House Age and Water – what's the connection?

Yorkshire Water is using building class information to help pinpoint houses that may require lead pipe replacement.

The 1945 Water Act brought together previous water legislation and introduced a waterworks code. In addition, this Act encouraged amalgamation of water companies and boards a move that reduced the number of organisations from over two thousand in the first decade of the 1900s to only ten in 1973.

Following privatisation in the 1980s, the water companies were encouraged to compete effectively where practical and where not, the Government introduced a system of regulation to stimulate a competitive approach. One area that was identified to increase competitiveness was the reduction of leakages from an old and decaying network and also the replacement of materials used in networks, that have now been identified as potential contaminators.

The post war act was a critical cut-off date in the planning of the infrastructure replacement programme making it necessary to identify properties constructed prior to that date. The building class dataset launched in 2001 by Cities Revealed has, as part of its classifications, an age category that enables the distinction of residential properties based on when they were built. This was ideal for water company Yorkshire Water who were undertaking an evaluation on how to replace lead pipes, used extensively in properties built before the 1960s within their network.

The project area covered some 30 sq kms of northern Leeds, consisting of 1.7 million residential properties encompassing every building age from Victorian terraces to recent housing estates.

The Building Class was interpreted from the Cities Revealed 12.5 cm aerial photographic database collected in 2002. At this resolution it is possible to see details of chimney types, roof structures, and often elements of building facades, which when coupled with road patterns and building block layouts, give very strong evidence on which to classify both age and type of each residential property.

The interpretation was supported by fieldwork both to identify regional variations in design types and to check for consistency in the database.

The age patterns for this part of Leeds are clear, showing concentric growth rings of the city, the linear developments along the major roads and the regeneration of areas due to wartime bombing and more recent reclamation of industrial sites.

The resulting building class database has enormous value in helping Yorkshire Water plan their infrastructure replacement programme in a cost effective manner. "The building class data has already proven to be an excellent source of property age information. Its reliability and ease of use will help us to save a great deal of man hours when planning future replacement schemes", a spokesman noted.