thinkWhere

CASE STUDY

Connecting Aberdeen Peripheral Route Construction Project

Customer

The Aberdeen Western Peripheral Route / Balmedie-Tipperty (AWPR/B-T) project, which is funded by Transport for Scotland, Aberdeen City Council and Aberdeenshire Council, is Scotland's largest road infrastructure project and is currently under construction.

The project will see the construction of 58 kilometres of new dual carriageway around the city of Aberdeen and when complete will help to reduce congestion, cut journey times, improve safety and lower pollution in Aberdeen city centre. Over the next three decades, the AWPR/B-T is expected to bring an additional £6 billion to the north-east economy and create around 14,000 new jobs.

The project will include 58 kilometres of main road, 40 kilometres of new side roads, 30 kilometres of new access roads and 18 kilometres of new footways and cycle paths. 75 new bridges, complete 1,183 beams will be built as will 80 culverts, spanning a total of 3,483 metres. The project will require 550,000 tonnes of road surfacing, 300 kilometres of drainage, 190,000 cubic metres of Continuously Reinforced Concrete Pavement (CRCP) and 230,000 cubic metres of Cement Bound Granular Material (CBGM).

Aberdeen Roads Limited was awarded the contract to design, build, finance and operate the project in 2014 and appointed the Construction Joint Venture (CJV) as New Works Contractor.

Problem

The largely linear AWPR/B-T project is being built across a vast area, crossing through greenfield locations, existing transport infrastructure, towns and villages. The construction project will have a direct environmental impact and it is important that throughout the construction work, that site staff have direct access to the most up to date geographical, mapping and environmental data. Traditionally, a GIS Officer is tasked with the production and distribution of paper maps and PDF documents using a vast array of geographic datasets and digital mapping products.

Not only is this very time consuming, the mapping outputs are often out of date before they are used as well as being difficult to share and there is a high environmental impact producing vast quantities of paper maps.

The proposed outcome was to find a single hosted solution that would provide access to up to date, fully maintained OS data across a multi-stakeholder environment via highly performant and secure web mapping services.

"Using thinkWhere's groundMapper tool we can instantly access the most up to date constraint data and we have dramatically reduced the need to produce costly and time consuming paper maps."

Angela Gardner
Environmental Manager
AWPR/B-T JCV

8-10 Corn Exchange Road
Stirling
FK8 2HU

t 01786 476060
@thinkwhere1
e info@thinkwhere.com

www.thinkwhere.com

thinkWhere

CASE STUDY

Connecting Aberdeen Peripheral Route Construction Project

Solution

Developed by thinkWhere, groundMapper is an online Geographical Information System (GIS) viewer that brings together location based data. Described by the CJV's GIS specialist, as "Google Maps for the AWPR/B-T", groundMapper allows users to search for and view multiple datasets. Hosted on a dedicated website, data accessible via groundMapper includes, for example, aerial photographs, private water supplies, ecological features, blasting areas and site office locations, all overlaid on the basic route layout.

Currently the CJV team has access to nearly 50 different projects layers displayed against a backdrop of Ordnance Survey mapping which differs depending on the scale of the data being viewed. Project layers are divided into 6 categories for ease of management and use and are centrally maintained for accuracy and currency.

Users can search the online datasets by postcode, drawing sheet reference, chainage or structure and then quickly get an overview of all features within the vicinity. groundMapper is accessible to anyone involved on the AWPR/B-T project and is regularly used from the level of Sub-agent, through to engineers and work managers, right up to the senior management team. The use of groundMapper is helping with the understanding and identification of tasks to be undertaken in the field, the preparation of task briefings and the production of work documentation.

Additional functionality such as a bookmarking tool, annotation and map management functions combined with easy online accessibility and integrated base maps has made groundMapper one of the key management tools for this project, useful from site level right up to the board room.

Benefits

- Data is centrally maintained by specialists working on the AWPR/B-T project ensuring accuracy and consistency
- Data is securely hosted by thinkWhere alongside background mapping from Ordnance Survey
- Using groundMapper operational personnel can access data remotely from a variety of devices at any time and from any location
- No need for the costly and time consuming production and distribution of paper maps
- Improved communication and collaboration between a largely dispersed workforce

Summary

Using groundMapper for the hosting, sharing and online access to digital mapping and geographic datasets on the Aberdeen Western Peripheral Route project has improved communication, saved map production costs and provided construction staff with real-time access to data anytime and anywhere.

"Given the vast array of datasets available we needed a solution that would allow us to effectively access, share and communicate geographically referenced information in real time."

Angela Gardner
Environmental Manager
AWPR/B-T CJV

"groundMapper helps to ensure the most up to date information is readily available reducing the risk of costly mistakes or accidents."

Annie Meyer, GIS Specialist
AWPR/B-T JCV

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.

8-10 Corn Exchange Road
Stirling
FK8 2HU

t 01786 476060
@thinkwhere1
e info@thinkwhere.com

www.thinkwhere.com