

Leader of the Pack

ADL Highways bespoke use of Autodesk Civil 3D is streets ahead of the competition according to Cadspec

“We suggested that someone come along to one of our Civil 3D open days, after seeing Civil 3D it made up their minds.”

Rob Hartwell, Cadspec.

Civil engineering firm ADL Highways has offices in Bristol and London and is involved in the design and construction of highways and traffic systems. The firm had successfully been using AutoCAD for six years but as its work progressed from small-scale road schemes and alterations to the existing highways network, to more detailed and involved schemes such as re-designing roundabouts, it felt that the time had come to upgrade its software.

The firm made the decision to change its software package just over two years ago in order to benefit from faster design times and to enhance the quality of its work.

ADL chose AutoCAD Civil 3D after a call to discuss options with Autodesk value added reseller 3 Ways Design, who were bought by Cadspec in December 2007. Rob Hartwell of Cadspec explains how the change of heart came about, “We suggested that someone come along to one of our Civil 3D open days, after seeing Civil 3D it made up their minds.”

According to Simon Townsend of ADL Highways, opting for Civil 3D was an obvious choice as it sat within AutoCAD, which had been in use within the firm for around six years, making the transition to a new package much easier. Although staff were able to draw on their existing AutoCAD skills, ADL felt it was important to invest in training to get the maximum benefit from the software.

The team has since increased its number of seats to six but when the software was initially implemented in 2006, there were only three users, including Townsend. “The three of us received basic training from Cadspec, which we felt was a really good

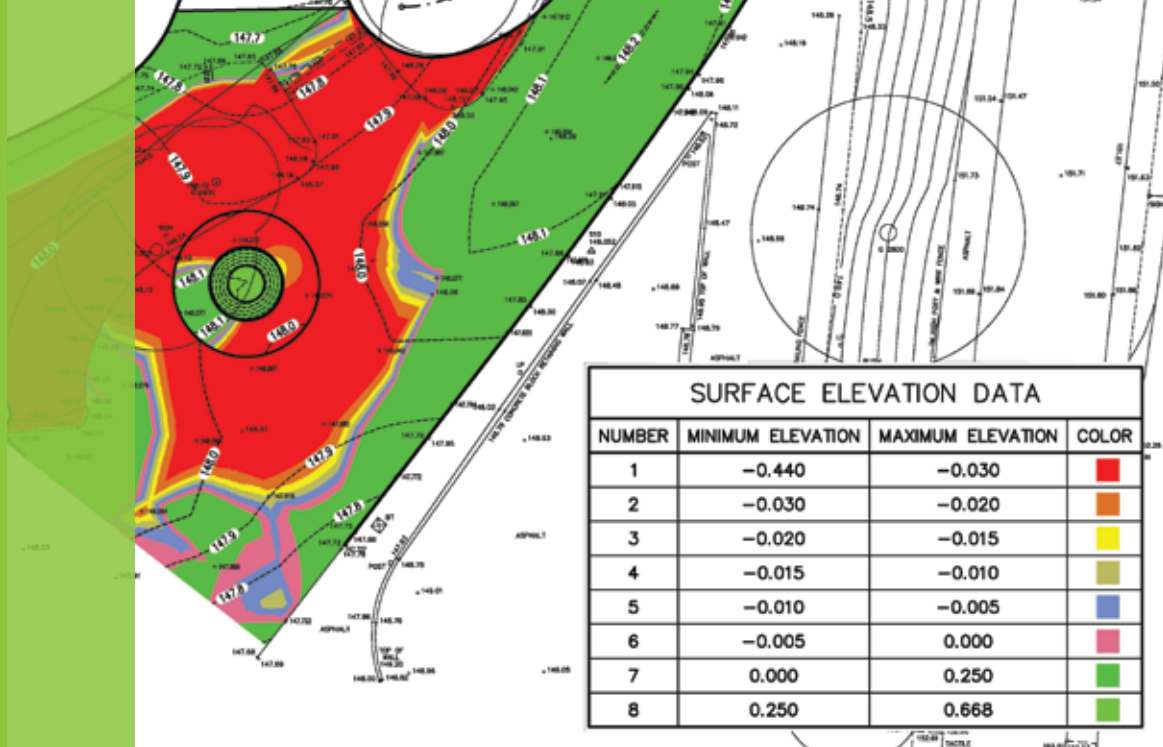
introduction to the software. We have since been able to share our knowledge with new team members and we are now utilising some of the online resources to deal with any minor problems which arise,” says Townsend.

“Now from our discussions with Cadspec we are one of the more advanced users of Civil 3D. As the majority of our work is bespoke it is very rare that we get a job where the design standards can be applied exactly as they exist in the design manuals and therefore our use is more advanced than a lot of other firms,” explains Townsend.

Rob Hartwell agrees, “ADL Highways is one of the most advanced users, not just among our clients but in the UK as a whole. The work that it carries out using the software is pretty specialist and technical and we have been particularly impressed at the speed with which the software has been adopted. Within two or three weeks of implementing the software we classed them as experienced users.”

ADL now has a six strong design team utilising Civil 3D on almost every vertical design project undertaken. It has found the software invaluable, allowing it to take on jobs that would have been near impossible without Civil 3D. “We are able to use the software on a vast range of projects from small scale access roads to multi-million pound, highly complex projects,” explains Townsend.

For example ADL recently designed a half kilometre link road in an area with a lot of contaminated land. Using the software the firm was able to calculate the volume of polluted soil easily, whereas previously this would have involved complex long-hand calculations.



In terms of larger projects ADL has now completed work on a roundabout scheme in Shepton Mallet which involved modifying the entries and exits for three existing roundabouts which they are particularly pleased with.

“I was the lead designer,” explains Townsend, “And I don’t think it would have been feasible to have completed the project to the standard required or within the time constraints without Civil 3D. This scheme was particularly complex and required a great deal of amendments to satisfy the local authority. This was made easier using the software, as any changes are carried throughout the model and any relevant documentation.

Other schemes on which the firm has used Civil 3D include a £1 million retail project in Reading in conjunction with a national housing developer. This is a complex project involving a new signalised junction on the existing highway with a new access road serving the development.

Smaller projects include a new roundabout on an existing highway in Cullompton, Devon and two access roads for a mixed use development at Ebbw Vale in Wales. ADL is also utilising the software on a number of filling station redevelopments across the country, where access and exit points are required.

Townsend says that the software has fulfilled all of its requirements and more. “What I like most about Civil 3D is the fact that I am able to get a very pleasing design that works well in practice and looks good. The software has decreased the time necessary to create designs which is a bonus but it is the end product, the quality of the design, which has been of particular benefit.”

The company is also impressed with the way Civil 3D enables it to easily “finesse” the design making small but important tweaks without having to totally recalculate all measurements and volumes. “We now recognise that it not only helps us work more quickly, but also to optimise our designs enabling us to offer clients the best possible solution,” says Townsend.

Having experienced these benefits in its existing projects ADL is now hoping to extend its use of the software and branch into new business areas.

“Having the software opens up a number of new possibilities for us, and we are keen to expand the business to make full use of these,” explains Townsend. To utilise Civil 3D’s volume capabilities, ADL is keen to move in to areas such as the creation of golf courses and other projects which involve a great deal of earthworks.

In terms of moving forward and progressing its use of the software visualisation is another key area that the firm would like to move into. “Over the past 12 months we have been exceptionally busy which has meant we have not had time to do as much investigation into Civil 3D as we would have liked. We are hoping to get the chance to have a more in-depth look at the software and see what features we are not using at the moment that we could make use of in the future,” explains Townsend. “There are so many things that you can do with the software, however, it does take time to work through them all.”

Townsend predicts that the firm’s use of the Civil 3D will continue to evolve as the software does. “There are some additional features, such as annotation scaling, that Autodesk has brought out which we are hoping to adopt once we work out how best to use it for our design process.”

For more information

To learn more visit us on the web at www.autodesk.co.uk/civil3d