> "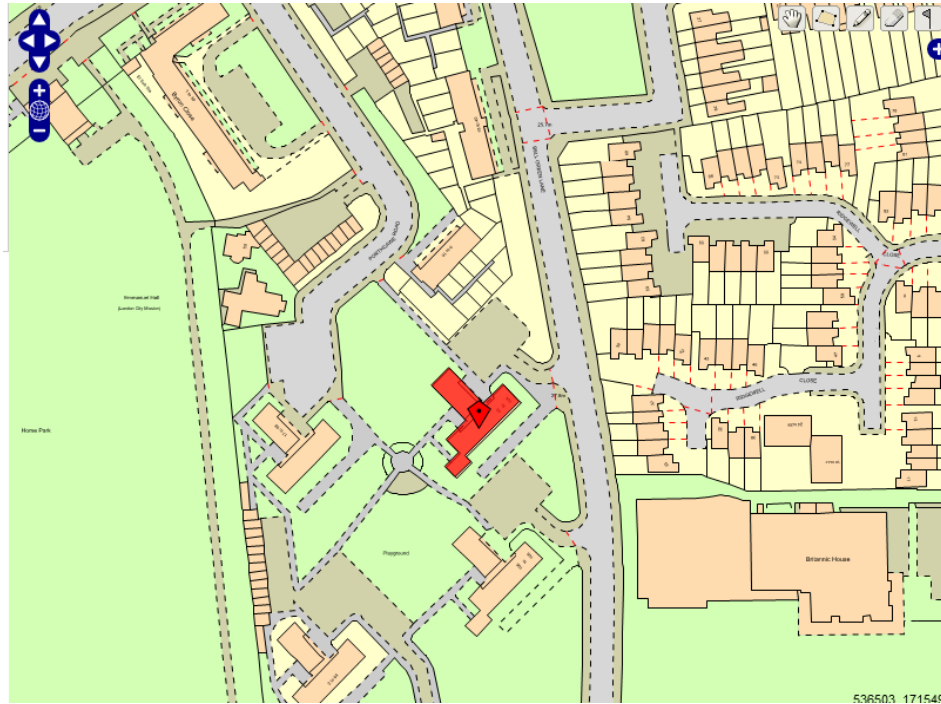However, departments were using their own individual databases, which caused problems when we wanted to share data between departments. Many addresses were incomplete, duplicated or expressed in different formats across the various databases."

Gary Simms
Property Systems
Information Manager

LEWISHAM COUNCIL TACKLES DATABASE CHALLENGE

Lewisham Council is making a valuable 25% saving in time and costs since implementing a comprehensive and flexible web application to manage the borough's address data.

All local authorities refer to databases to check they are using accurate and correctly formatted addresses. Many internal departments at Lewisham Council (such as Customer Services, Environmental Health, Revenues & Benefits and Electoral Registration) had been referring to databases to check address details - for example, when logging a case or incident. "However, departments were using their own individual databases," says Gary Simms, Property Systems Information Manager, "which caused problems when we wanted to share data between departments. Many addresses were incomplete, duplicated or expressed in different formats across the various databases." These issues led to confusion and lack of clarity, which was frustrating enough in-house, but which became particularly problematic when liaising with external agencies, such as the emergency services.

Council staff were under considerable pressure to efficiently load and update address data, but this proved extremely difficult and time-consuming, given the disparate databases they were working with. Effort was unintentionally being duplicated as different departments attempted to verify and update the same addresses.

Lewisham Council recognised a necessity to improve efficiencies in loading, maintaining and searching for property information. They realised they would need to harness the latest technology to reorganise and streamline their address data. Then, a Central Government initiative was launched to encourage all local authorities to use a Local Land and Property Gazetteer (LLPG) - a single, definitive database containing accurate, up-to-date addresses and other details of all properties and land within the local authority area. The LLPGs of over 350 local authorities feed into a central hub, the National Land and Property Gazetteer (NLPG), which covers the whole of England and Wales and is maintained by GeoPlace, a government-appointed custodian.

The Council set about finding a partner for their new venture. They considered the software offered by some fairly large companies, but discovered that it would not automatically allow them to integrate the database with their legacy systems, and that creating special links for this function would be extremely costly. "In the end," says Gary, "we found that Cadline, with whom we had worked previously, provided the most appropriate database software for our needs; their solution is so much more flexible." (Cadline's LLPG web application complies fully with British Standard 7666 [BS7666].)

Figure 1

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Gary Simms
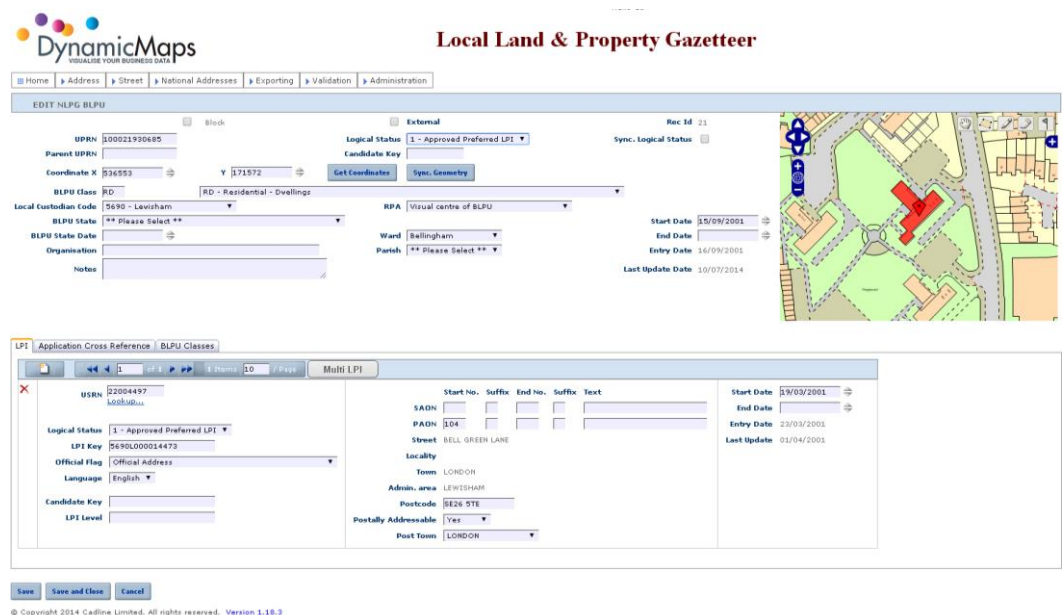Property Systems
Information Manager

Figure 1: The main screen where users can modify the address textually and create multiple addresses based on the original address. They can also be made historic from this screen and cross references can be added from legacy systems.

The Council is now enjoying a 25% saving in time and costs spent dealing with address data. "We can work far more rapidly and efficiently now that all departments are working with the same

comprehensive database on a web application," explains Gary. "We don't need to access the same address several times to check or amend it or move it to another location. We have extended the system with the inclusion of the Local Street Gazetteer (LSG), in Highways. This application links seamlessly with the LLPG module and the same street data is used for both the LSG and LLPG national hub updates. This, too, saves us an enormous amount of time and effort."

Staff have found the interface much clearer and easier to navigate than their previous system. "It's logical and intuitive, which makes it easy for new users to pick up very quickly," explains Gary. "Useful drop down tabs indicate which functionality the user is entering. The whole experience of working with our new system is far easier and more enjoyable." Online help and video tutorials are on hand to provide assistance if necessary.

Figure 2:

"Useful drop down tabs indicate which functionality the user is entering. The whole experience of working with our new system is far easier and more enjoyable."

Gary Simms
Property Systems
Information Manager

Figure 2: Useful front end screen for searching the address by postcode, road, UPRN, full address, date and classification.

The flexibility of the Cadline web application means that the Council's legacy systems feed seamlessly into the LLPG in two formats. Firstly, there is a real-time connection between the web application and the legacy systems with their own categories. Secondly, extracts can be selected for export to other departments.

The duplication of addresses is a thing of the past as the system gives each address a unique property reference number (UPRN) and flags up addresses which appear to be duplicated. There are built-in validation and audit checks, ensuring that the export of data to the hub is fully checked and cleaned of all anomalies.

The new tool links with the Council's website www.lewisham.gov.uk to facilitate the 'Report It' function where residents can alert the Council to a range of issues such as graffiti and faulty street lighting. In addition to this, residents also have access to other online services such as Online Registrations, and Contextual and Interactive Mapping which involves the use of the LLPG address and linking these through to the desired service. For example, even if a landlord lives outside the borough, they can link their address to the Lewisham property that they let.
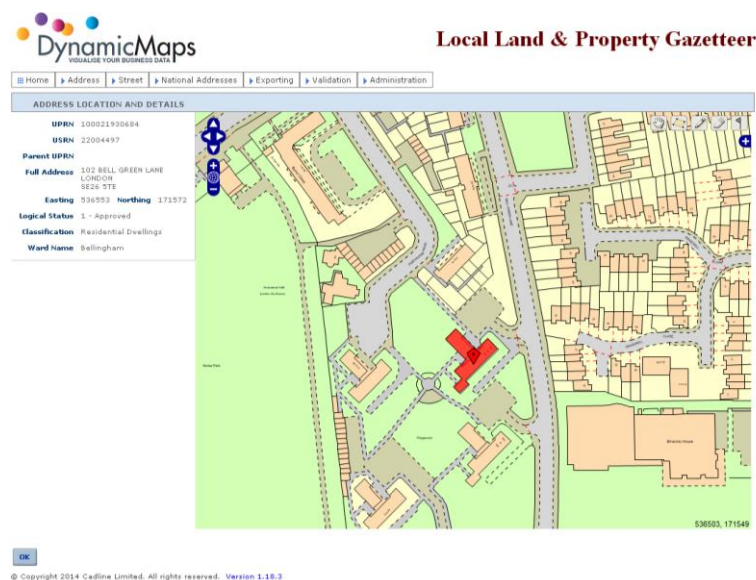
Figure 3

Figure 3: Very useful mapping screen and tools to allow the user to check the positional accuracy, move the location if required and polygonise the address. The background maps can be toggled, allowing the user to choose MasterMap or UK Maps.

Gary is delighted with the additional functionality of their new system. "We can now view exact locations on a map in order to get a better idea of exactly where it is and what is nearby," he explains. "We can even polygonise an address to store it as spatial data in order to carry out constraint checking. For instance, our Planning Department can see easily from this function whether or not proposed developments will fall within conservation areas and the like." Both the LLPG Addresses and the LSG Streets have an integrated web-mapping interface which allows for location view, edit and creation of spatial data.

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Security has been enhanced too, as the permission settings now require admin users to log in. Administrators' settings allow them to amend data, while other Council users are given access to the same data but through a read-only application called Rapid Address Finder. With the application being totally web-enabled, access can now be made available from anywhere in the world.

Gary reports that his organisation has a very good relationship with the Cadline team, with whom they have worked on various projects since 2005. He is particularly impressed with Cadline's knowledge of the issues surrounding the LLPG, plus the speed with which they made requested changes to the software. "Larger companies tend to take several months to make tweaks on this type of software," he comments, "but Cadline are very fast to respond. Together we have improved the original system and we are very pleased with the outcome."

"If any new government initiatives are launched concerning address and geographical data," says Gary, "then Lewisham Council would definitely consult with Cadline to ensure we were in line with official requirements or guidelines."

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