column 7; to line 102, column 82
Not resolvable	education	From line 110, column 7; to line 110, column 79
Not resolvable	Identify Queen	From line 118, column 7; to line 118, column 88
Not resolvable	queen	From line 131, column 7; to line 131, column 71
Not resolvable	queen cell	From line 139, column 7; to line 139, column 80
Not resolvable	Brood-types	From line 147, column 7; to line 147, column 83
Not resolvable	smoker	From line 155, column 7; to line 155, column 73

The html validator was used on all the pages in the website. Below is a screen shot of the errors found on the bee Supplies. The rows were not closed off on the correct line. The page still operated correctly however.

The screenshot shows a list of 7 errors from the html validator:

- Error Stray end tag `td`.  
From line 115, column 22; to line 116, column 5  
`blin </td></td></tr>`
- Error Stray end tag `td`.  
From line 122, column 17; to line 123, column 5  
`Cork </td></td></tr>`
- Error Stray end tag `td`.  
From line 129, column 20; to line 130, column 5  
`klow </td></td></tr>`
- Error Stray end tag `td`.  
From line 136, column 20; to line 137, column 5  
`egal </td></td></tr>`
- Error End tag `br`.  
From line 142, column 18; to line 142, column 22  
`ern Flynn <br>The Sq`
- Error Stray end tag `td`.  
From line 143, column 22; to line 144, column 5  
`mmon </td></td></tr>`
- Error Stray end tag `td`.  
From line 151, column 18; to line 152, column 5  
`outh </td></td></tr>`

The W3C CSS validator was also used during the development and testing phase. The screen shots below show the results before and after testing the my\_styles.css file.

**The W3C CSS Validation Service**  
W3C CSS Validator results for my\_styles.css (CSS level 3)

Jump to: Errors (1) Warnings (8) Validated CSS

W3C CSS Validator results for my\_styles.css (CSS level 3)

**Sorry! We found the following errors (1)**

**URI : my\_styles.css**

357 #nav	Value Error : width Unknown dimension 100px0px
----------	--

**I ❤ VALIDATOR**

The W3C validators rely on community support for hosting and development.  
[Donate](#) and help us build better tools for a better web.

**Warnings (8)**

**URI : my\_styles.css**

164	Property -webkit-box-shadow is an unknown vendor extension
165	Property -moz-box-shadow is an unknown vendor extension
175	Property -moz-border-radius is an unknown vendor extension
176	Property -webkit-border-radius is an unknown vendor extension
189	Property -webkit-box-shadow is an unknown vendor extension
190	Property -moz-box-shadow is an unknown vendor extension
199	Property -moz-border-radius is an unknown vendor extension
200	Property -webkit-border-radius is an unknown vendor extension

**The W3C CSS Validation Service**  
W3C CSS Validator results for my\_styles.css (CSS level 3)

Jump to: Warnings (8) Validated CSS

W3C CSS Validator results for my\_styles.css (CSS level 3)

**Congratulations! No Error Found.**

This document validates as [CSS level 3](#) !

To show your readers that you've taken the care to create an interoperable Web page, you may display this icon on any page that validates. Here is the X



```
<p>
<a href="http://jigsaw.w3.org/css-validator/check/referer">
<img alt="Valid CSS!" />
</a>
</p>
```



```
<p>
<a href="http://jigsaw.w3.org/css-validator/check/referer">
<img alt="Valid CSS!" />
</a>
</p>
```

The check my links add on in chrome was also used in the evaluation phase to ensure that all the links in the individual pages were properly linked. The 2 screenshots below show the results of checking the home page, highlighting 2 invalid links and after applying the corrections the results can be seen in the second screenshot.

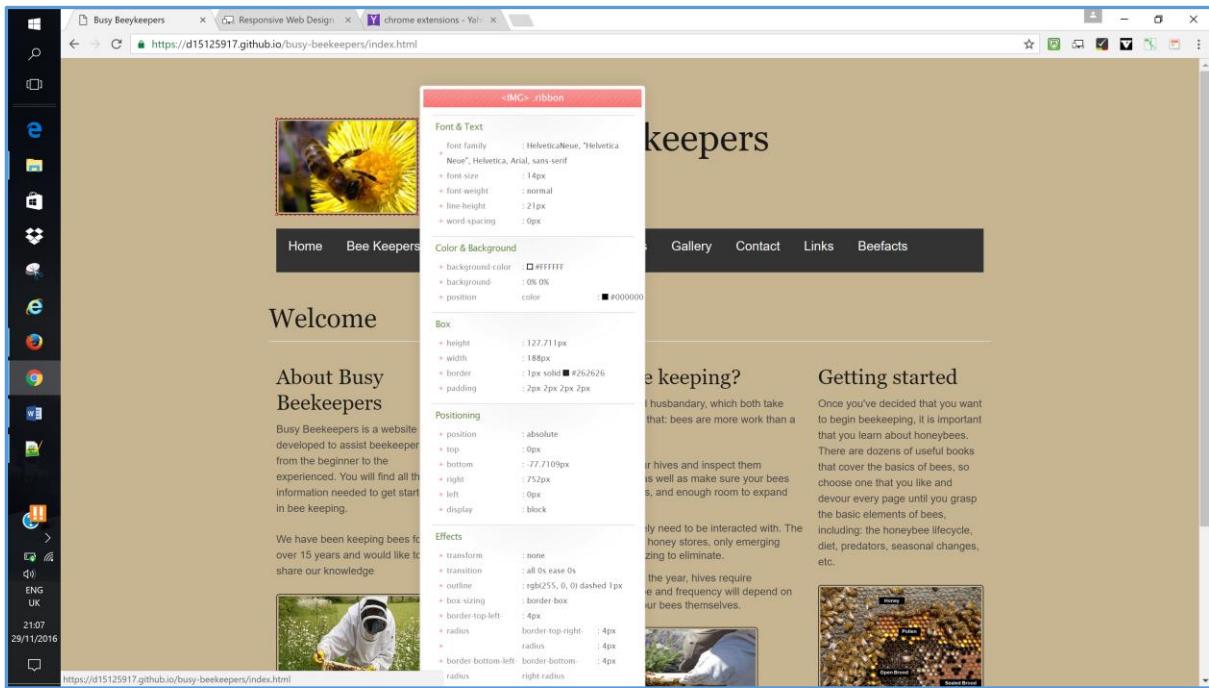
This screenshot shows the 'Busy Beekeepers' homepage in a browser window. The page features a yellow flower with a bee on it as the header image. The main title 'Busy Beekeepers' is centered above a 'Welcome' section. Below the welcome section is a 'About Busy Beekeepers' box containing text and two small images: one of a beekeeper in a white suit and another of a beehive cluster. To the right is a 'What involved in bee keeping?' section with a list of seasonal management tasks. On the far right is a 'Getting started' section with text and an image of a beehive. A top-right corner overlay displays the 'Link Results' extension's interface, showing 13 total links, 11 valid, 0 warnings, and 2 invalid. The status bar at the bottom indicates the date and time as 2013 29/11/2016.

This screenshot shows the same 'Busy Beekeepers' homepage after link corrections have been applied. The 'Link Results' extension now shows 12 total links, all valid (green), with 0 warnings and 0 invalid links (red). The rest of the page content remains identical to the first screenshot, including the header image, main title, welcome message, 'About Busy Beekeepers' section, 'What involved in bee keeping?' section, 'Getting started' section, and the status bar at the bottom indicating the date and time as 2014 29/11/2016.

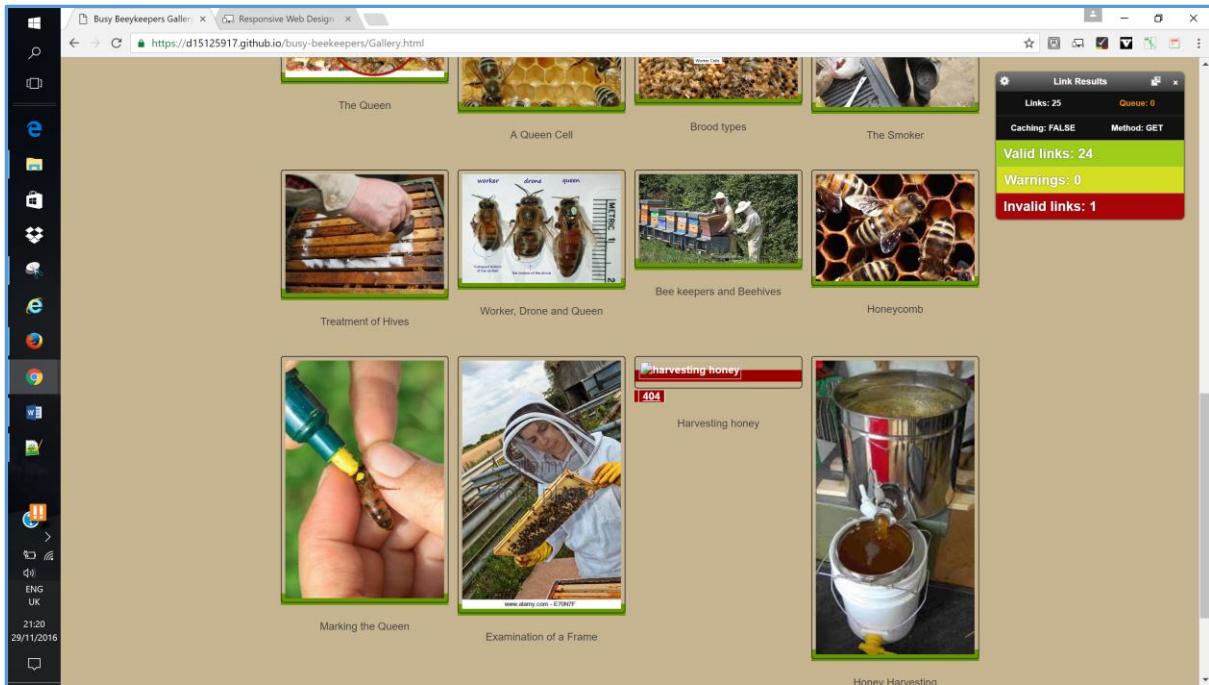
The results of checking the links on the beefacts page. All links are properly working.

The CSS Usage add on in firebug was also used to check what redundant css was in the my-styles.css file.

The CSS viewer add on in chrome was also used to investigate what css code was used on individual elements on each page. The screen shot below shows this add on in action.



The check my links add on found an invalid link in the gallery page below.



The following error was found in the html code of the gallery page. The incorrect link was called.

busy-beekeepers / Gallery.html

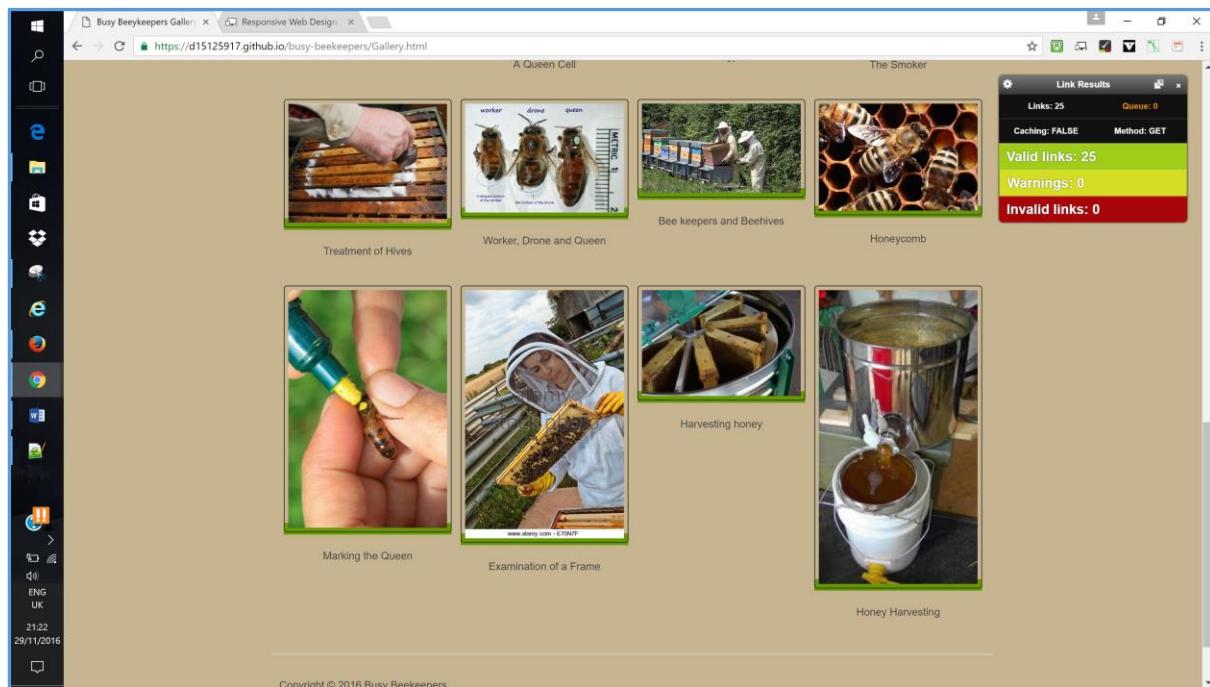
or cancel

<> Edit file Preview changes

Tabs 8 No wrap

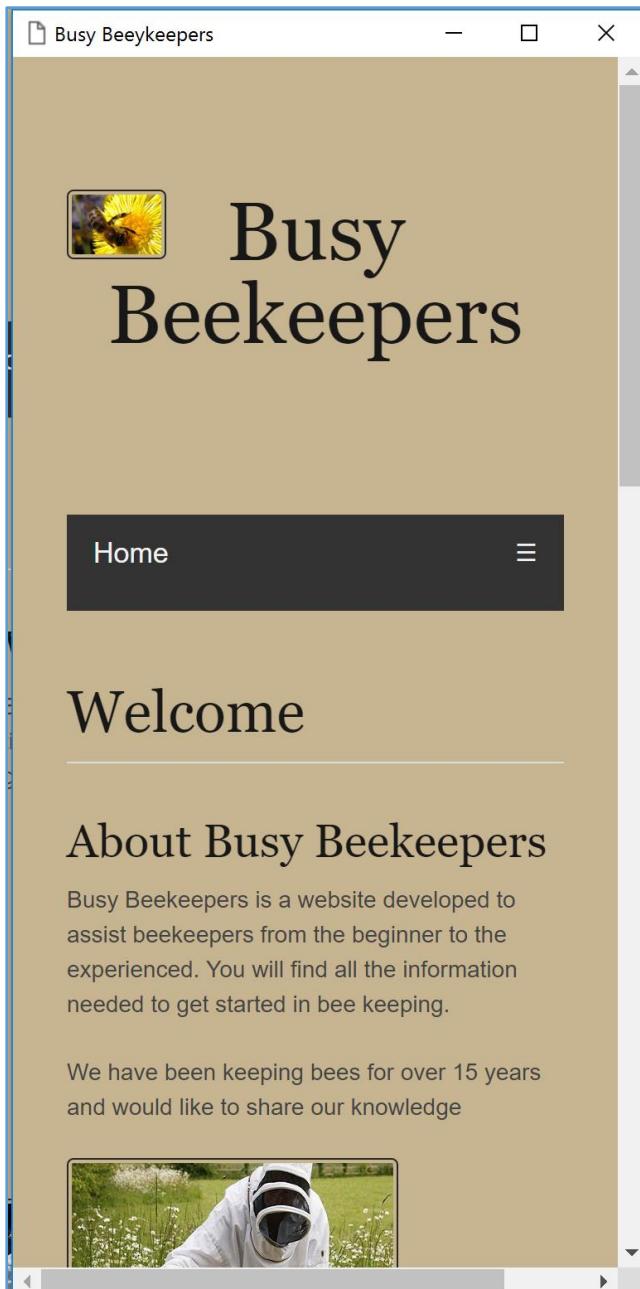
```
209 </div>
210 </div>
211 <div class="responsive">
212 <div class="img">
213 <a target="_blank" href="examining.jpg">
214 
215 </a>
216 <div class="desc">Examination of a Frame</div>
217 </div>
218 </div>
219 </div>
220 </div>
221 <div class="responsive">
222 <div class="img">
223 <a target="_blank" href="Photos/harvestinghoney.png">
224 
225 </a>
226 <div class="desc">Harvesting honey</div>
227 </div>
228 </div>
229 <div class="responsive">
230 <div class="img">
231 <a target="_blank" href="harvestinghoney1.png">
232 
233 </a>
234 <div class="desc">Honey Harvesting</div>
235 </div>
236 </div>
```

The code was corrected and the page retested and all links were found to be valid.



### **Part C: Testing Responsiveness**

The webpages were tested during the development phase to access how responsive they would be on an iPhone, iPad and desktop. Below are the results of the home page and the Gallery page. The Responsive Web Tester chrome add-on was deployed for this purpose.



I Phone view.

Busy Beekeepers



# Busy Beekeepers

[Home](#) [Bee Keepers Calender](#) [Bee Supplies](#) [Courses](#) [Gallery](#) [Contact](#) [Links](#) [Beefacts](#)

## Welcome

### About Busy Beekeepers

Busy Beekeepers is a website developed to assist beekeepers from the beginner to the experienced. You will find all the information needed to get started in bee keeping.

We have been keeping bees for over 15 years and would like to share our knowledge



### What involved in bee keeping?

Beehives require management and good stewardship, which both take time and knowledge. That said, we like to say: bees are more work than a goldfish, but less work than a dog.

- **Summer:** You will need to open your hives and inspect them regularly during the warm months, as well as make sure your bees are thriving, have good honey stores, and enough room to expand their population as needed.
- **Winter:** During the winter, bees rarely need to be interacted with. The colony clusters and eats through its honey stores, only emerging when the temperature is above freezing to eliminate.
- **Rest of the year:** During the rest of the year, hives require management. The management type and frequency will depend on your climate, your hive style, and your bees themselves.




### Getting started

Once you've decided that you want to begin beekeeping, it is important that you learn about honeybees. There are dozens of useful books that cover the basics of bees, so choose one that you like and devour every page until you grasp the basic elements of bees, including: the honeybee lifecycle, diet, predators, seasonal changes, etc.

I pad view.

Busy Beekeepers



# Busy Beekeepers

[Home](#) [Bee Keepers Calender](#) [Bee Supplies](#) [Courses](#) [Gallery](#) [Contact](#) [Links](#) [Beefacts](#)

## Welcome

### About Busy Beekeepers

Busy Beekeepers is a website developed to assist beekeepers from the beginner to the experienced. You will find all the information needed to get started in bee keeping.

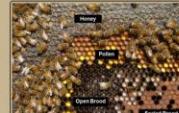
We have been keeping bees for over 15 years and would like to share our knowledge



### What involved in bee keeping?

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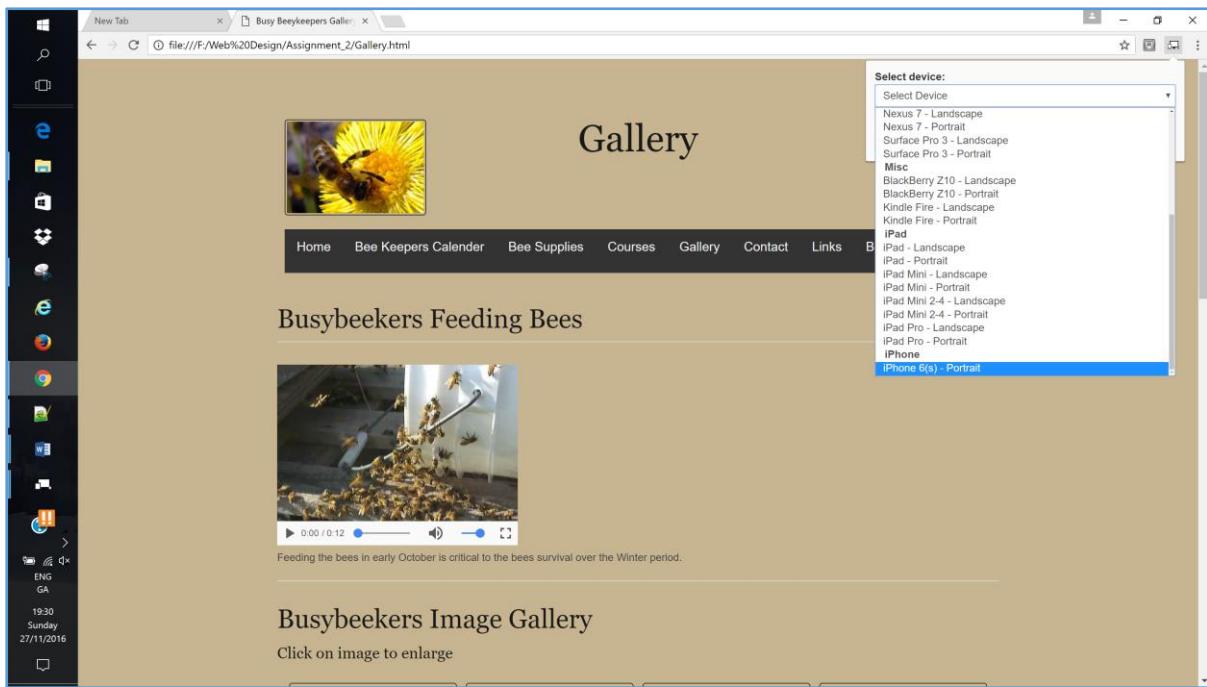
- **Summer:** You will need to open your hives and inspect them regularly during the warm months, as well as make sure your bees are thriving, have good honey stores, and enough room to expand their population as needed.
- **Winter:** During the winter, bees rarely need to be interacted with. The colony clusters and eats through its honey stores, only emerging when the temperature is above freezing to eliminate.
- **Rest of the year:** During the rest of the year, hives require management. The management type and frequency will depend on your climate, your hive style, and your bees themselves.

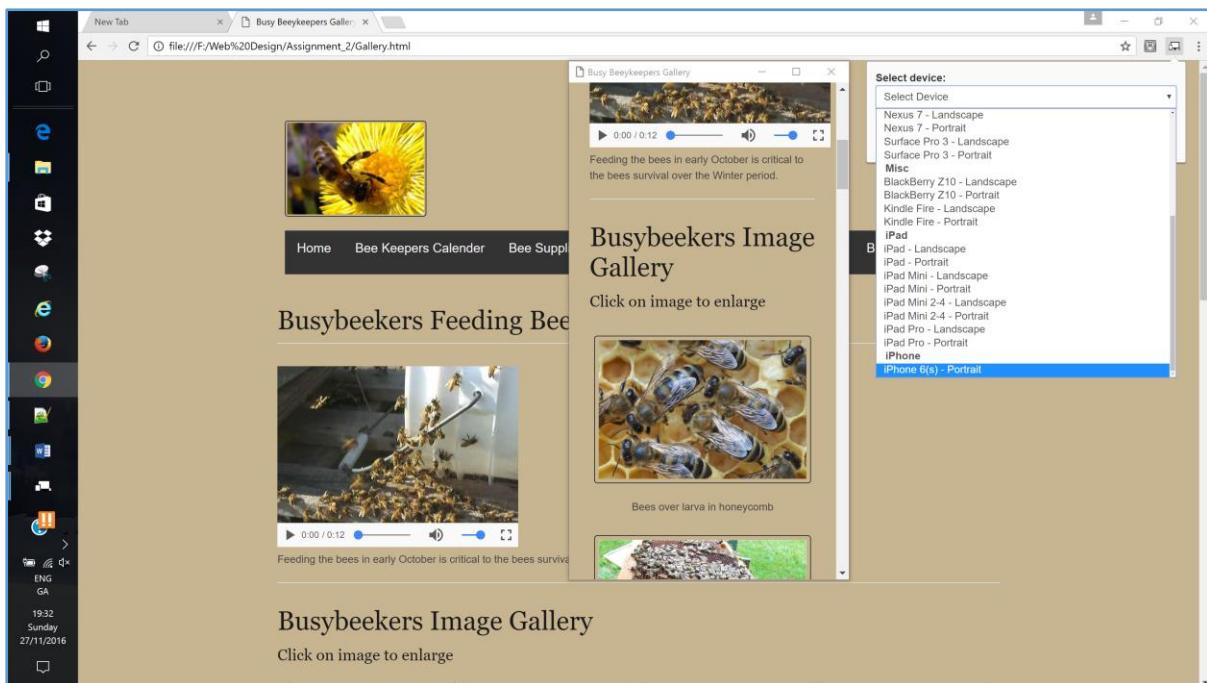
### Getting started

Once you've decided that you want to begin beekeeping, it is important that you learn about honeybees. There are dozens of useful books that cover the basics of bees, so choose one that you like and devour every page until you grasp the basic elements of bees, including: the honeybee lifecycle, diet, predators, seasonal changes, etc.

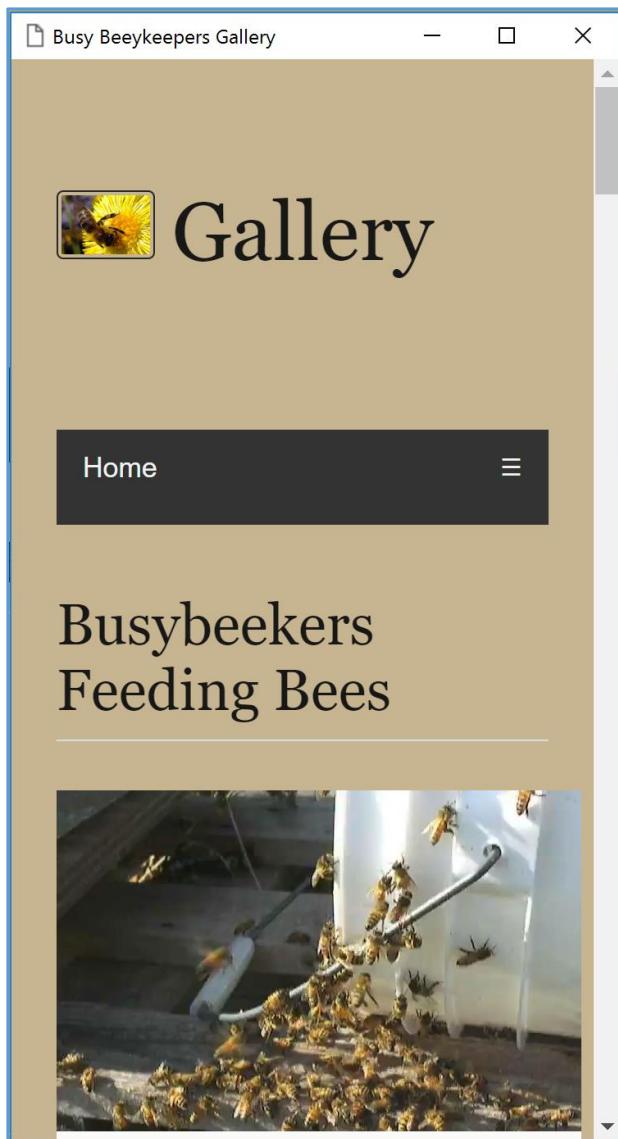
Desktop view.



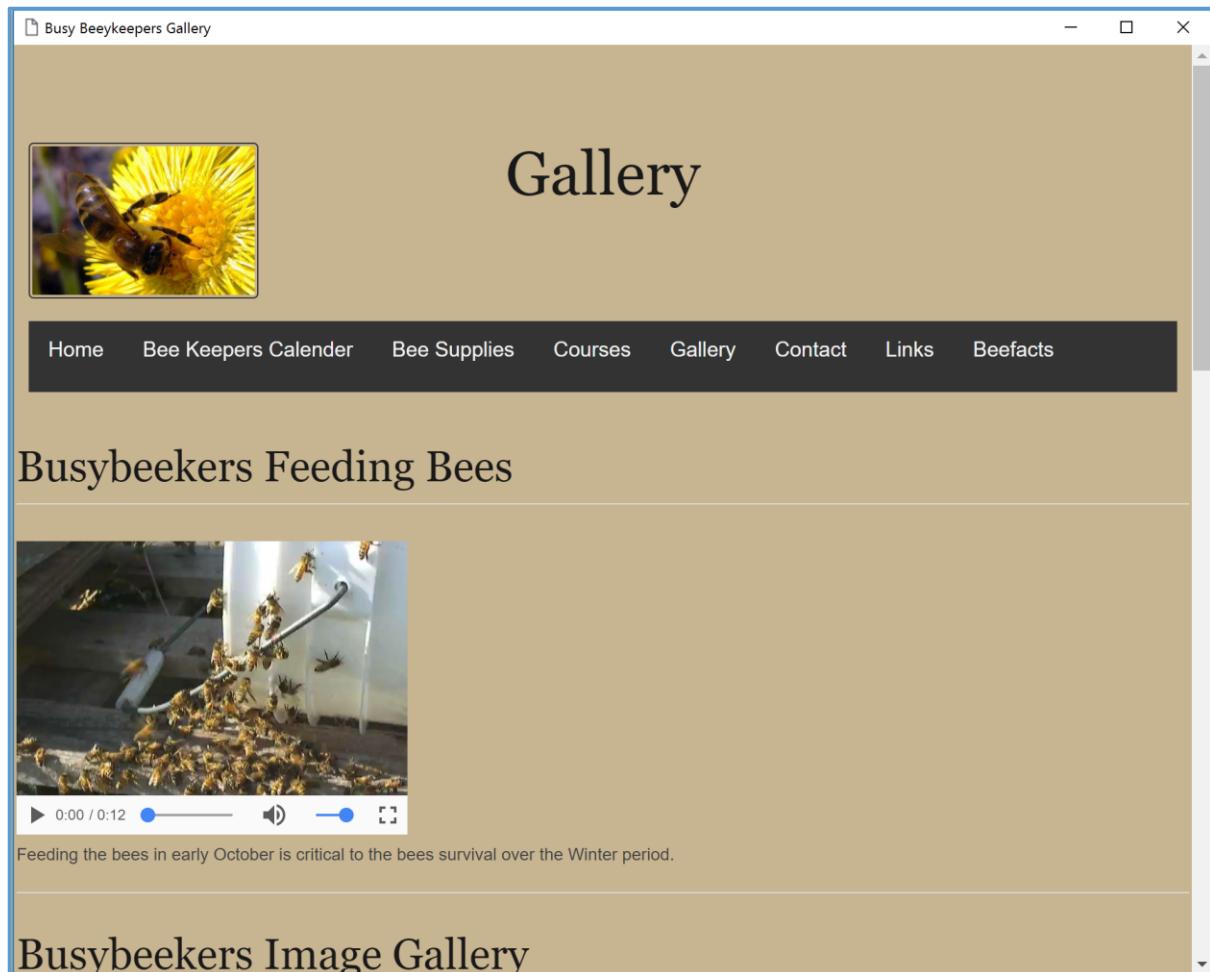
The screenshot above shows the Responsive Web Tester in use.



The screenshot above shows the iPhone 6 screen.



The screenshot above shows the iPhone 6 screen.



The screenshot above shows the iPad screen.

The results show that the website is responsive on most devices.

## **Part D: Evaluation**

A survey was used as an evaluation method to assess the usability and functionality of the website. This survey was set up in survey monkey  
[https://www.surveymonkey.com/r/H5GK9BD.](https://www.surveymonkey.com/r/H5GK9BD)

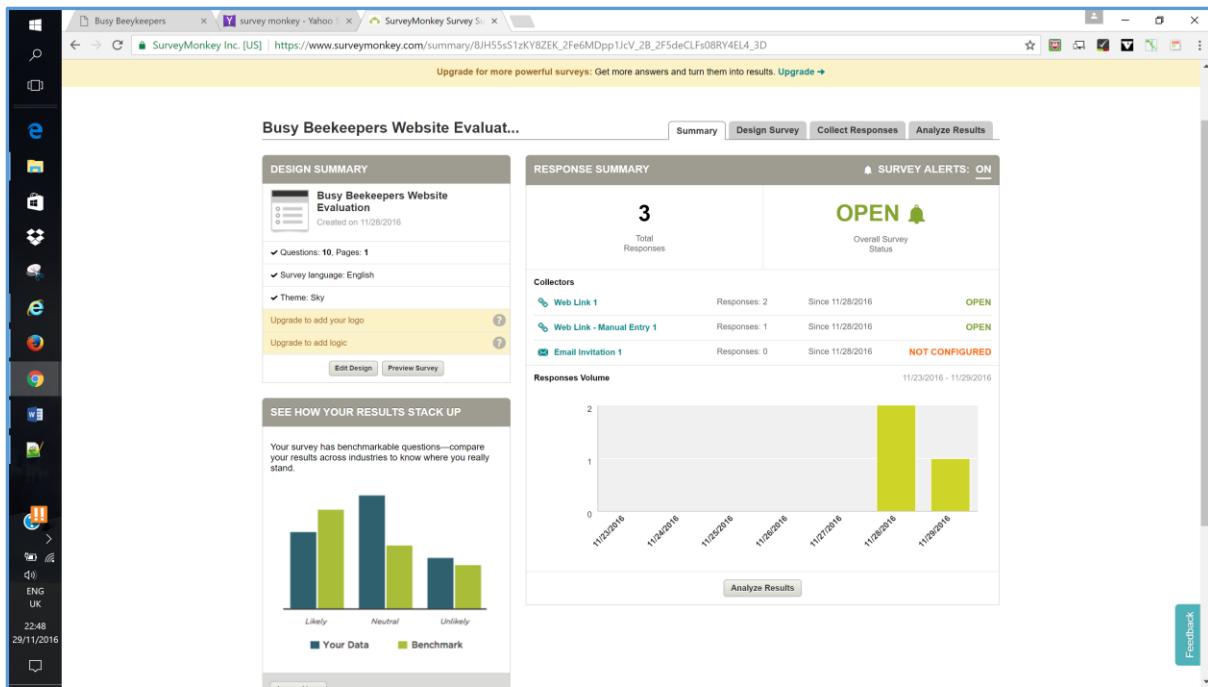
Consideration was given to many of the Nielsen's Heuristics principles when developing the website. The survey is centered at finding out if these principles were delivered. The following are some of the more important considerations:

- i. Match between system and the real world: the website will speak a simple language and use words and concepts familiar to the targeted user. It will be in a format that the user would expect and will reflect the mental model that the user has become accustomed to.
- ii. Consistency will flow through the webpages. There will be consistency throughout the website and particularly from page to page. This will be setup in the CSS style sheets.
- iii. User control and freedom. The user will know exactly where they are on the site and how to get home. They will be able to move through the site quickly and know what is happening at all times. The webpages will adapt to small screen sizes and have disabilities considered to make available to all potential users.
- iv. A minimalist design will ensure the information presented is relevant and accurate. Only what needs to be on the pages will appear.

The questions were set up to determine if these principles were achieved. The survey contained 10 short questions with multiple choice answers. This method was deemed appropriate as an evaluation method of the website as:

- The results could be easily analysed,
- The survey could be taken by the respondent immediately after viewing the website, and
- Its method of collecting data was quick.

The survey was sent to 4 fellow beekeepers and 3 responses were received back at the time on compiling the report. The following link shows the results of the completed surveys  
<https://www.surveymonkey.com/results/SM-2PJXY2ZN/>.



The completed surveys.

**Usability and Functionality Evaluation**

A simple survey to capture your observations of the Busy Beekeepers website.

- How clearly was the information presented in the website?
- How easy is it to understand the information on our website?
- How visually appealing is our website?
- Does the website appear easy to navigate?
- Did it take you more or less time than you expected to find what you were looking for on our website?
- How engaging is the design of the website?
- How easy was it to find what you were looking for on our website?
- Would you consider the website to be accessible to all users?
- How likely is that you would recommend this website to another beekeeper?
- What improvements would you make to the design of the website?

Powered by SurveyMonkey

The Survey using the link sent to the respondents.

## Usability and Functionality Evaluation

A simple survey to capture your observations of the Busy beekeepers website.

### 1. How clearly was the information presented in the website?

- Extremely clearly    Very clearly    Moderately clearly    Slightly clearly    Not at all clearly

### 2. How easy is it to understand the information on our website?

- Extremely easy    Very easy    Somewhat easy    Not so easy    Not at all easy

### 3. How visually appealing is our website?

- Extremely appealing    Very appealing    Somewhat appealing    Not so appealing    Not at all appealing

### 4. Does the website appear easy to navigate?

- Extremely easy    Very easy    Somewhat easy    Not so easy    Not at all easy

### 5. Did it take you more or less time than you expected to find what you were looking for on our website?

- A lot less time    A little less time    About what I expected    A little more time    A lot more time

### 6. How engaging is the design of the website?

- Extremely engaging    Very engaging    Somewhat engaging    Not so engaging    Not at all engaging

### 7. How easy was it to find what you were looking for on our website?

- Extremely easy    Very easy    Somewhat easy    Not so easy    Not at all easy

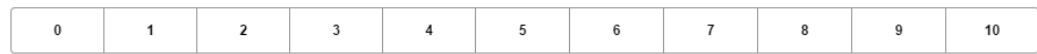
### 8. Would you consider the website to be accessible to all users?

- Extremely accessible    Very accessible    Somewhat accessible    Not so accessible    Not at all accessible

### 9. How likely is it that you would recommend this website to another beekeeper?

Not at all likely

Extremely likely



### 10. What improvements would you make to the design of the website?

Done

The Survey.

## Part E: Outcome of the test and evaluation

1.

Outcome of the test and evaluation process. The screen shot below show the comments from the surveys.

Showing 3 responses

---

Include some more videos etc. More info on course type an costs. Complete the links page. The size of text might be a bit small for some users.  
11/29/2016 10:46 PM [View respondent's answers](#)

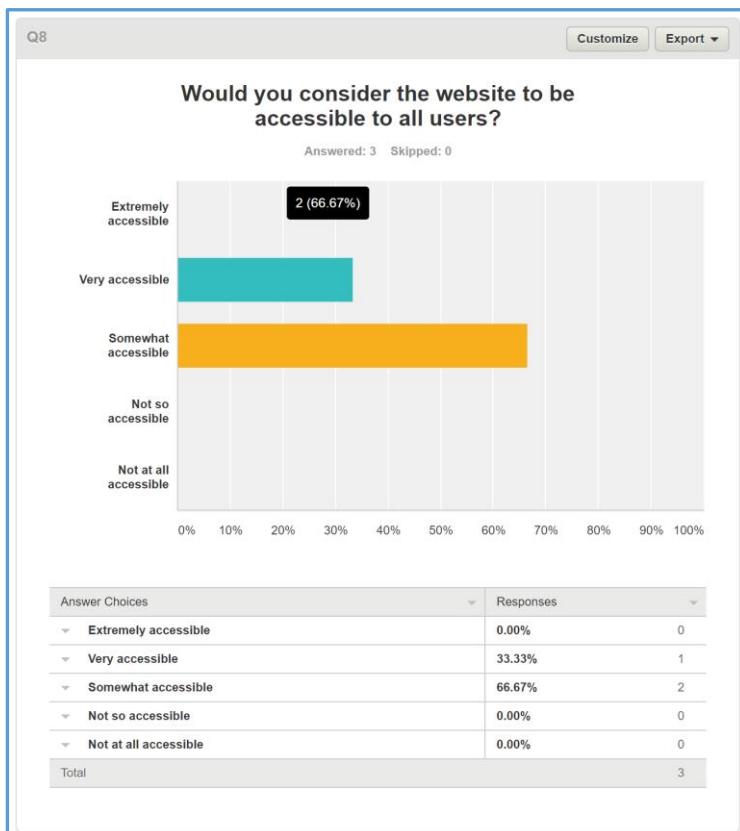
---

Writing a bit bigger.when documents open that you stay on bee keeping page, dont have to hit back button. images the same size. a lot of written information on calender page. overall very good and clear  
11/28/2016 9:29 PM [View respondent's answers](#)

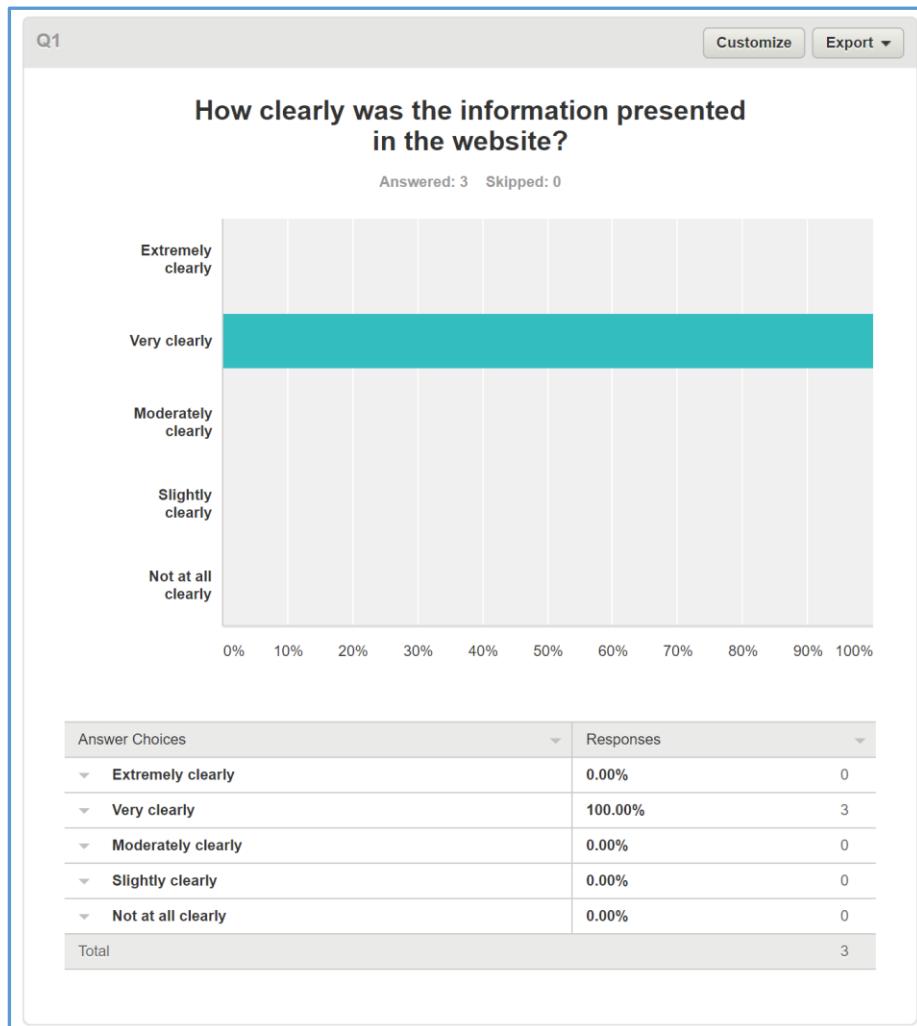
---

Include more information on courses which would allow to make a more informed decision on the course type. A lot information was presented on the calendar page, could this be simplified with links to each month.  
11/28/2016 12:27 AM [View respondent's answers](#)

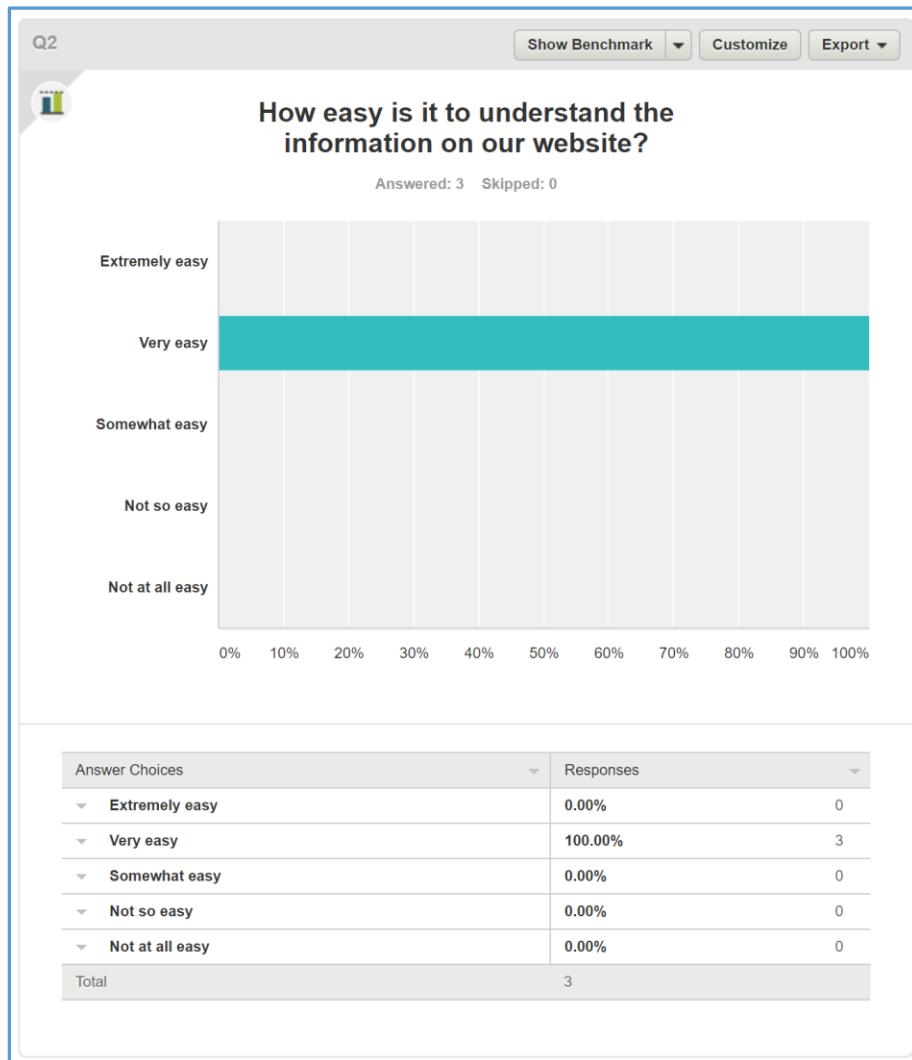
Two of the responses stated that the website was somewhat accessible (screenshot below). From analysing the comments above the text size could have been a small bit bigger.



On a positive note the, all of the respondents found the information to be presented very clearly (screen shot below).



The main aim of the website from the outset was to present information to fellow beekeepers and potential new beekeepers in a clear and easy to understand manner. The results of question 2 are very pleasing in that all the respondents found the information very easy to understand. These results can be seen in the screenshot below.



Overall the results of the survey are pleasing and a lot of the comments can be taken and implemented in the future developments of the website.

The results of the speed tests were generally good except for the Gallery and Contact page. These pages included a video and iframe link respectively. Future developments will look ways of including these facilities without compromising on content. Three separate methods were used in checking the speed of the website – Firefox status bar, Performance analyser in chrome and an online speed check.

The use of the check my links, css validator, html validator, css viewer and css usage

extensions highlighted issues and problems during the development phase. These extensions/add ons proved to be very valuable tools for designing the website.

2.

The Responsive Web Design Tester in chrome was used to check the responsiveness of the website. This is a quick and easy way to test how responsive website the website is. Overall the website was generally responsive however improvements can be made in future developments.

The mobility of the website however was not great on all devices. The iPad portrait view needs improvement in future developments to the code. The media queries used in the css code at present do not cover all the device sizes in use.

3.

The following are the recommendations for future developments of the website as a result of this phase of the project:

- i. Increase the text size on some of the individual pages.
- ii. Improve the chunking of information on the calendar page.
- iii. Complete the links page, which is initially under construction.
- iv. Include some more videos or links to YouTube on the gallery page.
- v. Provide more/better information on the courses page.
- vi. Make the information on the calendar page more concise, thought was given to millers chunking concepts at the time of construction, however as the information provided on this page is on a month by month basis and some of the months require more information than others certain months are breaking this principle. Future developments will examine this issue.
- vii. Make the website more responsive by the inclusion of more media queries to allow for more responsiveness across a wide range of devices.
- viii. The form on the courses page will be further developed to collect more information. In addition to this more and better use of JavaScript will be used to collect these details and store the information.
- ix. The table used on the bee supplies page will be looked at as it is performing poor when it comes to responsiveness. Other options to display this information in a similar format will be investigated.
- x. The use of an iframe will be examined on the contact page as it is not very responsive and there may be issues accessing on certain browsers. Solutions to displaying the google maps link in other ways will be investigated to overcome this issue.

## **Word Count 3161**

### **References**

<http://www.w3schools.com/>

<http://www.talkingwithbees.com/beekeeping-how-to-guides/beekeeping-calendar>

<http://www.benefits-of-honey.com/index.html>