

<b>TSC Category</b>	Discipline Engineering Specialisation					
<b>TSC</b>	Geotechnical Engineering Management					
<b>TSC Description</b>	Manage the design, technical specification, selection, modification and troubleshooting of geotechnical equipment, structures and systems to provide geotechnical engineering discipline support to construction, maintenance and project teams					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
				<b>EGS-EPM-4062-1.1</b>	<b>EGS-EPM-5062-1.1</b>	<b>EGS-EPM-6062-1.1</b>
				Interpret designs, technical specifications, modification designs, constructability methods, and maintenance procedures to provide geotechnical engineering support to construction, maintenance and project teams	Enable the development and implementation of designs, technical specifications, modification designs, constructability methods, and maintenance procedures to manage geotechnical engineering support to construction, maintenance and project teams	Evaluate designs, technical specifications, modification designs, constructability methods, and maintenance procedures to drive high standards of geotechnical engineering support to construction, maintenance and project teams
<b>Knowledge</b>				<ul style="list-style-type: none"> <li>Local and international geotechnical engineering standards and regulations</li> <li>Geotechnical, civil and structural engineering principles and concepts</li> <li>Geotechnical drawings, site plans and maps</li> <li>Principles of geotechnical investigations and monitoring</li> <li>Principles of geotechnical constitutive modelling</li> <li>Principles of ground engineering and ground improvement</li> <li>Pile foundation and earth retaining structures principles and concepts</li> <li>Building and damage impact assessment</li> <li>Geotechnical engineering technology</li> <li>Principles of sustainability in geotechnical engineering</li> </ul>	<ul style="list-style-type: none"> <li>Local and international geotechnical engineering standards and regulations</li> <li>Geotechnical design review principles</li> <li>Geophysical methods and geotechnical analysis and monitoring methods</li> <li>Advanced ground improvement principles and concepts</li> <li>Analytical and numerical methods in foundation engineering</li> <li>Principles of pile foundation design, problems and impact</li> <li>Principles of underground space, excavation methods and support systems</li> <li>Construction equipment and methods</li> <li>Principles of construction project management</li> </ul>	<ul style="list-style-type: none"> <li>Local and international geotechnical engineering standards and regulations</li> <li>Geotechnical construction and maintenance strategies</li> <li>Geotechnical design and modification practices</li> <li>Principles of project quality management</li> <li>Principles of environmental planning</li> <li>Concepts of hazard identification and evaluation</li> <li>Principles of robotics technology and application</li> <li>Industry best practices in civil and structural engineering</li> </ul>

					<ul style="list-style-type: none"> <li>Principles of hazard and environmental risk assessment</li> </ul>	
<b>Abilities</b>				<ul style="list-style-type: none"> <li>Select and apply appropriate geotechnical standards and regulations</li> <li>Analyse geotechnical designs including plans, drawings and specifications</li> <li>Validate site sampling and in-situ testing</li> <li>Interpret site features and geotechnical conditions</li> <li>Analyse soil behaviours, soil mechanics and earth pressure</li> <li>Select excavation methods, ground improvement techniques, and field evaluation and specifications</li> <li>Design rigid and flexible earth retaining structures and deep supported excavations</li> <li>Apply construction methodologies and technologies</li> <li>Incorporate green practices to ensure sustainability in geotechnical works for pollution control, and energy, waste and noise management</li> </ul>	<ul style="list-style-type: none"> <li>Validate compliance of geotechnical works with legislative requirements and safety standards</li> <li>Review, validate or re-validate designs for geotechnical works</li> <li>Recommend site sampling and testing equipment and materials, and validate results</li> <li>Validate site features and geotechnical conditions</li> <li>Recommend appropriate methods and techniques for ground improvement</li> <li>Recommend appropriate methods and techniques for excavation and trenches</li> <li>Provide engineering support for selection of suitable construction methods and technologies depending on the site condition, time and cost</li> <li>Validate design and construction of geotechnical works against environmental risk and hazards</li> <li>Manage the development and implementation of organisational safe working procedures</li> <li>Provide discipline engineering support for engineering, construction and maintenance of geotechnical works</li> </ul>	<ul style="list-style-type: none"> <li>Set organisational safety standards for geotechnical works</li> <li>Endorse geotechnical designs including plans, drawings and specifications</li> <li>Review and endorse designs and technology selection for geotechnical works</li> <li>Provide expertise to ensure adherence to safety regulations and mitigation of hazards associated with geotechnical works</li> <li>Strategise planning processes, policies and design methods to minimise environmental issues and problems</li> <li>Review and endorse quality of geotechnical works</li> <li>Drive adoption of geotechnical engineering technology and robotics in the organisation based on industry best practices</li> <li>Review and endorse the organisational safe working procedures</li> </ul>