

Local government electoral boundary management
transformed by Sweet for ArcGIS

Local Government Boundary Commission for England

The Challenge

- Develop a more accurate and efficient means of boundary management, vital for legislative purposes

The Benefits

- Data integrity
- Time savings
- Improved productivity
- Effective stakeholder engagement

The Local Government Boundary Commission for England ('the Commission') has the Parliamentary remit in law to deliver fair electoral and boundary arrangements for local government electors in England. By using Sweet for ArcGIS, it has revolutionised the way in which it carries out boundary reviews, driving improved accuracy and substantial efficiencies for the organisation.

The Challenge

A small, lean organisation, the Commission conducts electoral reviews by considering the electoral boundaries of local authorities and recommending any changes to Parliament. The scale of the task is daunting. At any one time the Commission's review teams are handling approximately 25 to 30 reviews, each one lasting approximately 15 months.

Each review has to ensure that, within all local authorities, every councillor represents a similar number of electors. Boundaries need to be appropriate and reflect community ties and identities and all reviews delivered need to be informed by local needs, so community engagement is vital. Legislation requires projected electors to be factored in five years after each review has been enshrined in law; consequently, the accuracy and precision of the Commission's work and boundary editing is critical to support electoral fairness.

There are multiple factors impacting the number of electors in a local authority area, from population growth and migration, to new housing developments. Review officers check evidence-based data from each local authority, detailing the number of electors in a local authority and the projected five-year forecast. These electors are then placed into different wards, to be represented by either one, two, or three councillors.

Previously, the boundary editing process could only be done in the office, which could be frustrating for review officers out in the field, who could be often looking at six or seven different boundary options. The process was time-consuming and, with separate software and Excel programmes, there was a high risk of error. The Commission urgently sought to improve its IT infrastructure to improve the efficiency and accuracy of processes, as well as looking at how it could exploit digital technologies to impact the way reviews are conducted and presented.

The Solution

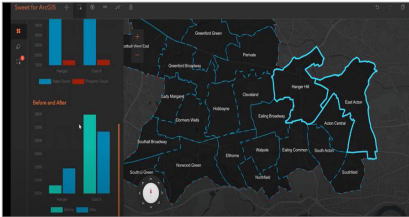
The Commission initially worked on a highly successful proof of concept using Sweet for ArcGIS Online Builder, to build simple but smart apps for boundary editing; this enables the team to edit their own GIS data on the web. With its extensive library of customisable rules and Sweet for ArcGIS' unique locking system, multiple users can access the same app simultaneously, in the office or out in the field, while data integrity is maintained.

Beforehand, the Commission's Data Officer would have to undertake a series of quality checks throughout each and every single review process. With Sweet for ArcGIS, the Data Officer only has to do one data check at the beginning of a review thanks to the built-in configurable data quality checks. No lengthy QA (Quality Assurance) analysis is needed before the data is used for further analysis or reporting, thereby saving significant amounts of time while being assured of accuracy of data.

Multiple drawing modes, including freehand, allow review officers to modify boundaries with mobile devices while out in the field, a key feature that was previously not available to

“Because our work becomes law, it is crucial we are accurate. Sweet for ArcGIS ensures that data is always correct and has made a fundamental difference to how we do our job”

Jonathan Ashby, Review Officer & Mapping Lead, Local Government Boundary Commission for England



Sweet for ArcGIS supports more accurate and efficient boundary management

Commission staff. Officers can also work on multiple boundary options of a single review at any one time. This is essential, given there are often up to six or seven options for each review. Sweet for ArcGIS calculates field values, clips data and automates other repetitive tasks to improve the user's efficiency and save time. Bespoke functionality is a further benefit - for example, the Commission is looking to integrate Google Maps into the app.

ArcGIS StoryMaps are used for internal and external presentations, including the two public consultations, which form part of each review. "StoryMaps are a phenomenal presentation tool. We get much better feedback from local communities and the final submissions are of a much higher quality, and easier for the Commission to assess" adds Jonathan Ashby.

The Benefits

Time Saving

Real-time calculations of forecast electoral variances can be undertaken in the office and out in the field, saving significant amounts of time. For example, one task that would previously have taken fifteen minutes, now takes 30 seconds. Review officers now work on multiple boundary options at any one time, which they could not do previously.

Greater accuracy

Built-in configurable data checks eradicate the opportunity for error, helping review officers to edit accurately the first time, every time. Data integrity is maintained and users can create, edit and explore spatial data in the browser or across multiple devices (Android, iOS and Windows) whether out in the field or in the office, even when disconnected.

Improved productivity

All the Commission's Sweet for ArcGIS apps are interoperable with the rest of their GIS products, helping to further improve productivity. Intuitive, configurable and easy-to-use, everyone benefits from using the same secure data for better-informed decision making.

More effective stakeholder engagement

ArcGIS StoryMaps are used both internally and externally to share information, gauge feedback and support decision-making. Some consultees have found interactive ArcGIS StoryMaps easier to access and engage with. Internally ArcGIS StoryMaps are used in presentations, making data and recommendations far more accessible than the previous analogue reports.

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