**SPECTS Vehicles Reduce Wear and Tear on the Road = Less Maintenance**

**Axle Loads**

SPECTS vehicles have similar and, in some cases, lower axle loads as general access vehicles currently travelling on local roads.

**SPECTS Vehicle**

- 17.73 3-axle rigid truck, 3-axle dog trailer
- 18.07 PBS 3-axle rigid truck, 4-axe dog trailer

**Swept Path**

12.5m Swept Path Comparison:
- 17.73m PBS 3-axle rigid truck, 3-axe dog trailer
- 18.07 PBS 3-axle rigid truck, 4-axe dog trailer

Innermost Path Maximum Difference = 0.33m

Outermost Path Maximum Difference = 0.08m

**Garbage Truck**

- 6.5 tonnes if a complying steer axle as defined in Section 3 of the Heavy Vehicle (Mass, Dimension and Loading) National Regulation, otherwise 6.0 tonnes.
- 17.0 tonnes at Concessional Mass Limits or 16.5 tonnes at General Mass Limits.
- General access (other than controlled access buses exceeding 12.5m long) under the NSW and Victoria Class 3 Bus Mass Limit Exemption (Notice) 2014 up to 18.0 tonnes.

**Bus**

Higher axle loads are more likely to contribute to pavement rutting and catastrophic pavement failure.

Higher axle loads are more likely to contribute to pavement rutting and catastrophic pavement failure.

Scale 1:250

- Innermost path of vehicle
- Outermost path of vehicle

12.5m radius

0.33m

0.08m

- 17.73 3-axle rigid truck, 3-axe dog trailer
- 18.07 3-axle rigid truck, 4-axe dog trailer

Innermost Path Maximum Difference = 0.33m
Outermost Path Maximum Difference = 0.08m
### General Access
**Non SPECTS Vehicle**

Prescriptive 3-axle rigid truck with 3-axle dog trailer

**SPECTS Vehicle**

PBS 3-axle rigid truck with 4-axle dog trailer

<table>
<thead>
<tr>
<th>Pavement wear for one return trip</th>
<th>Pavement wear for construction task</th>
<th>Pavement wear for one return trip</th>
<th>Pavement wear for construction task</th>
<th>% Reduction in pavement wear for construction task</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESA (Overall Pavement)</td>
<td>7.12</td>
<td>8,657,582</td>
<td>7.7</td>
<td>7,499,769</td>
</tr>
<tr>
<td>SAR 5 (Asphalt)</td>
<td>8.27</td>
<td>9,988,805</td>
<td>9.11</td>
<td>8,811,926</td>
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<tr>
<td>SAR 7 (Mixed Materials Subgrade)</td>
<td>11.18</td>
<td>13,357,379</td>
<td>12.74</td>
<td>12,190,033</td>
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<tr>
<td>SAR 12 (Concrete)</td>
<td>24.34</td>
<td>28,591,203</td>
<td>29.88</td>
<td>28,140,653</td>
</tr>
</tbody>
</table>

Calculations for return trip are based on a vehicle performing one laden trip and one unladen trip.

Calculations for construction task are based on a vehicle performing laden and unladen trips for the transportation of materials (asphalt, bricks, crushed rock product and stone) for the construction of 207,650 houses.

ESA and SAR values were calculated using section 7.6.2 of the Austroads Pavement Design Guide Part 2 (2012).

ESA and SAR values provided in this fact sheet are for informational purposes only.