

A case history of a coastal land reclamation project

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Rapid industrial and commercial expansion in recent years have created the need for more land. One of the options to create more land is to reclaim coastal land. This paper presents a case history of a coastal land reclamation project where the site was partly on landfill and partly of soft tidal land. The landfill consists of variety of materials inclusive of domestic refuse, construction debris, organic substance etc. Subsoil at the site mainly composed of very soft clay layer overlying firm silty clay or medium dense silty sand layers. Hard or very dense soil layer was encountered at 40 to 50 m below the seabed. Potential problem of long term consolidation settlement of the soft compressible soil was expected. Biodegradation of the landfill resulting unexpected ground settlement was also a concern. Ground treatments were carried out. Surcharge method with and without vertical drains were used to treat the soft clay layer depending on time available for treatment. Dynamic compaction method was adopted to treat the landfill. Geotechnical instruments were installed to monitor the subsoil behaviour. Settlement monitoring results are presented in this paper.
