

# Strategic Local Government Asset Assessment Project (SLGAAP)

## Key Terms

### Types of SLGAAP assessments

TYPE	ASSET ASSESSMENT DETAIL
<b>Tier 1</b>	<p>Tier 1 bridge assessments are performed using the reference vehicle technique, comparing the worst load effects of an application vehicle on a given structure compared to a reference vehicle which would be considered suitable to travel over the structure. Key inputs to the assessment are:</p> <ul style="list-style-type: none"> <li>• Span Length</li> <li>• Span Continuity</li> <li>• Design Vehicle or known Acceptable Loading Configuration</li> <li>• Level 2 Structure Condition (includes design drawings fully defining all geometry and reinforcing, any material specifications used that define required material performance and as-built records – whether as-built drawings if available).</li> </ul>
<b>Tier 1/2D</b>	<p>Using either an in-lane design vehicle or a known historic in lane vehicle, determine the equivalent rating for straddling lane vehicles using a grillage analysis based on measured section properties. Used in situations where the internal design details are not known and an accurate straddling lane reference vehicle is needed to be produced from existing in lane design/known vehicles.</p>
<b>Tier 2</b>	<p>A Tier 2 bridge assessment focuses on using structural engineering principles to identify the theoretical maximum load effects the structure can withstand as governed by the material and configuration (capacity assessment). Two-dimensional analysis techniques such as a grillage analysis or a line model analysis using girder distribution factors are typically used to determine the theoretical loads from the application vehicle load case. The results of the loading analysis are then compared to a theoretical estimate of the structural capacity of each member of the bridge.</p> <p>Key inputs to the assessment are:</p> <ul style="list-style-type: none"> <li>• As-Built Drawings (if available),</li> <li>• Component Geometries and Material Properties to construct analytical models,</li> <li>• Site Measurements (if necessary),</li> <li>• Assessment Vehicles, and Level 2 Structure Condition.</li> </ul>
<b>Tier 3</b>	<p>Assessment or testing activities that employ methodologies other than typically accommodated in the Australian Standards, including potential benefits over and above a Tier 2 asset assessment.</p>
<b>Asset Improvement Report (AIR)</b>	<p>Where assets do not have the capacity to support the desired heavy vehicle movements on the network an Asset Improvement Report will outline the actions required to improve the asset capacity; repair or renewal.</p>

### Types of Asset/ Bridge Inspection Reports

<b>Level 1</b>	Routine Maintenance Inspection (Level 1) - a visual inspection to check the overall serviceability of the structure and identify maintenance issues.
<b>Level 2</b>	Detailed component Condition Inspection (Level 2) - consists of a detailed report outlining the condition state of every structural component.
<b>Level 3</b>	Detailed Structural Engineering and Material Inspection (Level 3) - analytical analysis of a structure with suitable defect identification and investigation.