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Alliance Projects as a Growth Opportunity for Young Engineering Geologists

Lauren Foote

WSP Limited, Nelson, New Zealand

lauren.foote@wsp.com

1. Introduction

Within New Zealand there have been many larger-scale infrastructure projects that require considerable input from Engineering Geologists. In order to contribute to multiple projects at the same time, it is common for different organisations to pool their resources and come together to work collaboratively to achieve the required Engineering Geological outcomes. This commonly occurs as part of an alliance delivery model ("alliance") where clients, contractors, and designers work together to achieve the end goal (Ibrahim et al. 2016). Recent examples of alliances are the Stronger Christchurch Infrastructure Rebuild (SCIRT, from 2011 to 2017), North Canterbury Transport Infrastructure Rebuild (NCTIR, from 2016 to 2020), and the Northern Corridor project (from 2024 and ongoing). As a Young Engineering Geologist, involvement with projects of this nature provides a great opportunity for professional development; however, it is not without challenges. This article describes some of the advantages and challenges of working within alliance projects based on the author's own experiences.

2. Advantages of Alliance Projects for Young Engineering Geologists

Advice commonly given to those in the early stages of their career is to say "yes" to every opportunity that comes your way, and the chance to be involved with an alliance project is certainly one of those opportunities. Advantages are discussed below.

New skills: within a single alliance project, there can be multiple elements which require engineering geological input, such as building siting and foundations, roading, tunnels, utilities and many more. As a Young Engineering Geologist, this provides exposure to new tasks and the opportunity to learn new skills. These will be wide ranging and commonly include regional scale mapping, soil and rock logging, different analysis techniques and construction supervision.

Increased confidence through repetition: due to the scale of alliance projects, there is often a need to complete the same tasks many times across the site. Whilst this repetition can be viewed as tedious, it provides a great opportunity to refine your skills and increase confidence. Even when a task appears monotonous, there are always new engineering geological challenges to be solved. A great example of this is the variability you can encounter between two nearby boreholes, proving that it is important to keep your eyes open to identifying change in ground conditions where it may not be expected.

Exposure to different viewpoints: you will work with other geo-professionals with widely varying backgrounds, who will have differing viewpoints that provide the opportunity to challenge your knowledge and technical understanding. This is not just a top-down process, and there are opportunities to share knowledge across all levels of experience.

Additionally, there are opportunities to work with other disciplines such as planners, structural engineers, and construction managers, gaining an improved understanding of how geology fits into the bigger picture of a project. For example, the level of detail required from a single borehole can vary depending on its purpose and the project outcomes. A borehole could be used to identify the depth to rock for pile bearing (broad, high-level data required) or could be required to identify fault location and displacements (detailed logging is important). This context is important as it guides the required level of information and, therefore, how you might go about locating and logging the borehole.

Professional networking: working on an alliance project will provide exposure to new people and an opportunity to grow your professional network. The need for a collaborative approach to these projects builds a close working relationship between consultants, contractors, and clients. As a result, future projects may come your way, as we all prefer to work with people that we already know and trust. Further, you will find that the Engineering Geology community is small, so there is a good chance that the friends you make on your first alliance project will cross paths with you over the course of your career.

Insights to career opportunities: Working with others on the project, you will learn more about the variety of roles that Engineering Geologists can be involved with within consulting, laboratories, government agencies, research entities, and construction companies. This provides a

chance to learn about the different roles, their benefits and challenges in each type of organisation, and may guide your future career path and goals.

3. Challenges of Alliance Projects for Young Engineering Geologists

As a Young Engineering Geologist, starting on an alliance project may be daunting with day-to-day operations on the project different to what your prior career experiences may include. Entering the project with an open mind will set you up for success and allow you to take on the challenges that these projects present. Some of which are discussed below.

Travel and time away from home: as an Engineering Geologist, one of the core tasks of any project is the initial site mapping and investigations. These works are commonly required outside of the major urban centres, requiring time away from home. While this can be exciting initially, many will find the change in routine tiring. It can be difficult to separate work and rest time while away from home, so having key activities to help mentally signal the end of your working day (maybe doing your timesheet or going out for a meal) can help set some boundaries.

Long working days: site works typically require longer working days, and being outside in all weather conditions can be exhausting. Effective rostering of both site and office tasks can help minimise the effects of fatigue and complacency.

Loss of your usual support network: moving into a different work environment, such as a site-based role or an alliance office, can separate you from your usual support network. You might be the only representative from your home organisation, which can be as daunting as starting a whole new job. It's important to connect with the leaders within the alliance to make sure that you have the support required to complete your role effectively, and it's also useful to have regular catch ups with your support network at your home organisation.

Differing viewpoints: while already mentioned as being an advantage, learning to work with new people and navigating their different ways of doing things can be draining. Approaching the project with curiosity to learn new things and an open mind will help you stay positive.

4. Conclusion

Overall, the advantages vastly outweigh the challenges that come with working on alliance projects. The Alliance contracting environment provides a valuable and rewarding experience that all Young Engineering Geologists should consider being involved with.

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References

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