assess; challenge; deliver.

What your civil consultant should be doing before you sign off on the design

Most civil engagements are scoped to deliver compliant documentation. That is the baseline. The question worth asking is what a proactive civil consultant should be doing beyond it, and what it costs when they are not.

Throughout a project, the right civil consultant is asking questions that sit outside the brief: What has been assumed that should be tested? Is there a better way to achieve the desired outcome? What do our recommendations mean for other disciplines, the construction program, and the end user?

The following examples are drawn from real projects. Details have been anonymised to protect client and project identity.

The limits of responding to the brief

A consultant who responds only to what is asked can deliver a compliant outcome. What they cannot deliver is an understanding of the risks and savings that were never surfaced in the first place.

A civil expert should critically assess a project at every stage: checking whether earlier design decisions still hold against current objectives, standards, and site conditions. They should be identifying constraints early, before design is locked in and changes become expensive. Above all, they should be protecting the project in terms of timeline, cost, and the experience of end users once the development is operational.

When consultants operate in this way, they reduce the likelihood of costly surprises during the development application process or on site. When they do not, the client carries the risk.

Case study A: finding $150k in a construction budget

The project involved an upgrade of an industrial development. The ptc. civil team was engaged during the construction stage to progress drawings to "construction" status.

During the proposal stage, while reviewing the existing documentation, our team identified design issues requiring discussion with the client. These included the construction of a pipe requiring deep excavation adjacent to a substation and a large tree. The most significant concern, however, was a retaining wall positioned next to a heavy vehicle access point. A safety barrier would be required to prevent vehicles from running off the roadway and over the vertical drop at the wall.

> **"The key insight: compliance wasn't enough. The development required a stormwater strategy designed around project objectives (Green Star certification, institutional leadership) rather than minimum regulatory standards."**

As the team progressed through the construction documentation, our civil experts identified an alternative. The retaining wall could be removed and replaced with a vegetated landscape batter, achieved through an adjustment to the existing design.

The advantages extended beyond the $150k saving in construction cost directly related to the retaining wall. The batter removed the need for a safety barrier entirely. In the event of an incident, a vehicle travelling down a vegetated batter is a significantly better outcome than impact with a retaining wall. The landscape option would also require only standard maintenance consistent with the rest of the site, compared with a retaining wall that could require repair or replacement if struck by a vehicle.

Our approach in these situations

is to present both options with a clear assessment of the trade-offs, so the client can make a decision with full visibility of the cost, risk and maintenance implications of each. In this case, the client chose to maintain the original retaining wall design, and that remains a valid outcome.

"We believe the best thing we can offer a client is an informed choice: keep what was initially planned or innovate. We don't always know what is happening across the full project, what stakeholder commitments have been made. The client can balance our advice against other project priorities and select the most suitable path."

Stephen Naughton, Director at **ptc.**

Case study B: 80 additional spaces without a new car park

A proposal request came to us with a clear brief: design a new car park for a health facility, requiring the construction of two new retaining walls. An additional building was proposed on the site, and the increased parking demand needed to be accommodated.

Our approach to parking briefs varies depending on the project. On some developments, the first question is whether the parking requirement in the brief is right at all. For a data centre we worked on near a public transport node, a traffic assessment demonstrated that actual demand was well below the DCP rate, and the client was able to reduce the number of spaces provided significantly. You can read

more about that project on our blog.

For the health facility in question, the parking demand was genuine, and the additional spaces were needed. What our civil consultants identified was that the concept design civil layout, while feasible, was more costly than necessary.

By adjusting the layout of the existing car park rather than constructing a new one, our team determined that the required spaces could be accommodated within the existing footprint. The revised layout created approximately 80 additional spaces, removing the need for the new car park and its associated retaining walls entirely.

The project has not yet progressed to subsequent phases, and a final decision has not been made. The client now has a lower cost alternative to evaluate before committing to construction.

The cross-discipline perspective

Civil consultants who focus exclusively on their own scope miss risks and savings that sit just outside it. They also miss opportunities to flag issues that, if left unaddressed, will create problems for other parts of the team. A genuinely proactive engagement means looking across discipline boundaries.

On any project, a civil expert should be asking questions such as:

- Can the position of a substation be adjusted to improve sight lines for the architects or to achieve a more efficient road layout, while still meeting electrical requirements?
- Can drainage be designed to minimise conflict with other services and reduce day-to-day operational issues?
- Can stormwater solutions be integrated with landscaping and contribute to the market value of the development?

These are not questions that sit outside the civil scope. They are the questions that distinguish a consultant who delivers documents from one who helps deliver outcomes. An ownership mindset, where the civil team buys into the client's goals is required to achieve results that are beyond standard. It also generates genuine collaboration across disciplines and protects the client's interests at every stage.

When to engage a civil consultant

A civil consultant can add value from due diligence through to construction. What changes is the degree to which findings can be acted on without disrupting other parts of the project.

Early civil input, at the feasibility or pre-DA stage, identifies constraints such as flooding, drainage, utilities, soil conditions, access limitations, and planning requirements before significant design commitments have been made. At this stage, the cost of addressing an issue is at its lowest and the options available to the client are at their greatest.

Later in the process, as Case Study A demonstrates, there is still room to identify savings and challenge design assumptions. But the window for change narrows as design is progressed and other disciplines build on it. The earlier a civil consultant is engaged with a genuine brief to think critically, the more value they can contribute.

Get strategic civil advice on your next project

Our civil team is ready to review your project and identify where risks and savings opportunities may exist.

Whether you are at feasibility stage or progressing through design, Stephen Naughton and the **ptc.** civil team can provide a targeted assessment of your options.

talk to Stephen