



Between the Lines

Land of Oak & Iron Mapping Project Newsletter

November 2019

With some of the current phase of topics nearing completion of their “table-top study” stage, the digitisation team prepare to swing into action. Next will come sharing information with the public. In this edition we give an update about progress so far and our plans for development over coming months.

Volunteer meetings November 2019

With final touches being completed on the mills database and tracing, the team are turning their thoughts to developing the supporting narratives, whilst handing over the location data for digitisation. The waggonways team continue to work on the “ways” that originate or continue towards the edges of our mapping area. A new area of work is being explored, identifying river features; bridges, fords, stepping stones, weirs etc. and looking at why they may have been placed where they are. Already some interesting avenues for further investigation are being sparked in peoples’ minds.

Whilst a great deal of enjoyment can be found in the work of the volunteer group our aim has always been to share information produced with people with a wide spectrum of interests, and allow it to be accessed using a range of media and devices. The articles that follow explain our current thinking, about how to achieve this, which we hope will be of interest to all.

From Working Group to Web: publishing the Land of Oak & Iron maps

Much as we all enjoy looking for the hidden stories and little secrets in maps, then researching the details behind the symbols and squiggly lines we find, there’s little point doing all this work on the mapping project if we can't make it available to those who might be interested in it: new visitors to the area, local history groups, academics and the general public.

The graphics package that we use, *Adobe Illustrator*, is a clever and powerful tool and we can publish the many combinations of layers stored in it in various ways.

We might print paper copies to make available at visitor centres and other key outlets. We can create PDF (Portable Document File) images for people to download; we can even incorporate a degree of interactivity, with pop-up text boxes. As we have shown at earlier volunteer meetings, it's quite straightforward

to generate effective animated videos – effectively slide shows with text and audio – to upload on to platforms like YouTube. We see all these as useful means of exploiting and sharing our efforts.

Each of these formats has its merits; but we would also like to embrace all the power of the software and let people interact more fully with the maps in ways that suit their individual or group needs; even in ways that we may not yet have thought of. It is after, all, as much a research tool, underpinned by solid data and provenance, as it is a potential hub for people who just want to know how to get from A to B and where the public loos are. The more we can accommodate this variety of needs, the richer the experience and the more justice we do to the huge amount of effort that has gone into the mapping exercise.

Our early attempts to work out how to bring this ambitious vision to the public arena, resulted in webpages with far too many limitations to satisfy our aims and do justice to the efforts being put in by those members of the volunteer group who have been busy generating the base information. We have, therefore, again, been thinking about exactly how we might envisage a website offering interactive access to the maps. To that end, we are currently building a mock-up in *Powerpoint*, with real buttons and internal links, to create a visual image of how the website might look. Over the next few volunteer meeting sessions we will be asking for input into that mock-up, so if you have some good ideas about what you'd like to see or be able to do with the mapping data, we'd be delighted to know your views about what to include.

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From SVG to HTML – graphics, coding and the Internet

Remember that we store our maps as separate layers for very good reasons: firstly, each layer represents not just a two-dimensional theme – contours, rivers, boundaries etc. – but also a provenance: tied to our knowledge of where that information came from. Most users won't care much about that; and those who do can have our original AI files to play with. But the power of the multi-layer format is that it allows many different combinations of information to be displayed without the clutter of background noise – what we have becomes so much more than a map, it is a visually queryable database, which can be used to explore relationships which may otherwise have lain hidden in the mass of detail.

Well, it turns out that you cannot just throw *Adobe Illustrator* files at the Internet. Sure, you can save a layer or combination of layers and post it as an image; but we want to do much more than that. We might like to, for example, allow users to hover their mouse over a place name and bring up its origin. We would like to see information boxes or old photographs appear when a mill symbol is clicked; and it would be really fun to animate the growth of the waggonway network. What other functions might you like to see?

As everyone knows, images appear slightly differently on different devices and in different operating systems. We need the graphics to work equally well on an Android phone, a Tablet or a PC. That means we have to be sure that when graphics and text appear, they are at the correct scale and, when we zoom in on them, they don't pixelate or do anything else weird.

The key to ensuring this cross-platform compatibility is to store our maps as Scalable Vector Graphics (.svg). *Adobe Illustrator* will do just that; after all, it's the go-to software for graphic designers who want their logos to appear perfectly every time and at all scales, and to do whatever tricks make them attractive to punters. So, .svg it is. What lies behind this cleverness is that .svg files are used to store graphics as code – lots and lots of lines of it in XML text. Here's what a very small portion of our map files look like when they have been converted...

```
<?xml version="1.0" encoding="utf-8"?>
<!-- Generator: Adobe Illustrator 24.0.0, SVG Export Plug
-In . SVG Version: 6.00 Build 0) -->
<!DOCTYPE svg PUBLIC "-//W3C//DTD SVG 1.1//EN"
"http://www.w3.org/Graphics/SVG/1.1/DTD/
svg11.dtd" [
    <!ENTITY ns_extend "http://ns.adobe.com/
Extensibility/1.0/">
    <!ENTITY ns_ai "http://ns.adobe.com/
AdobeIllustrator/10.0/">
    <!ENTITY ns_graphs "http://ns.adobe.com/
Graphs/1.0/">
    <!ENTITY ns_vars "http://ns.adobe.com/
Variables/1.0/">
]>
```

```
<svg version="1.1" xmlns:x="&ns_extend;"
xmlns:i="&ns_ai;" xmlns:graph="&ns_graphs;"
xmlns="http://www.w3.org/2000/svg"
xmlns:xlink="http://www.w3.org/1999/xlink" x="0px"
y="0px" viewBox="0 0 4536.9 2507.5"
style="enable-background:new 0 0 4536.9
2507.5;" xml:space="preserve">
```

That code can be read by software to re-create the graphical images, and manipulated by programmers and controlled by web protocols. It has the advantage of hugely reducing the amount of storage space taken up by the maps and thus the speed at which they can be loaded (our files are currently about 200 MB and about to get much bigger with mills, waggonways and roads soon to be added).

Web designers and coders are familiar with this sort of stuff. We are currently researching the possibility of finding a software package or a stand alone plug-in that would allow us to generate the right sort of web content without us having to learning coding. There are a few possibilities, including *Webflow*, *Page Cloud* and Adobe's own web design software *Dreamweaver*, but they do not come cheap. If anyone knows of a cost-effective package that we can use, please let us know.

What we feel we need to do over the next couple of months is find a web designer/developer who will work with us and take our vision and turn it into reality – at a reasonable cost. The ideal alternative would be to find someone within the group who could provide this support. We then have to decide what is the most appropriate web platform for us to use, acquire the appropriate domain and probably put hands into pockets to pay it. Obviously we want to be able to update the maps and their interactive functions ourselves. The easiest platform to work with is probably *Wordpress*; but our files look as though they'll be too big for it to handle. There are lots of packages out there that promise easy web development; but which one might be the right one for us? It's possible that the most useful tools out there might be packages designed to make computer games... another avenue to explore.

There may be opportunities for us to get a local college involved. Part of the work may be ideal for a student project – after all, we have loads of mapping data for them to play with, and a pretty clear vision of what we are hoping to achieve.

Coming up in December:

Tuesday [3rd December 2019](#) , The Winlaton Centre, North Street NE21 6BY (in Winlaton village)

Tuesday [17th December 2019](#) The Lodge, Laburnum Avenue, Blackhill, Consett, DH8 5TA

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and



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Meantime,
to curb
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