



Dr. Pramod Thakur

Dr. Pramod Thakur is a Registered Professional Engineer of Queensland (RPEQ) and Chartered Professional Engineer (CPEng) with over 15 years of experience in the field of geotechnical engineering, predominantly on civil infrastructure projects. He has been involved in a wide range of multi-disciplinary projects for clients such as Transport and Main Roads (TMR) Queensland, Local Governments (Councils), New Zealand Transport Agency, Wellington Water and GHD internal clients. His primary skills are in geotechnical investigation, design, construction support, project management, and business development. He has specialized expertise in shallow foundation design, deep foundation design (driven and bored piles, sheet pile, micro pile etc.), soil nail and anchor design, slope stability analysis and design (embankments, cuts, natural slopes, slope failures), retaining structures design (RSS wall, gravity retaining wall, piled wall etc.), ground improvement (remove and replace, surcharging, wick drains, soil cement mixing, stone column etc.), liquefaction potential analysis and mitigation measure design, numerical modelling. He is an experienced user of commercial geotechnical software such as: SLOPE/W, PLAXIS, WALLAP, FLAC, CIRCLY, GRLWEAP, PIGLET, LPILE, RocLab, PHASE2, DIPS, SLIDE, gINT etc.

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GROUND IMPROVEMENT WORKS FOR ROAD CONSTRUCTION IN QUEENSLAND AUSTRALIA

Abstract: Ground improvement works are an important aspect of a road infrastructure design and construction. If appropriate methodology and technology are not adopted, construction costs and duration can increase significantly. The presentation describes about the methodologies adopted to improve ground conditions for two road construction projects in Queensland, Australia. One project used the Platypus Anchor system to improve factors of safety in global stability of a road embankment while the second used Rapid Impact Compaction to compact landfill material to reduce long-term compressibility. Various challenges experienced during the construction of these projects together with methodology to overcome the issues will be discussed.

Keywords: *Ground Improvement, Rapid Impact Compaction, Global Stability, Compressibility*