

## Supporting Land Referencing for Rail Infrastructure Improvement



### Customer

Millar & Bryce is the leading provider of reports and data to support conveyancing professionals in Scotland. Established in 1875 and based in Edinburgh, Millar & Bryce provides title information, conveyancing searches and land reference services across the UK and Ireland. Millar & Bryce also has an extensive Company Search facility, providing detailed company information to support land transactions, company acquisitions and corporate decision making.

### Problem

The Edinburgh Glasgow Improvement Programme (EGIP) is a £650 million package of improvements to Scotland's Rail infrastructure. Funded by Transport for Scotland, EGIP is being delivered by Network Rail and includes modernisation and upgrades to key junctions and infrastructure as well as widespread electrification of the rail network.

EGIP will include 150 single track kilometres of new electrified railway, one new station, three completely redeveloped stations, one new electric depot and platform extensions at four stations. It is expected that EGIP will deliver a 42 minute fastest journey time between Edinburgh and Glasgow and provide a 30 percent increase in capacity by 2019.

At the outset a critical aspect of the EGIP was land referencing across the entire rail development corridor; investigating land and property ownership, analysing these interests and organising a rich suite of data to support work on public consultation, design options, engineering activity, logistics, land purchase and notice management. Traditionally this work involves manually intensive processes and the use of multiple, discrete business systems which can lead to data duplication, inefficient data exchange processes and the risk of data being inaccurate or out of date.

Millar & Bryce were engaged to undertake land referencing services for EGIP and, whilst the company already used desktop Geographical Information System (GIS) technology, it was identified that significant benefits, efficiencies and cost savings could be achieved with the creation of an online, land referencing information sharing hub.

*“The collaborative approach combines the business and technical strengths of each company to deliver an innovative solution for the client.”*

Gary Donaldson  
Head of Product  
**Millar & Bryce**

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### Solution

Working with Millar & Bryce, thinkWhere developed a bespoke application called Notification Manager. Based on thinkWhere's Location Centre platform, Notification Manager acts as a central interface for all EGIP stakeholders. A map browser combined with GIS functionality allows users to search by different categories, view results against background mapping and associate and link data with questionnaires, confirmations and notifications.

Land referencing data, associated documents and reports are centrally held on a secure hosted platform, underpinned by a national mapping datastore. Users can access the system from any location using any Internet connected device and, with strong digital rights management capabilities, security is considered with permissions and levels of access controlled by user, user group and organisation.

Standardised data exchange and publication capabilities together with workflow tools for processing the movement of data from collection, validation, publication and export contribute to a full audit trail of data events and verification decisions while transaction monitoring and reporting is used to inform billing and invoicing.

### In Action

The thinkWhere developed solution is in daily use with more than 60 users regularly accessing and sharing data. The Notification Manager business application provides a robust, scalable, flexible platform for the storage of, management, access and publication of a wide range of business information including third party digital map datasets from Ordnance Survey, Historic Scotland and Scottish Natural Heritage together with associated documents, reports and images for example search reports, valuation roll and election roll.

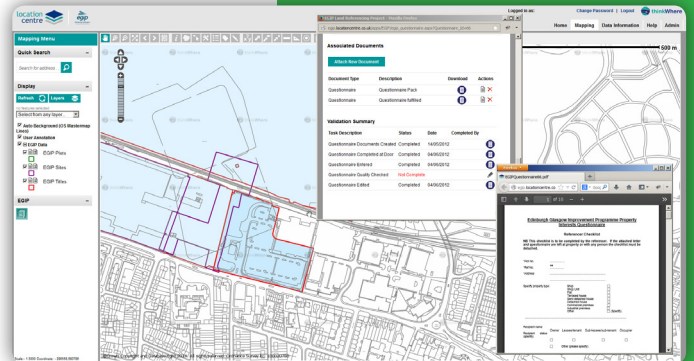
The project was awarded Best Practice for Private Sector Innovation by the Association for Geographic Information.

### Benefits

- Cost savings in the region of £250,000 across project participants
- Increased efficiency of all workflow activities associated with land referencing
- Improved speed of decision making with greater confidence in the quality, currency and accuracy of data
- Robust audit trail on all key transactions with strong version control on all activities
- Enhanced stakeholder engagement and improved information sharing

### Summary

Working with Millar & Bryce, thinkWhere's development of the Notification Manager solution has transformed the workflow processes associated with land investigation and stakeholder engagement. The online GIS system makes it easy to manage, integrate and share maps and geographic data throughout the infrastructure project lifecycle.



*“This collaboration is an exemplar for future infrastructure development projects.”*

Gary Donaldson  
Head of Product  
**Millar & Bryce**

**thinkWhere** use leading edge cloud, Open Source and GIS technologies, to develop innovative software and solutions, backed by a wide range of GIS implementation, consultancy, support and training services.

They provide an online platform for storing, sharing and using maps and geographic data, and help solve real-world problems using open data and open technology.