Detailed footpath data for Ordnance Survey mapping

A Walkingworld / GPS Training Report
Summary

This report is the result of an online survey conducted in January and February 2015. Invitations to take part in the survey were sent by email to over 65,000 members of Walkingworld and over 6000 people on the GPS Training email newsletter list. Further requests to take part were placed on Walkingworld and GPS Training’s Facebook pages. Walkingworld members and GPS Training customers represent a reasonable cross-section of those interested in the outdoors and in the use of GPS in the outdoors.

As the survey was conducted online and with members of an online walking guide publisher and GPS training provider, there will be some bias towards those who are familiar with the use of technology. The nature of the survey is also likely to have attracted more people with a prior interest in using GPS while in the outdoors. Those who are happy to simply use a map and compass for navigation are likely to be under-represented.

Over 700 people responded to the survey. The results are fascinating and in some respects surprising, with a high proportion expressing a degree of frustration with lack of accuracy in showing the routes of public rights of way (PROWs) on OS maps. Over 85% of respondents said that they were either often or occasionally frustrated by errors in footpath mapping.

There is real interest in more accurate footpath data on both paper and digital maps and the ability to follow a footpath using a GPS. Only 4% said they would never take advantage of more accurate plotting of footpath routes on paper maps and only 12% on digital maps. Nearly 71% said they would ‘definitely’ appreciate more accurate data on paper maps.

When it comes to using a GPS with accurate footpath data well over half (56%) said they would definitely appreciate better plotting on GPS and nearly 30% would appreciate the use of such data for turn-by-turn routing (similar to that on a car satnav).

In what is perhaps the most surprising result from the survey, quite a large proportion of respondents (over 75%) expressed a willingness to make some payment for more detailed footpaths data. The amount they were prepared to pay ranged from less than £5 to between £20 and £40. The number who were willing to pay over £10 was over 45%.
Q.1. How happy are you with the accuracy of public footpaths shown on current OS maps?

Our survey shows that a surprising 85% are often or occasionally frustrated by errors in relation to our rights of way data. Only a disappointing 11% are perfectly satisfied with the accuracy of public footpaths shown on OS maps. This is a startling statistic considering that Ordnance Survey maps are widely perceived as being amongst the best in the world.

The survey allowed respondents to make open comments on the question. Nearly 150 did so. Amongst these a common frustration was lack of accuracy in farmland, potentially causing conflict with landowners where footpaths are in dispute or not clearly marked. Lack of accuracy led to people spending more time on walks than they expected, not enjoying themselves as much and sometimes avoiding following particular routes for fear that they would have problems. A number of respondents felt that, if they could be sure that their map was accurate, they would feel more confident when dealing with landowners and that
landowners themselves would benefit from the clarity. There is a great desire to avoid conflict with landowners and anything that might help is welcomed.

There were complaints that when a footpath is totally impassable or non-existent, reporting these blocked footpaths to the council results in nothing being done. Clearly much of the responsibility for these frustrations lies with the local council or with the landowners rather than with OS. Cutbacks in Public Rights of Way Departments in councils will be adding to these frustrations.

It is clear that GPS accuracy in the hands of normal walkers is exposing the inaccuracy of OS maps, with many thinking that more could be done to improve PROW data. Others point to aerial photography available on Google Earth, for instance, where paths are shown following different lines from those on the map. A number of people felt that OS had a strict obligation to show accurate footpaths on their maps, while others thought that it was the local council’s responsibility.

There were, of course, a few who expressed the view that current OS mapping is perfectly adequate and that finding your way on the ground, even given the occasional mapping inaccuracy, is all part of the fun.
Q.2. If accurately surveyed footpath data were available would you appreciate it for?
   a) More accurate marking of footpaths on paper maps
   b) More accurate marking of footpaths on digital maps
   c) The ability to follow a footpath accurately using a GPS
   d) Turn by turn routing on a GPS (like a satnav)
There was a clear message here: if more accurate marking of footpath data were available outdoor users were in favour of it being used on paper and digital maps and felt that it would be helpful. Over 70% would ‘definitely’ appreciate more accurate footpath routes on paper maps. This percentage fell off to 65% and 56% for use of such data on digital maps and GPS devices, reflecting the fact that paper maps continue to be used as a major navigation tool by the largest number of people.

It is only when asked about the possibility of ‘turn-by-turn’ routing that the number of respondents who might use it ‘occasionally’ outnumbers those who would use it ‘definitely’ (34% and 29% respectively).

Around 70 people made comments, in response to our asking if they could imagine other uses for accurate footpaths data. Many of these covered the same ground as Q.1., with a large number considering it useful for settling disputes with landowners and ‘avoiding trespass’. A few thought that it would help with route planning, for instance in giving much more accurate estimates of distance.
Q.3.
Surveying all public rights of way is likely to be expensive and there may be a cost for using the data on a GPS. How much might you be prepared to pay for having use of the data for the whole of Great Britain?

The responses are quite surprising. Only 25% thought that more accurate footpath data should be provided by OS for free. The remaining 75% would be prepared to pay anything from a few pounds upwards, including 20% who would expect to pay between £20 and £40.

The question was not designed to be very precise and some people commenting in Q.5 noted that we did not specify whether this cost would be a one-off fee or a subscription. Currently the majority of OS digital data used on GPS devices and on smartphone and tablet apps is bought as a one-off purchase and people most likely assumed that the same model would apply to any footpath data. There is a separate issue here around how often users of OS digital mapping data update their mapping, with some very likely using digital maps that are several years old.
Q.4.
If the GPS routing data were only available for selected areas, such as the National Parks, would you be interested in using it?

![Bar chart showing responses to the question]

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentages</th>
<th>Responses</th>
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<tbody>
<tr>
<td>Not at all</td>
<td>18.43%</td>
<td>134</td>
</tr>
<tr>
<td>Only if it were free</td>
<td>26.96%</td>
<td>116</td>
</tr>
<tr>
<td>At a modest cost per National Park</td>
<td>54.61%</td>
<td>357</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54.61%</strong></td>
<td><strong>397</strong></td>
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Releasing OS data for restricted areas, such as National Parks, has been widely done in the past, particularly during the period when digital 1:25,000 Explorer Mapping was very expensive. This has changed in the last two years with a considerable reduction in the licence cost and it is now more common for customers to buy 1:25,000 mapping for the whole of Great Britain.

Because of the amount of work involved in mapping footpaths accurately using GPS and creating data files for them, we recognise the possibility that initial releases would occur for similarly restricted areas, those where there might be expected to be greatest demand.

In response to our question there was, as might be expected, a lower percentage of people who would be prepared to pay a ‘modest cost’ per National Park, down to 54%. This quite likely represents a simple reduction in the number of respondents who actually visit a National Park regularly and who would therefore be able to take advantage of the data.
Overall, however, with 80% saying they would use the data if it were free or available for modest cost, there is clearly a substantial demand for accurate footpath data in the National Parks. This may reflect the fact that National Parks tend to be wilder places and people would appreciate the confidence of knowing that they are ‘on track’.
Q.5.
General comments

We allowed respondents to add any further comments which might fall outside of the specific questions asked in Q.1 and Q.2. 191 people made further comments. Naturally enough these were quite wide ranging and some repeated issues raised in Q.1.

More of the comments addressed the issue of the work involved and occasionally asked if it would be worth it (especially given other priorities of keeping paths maintained and open). Some considered that the work should be done by local authorities for their definitive maps and the data passed to OS. Others suggested that track data could be captured by the public using smartphone apps like ViewRanger or GPS devices from manufacturers like Garmin and passed to the OS for collation and validation, and pointed out that commercial mapping companies already did this for road data. A number of respondents felt that this should not become a major item of expenditure out of the public purse but should be developed over time using existing resources and by using data from end users.

It was regularly noted that there were different issues in different areas of the country. In Scotland fewer paths are marked on maps and there is a general 'right to roam', so the question was sometimes perceived as less relevant. Users noted that many of the problems occurred outside of the National Parks, in rural areas where paths are less well used and often unclear.

Conclusion

The survey indicates a significant pent-up demand for better recording and display of PROWs on maps, both paper and digital. There are plenty of outdoor users who would use this data to follow footpaths and even take advantage of turn-by-turn routing.

There is a high degree of pragmatism over the question of data acquisition cost, how data can be gathered and recorded, and whether there would have to be an end-user charge for using the data. While some accept that data acquisition could only be done professionally by Ordnance Survey or local authorities, others ask whether it is not possible to utilise 'crowd-sourced' data gathered by the millions of people walking our paths every year – a model that is used for other projects, like OpenStreetMap.

What the survey does indicate is that it is no longer acceptable for Ordnance Survey and its partners in making public rights of way open and accessible to the public, such as local councils, to ignore the demand for accurate PROW data and its availability in various formats for use by the outdoors community.
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Turn by turn guidance on a footpath in the Lake District seen on a Garmin Oregon 650