# *Royal Geographical Society - Discovering Britain website, stage 1 Technical Specification*

| | |
|---|---|
| Prepared for | Jenny Lunn |
| Distribution | Pixillion Digital |
| Version | 9<br>*9 June 2011* |
| References | wireframes-v6<br>http://www.pixillion.com/designs/discoveringbritain/wireframe/Home.html |


Pixillion Ltd.
71 Queens Road
Bristol
BS8 1QP
UK

**Telephone** 44 (0)117 910 2450
**Email** studio@pixillion.com
**Website** www.pixillion.com

# Contents

# Overview

The Royal Geographical Society (RGS-IBG) Discovering Britain (DB) site is to be a content-managed website that needs to be flexible and scalable, easy to maintain, and feature-rich.

The site should be developed in a private Development Environment and published to a Staging Environment for testing and approval before being published to the Production Environment.

RGS-IBG already host their main website and the DB hosting solution is not yet decided. As such, a hosting recommendation for the DB site will be required as part of this proposal, as well as documented hosting requirements that RGS-IBG would need to meet if they decide to host the DB site in-house.

All code should be held in a source control repository (Subversion or GIT) to enable collaborative working. This would enable members of the Pixillion or RGS-IBG team to have input into the development phase of the project, if appropriate.

Support tickets and discussions will be raised via the Pixillion Basecamp account, details of which will be provided before the project starts.

Any assumptions made in producing the proposal should be documented, either at the start of the document if they are general assumptions, or after each requirement if they are specific.

This requirements specification should be viewed in conjunction with the wireframes and site map referenced at the beginning of this document.

# Technical Specification

## General Requirements

The following set of requirements set out the details of design, software, hosting and front-end page template coding standards.

## Scope Limitation

The following functionality is not required for this phase of development:

- A mobile version of the site, or mobile-specific stylesheets.
- Ecommerce.
- Localisation.
- Free text search.
- User registration and login.

## Design

Designs will be provided by Pixillion. Copy and imagery will be provided by RGS-IBG and RGS-IBG will be responsible for the data entry of the new site via the CMS.

## Content Management

The DB site will be content-managed through an Open Source CMS. RGS-IBG do not wish to be tied to any one developer so the intellectual copyright of all code and assets produced for the DB site will be owned by RGS-IBG.

CMS users will be non-technical so the CMS should be easy and intuitive to use, and be scaleable to allow for growth and further site development in the future.

Any software licenses purchased should be purchased in the name of RGS-IBG through Pixillion.

The following user groups will be required:

- Administrators.
- Editors (for RGS-IBG stakeholders).
- Public (for anonymous users).

Each element of content should have at least three statuses:

- Draft
- Live (visible on the site)
- Closed

## Hosting

Hosting will be handled by RGS-IBG or Pixillion so there is no need to quote for a hosting solution. However full hosting requirements should be included so that adequate hosting can be put in place for the solution developed.

RGS-IBG do not have any specific traffic expectations for the DB site so hosting figures are based on analysis of traffic to the existing RGS-IBG portal and mini sites. Based on the figures available, an assumption has been made that the DB site will attract up to somewhere in the region of 4,000 unique visits per month.

This relatively low figure would indicate that a server dedicated specifically to the DB site would be overkill, however a shared platform may not handle any spikes in traffic or unexpected surges in demand very efficiently. Therefore it is recommended that a scaleable virtual/cloud server environment be reserved for the DB site, that supports instant scaling of resources (both up and down) as and when required.

## Page Templates

The DB site should be future-proofed as far as practically possible. Site templates should be produced in HTML5, with CSS 3 (where appropriate) and should degrade disgracefully in legacy browsers, ensuring that users enjoy a fully functional user experience without feeling disappointed with any errors or failures.

As HTML5 support varies in different browsers, the proposal should include details of how this will be handled. For example:

'HTML5 doctype and video elements but the remaining markup shall be the same coding standard as XHTML 1 Strict'

or:

'HTML5 semantic markup such as article and section will be used. Browsers that do not support these semantic elements

# Technical Specification

will have support provided by html5shiv.js.'
CSS and JavaScript files should be minimised to maximise performance (Production Environment only) and site templates should be optimised using Yahoo!'s YSlow and Google's PageSpeed tools as performance benchmarks (a minimum YSlow score of 85% is expected).

JavaScript should be used to achieve the interactive requirements set out in the Specific Requirements below but this functionality should degrade gracefully if script is disabled in the user browser.

## Media Assets

File dimensions and maximum file sizes will be defined by Pixillion. Where possible, the CMS should enforce these restrictions when RGS-IBG upload assets.

## Client-side Behaviour

All client-side behaviour should be developed using the jQuery. There is no requirement to produce any Flash assets as part of this project.

Wherever an image gallery is required, the following jQuery plugin should be used:

http://coffeescripter.com/code/ad-gallery/

Wherever a form is required, form submissions should be validated on the server side and also on the client side using JavaScript.

## Specific Requirements

The following requirements are specific to the DB site.

## Site Structure

There essentially be three levels of hierarchy and navigation beneath the home page in the DB site:

1.0. Walks.
1.1. Category (Landscapes, Setting, Region).
1.2. Sub category (defined in CMS for each category)
1.3. Walk.
2.0. About.
3.0. Glossary.
3.1. A-Z pages for all terms sorted alphabetically (i.e. a page for each list of terms beginning A).
4.0. Contact Us.
4.1. Thanks for getting in touch.
5.0. Site Map
6.0. Accessibility Statement
7.0. Terms & Conditions
8.0. Privacy Statement

Please see the wireframe reference document for more details.

## Generic Site Frame

Each page of the site will be contained within a Generic Site Frame, consisting of the following elements:

### Header

- DB logo
- Primary Navigation Tabs (Home, Walks, About, Contact)
- RGS-IBG logo
- CTA for "Find out more about how this project is developing

### Right Hand Side column

- Social Network Share links (Facebook, Twitter, Share This widget) and Facebook page likes

### Footer

Links to:

- Site Map
- Accessibility Statement
- Glossary
- Terms & Conditions
- Contact Us
- Download Adobe Reader
- Text including registered charity and copyright details
- Supporting organisations logos

# Technical Specification

## Home Page

The Home Page will feature panels that lead into the Category Landing Pages, consisting of a link, title and image.

RGS-IBG should be able to upload the images to the CMS.

It will also feature a video introduction to DB.

### Featured Walks

RGS-IBG should be able to define one or more groups of featured walks; e.g. a headline of Featured Family Walks, and links to three relevant walks formed of a title, an image, a brief description and the region.

### Featured Stories

RGS-IBG should be able to define the headline, upload an image, and link to a number of relevant walks.

### Walks Near You

This will be the Walk Search panel common to Category Landing Page. See the Walks section for details.

## Walks

The Walks section will form the bulk of the site content and walks will be categorised in a number of ways that will enable users to find walks they are interested in. Each Walk will be categorised under one of three Categories (Landscapes, Setting and Region).

Walks will also have the following attributes assigned to them:

- Landscape (a single taxonomy defined by RGS-IBG in the CMS).
- Setting (a single taxonomy defined by RGS-IBG in the CMS).
- Region (a single taxonomy defined by RGS-IBG in the CMS).
- Difficulty Level (a fixed taxonomy: Gentle, Moderate, Challenging).
- Suitability for Families (a fixed taxonomy: Suitable, Unsuitable).

Each Walk may be classified under up to three Landscapes, but only under a single Setting and Region. Each walk will also be classified under a single Difficulty Level and Suitability for Families.

The 12 Regions are not editable in the CMS and are as follows:

- Greater London
- South East England
- South West England
- East of England
- East Midlands
- West Midlands
- Yorkshire and the Humber
- North West England
- North East England
- Wales
- Scotland
- Northern Ireland

## Walks Landing Page

The Walks Landing Page will feature tab navigation with links to the Category Landing Page for Landscapes, Setting, and Region. There will also be an introduction and links to each Subcategory of the Landscapes and Settings taxonomies. When clicked, the user will go to the Category Landing Page with the relevant Subcategory selected.

There will then be a panel with an introduction paragraph and image, links to each Category Landing Page and each Landscape. When clicking on these links, users will be taken to the relevant Category Landing Page, or Landscape Landing Page.

### Category Landing Page

The Category Landing Page will feature the same tabs as the Walks Landing Page but will also include a second set of tabs where users can view Walks by List or Map view. The Map view will be the default view.

List and Map views will both feature the list of Subcategories on the left. The Regions Category Landing Page will also feature the Walk Search panel (detailed below) on the right.

# Technical Specification

The Map view will feature a graphic map of the UK, overlaid with numbered icons for each Walk location that when hovered over, display a panel overlay containing the Walk title, summary and thumbnail image.

RGS-IBG will need to able to define where each Walk should appear on the map, via the CMS in an intuitive way, perhaps by clicking on the map graphic to specify the position the icon should appear in.

The List view will include introductory text and a graphic. The List itself will be an alphabetical list of Walks in the selected Subcategory. Clicking a link to a Walk either on the List or Map view will take the user to the Walk Detail Page.

Both List and Map views will include filter navigation allowing the user to define their search further.

- If the user is on the Landscapes page they will be able to filter by Setting and Region.
- If the user is on the Setting page they will be able to filter by Landscape and Region.
- If the user is on the Regions page they will be able to filter by Landscapes and Setting.

This filter navigation will only be shown when a Subcategory is selected.

If no Subcategory is selected (i.e. the user has clicked on the Landsapes or Setting tab), the List view will list all Walks and the Map view will show icons for all Walks.

## Walks Detail Page

Each walk will be displayed in a common template that includes the following elements:

- Headline
- Subheading
- Location/UK map (an indication of the walk location within the context of the UK)
- Social Network links
- Summary description of the walk
- Summary panel including:

1. An audio introduction
2. Distance
3. Level (an icon with a content manageable tooltip on rollover)
4. Suitability for families, dogs and wheelchairs (an icon with a content manageable tooltip on rollover)
5. Region
6. Setting (link to Category Landing Page for each Setting)
7. Landscapes (links to Categeory landing Page for each Landscape)
8. Starting Point
9. Finishing Point

- Photo or video and copyright details and caption
- Interactive map and points of interest (see the Ordnance Survey Maps section for details)
- Downloads - RGS-IBG should be able to upload a number of files to the CMS that the user can download, including:

1. Route file (GPX)
2. Route card (PDF)
3. Children's trail (PDF)
4. Script (PDF)
5. Audio (multiple audio files)
6. All of the above in one zip file

- Photo gallery - RGS-IBG should be able to upload multiple image files that will then be displayed in an interactive slideshow featuring functionality for:

1. Next/previous image
2. Zoom image (views full-screen)
3. Display of caption and copyright
4. A carousel of thumbnail images with scroll functionality and an indication of the image currently in view.

- Testimonials. RGS-IBG should be able to add testimonial text. Users will be able to submit this by completing the Contact Us form.

# Technical Specification

— Links. RGS-IBG should be able to add a number of third party resources, each of which will consist of title, brief description, and one or more URLs.

— Credits. RGS-IBG should be able to add a list of names and a brief summary of their contribution.

Each Detail Page will have a consistent URL pattern such as /walks/region/name-of-walk/.
A user could locate this Walk in a number of ways, e.g:

— A link on the home page (a featured walk).

— By filtering on the Walks page.

— By filtering on the Countryside Category page.

Regardless of the route taken to the page, the end URL should always be consistent. This will enable the use of Breadcrumb navigation, and reduce any SEO issues concerning duplicate content.

## Walk Search

Users should be able to search for walks by geographic location in two ways:

### Interactive graphic map

Pixillion will produce a number of simple maps of the UK and 12 Regions. A UK map will be displayed in a Walks Near You panel that will be included on the Home Page and Category Landing Pages. When a user clicks on one of the 12 Regions of this map, Walks will be displayed according to the following rules:

— If the user is on the home page, they will be taken to the Map view of the Regions Category Landing Page in the Walks section. No Subcategories will be selected so Walks in the selected Region will be displayed.

— If the user is on the Landscapes or Setting Category Landing page, they will be taken to the Map view for that Subcategory and the Walks for that Subcategory and Region will be displayed on the map.

— The Map should remember the various filter selections the user made before, if any.

In order to work on iPhone and iPad platforms the interactive map should be produced using JavaScript, not Flash.

### Postcode search

Users will be able to enter their postcode and when clicking the search button, be taken to the List view of the Walks Landing Page. The Walks listed will be an alphabetical list of all Walks within 50 miles of the postcode.

The number of Walks that will be listed on the site does not warrant a search that is accurate to a full UK postcode. Instead, distances matched to the outward code of the postcode (e.g. BS1, N1, BS20) and the inward code should be ignored. This should facilitate the use of open source postcode data instead of licensed access to the Royal Mail PAF database.

To enable searching by Postcode, RGS-IBG will need to enter the postcode of each Walk's starting location in the CMS.

The suggested solution for this is the Google Maps API. Please note that there is no requirement to feature maps from Google - it is merely suggested as a means to calculate distance between postcodes.

See http://code.google.com/apis/maps/articles/phpsqlsearch.html for an overview of this approach.

## Mapping Functions

RGS have a license for the integration of OS maps using the OS OpenSpace Pro service (http://openspace.ordnancesurvey.co.uk/openspace/pro.html), which is a JavaScript-based API service.

The site would feature an embedded map with the following features/functionality:

— Users can zoom and pan the map using controls or the mouse (mouse-wheel/double-click; click and drag)

— Users can view a Walk route overlaid on the map. A GPX file containing this route data would be uploaded to the CMS and applied to the map via the API.

— Users can click on Waypoint and Point of Interest (POI) icons and when doing so, view a panel overlay containing a combination of text, HTML, images, video and audio content relevant to that point. These Waypoints and POI overlays should be populated with content entered into

# Technical Specification

the CMS and the addition and removal of these should be achieved via the CMS interface.

- Waypoint and POI icon graphics should be custom graphics
- Map control graphics can be customised
- Route overlay style can be customised

## Static Pages

There will be a number of Static Pages throughout the site and each will be displayed in a standard template (see the About Us page of the wireframes for details).

RGS-IBG should be able to enter the main body text and upload one or more images and videos.

## Glossary

The Glossary will list terms RGS-IBG define in the CMS and each term will have a description. To view the description of a particular term, users will click on the relevant first letter of the word and will be presented with a list of terms and descriptions beginning with that letter.

Where a Glossary term is mentioned within the text of a page elsewhere in the site, the term should be wrapped with a hyperlink to the relevant Glossary page and anchor. Care should be take to ensure that a hyperlink is added only to the body content of a page (i.e. not in site navigation lists), and is not added if any of the following conditions is true:

- The term is within a heading tag (H1, H2, etc).
- The term is already contained within a link.

## Site Map

There should be two site maps - an XML site map to be submitted to Google, and an HTML site map that can be used by site users. In both cases, the following pages should be listed:

- The Walks Landing Page
- Each of the Walks Landing Pages and each Subcategory within each
- About
- Glossary and each of the A-Z pages
- Contact Us
- Accessibility Statement
- Terms & Conditions
- Privacy Policy
- Each of the Walks listed on the site

The XML site map should also include video content (see http://www.google.com/support/webmasters/bin/answer.py?answer=80472).

## Video Content

RGS-IBG will upload video files to a Longtail Bits On The Run (BOTR) account (http://www.longtailvideo.com/bits-on-the-run/) via the BOTR control panel. RGS-IBG will create a BOTR account so and there is no requirement for the CMS to integrate directly with the BOTR API.

Wherever video is required within the CMS, RGS-IBG should be able to paste in the embed code for the relevant BOTR video and add a transcript that will be displayed with the video (this can be hidden by default and toggled into view by the user using JavaScript) for SEO and accessibility and these details will also be submitted to Google Video as detailed in the SEO section.

On the front end, video files should be played with a BOTR player which may have a custom skin defined by the player design that Pixillion produce.

Wherever a video file has been defined in the CMS, this should be displayed in preference to any images that have been defined. If no video is defined and an image has been, the image should be displayed. If neither video or image has been defined, nothing should be displayed.

Should RGS-IBG decide not to use BOTR for video content, an alternative solution will be required. That solution would entail RGS uploading the video file directly to the CMS. On the front end, the video files would be played in a player element that will need to be built.

## Audio Content

For consistency and ease of development, another Longtail component should be used for delivering audio content on the

# Technical Specification

front end: JW Player (http://www.longtailvideo.com/players/). RGS-IBG should be able to upload audio to the CMS in MP3 format and also be able to add a transcript of the audio.

As with video content, the transcript should be made available on the front end.

The caveat for an alternative hosting solution mentioned in the Video Content section above, also applies to audio content.

## SEO

The site should be technically optimised for SEO and the proposal should include a list of the techniques that will be adopted to achieve this.

The following features are also required as part of the build:

- Use of Canonical URLs on all pages to avoid any content duplication issues.
- Full control of meta content for each page via the CMS.
- Clean URLs that maximise keywords. For example /section/subsection/keywords-for-this-page-here/. These URLs are auto-generated by the CMS but the user can choose to override them if required.
- A Google XML site map auto-generated by the CMS and linked to Google via Google's Webmaster Tools, plus an HTML version for site users that is also fully crawlable by search engines. The XML site map should be developed to include the information Google requires to list video content at video.google.com.
- Noindex nofollow rules applied to any pages that shouldn't be listed on search engines (for example pages that confirm a contact form has been submitted, or the 404 page).
- Each video on the site should be accompanied by a transcript.

## Schedule

A schedule for development and testing should be included with the proposal, including a two week warranty period for any bug fixes. This warranty period is not intended for any changes to project scope as any such changes would be treated as additional requirements and quoted separately.

# Technical Specification Walk The World

## Walk The World

Alongside the Category tabs there will be a further tab: Walk The World (WTW). Any WTW link in the site will take the user to the home page of a different domain (www.walktheworld.org.uk). This domain will appear to be a standalone site but will in fact pull content from the same CMS as the DB site. The layout of the DB site will be consistent with the WTW site but the content will be limited to one Category (Walk The World), and a different HTML template and CSS skin will be used to differentiate it from the DB site.

## Taxonomies

To enable Walks to be shown on the WTW site, a list of Countries should be made available for RGS-IBG to assign Walks to. Each Walk that should appear on the WTW site will be categorised under one of these Countries, and also under one of the 12 UK Regions.

Each WTW Walk will use the same Difficulty Level and Suitability attributes as the Walks on the DB site and each WTW Walk will be classified under a single Difficulty Level and Suitability level. The rest of the Walk content will be identical to the DB Walk content.

## Search by Region

As the WTW Regions are countries of the world, the interactive UK and Region maps featured on the DB site will be replaced with WTW-specific maps.

The Map view be replaced with a world map which highlights each Walk's links to various countries. For example, a walk in the Liverpool might have Points of Interest that show evidence of links between Liverpool and Wales, Ireland, Ukraine, China, USA, Caribbean, West Africa, Germany, Greece, Scandinavia, Japan and others. So the world map would somehow show the connections between Liverpool and all these places.

On each Walk Detail page, the UK OS map would be used but with less interactive detail. The main feature of the map will be user-submitted stories that relate to the Walk. These would be submitted to RGS-IBG via a form (see User Experiences below) and if approved, would be added to the map as a Point of Interest.

The List view will include introductory text, graphic and an audio !le that the user should be able to listen to. The List itself will be an alphabetical list of Walks in the selected Category. Clicking a link to a Walk either on the List or Map view will take the user to the Walk Detail Page. There will be no postcode search (Walks Near You) functionality on the WTW site.

## User Experiences

Users should be able to send testimonials of Walks to RGS-IBG by way of a simple online form. This form should be based on the Contact Us form and have additional fields for the testimonial content and a number of file fields to enable users to upload image and video files.

No user registration and login is required and these testimonials should not be published to the site automatically. RGS-IBG will be responsible for manually adding these to the CMS and on the front end, these will be displayed on the Experiences tab of the Walk Detail Page.

## Limited shelf life

The WTW will have a limited shelf life as its purpose is to promote the 2012 Olympics. At some point in the future the WTW domain will be discontinued, at which point the content will be made available in the DB site. At this point, when a user clicks on the WTW tab or a WTW link, the user will view the Walks Category Page and the content within that page will be limited to Walks categorised as WTW Walks.

There is a separate budget for the WTW site so the work for this aspect of the build should be quoted separately. To summarise, the work required is as follows:

- Configure the CMS to allow for two domain names - the template/skin and content delivered will depend on the domain name used.
- Configure the CMS to allow for categorising Walks initially using the DB or WTW taxonomies. When the WTW site is discontinued, RGS-IBG should be able transfer the WTW Walks to the DB site by assigning each Walk the relevant DB Category, Region and Landscape attributes in place of the WTW Category, Region and Theme attributes.

# Technical Specification

— Development of a separate WTW skin based on the DB wireframe layout and functionality.

## Schedule

A schedule for development and testing should be included with the proposal, including a two week warranty period for any bug fixes. This warranty period is not intended for any changes to project scope as any such changes would be treated as additional requirements and quoted separately.

A separate schedule for any work involved in dismantling the WTW architecture and reallocating the content to the DB site.

# Contact Us

If you have any questions please feel free to get in touch with Remco Merbis.


Pixillion Ltd.
71 Queens Road
Bristol
BS8 1QP
UK

Telephone 44 (0)117 910 2450
Email studio@pixillion.com
Website www.pixillion.com