Detailed map data puts England Coast Path on right track

The *Marine and Coastal Access Act 2009* will give people the right to walk around England's coast, including, where appropriate, areas of 'spreading room' where they can rest, relax or admire the view. Natural England® has started work on the England Coast Path, a new National Trail that will provide satisfactory, legally-secure access to the coast. The new rights are not yet in force – the first stretch, at Weymouth Bay in Dorset, will open in time for the Olympic and Paralympics Games sailing events in July 2012. Work is also underway on five other stretches, in Cumbria, Durham, Kent, Norfolk and Somerset.

The challenge

Implementing the England Coast Path involves gathering and analysing large amounts of information, as well as wide-ranging public consultation.

To achieve this, a new 'toolkit' for capturing and recording information in the field, analysing third-party data and generating standardised maps and statistics was required. The challenge for the three members of Natural England's Coastal Access Delivery Enabling Toolkit (CADET) project team was to deliver this using existing IT systems, within a limited budget and to meet a tight timescale.

The solution

Ordnance Survey data supplied under the Public Sector Mapping Agreement (PSMA) underpins the toolkit, which comprises a customised desktop mapping system; bespoke GPS data-capture tools; a contacts and correspondence database, and procedural and training documentation.

The customised desktop mapping tool is used to view and query third-party datasets against Natural England's own data and the full range of Ordnance Survey contextual mapping to gather information about the coastline. Information from HM Land Registry and the relevant local authority is then used to identify those owning or living on land likely to be affected by the new rights of access so they have the opportunity to join Natural England in 'walking the course' site visits to give their views and raise any concerns.

A GPS unit with a package of mapping data is prepared for each visit. This typically includes OS MasterMap® Topography Layer, 1:10 000 Scale Raster and 1: 25 000 Scale Colour Raster, as well as business data to allow operators to find their location, understand the surrounding landscape and capture the alignment of the coastal path, spreading room and any required infrastructure. This information is then processed to improve accuracy using specialist software that references the OS Net® Active GPS network RINEX data server. Aerial photography and OS MasterMap Topography Layer are also used to refine the captured data to ensure it reflects the landscape features.

The alignment information captured on site is then incorporated into detailed maps showing every section of the proposed coastal trail and areas of spreading room. These maps use the new OS VectorMap® Local product and are a vital element of the Coastal Access Report, which is published for public consultation. Following all consultation submissions, the team makes any necessary changes to the trail alignment to produce the final report. Land owners and occupiers are then invited to make legal representations and objections before the trail is approved by the Secretary of State and the new access rights begin.

The benefits

- Access to consistent, relevant mapping data to help facilitate the alignment process.
- Significant improvements in obtaining and sharing data from local authorities and other PSMA members.
- Clear, high quality, detailed mapping data to effectively communicate the proposed trail alignment to stakeholders and the public.

Return on investment

'Access to Ordnance Survey data under the PSMA, and the improved terms and conditions it offers in sharing and making licensed data available for public viewing, has been central to the success of this project. A vital part of the public consultation is the preparation of a report with detailed mapping showing every section of the proposed coastal trail and areas of spreading room. Having access to the new OS VectorMap Local product to use as the contextual mapping for these maps is fantastic because it provides an excellent balance of detail, ease of use and can be customised to suit our requirements.'
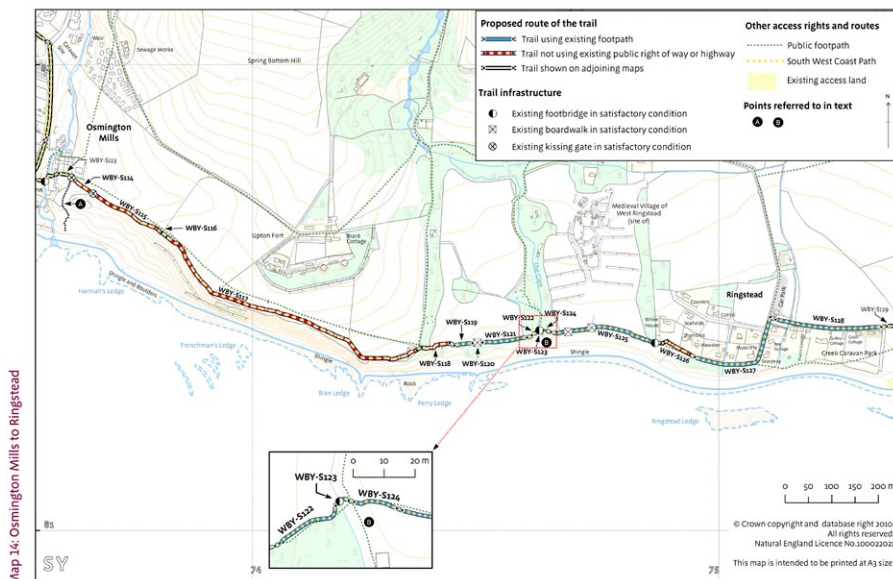
Chris Burstow, GIS Senior Adviser, Natural England
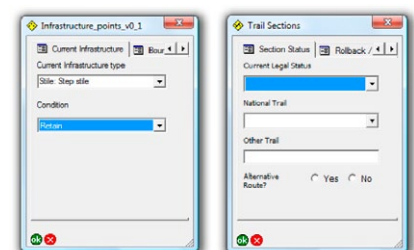
Data products used:

- OS MasterMap Topography Layer
- 1: 10 000 Scale Raster
- 1: 25 000 Scale Colour Raster
- OS VectorMap Local
- OS Net

Sample report map showing part of proposed route in Weymouth Bay.

Customised ESRI ArcPad data entry forms on Trimble GPS unit.