



## Revit® Architecture for higher quality design

*“The benefits are completely proven as far as we are concerned.”*

**Richard Cahill**, Partner and Engineer, Corroon Architectural Consultants

Corroon Architectural Consultants is an established Cork firm with offices in Buttevant and in Sunday's Well, Cork. It is a mixed practice, with civil engineering complementing the architectural expertise, originally founded by Tom Corroon Senior in the Eighties. The firm has expanded in recent years while the addition of the civil engineering capability has enabled it to offer a more comprehensive service to its clients. It undertakes complete green field projects such as housing estates and commercial developments from the earliest business planning and design phases through planning to complete project management.

The firm now has a staff of five professionals supported by administrators in each of the two offices. Corroon has invested in IT throughout its existence, using Autodesk products for its design and project work from the beginning. Today, each office has its own server and high-spec PCs while the two locations are connected by Virtual Private Network (VPN) and several of the professionals regularly use the facility to log on remotely using their laptops.

“The two principal software tools in use in our offices this decade had been AutoCAD® and AutoCAD® Civil 3D®,” explains Richard Cahill. A partner and one of the two engineers in the practice, he also has responsibility for the firm's IT systems. “In fact we are all very familiar with AutoCAD, which has been the design software of choice for each of us professionally since college days. “So the decision to move onto Revit® Architecture at the beginning of this year was essentially a trial initially, driven by our general policy of continuous investment in technology to improve our systems and enhance productivity. It was triggered by a trial CD with tutorials which we were given by our Autodesk reseller C-CAD Computing.”

Richard Cahill recalls that he took it home one weekend to experiment with and was soon convinced of the potential value to the practice: “In four or five hours I succeeded in producing from scratch something that was genuinely impressive. The implication was obvious: if I could do this after a few hours, what could the whole team accomplish if we had Revit for a while and became familiar with its tools?”

Corroon has now been using Revit Architecture since January. “It really proved its value,” Richard Cahill says, “in a reconstruction project in the Old Convent Quarters in Doneraile, Co. Cork where we designed the renovation and conversion to seven three-storey dwellings in varying sizes from 1,500 to 2,200 square feet. A number of existing elements were retained, notably the facade and a number of chimneys.” Because the units had to fit into defined spaces and involved complicated layout, very accurate drawing was required with a particularly large number of sections and rendered views.

The clarity and quality of the drawings from Revit Architecture, with some sheets almost of picture quality, were very helpful in presenting the design solution in concept and in detail to the client, Richard Cahill says. “We also received planning approval very quickly, which is quite unusual, with no revisions required. Some of the credit for that smooth process definitely has to go to Revit and its capabilities, not just in the presentation but also in the detailed design process.”

The presentation aspect, however, has proven its worth in other areas. Corroon has something of a specialisation in one-off houses for private clients and as Richard Cahill points out: “Lay people really can't read drawings and even things like front elevations



can be a bit intimidating for clients. But now Revit allows us to present coloured, 3D visualisations that are both attractive and excellent for communication. We will typically print these on A3 size paper and then laminate. In a tightening market, such quality design presentation is an important element in enhancing our reputation with clients.”

But it is in the detailed design process that Revit Architecture comes into its own, he says, stemming in large part from the fact that Revit is natively 3D and is conceptually a digital model rather than a set of two-dimensional drawings. “So, taking a simple example, if I remove a window from a ground floor plan in Revit it is then gone from all other plans and sections. In AutoCAD, on the other hand, we have all discovered that a few minutes’ distraction, answering a phone call, say, can mean that you forget to complete the process of taking that window out elsewhere and in due course the error comes back to haunt you!”

Based on the team’s collective experience, Corroon has a very long and comprehensive check list that their professional staffs go through for every project before it is submitted to the planning authorities. “We count and double check items such as doors, windows and so on as well as measurements and even then we occasionally get things wrong. So now we are finding that Revit saves a good deal of time in this respect. Similarly, during the design process the software will warn of apparent errors or clashes, which is a highly valuable feature although sometimes the warnings can be a bit cryptic!”

Richard Cahill concedes that his team have come this far without any formal training in using Revit. “We have worked through the tutorials, which are very good, and have received a fair amount of help from C-CAD in terms of answering queries which has enabled us to make good progress. As with many aspects of software in a busy office, each project spurs you to new levels as you have to or wish to do more complicated things.”

The Corroon team has already learned the value and necessity of doing things consistently throughout all of the design process. “The secret to gaining the benefits of smart software is to let the programs do as much as possible. That in turn depends on putting in

the effort to set things up properly, whether it is the detail of wall types—insulation, plasterboard, cavity, etc.—or the consistent house style for drawing sheets and titling.”

It is also clear that the way forward for the firm involves working completely in 3D: “The benefits are completely proven as far as we are concerned,” says Richard Cahill. “It will also enable better integration with AutoCAD Civil 3D, which we use for the engineering side of the house. So for example a housing estate would be completely 3D from the initial site and underground work through to the finished development.”

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