

Bootstrap 4 theme specifications

Demo <https://lbc-app-w-processwire-np.azurewebsites.net/bs4/>

Objective Develop a Croydon Council user interface that can be applied across platform without code conflicts. To be coded using new design patterns in HTML5 utilising Bootstrap 4 as the SASS/CSS framework. Accessibility best practices applied and theme colours tested to WCAG AA.

Cross platform compatibility

The 'site wide' theme components covered in section 2 have been created using Bootstrap CSS and pure Javascript. They do not require JQuery library or Bootstrap JQuery to function and will not be affected should additional Bootstrap JS **OR** AngularJS be integrated into the code.

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Bootstrap Grid (tbc)

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Flex / flex align classes (tbc)

Section 1 - HTML head section

Doc type and meta tags

1. Document type HTML5
2. Open HTML
3. Open head
4. Document title
5. Meta description
6. Meta content type
7. Canonical link
8. Short link

```
<!doctype html>
<html>

<head>
  <title>London Borough of Croydon: Bootstrap 4 Custom Theme</title>
  <meta name="description" content="Information for Croydon residents, visitors and local businesses.">
  <!-- <meta http-equiv="X-UA-Compatible" content="IE=edge">-->
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <!-- <link rel="canonical" href="https://www.croydon.gov.uk/" />
  <link rel="shortlink" href="https://www.croydon.gov.uk/" />-->
```

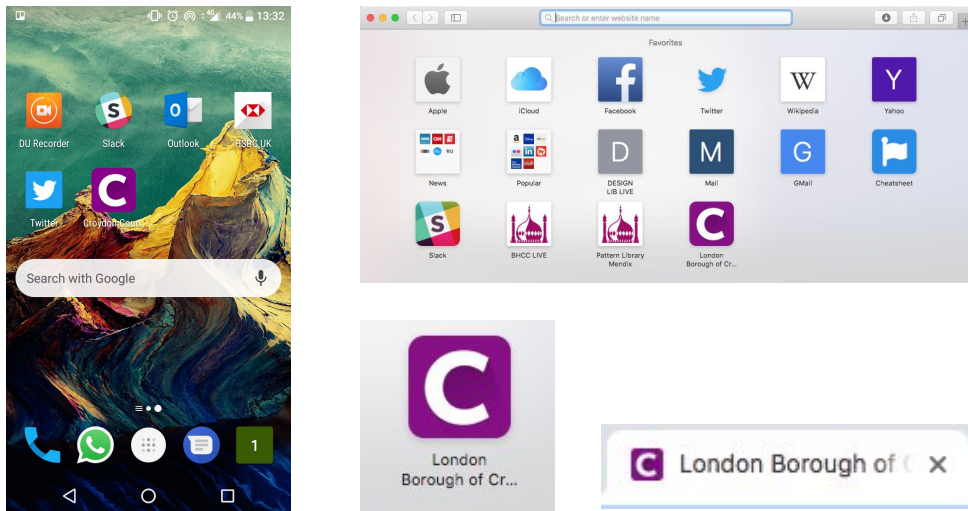
Favicons

New design home screen icons generated for:

- IOS
- Android Chrome
- Windows 8/10
- Mac OS Safari

REF: <https://realfavicongenerator.net/>

Documentation is inside 'img/favicon/'



Above: Android, OS Safari, Chrome tab

```
<!-- Favicons https://realfavicongenerator.net/ -->
<link rel="apple-touch-icon" sizes="180x180" href="img/favicon/apple-touch-icon.png?v=rMqRM0G9oX">
<link rel="icon" type="image/png" sizes="32x32" href="img/favicon/favicon-32x32.png?v=rMqRM0G9oX">
<link rel="icon" type="image/png" sizes="16x16" href="img/favicon/favicon-16x16.png?v=rMqRM0G9oX">
<link rel="manifest" href="img/favicon/site.webmanifest?v=rMqRM0G9oX">
<link rel="mask-icon" href="img/favicon/safari-pinned-tab.svg?v=rMqRM0G9oX" color="#5bbad5">
<link rel="shortcut icon" href="img/favicon/favicon.ico?v=rMqRM0G9oX">
<meta name="apple-mobile-web-app-title" content="Croydon Council (London Borough of Croydon UK)">
<meta name="application-name" content="Croydon Council (London Borough of Croydon UK)">
<meta name="msapplication-TileColor" content="#ff0000">
<meta name="msapplication-config" content="img/favicon/browserconfig.xml?v=rMqRM0G9oX">
```

OG (Opengraph) Tags

Generated using <https://megatags.co/>

Tested on:

<https://cards-dev.twitter.com/validator>

<https://developers.facebook.com/tools/debug/sharing/>

Customised to correct twitter tag format changing 'name' to 'property'.



Left: Twitter card preview (share page)



Left: Facebook post preview (share page)

Below: The OG code

```
<!-- OG and twitter tags -->
<!-- Search Engine -->
<meta name="description" content="Information for Croydon residents, visitors and local businesses.">
<meta name="image" content="https://lbc-app-w-processwire-np.azurewebsites.net/bs4/img/opengraph/Croydon-OG-image.png">
<!-- Schema.org for Google -->
<meta itemprop="name" content="Croydon Council (London Borough of Croydon UK)">
<meta itemprop="description" content="Information for Croydon residents, visitors and local businesses.">
<meta itemprop="image" content="https://lbc-app-w-processwire-np.azurewebsites.net/bs4/img/opengraph/Croydon-OG-image.png">
<!-- Open Graph general (Facebook, Pinterest & Google+) -->
<meta property="og:title" content="Croydon Council (London Borough of Croydon UK)">
<meta property="og:description" content="Information for Croydon residents, visitors and local businesses.">
<meta property="og:image" content="https://lbc-app-w-processwire-np.azurewebsites.net/bs4/img/opengraph/Croydon-OG-image.png">
<meta property="og:url" content="https://lbc-app-w-processwire-np.azurewebsites.net/bs4">
<meta property="og:site_name" content="Croydon Council (London Borough of Croydon UK)">
<meta property="og:locale" content="en_GB">
<meta property="fb:admins" content="130042263759700">
<meta property="og:type" content="website">
<!-- Twitter -->
<meta name="twitter:card" content="summary">
<meta name="twitter:title" content="Croydon Council (London Borough of Croydon UK)">
<meta name="twitter:description" content="Information for Croydon residents, visitors and local businesses.">
<meta name="twitter:site" content="@contactcroydon">
<meta name="twitter:creator" content="@contactcroydon">
<meta name="og:image" content="https://lbc-app-w-processwire-np.azurewebsites.net/bs4/img/opengraph/Croydon-OG-image.png">
```

Mobile address bar

Sets the browser header colour on mobile devices (where supported) :

```
<!-- Mobile browser colour theme -->
<meta name="theme-color" content="#121212">
```

Viewport meta tag

Defines the viewport settings - required for responsive CSS Media Queries:

```
<!-- Viewport -->
<meta name="viewport" content="width=device-width, initial-scale=1"/>
```

Font embedding

1. Source Sans Pro' loaded from **google web font api**
2. 'Fiendstar' @font-face embedding is found inside '**font-face.css**'
3. 'Open iconic icons' @font-face embedding is found inside '**font-face.css**'
4. 'Fontello brand icons' @font-face embedding is found inside '**font-face.css**'

```
<!-- Fonts -->
<!-- Google Source Sans Pro -->
<link href="https://fonts.googleapis.com/css?family=Source+Sans+Pro:400,400i,600,600i,700,700i,900"
      rel="stylesheet">
<!-- @Font-Face Fiendstar, Open Iconic, Fontello -->
<link type="text/css" rel="stylesheet" href="css/font-face.css">
```

Loading Bootstrap 4 CSS

'main.css' contains our custom Bootstrap 4 theme:

```
<!-- Croydon Council Bootstrap 4 Theme -->
<link type="text/css" rel="stylesheet" href="css/main.css">
```

Bootstrap 4 customisation process described in detail here:

https://docs.google.com/document/d/1tirKyeLhv3dURj58OevzwV0rmKpKZ3DV0vEMie8z_PY/edit?usp=sharing

IE 6 - 7 fallback

Current message used on website and my account:

```
<!-- LESS THAN IE 8 MESSAGE IMPORTED FROM MY ACCOUNT -->
<!--[if lt IE 8]>
<div><h2>!! We do not support IE6 & IE7, for the best browsing experience please use IE8 or greater !!</h2></div>
<![endif]-->
```

IE 8 - 9 fallback

Automatically generated float based layout for IE 8 - 9:

<https://github.com/coliff/bootstrap-ie8>

```
<!-- BOOTSTRAP LAYOUT FIXES FOR IE 8 and 9 -->
<!--[if IE 9]>
  <link href="css/bootstrap-ie9.min.css" rel="stylesheet">
<![endif]-->
<!--[if lte IE 8]>
  <link href="css/bootstrap-ie8.min.css" rel="stylesheet">
  <script src="js/html5shiv.min.js"></script>
<![endif]-->
<!-- LESS THAN IE 8 MESSAGE IMPORTED FROM MY ACCOUNT -->
<!--[if lt IE 8]>
<div><h2>!! We do not support IE6 & IE7, for the best browsing experience please use IE8 or greater !!</h2></div>
<![endif]-->
```

Note: shim running on same server and CSS fallbacks need testing

Section 2 - Site wide theme components

The following components have been created using **Bootstrap CSS** and **pure Javascript**. They do not require the JQuery library or Bootstrap JQuery.

This approach allows us to define a set of site wide components that will not be affected should AngularJS or Bootstrap JS be added into the [theme project area](#) by a developer.

Main navigation

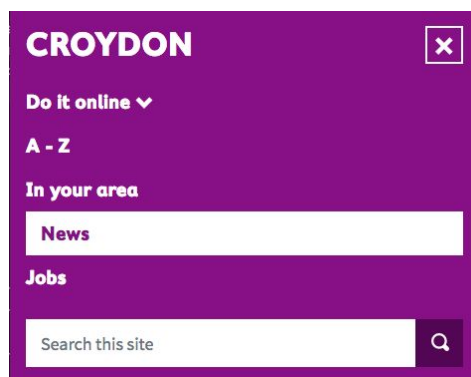
Bootstrap 4 navigation interaction that relies on JQuery has been replaced with a pure Javascript alternative.

Calling the script:

```
<!-- Nav toggle pure JS -->
<script src="js/navtoggle.js"></script>
```

The Javascript:

```
// Script to hide/show menu
// Uses custom classes so as not to conflict if Bootstrap JS is activated
var button = document.querySelector('#js-toggle');
var menu = document.querySelector('#menu-purejs');
button.addEventListener('click', function (event) {
    if (menu.style.display === "") {
        menu.style.display = "none";
        //button.innerHTML = "Show Menu";
    } else {
        menu.style.display = "";
        //button.innerHTML = "Hide Menu";
    }
});
```



Tested: Loading in additional Bootstrap JS libraries - no conflicts

Styling in progress

Dropdown menu

Bootstrap 4 dropdown menu interaction that relies on JQuery has been replaced with a pure Javascript alternative:.

Tested: Loading in additional Bootstrap JS libraries - no conflicts

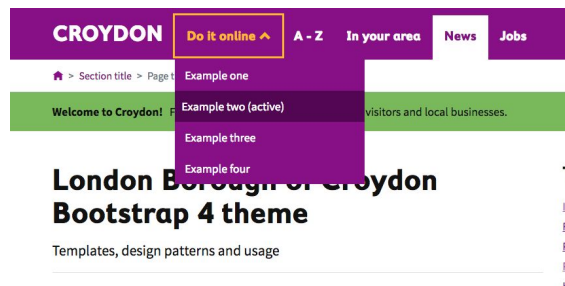
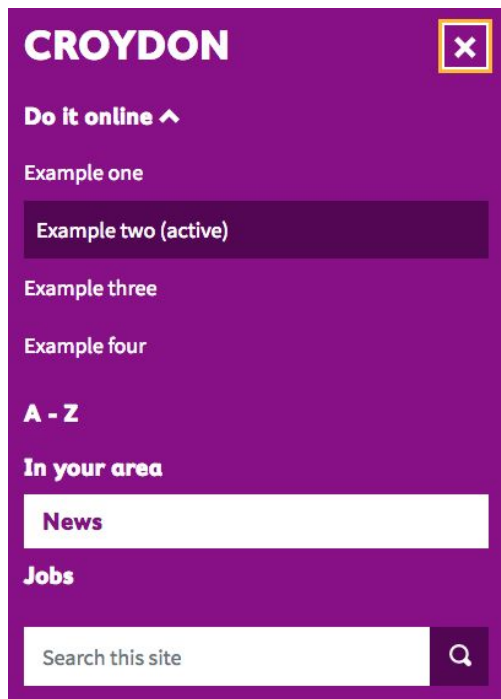
Styling in progress

Cookie Alert Bar

Stand alone pure Javascript cookie alert bar

positioned at the bottom of the screen. Firing cookies in pure Javascript has been implemented, for full details see: <https://github.com/Wruczek/Bootstrap-Cookie-Alert>

Tested: Loading in additional Bootstrap JS libraries - no conflicts



Section 3 - Theming bootstrap with SASS

Custom fonts

The example below shows how we can reset the default sans serif font, the default headings font and the legend font before re-compiling bootstrap.

Note how I apply a font weight for fallback fonts only.

```
// Base font and fallbacks (Source sans for all copy)
$font-family-sans-serif: 'Source Sans Pro', Arial, Helvetica, sans-serif;

// Fiendstar for all headings and legend @font-face (css/font-face.css)
$headings-font-family: "Fiendstar W01 Bold", 'Source Sans Pro', Arial, Helvetica, sans-serif;
legend{
  font-family: $headings-font-family;
  font-weight: 700; // for fallbacks only
}
$headings-font-weight: 700; // for fallbacks only
```

Font usage

Element	Font	Fallback 1	Fallback 2
H1-H6	Fiendstar Bold	Source sans pro 700	Arial, sans-serif
Legend	Fiendstar Bold	Source sans pro 700	Arial, sans-serif
Button	Fiendstar Bold	Source sans pro 700	Arial, sans-serif
Main navigation	Fiendstar Bold	Source sans pro 700	Arial, sans-serif
User navigation	Fiendstar Bold	Source sans pro 700	Arial, sans-serif
All other text	Source Sans Pro	Arial, sans-serif	n/a
Icons	Open iconic	n/a	n/a

Source Sans Pro weights 400,600,700,900

SASS custom colour palette

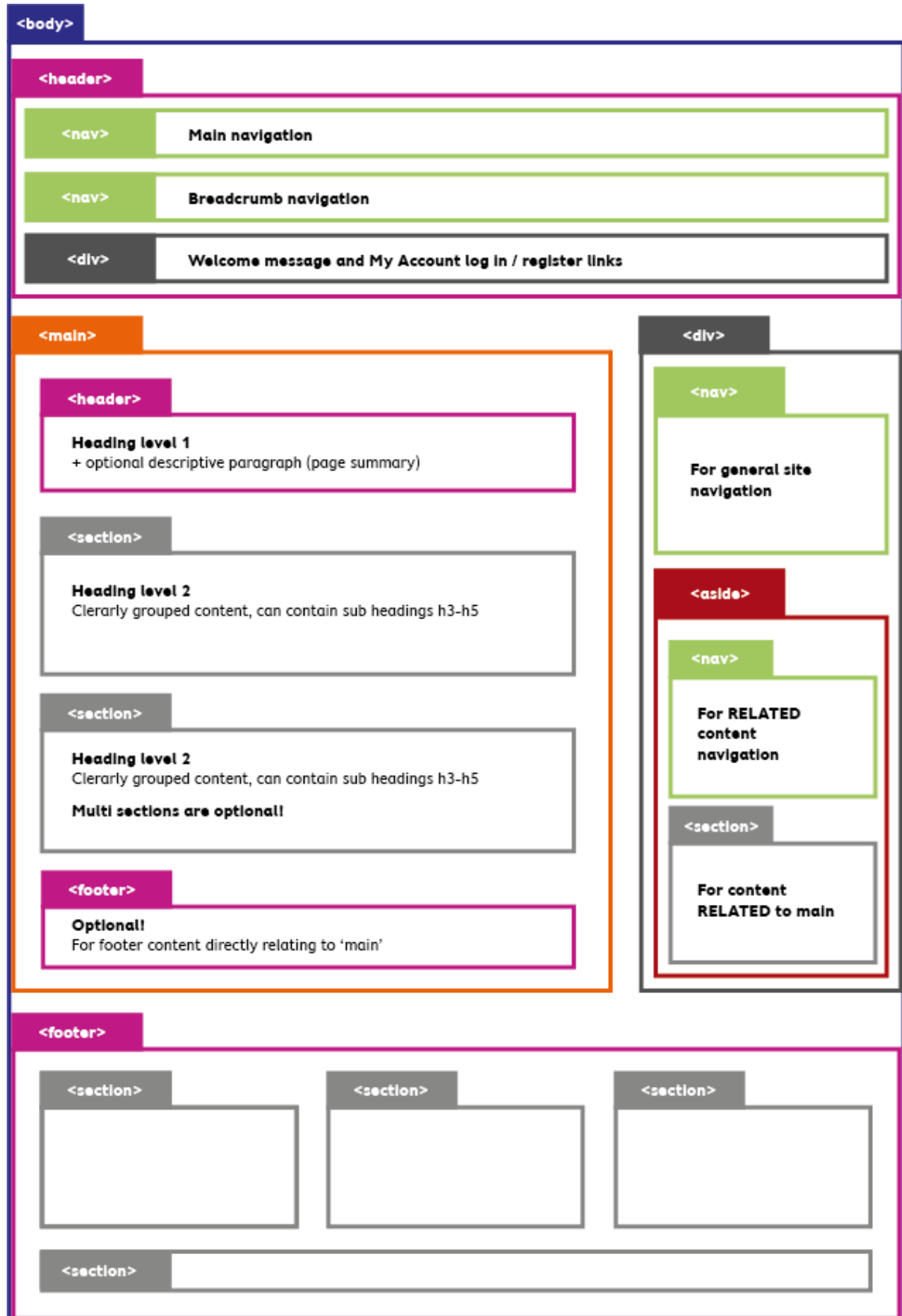
More in progress - Notes TBC

```
$theme-colors: (  
  // Bootstrap colours  
  "primary": #880088,  
  "secondary": #121212,  
  "success": #338800,  
  "info": #121212,  
  "warning": #ff5500,  
  "danger": #ae1100,  
  "light": #ededed,  
  "dark": #444444,  
  // Map additional colours to 'theme colours'  
  "carbon": #121212,  
  "graphite": #444444,  
  "stonewash": #444444,  
  "gray-tint": #ededed,  
  "purple-tint": #f8eef8  
);  
  
// Colour variable overrides - used in 'root;  
$blue: #0059a4;  
$indigo: #540055;  
$purple: #880088;  
$pink: #cc20cc;  
$red: #ae1100;  
$orange: #ff5500;  
$yellow: #ffbb00;  
$green: #77bb55;  
$teal: #20c997;  
$cyan: #17a2b8;  
$white: #fff;  
$gray: #cacaca;  
$gray-dark: #444444;  
  
// Background colours  
$body-bg: #ededed;  
$body-color: #121212;  
$breadcrumb-bg: #FFF;
```

Section 4 - Accessibility

HTML5 Semantic Markup

Structure conveys meaning through the HTML5 semantic container tags:



Focus on elements

Customised focus style, tab through page content to test:



The snippet from 'main.scss':

```
/* /// FOCUS STYLES /// */

*:focus {
  outline: none;
}
input:focus, textarea:focus {
  outline: 3px solid theme-color("yellow") !important;
  z-index: 999;
}
button:focus {
  outline: solid 4px theme-color("yellow") !important;
}
a:focus {
  outline: solid 3px theme-color("yellow") !important;
}
```

Skip to main content

Press tab on loading the page to see the link appear:



Section 6 - Dependencies

Icons **UPDATED**

<https://useiconic.com/open>

This icon library has been chosen for it's simple flat style, bold weight, and availability of required icons.

1. The icon font is embedded in '**css/font-face.css**'
2. The base icon styles are configured in '**css/iconic-bootstrap.css**'
3. Additional styles are applied in '**css/main.scss**'

```
<!-- @Font-Face Fiendstar, Open Iconic, Fontello -->
<link type="text/css" rel="stylesheet" href="css/font-face.css">

<!-- Open iconic (icons) -->
<link href="css/open-iconic-bootstrap.css" rel="stylesheet">
```

Examples:



calculator



calendar



camera-slr



caret-bottom



caret-left



caret-right



caret-top



cart



chat



check



chevron-bottom



chevron-left



chevron-right



chevron-top



circle-check



circle-x



clipboard



clock



cloud



cloud-download



cloud-upload



cloudy



code



cog

Section 6 - Dependencies

Brand icons **NEW**

<http://fontello.com/>

As brand icons are not featured in Open Iconinc a custom font has been generated using Fontello creating a lightweight @font-face embed, just for these brand icons:



4. The fontello font is embedded in '**css/font-face.css**'
5. The base icon styles are configured in '**css/fontello.css**'
6. Additional styles are applied in '**css/main.scss**'

```
<!-- Fontello (brand icons) -->  
<link href="css/fontello.css" rel="stylesheet">
```

Section 7 - Debugging

Azure hosting - Web Config fixes

The code below must be added to a 'web.config' file placed in an Azure hosted website root folder.

```
<configuration>
  <system.webServer>
    <staticContent>
      <!-- Allow JSON -->
      <mimeTypeMap fileExtension=".json" mimeType="application/json" />
      <!-- Allow WOFF for Azure Font Face Embedding -->
      <mimeTypeMap fileExtension=".woff" mimeType="application/font-woff" />
      <mimeTypeMap fileExtension=".woff2" mimeType="application/font-woff" />
    </staticContent>
  </system.webServer>
</configuration>
```

References:

Allow WOFF files to load (fixes @font-face errors):

http://www.codepal.co.uk/show/WOFF_files_return_404_in_Azure_Web_Sites

Allow JSON Files to run

<https://blogs.msdn.microsoft.com/africaapps/2013/06/07/how-to-serve-static-json-files-from-a-windows-azure-website/>

Notes - Variables in media queries SASS

```
@mixin styling($bg-green) {
  // your SCSS here, e.g.
  .breadcrumb {
    background-color: $bg-green;
  }
}

@media screen and (max-width: 1170px) {
  @include styling($bg-green: #000000);
}

@media screen and (min-width: 1171px) {
  @include styling($bg-green: #DDDDDD);
}
```