Implementing OS MasterMap®

Information sheet 4:
OS MasterMap and the Positional Accuracy Improvement Programme
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Introduction

The Positional accuracy improvement (PAI) programme is a five-year project to resurvey areas of the country currently covered by 1:2500 scale mapping. It started in 2001.

The main reason for the programme is that Ordnance Survey and its customers are making greater use of new technology such as GPS and imagery, which requires greater accuracy. Once the programme has been completed, features in Ordnance Survey datasets will be more accurately positioned in relation to their real-world location.

1 PAI and OS MasterMap

Parts of the OS MasterMap Topography Layer are derived from 1:2500 scale surveys, and these areas will be resurveyed under the PAI programme. Information about the resurvey schedule is available from Ordnance Survey.

Moorland and urban areas are surveyed at 1:10 000 and 1:1250 scales respectively and, as these surveys already meet the relevant accuracy standards, they will be excluded from the PAI programme. OS MasterMap features within these areas will not be affected.

The relative positions of OS MasterMap features may change following the PAI resurvey. These changes will not conform to any particular pattern, and features may move in any direction. Customers who have superimposed their own data over OS MasterMap features may find that it is no longer in the same relative alignment to the resurveyed data.

Customers with Land-Line® holdings at 1:2500 scale will be affected in just the same way, because Land-Line and OS MasterMap are both produced from the same survey material.

The PAI resurvey will have a significant effect on Ordnance Survey’s OSCAR® and ADDRESS-POINT® data, as well as some other products:

- OSCAR road centreline data normally reflects the carriageway alignments in OS MasterMap, but the two datasets may be temporarily out of alignment following the PAI resurvey. This will be corrected once the change updates for both products have been received.
- In the same way, ADDRESS POINT address seeds may lie temporarily outside a property extent, but this will also be rectified on the next update.
- Similar problems will affect the OS MasterMap Address and ITN™ Layers.
- Due to the different ways in which updates are supplied, temporary discrepancies may also be observed between Land-Line and OS MasterMap.

Some OS MasterMap areas surveyed before November 2001 already incorporate PAI changes. No alternative OS MasterMap datasets are available for these areas.

2 Metadata specification

PAI change is indicated by the term Position in the ReasonForChange attribute field, primarily on the line features. A PAI amendment will also result in an incremental change to the version number. Customers should verify that their GML translator settings are able to translate the ReasonForChange field.
3       Options for using OS MasterMap

Ordnance Survey has worked closely with its partners to provide a range of solutions for
realigning customer’s own data with features that have moved during the PAI resurvey.
There are several possibilities for doing this, to include rubber sheeting with link files.

The link files available with OS MasterMap list the National Grid coordinates of precise
points on the map, both before and after the PAI resurvey. Typically, these points describe
solid and clearly identifiable features such as the corners of buildings. Transformation
software uses this information to calculate the average distance and direction of change
within a given PAI area, and reposition the customers’ own data in the same way.

Link files will cover the blocks of PAI data issued to OS MasterMap users through the
change-only update process. They will initially be supplied off-line in 1 km by 1 km csv
format, though eventually the links will be available online.

Improved data attribution indicates whether PAI changes have occurred at the same time
as real-world changes. Data captured by association through TOIDs can be automatically
realigned where appropriate.

The availability of OS MasterMap has encouraged the development of specific data capture
tools to exploit the polygon structure in a dynamic way, making data editing preferable to
working with Land-Line.

• For further information on transformation software, link files and other solutions, visit
  Ordnance Survey’s PAI web pages at www.ordnancesurvey.co.uk/positional

Data managers should visit this site regularly for the latest news and updates to the PAI
schedule. The site also features case studies, examples of best practice and a step-by-step
guide.