

J. Wyndham Prince

Land Development

Challenges solved by 12d Model

- Designers can focus on design
- Design set up time cut by 98%
- Greater speed and accuracy

Macro Saves Hundreds of Hours in Design Setup

J. Wyndham Prince wins 12d Model Customization Award



Introduction

J. Wyndham Prince is a leading civil engineering and project management consultancy, originally founded in 1989. It has been planning, designing, managing and delivering innovative land development projects in the Greater Sydney region for over 35 years.

As a multidisciplinary consultant, it provides land developers and government clients with a range of services from strategic engineering and planning advice to project management and civil engineering design. J. Wyndham Prince also offers specialist services in roads and traffic infrastructure, storm water and environment.

For more information

To find out more about how you can create better designs faster with the 12d Model solution for civil engineering design, visit www.12d.com.



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The Challenge

J. Wyndham Prince was involved in a number of subdivisions, where the lot numbers seemed to always get larger, with one being an 1800 lot subdivision. There were increasing numbers of kerb returns and roads. For each of these, a designer would have to generate their own kerb return strings and apply them for every individual instance.

"The workflow was essentially that the users would have to generate their own kerb return strings, run the Apply Many on each of those kerb return strings as well as the roads, build a surface, set up the chains, and plot out the PPFs," explains David Healy, Engineer, J. Wyndham Prince.

The model setup was redundant and tedious for the team. They wanted to find something to lessen the burden of this repetitive work, so they could spend more time designing rather than setting up models.

"The main problem we have as designers is the initial setup process. Defining kerb returns, applying the MTFs, it takes a lot of time, it's boring and it's tedious and designers don't like doing it. It's incredibly inefficient and time-wasting for J. Wyndham Prince. For example, one project had 109 roads and 426 kerb returns that had to be done one at a time. It's not the most fun day," David says.

"Thanks to the macro, the designers can remain more focused, concentrating on the design itself rather than the setup."

David Healy
Engineer, J. Wyndham Prince

The Solution

David and his colleagues created a macro in 12d Model that could automate the lengthy process of doing kerb returns manually. The initial macro was fairly simple, involving kerb returns and plotting. Over a five-year period they continued to refine and enhance it, adding extra functionality, including snippets, and global parameters.

"We worked out that we could hook those snippets up to the project attributes and we took advantage of that to take it to another level. The workflow now enables us to go from only graded centrelines to a built model complete with chains, plot PPFs, special chainages, etc. in 20 minutes on average," David says.

The innovative tool has saved "massive" amounts of hours of work and frustration. One recent project involved 109 roads and 426 curb returns. David estimates it would

have taken about 122 hours to set up, but with the macro it only took about two hours - approximately a 98% reduction in setup time.

"Designers are no longer getting bored. You can imagine after doing 50 or 60 kerb returns manually they start to lose interest. Thanks to the macro, the designers can remain more focused, concentrating on the design itself rather than the setup. One designer had spent days doing 200 kerb returns manually on a project, before we released the tool." David says.

The time saved means that J. Wyndham Prince can also work on more client projects, deliver them earlier, and then work on another area of a project rather than having to wait for the first one to finish. "As an example, using these tools we were able to

prepare a set of plans for an 1800 lot residential subdivision Development Application within 12 weeks including stormwater design," David says.

The macro works so seamlessly that most people at J. Wyndham Prince now "take it for granted."

"They just assume that it's part of the package and probably don't understand the hours that have gone into building it. They just essentially press a few buttons and get the design done. And then they can concentrate on the rest of the project," David says.

Outcomes

Huge time savings

The 12d Model macro has cut the design set up time by 98%.

Improved staff focus & productivity

Thanks to the macro, designers are able to stay focused on design, not on tedious and repetitive work.

Increased client satisfaction

J. Wyndham Prince can now work on more client projects, and deliver early, due to the time saved.



"We designed the macro exactly how we want it to work. We know the ins and outs of it and what we can do to make it better or change things. So it fits our workflow perfectly."

David Healy
Engineer, J. Wyndham Prince

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