

When it comes to large projects, there's nothing better than AutoCAD Civil 3D. And it really comes into its own on an integrated project.

– Stephen Herholdt Pr Eng
Technical Director,
Mining Infrastructure Services
Aurecon

Teamwork delivers

At global professional technical services company, Aurecon, AutoCAD Civil 3D software is streamlining design coordination on multidisciplinary projects, reducing risk and helping the company to get maximum performance from its teams.



Aurecon was established in March 2009 when three world-class engineering companies – South African-based Africon and Ninham Shand, and Connell Wagner of Australia – joined forces to provide professional technical services in two geographic zones – Africa-Middle East and Asia Pacific.

With additional resources at their disposal, the group's African offices were able to tackle even larger projects, although they were faced with new project challenges.

“We could have engineers from Australia, Indonesia and South Africa all collaborating on a single large project. It not only meant managing designs from multiple disciplines, but also a workforce operating in different offices, on different continents and across different time zones,” says Stephen Herholdt, Technical Director of Mining Infrastructure Services at Aurecon.

To overcome the challenge, Aurecon introduced a dedicated, master planning coordinator to manage and coordinate designers and stakeholders on a global scale, using AutoCAD Civil 3D software.

It enables interfaces and layouts to be globally coordinated between the different disciplines.

AutoCAD Civil 3D is a powerful building information modelling (BIM) solution for civil engineering that helps teams create, predict and deliver large projects faster and with improved accuracy. Every time new information is added to a design or changes are made, all related design elements, annotation and tables are immediately updated, allowing users to work off the same up-to-date information and ensuring the whole project team remains synchronised.

The key to the software's success is the flexibility and compatibility in making changes or updates quickly and redistributing them to always ensure that only the latest information is used.

The software has been rolled out in Aurecon's South African offices and used on two large projects, including the Moatize Coal Project.

After executing the first phase of the project, which consisted of the development of a new conceptual design optimising the mine's layout, Aurecon provided the detail design of the mine infrastructure components in just 15 months.

More than 300 designers and CAD operators created about 3 750 drawings that included the establishment of mine infrastructure, including buildings, maintenance and administration facilities as well as conveyors, bulk water and electricity supply, new access roads, water treatment and rail loading facilities.

Many factors contribute to the increased work speed facilitated by the software. "To start with, when we're modelling, we're already creating our first order drawings," says Herholdt.

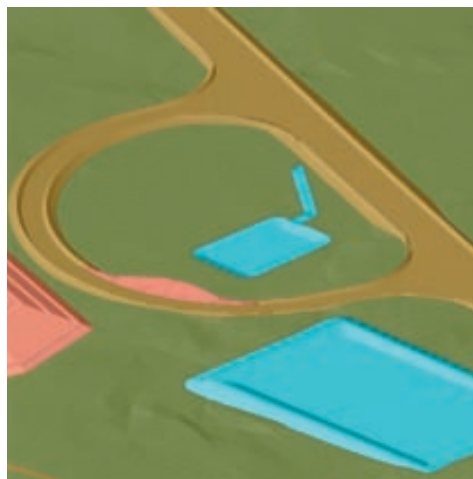
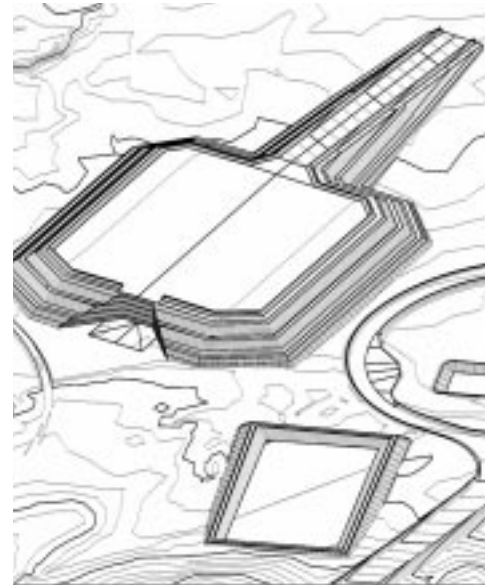
With BIM, when users create the model of their design, drawings are created concurrently, helping to reduce time required to produce project documentation.

The increased accuracy of the software and its seamless integration with AutoCAD also contribute to the pace at which Aurecon teams operate.

"At the end of the day, our deliverables are AutoCAD drawings and we can punch these out quickly working in an AutoCAD environment. There are no translations or imports of information. And as changes are made easily in the Civil 3D model within the AutoCAD environment, there is less manual input and fewer errors.

Implementation of the software was supported by Autodesk reseller, Devotech, which went the extra mile in assisting Aurecon with the adoption of the new software.

"With on-the-job-training provided by Devotech, project activity wasn't disrupted."



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