

Pioneering sustainability and biodiversity reporting in housing

Southern Housing

The Challenge

- Map, manage and report on the organisation's ambitious sustainability and biodiversity objectives in addition to supporting ongoing asset management and regulatory reporting.

The Benefits

- Optimised asset management
- Accelerating the delivery of EPC requirements
- Demonstrating biodiversity net gain
- Monitoring and reporting sustainability metrics

GIS is a vital tool allowing any housing association to integrate its datasets and manage its assets through location. Southern Housing is taking this one step further and is pioneering the use of ArcGIS to monitor and report on multiple regulatory KPIs, gauge ESG performance and demonstrate how it is fulfilling its ambitious sustainability and biodiversity objectives. .

The Challenge

Southern Housing, one of the largest housing associations in the UK, manages over 78,000 homes across London, the South East, the Isle of Wight and the Midlands. Formed in 2022 from the merger of Optivo and Southern Housing Group, it is a not-for-profit organisation with charitable status.

Since the merger, the company has made significant advances amalgamating and harmonising asset data using GIS technology. A key focus is meeting investor demands for sustainability data and achieving the UK government's 2030 target for Energy Performance Certificate (EPC) ratings, which Southern Housing has made great progress towards.

Southern Housing is committed to ambitious sustainability standards, including biodiversity improvements, which require ongoing monitoring and reporting.

"Not only do we need to better understand our assets and responsibilities, we have to regularly monitor and report on multiple regulatory KPIs, gauge our ESG performance and demonstrate how we are fulfilling our commitments in our Environmental Sustainability Strategy," said Bethany Austin, Sustainability and Reporting Manager.

The Solution

The Sustainability Team at Southern Housing has effectively utilised ArcGIS Pro and ArcGIS Online to develop dashboards that collate, visualise, and report data geographically. This GIS-led approach, crucial after the merger of the two companies' assets, provides a centralised data integration base while allowing individual asset examination for specific queries from local authorities and other key stakeholders.

With Ordnance Survey (OS) AddressBase®, detailed insights, including energy performance profiles, are accessible. AddressBase® matches Royal Mail postal addresses to unique property reference numbers (UPRNs), adding a geographic dimension to records. As an OS strategic partner, Esri UK supports using OS data in the ArcGIS System, including offline data and tools for customer data processing.

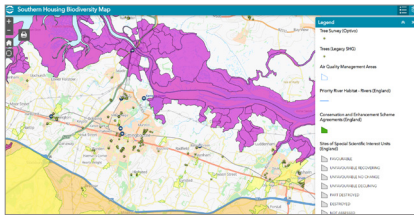
Using ArcGIS Pro and ArcGIS Online, Southern Housing users can identify geographic clusters of homes nearing Band C and target retrofit programmes such as cavity wall insulation. Flood risk management is also enhanced, classifying properties as high, medium or low risk based on Environment Agency flood maps. This proactive approach helps to create more resilient communities by promoting flood alerts in high-risk areas.

In support of its sustainability goals, Southern Housing has mapped its greenspaces using the OS MasterMap Topography Layer. During its Biodiversity Pathway, a natural asset audit established a baseline for natural asset improvement. Utilising the Living Atlas and the SHIFT methodology, the team estimated the total biomass across all housing assets to be 14,487 tonnes, with over 26,000 homes with private gardens supporting biodiversity.

ArcGIS is vital tool for measuring Biodiversity Net Gain (BNG), ensuring compliance with new regulations by comparing biodiversity before and after new housing developments, and demonstrating the required 10 percent BNG improvement.

“ ArcGIS is a powerful tool to help us measure the sustainability of our homes. We are not only fulfilling regulatory or investor reporting requirements but also demonstrating our clear commitment to improving our homes and communities for our residents. ”

Kara Tomes Meek, Head of Sustainability, Southern Housing



Images from Biodiversity Pathway report (specific to Southern Housing housing locations)

These activities underpin Southern Housing’s key metric: ‘30 by 30 by 2030’. The organisation aims to protect and support 30 flora and fauna species by delivering 30 habitat creation and enhancement projects annually until 2030. ArcGIS will continue to play a vital role in curating, managing, and presenting the data that supports these initiatives.

The Benefits

Optimised asset management

With a single repository for asset data, staff can better understand assets and responsibilities and quickly answer incoming queries. This is of greater importance given the increased size of the organisation following the merger of Southern Housing Group and Optivo, with over 78,000 homes.

‘Our pioneering work with complex datasets and the use of ArcGIS enables us to understand the performance of our property portfolio in detail. This enables us to make informed strategic decisions that will deliver improvements to our residents and wider benefits’. Dritan Uka, Director of Strategic Asset Management, Southern Housing.

Delivering on EPC requirements

The use of ArcGIS to measure and map the energy performance of its homes enables the identification of areas for improvement and supports decision-making at both local and senior strategic levels. The Sustainability and Capital Investment Teams can respond accordingly to undertake necessary improvements to move properties from Band D or below to Band C.

Demonstrating Biodiversity Net Gain

Using GIS, Southern Housing will be able to measure and record biodiversity before and after new housing developments are built, facilitating the required regulatory reporting and supporting other internal and external stakeholder updates. They will be able to demonstrate and map metrics showing how a development site is left in a measurably better state than before the development began by mapping new wildlife habitats, plants, and insects. They’re aiming to use GIS to apply the same monitoring methodology to all habitat enhancements going forward.

Monitoring and reporting sustainability metrics

ArcGIS will be used to support reporting around the organisation’s science-based targets detailed in its Environmental Sustainability Strategy and Biodiversity Pathway. The organisation’s goal of delivering ‘30 by 30 by 2030’ involves communicating these biodiversity management successes to multiple stakeholders, including the communities and housing developments where new initiatives are being implemented.

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