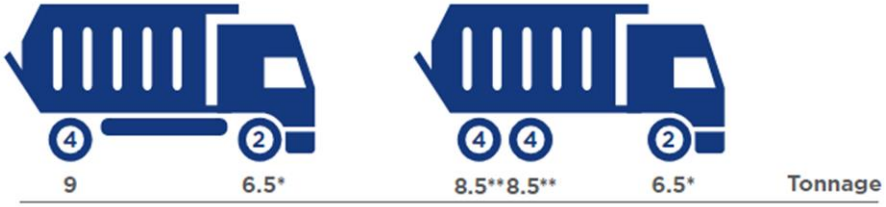
SPECTS Vehicles Reduce Wear and Tear on the Road = Less Maintenance

Axle Loads

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

SPECTS Vehicle

Garbage Truck



Bus***

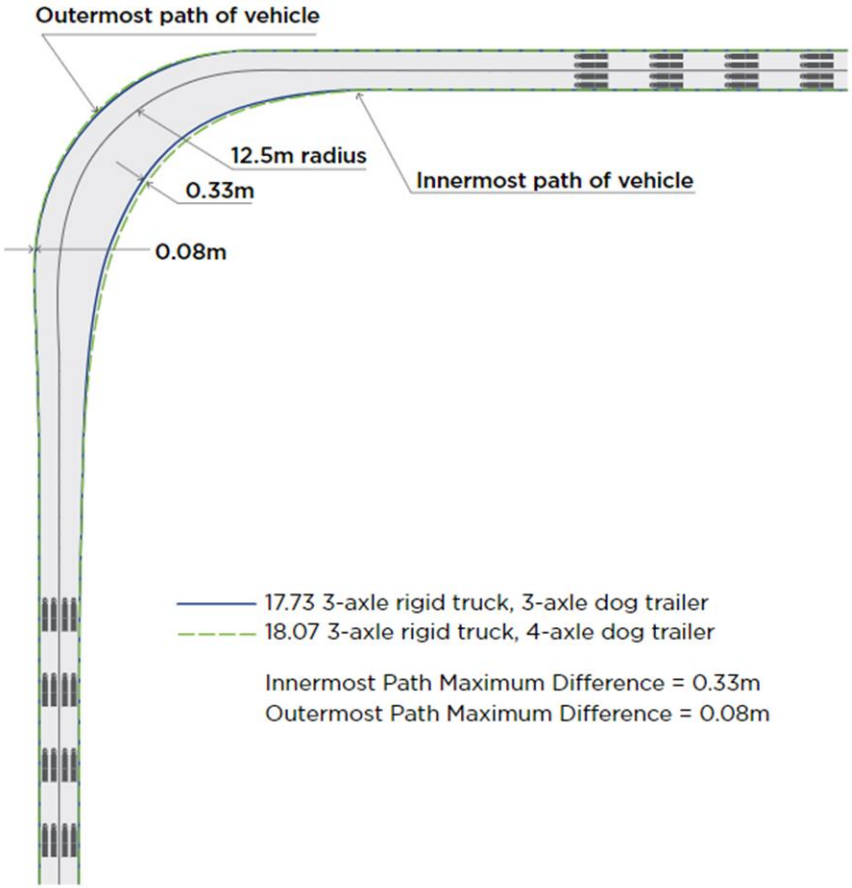
Higher axle loads are more likely to contribute to pavement rutting and catastrophic pavement failure

* 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.

Swept Path

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

Scale 1:250



	General Access Non SPECTS Vehicle		SPECTS Vehicle		
	Prescriptive 3-axle rigid truck with 3-axle dog trailer 		PBS 3-axle rigid truck with 4-axle dog trailer 		
	Pavement wear for one return trip	**Pavement wear for construction task**	**Pavement wear for one return trip**	**Pavement wear for construction task**	**% Reduction in pavement wear for construction task**
ESA (Overall Pavement)	7.12	8,657,582	7.7	7,499,769	13.37% reduction
SAR 5 (Asphalt)	8.27	9,988,805	9.11	8,811,926	11.78% reduction
SAR 7 (Mixed Materials Subgrade)	11.18	13,357,379	12.74	12,190,033	8.74% reduction
SAR 12 (Concrete)	24.34	28,591,203	29.88	28,140,653	1.58% reduction

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.