

**SKILLS FRAMEWORK FOR LANDSCAPE  
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE**

<b>TSC Category</b>	Design					
<b>TSC</b>	Building Information Modelling Application					
<b>TSC Description</b>	Use Building Information Modelling (BIM) software to make design, engineering, project and operational information accurate, accessible and actionable for engineering projects					
<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>LNS-TEM-3027-1.1</b>	<b>LNS-TEM-4027-1.1</b>	<b>LNS-TEM-5027-1.1</b>	
			Apply Building Information Modelling (BIM) across engineering project lifecycle	Operate individual Building Information Modelling (BIM) modules during engineering project	Drive enhanced project outcomes through integrating project phases to enhance operational excellence and effectiveness	
<b>Knowledge</b>			<ul style="list-style-type: none"> <li>Principles of BIM</li> <li>Value proposition of BIM</li> <li>Requirements of BIM</li> <li>Definition of BIM</li> <li>Application of BIM</li> <li>Technology used in BIM</li> <li>BIM design process</li> <li>Documentation required for BIM</li> <li>Databases and information systems required for BIM</li> </ul>	<ul style="list-style-type: none"> <li>Components of BIM Execution Plan</li> <li>Primary uses of BIM</li> <li>Secondary uses of BIM</li> <li>BIM standards and implementation strategies</li> <li>BIM modelling for Architecture, Structure and Mechanical, Electrical and Plumbing (MEP)</li> </ul>	<ul style="list-style-type: none"> <li>BIM Management for Projects</li> <li>BIM Management for Organisation</li> <li>BIM e-submission system and regulations</li> <li>BIM Legal and Contractual Documents</li> </ul>	
<b>Abilities</b>			<ul style="list-style-type: none"> <li>Identify BIM application and development in industry</li> <li>Identify BIM's interoperability with other analysis tools</li> <li>Maintain databases and information systems for BIM</li> <li>Develop models containing building elements and information</li> <li>Integrate the design of active systems in reference models</li> <li>Operate BIM applications and software</li> </ul>	<ul style="list-style-type: none"> <li>Identify high value BIM uses during the project planning, design, construction and operational phases</li> <li>Articulate value of implementing BIM in the building life-cycle</li> <li>Develop the BIM execution plan</li> <li>Propose how various BIM tools could be used in a BIM project</li> <li>Develop the technological infrastructure to support the implementation</li> </ul>	<ul style="list-style-type: none"> <li>Establish purpose of BIM implementation</li> <li>Establish BIM use characteristics</li> <li>Review BIM execution plan</li> <li>Manage integration of BIM with other technologies</li> <li>Review proposed designs and implementation strategies</li> <li>Manage BIM e-submission procedure</li> <li>Refine existing BIM plan, work-flow or system</li> </ul>	

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			<ul style="list-style-type: none"> <li>• Interpret data within BIM outputs</li> <li>• Analyse the design performance and compliance of the relevant systems</li> <li>• Document the processes using templates from relevant resources</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnose interoperability issues during various BIM project phases</li> <li>• Review BIM deliverables in adherence to legal and contractual requirements</li> <li>• Review accuracy of documentation of BIM processes</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage synergies to drive efficiencies in project execution</li> <li>• Endorse BIM deliverables in adherence to legal and contractual requirements</li> </ul>	
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