

Infrastructure Projects in U.K. and EMEA Named as Finalists in Bentley Systems' 2022 *Going Digital Awards in Infrastructure*

Winners to Be Selected and Announced on Nov. 15 as Part of Bentley's Year in Infrastructure and Going Digital Awards

EXTON, Pa. – Oct. 20, 2022 – Bentley Systems, Incorporated, the *infrastructure engineering software* company, has announced several projects from the United Kingdom and Europe, Middle East, and Africa (EMEA) as finalists in Bentley's 2022 *Going Digital Awards in Infrastructure*. The annual awards program honors the extraordinary work of Bentley software users advancing infrastructure design, construction, and operations throughout the world. Eleven independent jury panels selected 36 finalists from over 300 nominations submitted by more than 180 organizations from 47 countries encompassing 12 categories.

The *Going Digital Awards in Infrastructure* finalist project presentations will be available for viewing using [this link](#) on **Nov. 7**. Visit the site to hear from the people behind these extraordinary infrastructure projects as they tell their stories of leveraging digital advancements to achieve unprecedented outcomes.

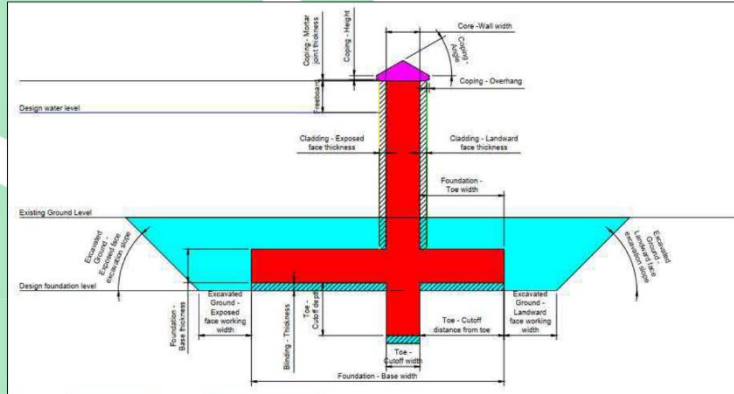
The U.K. and EMEA projects named as finalists for the 2022 *Going Digital Awards* are:

Enterprise Engineering

Smart Object Library for the Environment Agency
Mott MacDonald, United Kingdom

Mott MacDonald selected ProjectWise Components Center, which provided greater accessibility and interoperability than other platforms and was capable of hosting multiple file formats and serving a wide range of project disciplines and suppliers. The ability to reuse the digital content saved at least GBP 79,000 since the SOL implementation, with ROI increasing exponentially as the library incorporates more smart objects and becomes accessible to more users. Now, the Environment Agency can optioneer designs for efficiency, sustainability, and carbon emissions, helping them cut costs and meet their net-zero goals.

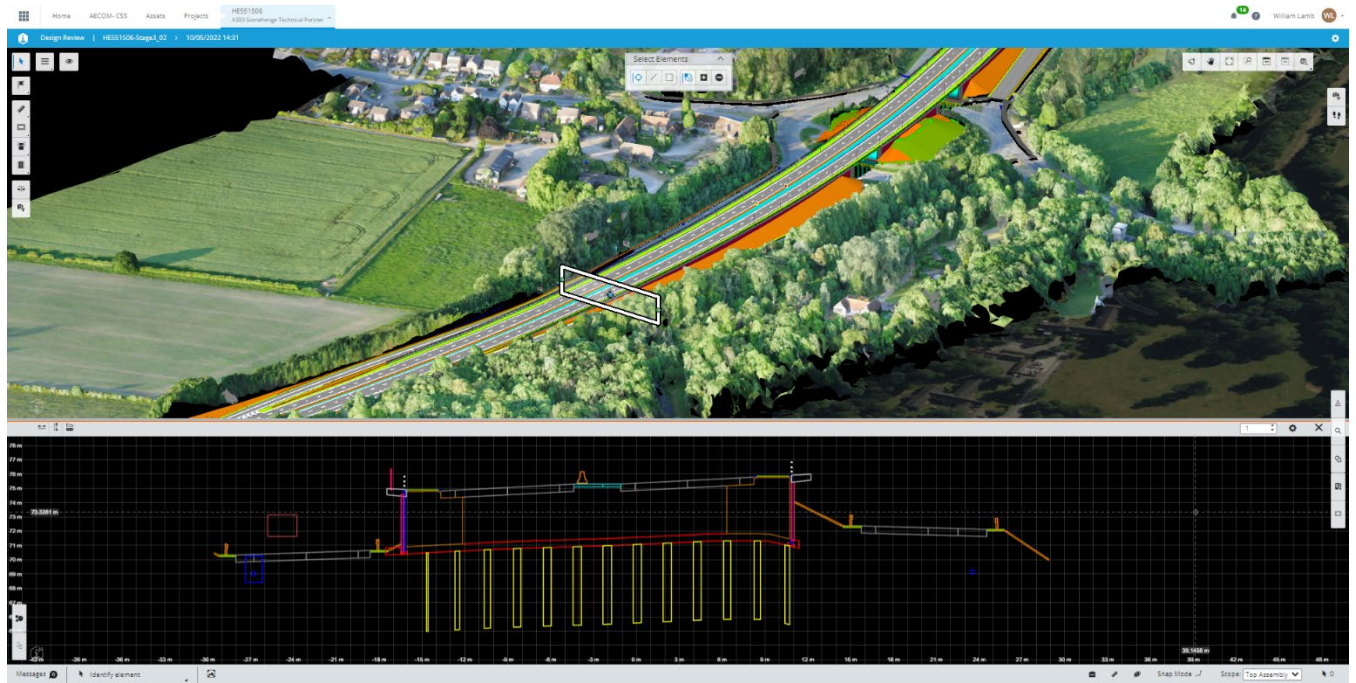
Smart Object Library: Wall Input Data



[High Res Image of Smart Object Library](#) *Image courtesy of Mott MacDonald*

Complex Infrastructure Programme – A303 ProjectWise and iTwin Deployment Pilot Project,
Salisbury – Stonehenge
National Highways, United Kingdom

National Highways piloted ProjectWise and iTwin to exchange and manage design data on the A303 project. The integrated digital solution provided a collaborative, web-accessible platform that resulted in a 50% more efficient data federation process and a 70% more efficient data exchange process. Bentley applications enabled National Highways to use supply chain data more proactively to better understand costs and risks, allowing for more timely and informed decisions to support better outcomes for the built asset.



[High Res Image of Complex Infrastructure Programme](#) *Image courtesy of National Highways*

Facilities, Campuses, and Cities

Kaunas Digital Twin

Kaunas University of Technology, Lithuania

To help build, sustain, and develop a community focused on smart cities and infrastructure, Kaunas University of Technology partnered with other organizations to develop a digital twin of the city's built environment, with an emphasis on the university campus. Leveraging Bentley applications, they generated a reality model of the city and campus and built a digital twin. Bentley's applications facilitated multidiscipline integration and saved time while accurately modeling the area. The solution provided virtual tours of the existing university infrastructure and digitized the MLab building project. Working in the Bentley iTwin platform enabled the team to augment the new building's digital representation with live Internet of Things data to analyze indoor climate conditions, helping optimize energy consumption.

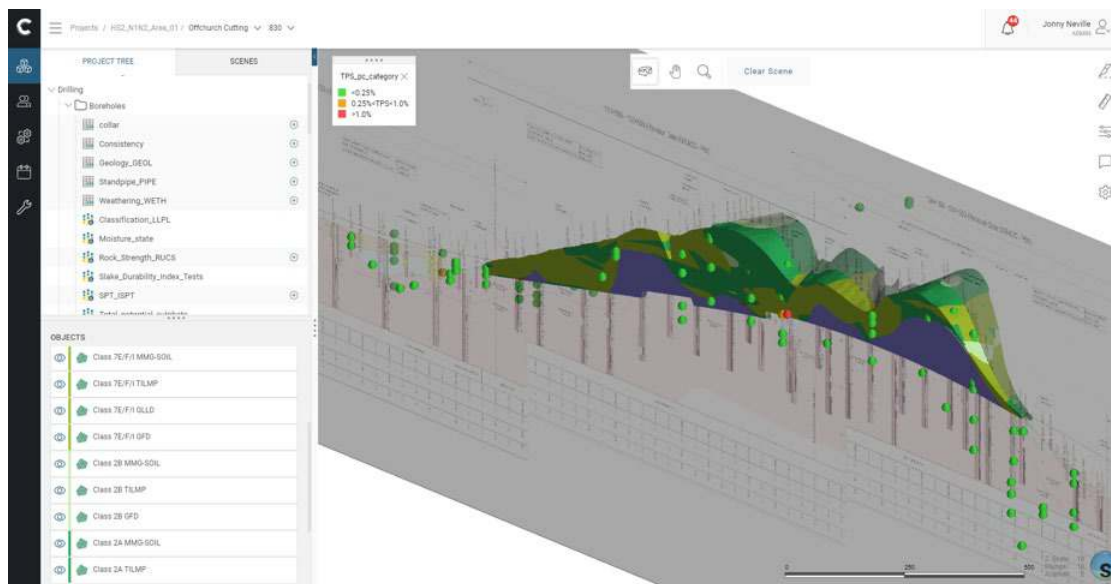


[High Res Image of Kaunas Digital Twin](#) *Image courtesy of Kaunas University*

Geoprofessional

Driving Efficiency and Sustainability in Material Reuse through geoBIM
 Mott MacDonald, Birmingham, West Midlands, United Kingdom

Leveraging ProjectWise with the Central and Leapfrog applications from Seequent, The Bentley Subsurface Company, the Mott MacDonald team developed a collaborative geoBIM assessment technique based on the 3D spatial assessment of ground investigation data within the proposed earthworks excavations. The ability to model specific geometric earthwork profiles optimized mass haul movements during construction, which provide critical insight into material reuse across the project, reducing waste and carbon emissions. The 3D models provide a foundation for the development of a digital twin to support future earthworks projects.

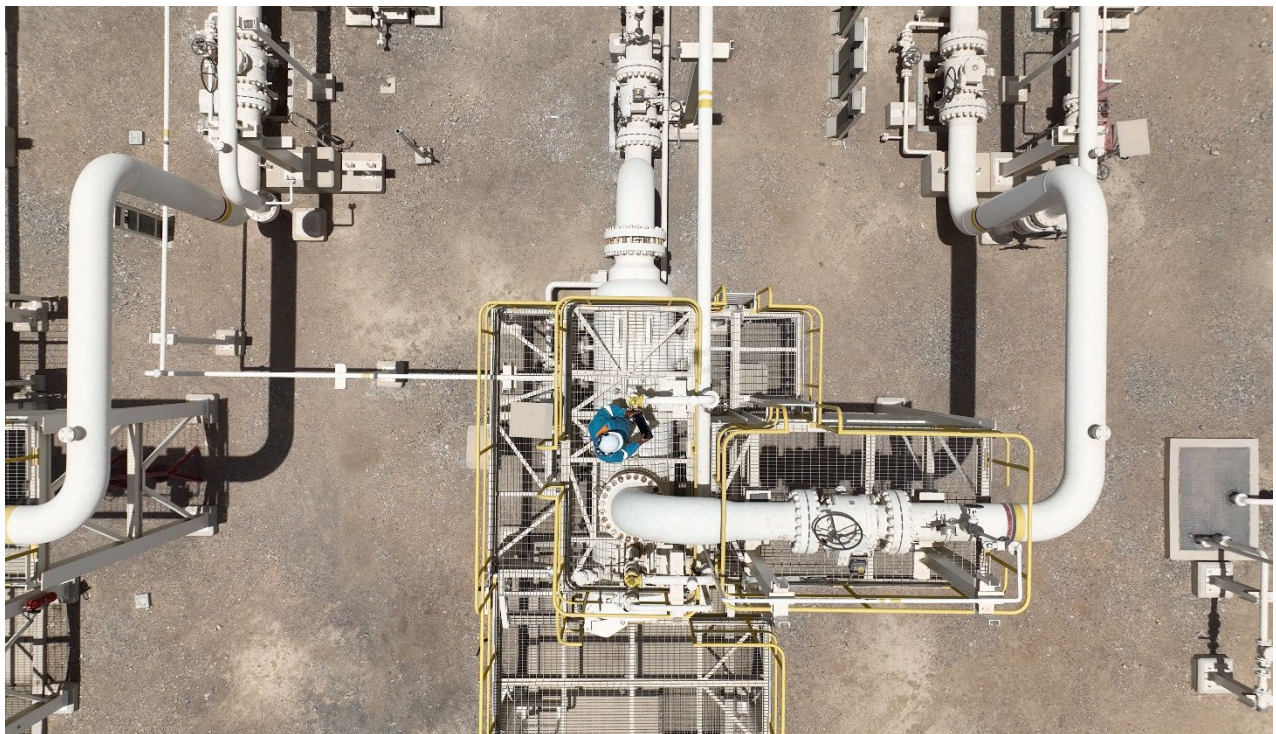


[High Res Image of geoBIM Assessment](#) *Image courtesy of Mott MacDonald*

Process and Power Generation

OQ Asset Reliability Digitalization with Purpose
OQ Upstream, Oman

OQ wanted to improve asset performance and reliability, and ensure safe plant operations by digitizing its asset management processes. They selected AssetWise as their central asset data management platform, incorporating failure reporting and analysis, asset health indicators, and digital inspection strategies to enable corrective maintenance management. Their digitized APM system reduced asset failures and unplanned plant shutdowns, minimizing environmental risks of flaring. Based on APM implementation at one compressor site, the digital solution saved 14.8% in total maintenance costs and reduced functional failures by 50% to achieve an annual operational reliability growth of 4.3%. Continuing to digitize, OQ is integrating APM as part of their efforts to develop a digital twin.



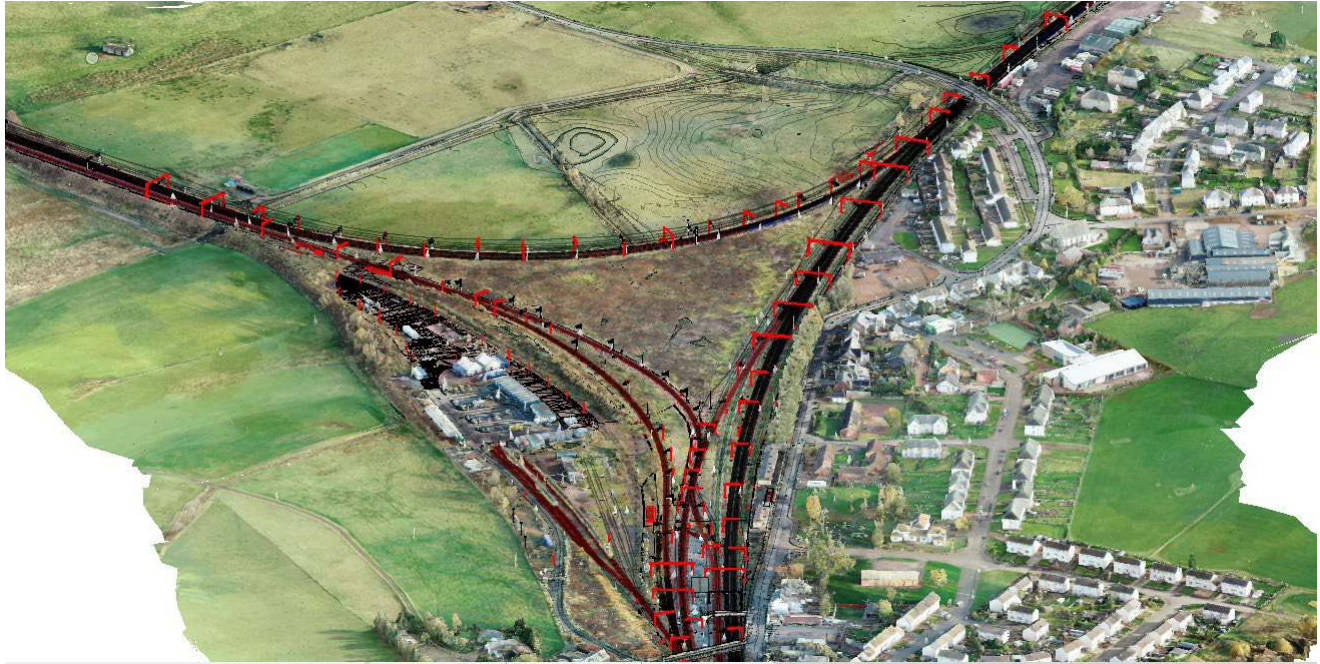
[High Res Image of OQ Asset Reliability Digitalization](#) *Image courtesy of OQ Upstream*

Rail and Transit

Carstairs
Arcadis, Scotland, United Kingdom

To improve passenger service and accommodate high-speed, low-emission electric trains, Arcadis designed an updated electrification system for the station. They had to coordinate numerous design disciplines and discovered the new design elements were difficult to integrate into their previous modeling applications. Arcadis determined they could unify all design work on Carstairs with Bentley's open and integrated applications. Using the Bentley iTwin platform as the shared design environment, they created a digital twin of the project that enabled improved communication between teams and early detection and resolution of clashes in the design. Keeping project information up to

date in ProjectWise enabled web-based interdisciplinary project reviews. Arcadis met all client requirements and optimized the design while reducing the modeling time by 35%.

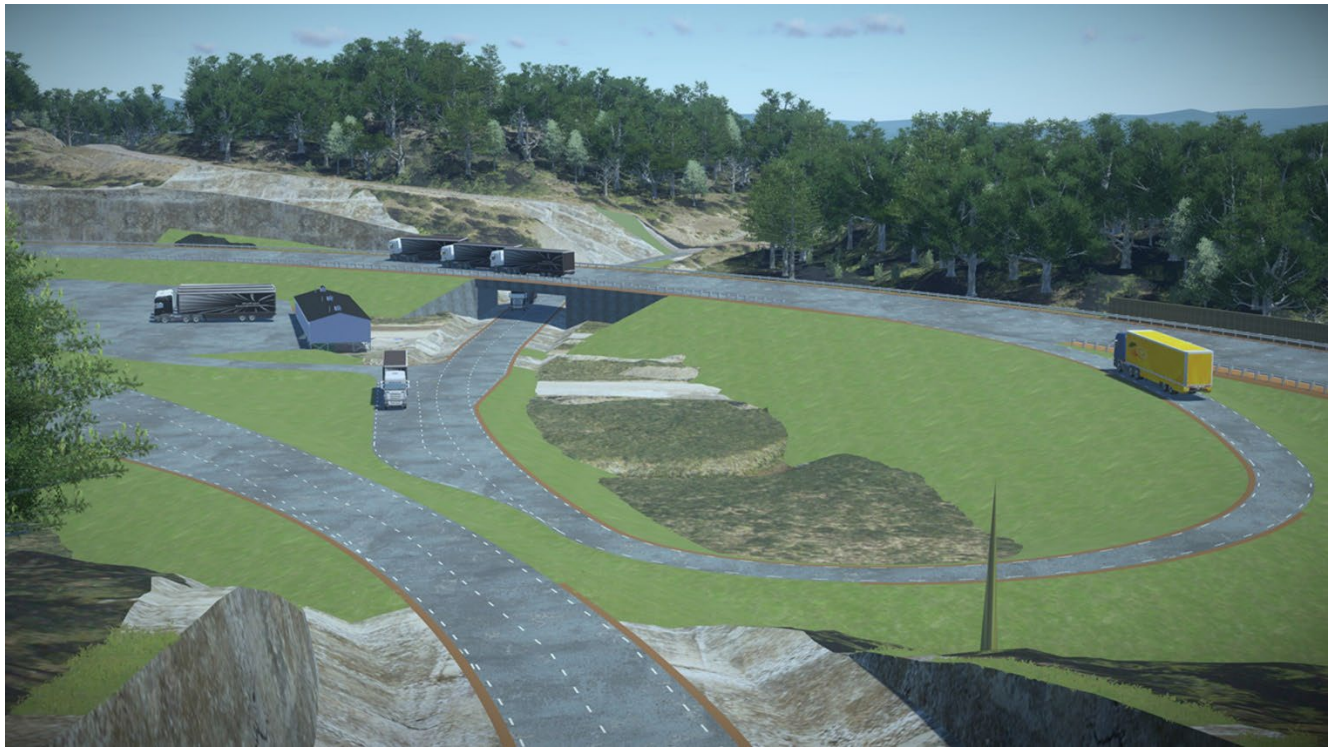


[High Res Image of Carstairs](#) *Image courtesy of Arcadis*

Roads and Highways

New Test Track for Autonomous and Electrified Vehicles
AFRY, Södertälje, Stockholm Area, Sweden

AFRY was selected by commercial vehicle manufacturer SCANIA to design a new test track to test and drive electric and autonomous technology for heavy vehicles. They determined Bentley applications could model the track while ensuring tight change management and constructability. AFRY used the applications to produce accurate 3D models enriched with project data, as well as to verify the impact of design on the environment and calculate the amount of earthwork required. The ability to produce dynamic relationships between models reduced modeling time by 30%, and automated drawing production saved 30 resource hours. The applications helped AFRY detect and remove errors in the design stage, saving millions of Swedish crowns in rework and helping them take the lead in developing sustainable transport solutions.



[High Res Image of Test Track for Autonomous and Electrified Vehicles](#) *Image courtesy of AFRY*

Structural Engineering

Unity Place Delivered with Optimized Design by WSP Using Innovations from Bentley
WSP, Milton Keynes, Buckinghamshire, United Kingdom

Unity Place will be the new headquarters for Santander Bank, consolidating four existing office buildings into a state-of-the-art facility. It will be designed and constructed as a green, efficient space, achieving excellence in environmental sustainability and impact on well-being. WSP selected PLAXIS and RAM, simplifying design and streamlining workflows to meet the construction budget and timeline while achieving sustainability goals. Using Bentley's applications, they opted for a concrete solution that saved 16,000 tons of concrete and GBP 1.206 million in material costs. The integrated technology reduced design time, saving an additional GBP 20,000, and facilitated innovative structural solutions that already exceed 2030 carbon targets. The project sets a benchmark for sustainable design of commercial new builds.



[High Res Image of Unity Place](#) Image courtesy of WSP

To view the full list of awards finalists, visit <https://yii.bentley.com/award-finalists>.

Winners will be announced on Nov. 15, 2022.

If you would like to request a media interview with a *Going Digital Awards* finalist or Bentley colleague, click [here](#). If you have any other media-related questions please contact your Bentley PR contact or Christine Byrne at Christine.Byrne@bentley.com (U.S., U.K.), or Michaela Romero at Michaela.Romero@bentley.com (EMEA, Asia, LA).

The 2022 *Year in Infrastructure and Going Digital Awards* Virtual Press Kit offers access to event registration, *Going Digital Awards* finalists' sessions, access to press announcements, images, awards winners and finalists' information, media interview request form, and more! Check out the Virtual Press Kit at <http://yii.bentley.com/press>.

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About Bentley Systems

Bentley Systems (Nasdaq: BSY) is the *infrastructure engineering software* company. We provide innovative software to advance the world's infrastructure – sustaining both the global economy and

environment. Our industry-leading software solutions are used by professionals, and organizations of every size, for the design, construction, and operations of roads and bridges, rail and transit, water and wastewater, public works and utilities, buildings and campuses, mining, and industrial facilities. Our offerings include *MicroStation*-based applications for modeling and simulation, *ProjectWise* for project delivery, *AssetWise* for asset and network performance, Seequent's leading geoprofessional software portfolio, and the *iTwin* platform for infrastructure digital twins. Bentley Systems employs more than 4,500 colleagues and generates annual revenues of approximately \$1 billion in 186 countries.

www.bentley.com

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