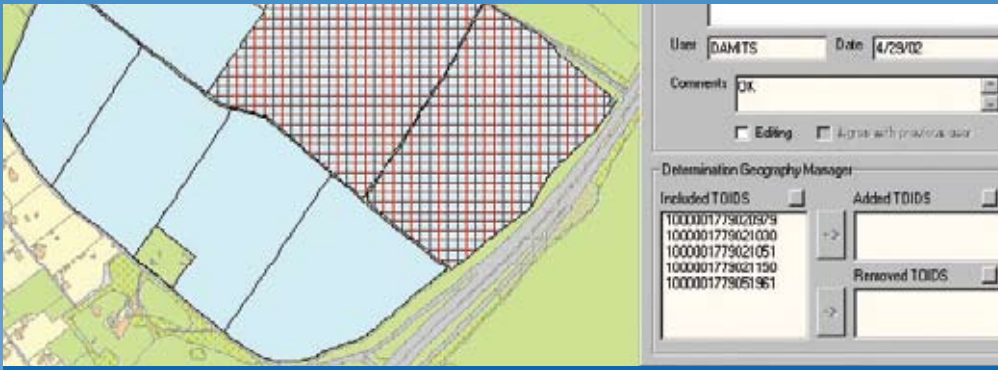


Implementing the Countryside and Rights of Way Act 2000 using the Digital National Framework





‘Our approach, a very holistic one, stood out from day one because we dared to be different and innovative. We gained the public’s trust during the consultation period and structured the project with completely transparent auditing. This, along with many other benefits, would not have been possible if we had not adopted DNF principles...’

The Countryside and Rights of Way Act 2000 established the need to identify and map open country and registered common land in England. Under the Act ‘open country’ is defined as land that is wholly or predominantly mountain, moor, heath or down.

This was the first large project to employ DNF principles. By reusing and referencing the topographic features in the landscape, the project was transformed from a wholly data capture programme to one of predominantly information collection and attribution. This lent itself more readily to subsequent business processes such as the public consultation audit trail, which was underpinned by clear and consistent mapping.



The challenge

The Countryside and Rights of Way Act 2000 placed a duty on the Countryside Agency to prepare maps of all open country (mountain, moor, heath or down) and registered common land in England.

The mapping was undertaken by Black and Veatch, contractors to the Countryside Agency, and was to be broken into five stages:

1. Information assembly: all existing information about the land had to be assembled and reviewed.
2. Draft maps: clear unambiguous draft maps were required to support the demanding public communication and consultation process, which included an appeals procedure.
3. Public consultation: all draft maps were to be reviewed by interested parties and comments cross-referenced and managed to achieve the best result for all stakeholders.
4. Provisional maps: were then published that incorporated changes as a result of the public consultation. Landowners and managers could then make a formal appeal to alter what was shown on the map.
5. Conclusive maps: were published as official records of open access land and these would support the Countryside Agency website and publication elsewhere, for example, OS Explorer Map series.

The solution

The Countryside Agency (now part of Natural England) contracted all mapping and consultation work relating to this development to Black & Veatch of Redhill, Surrey. The programme was managed over four years and divided



...It is appropriate that on the first occasion a GIS project has won the prestigious Information Management's Premier Award it has gone to a project which is of such a significant benefit to so many.'

Ian Bush – Technical Director, CA Mapping Project.

England into eight mapping areas. This was a huge undertaking involving the use of nearly 350 reference datasets, a team of 80 full-time staff and three subcontractors. The solution placed geographic information at the centre of the project.

The mapping was conducted in five stages:

1. Data sourcing and assembly
2. Draft map publication
3. Public consultation
4. Provisional map publication and appeals procedure
5. Publication of conclusive maps

The project involved managing a complex process of data analysis, mapping and public consultation.

The approach to the mapping of open country was based largely on a desk study supported by field verification, analysing and interpreting nearly 350 different datasets (including aerial photography for the whole of England). It also exploited the inherent 'intelligence' and accuracy of Ordnance Survey's OS MasterMap® data.

It was recognised early on that access land boundaries not visible on the ground would undermine the long-term integrity of the Act. It was decided that the adoption of recognisable boundaries such as hedges, walls, fences and so on would satisfy this requirement. A rule base was established to transform existing land extents (for example, common land) into this user-friendly model.

As a consequence of this decision, the project team did not need to draw (digitise) new lines and boundaries but could simply select those topographic areas (polygons) that made up a parcel of open country. The unique identifiers in OS MasterMap (TOIDs)

were then used to reference the individual land parcels, and these were in turn aggregated into contiguous land parcels to define the full extent of the area. These 'super parcels' were referenced by a collection identifier and this was cross-referenced with each individual parcel of land. Some parcels required additional geometry, for example, to close off one field from another.

This approach transformed the project from a labour-intensive data-capture task to a data-selection and categorisation programme. This meant that the mappers were free to focus on the value-adding business of identifying open country through analysing and interpreting the wide variety of datasets available (amounting to almost 650 Gb of both vector and raster data). The draft maps were then published and reviewed by stakeholders.

Once all comments had been assessed, a provisional map was issued and was open to appeal by those with a legal interest in the land. All appeals were logged and cross-referenced with the land information, which now provides a comprehensive audit-trail showing the process from initial decision to include the land (and the datasets on which this decision was based) right through the appeal, the nature of the appeal, when this occurred and what the final decision was.

Once all appeals had been heard, the map was issued in conclusive form. A commencement order then initiated the new right of access. This new area of access amounts to over 900 000 hectares of land or 7% of England.

The identifiers used to define the aggregations of field, woodland, down and so on will be preserved through the adoption of an organisational prefix (see DNF Registry) to support the Act's 'decadal review' regulations.

Benefits

- The method was highly successful: by the end of the project, the Countryside Agency and Black and Veatch had issued over 100 000 individual paper maps, deposited with:
 - 414 local authorities;
 - 163 individual libraries; and
 - almost 11 000 statutory consultees, including 10 000 parish councils.
- The clarity and integrity of the mapping material was proven: it was published at 118 individual roadshow events, which attracted over 12 000 visitors who came to inspect and talk about the maps and the website attracted nearly 35 million hits from 600 000 visits, and generated over 3 million unique maps.
- The system proved flexible and incorporated updating: the public consultation process resulted in almost 30 000 comments on the draft map and approximately one third of these responses have resulted in a change to the map.
- The mapping database holds records on the 1.8 million hectares that were mapped in total and on which decisions were made, involving 89 000 parcels of land comprising 1 million TOIDs.
- The method of referencing existing land parcels transformed the mapping project from a labour-intensive exercise to one where project staff were able to devote their skills to analysis and public-consultation priorities.
- Cross referencing and land parcel aggregation ensured the information integrity at all times.
- In December 2005 this project was winner of the Information Management (IM2005) GIS Project Prize and the prestigious Premier Project Award.

This case study has been produced on behalf of the DNF Expert Group.

An electronic version of this case study and a more detailed study on this application can be found by visiting the DNF website at www.dnf.org

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