

# STATE PLANNING POLICY 5.4: ROAD AND RAIL NOISE





# REVIEW BACKGROUND

- **July 2015-** The WAPC resolved to review SPP 5.4
- **March 2016-** The SPP 5.4 Policy Options and Recommendations Report was prepared and endorsed by the WAPC
- **September 2016 -** SPP5.4 Steering group endorsement (DG's of Planning, Transport, Environment Regulation and State Development.)
- **December 2016 -** WAPC endorsed draft policy for public consultation
- **June 2017 to August 2017 -** Ministerial and Cabinet approval
- **September 2017 –** Release for 90 days advertising



# REVIEW SCOPE

## OBJECTIVES

Simplify and reduce complexity

Enhance consistency and quality of implementation

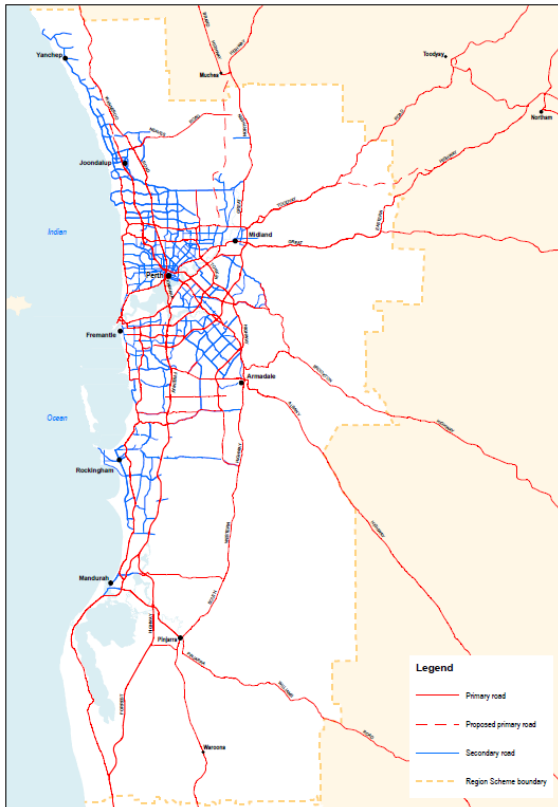
Improve interface between transport corridors and sensitive land uses

Identify and address policy gaps

## POLICY ELEMENT

- Policy status
- Policy application and implementation
- Trigger mechanisms
- Noise Criteria
- Noise metrics
- Noise Management
- Mapping
- Building siting and design
- Vibration

# KEY CHANGES- MAPPING

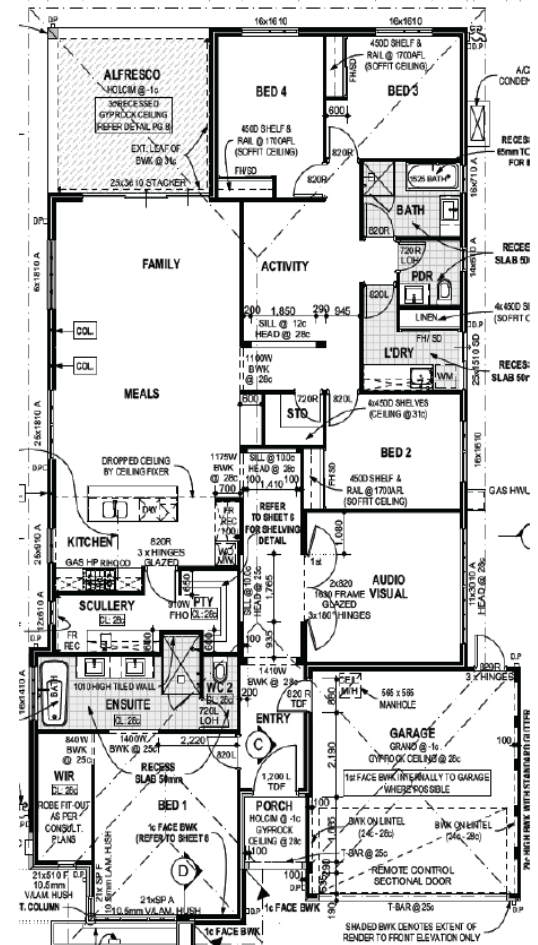


Transport corridor classification	Trigger distance	Distance measured from
<b>Primary Roads</b>		
State Roads (freeways/highways/primary distributors)	300 metres	Road carriageway edge
Primary Regional Roads (red roads under region schemes)		
Freight roads (Perth and Peel regions)		
Regional freight roads		
<b>Secondary Roads</b>		
Other Regional Roads (blue roads under region schemes)	200 metres	Road carriageway edge
District Distributor A		
<b>Passenger railways</b>	60 metres	Centreline of the closest track
<b>Freight railways</b>	300 metres	Centreline of the closest track

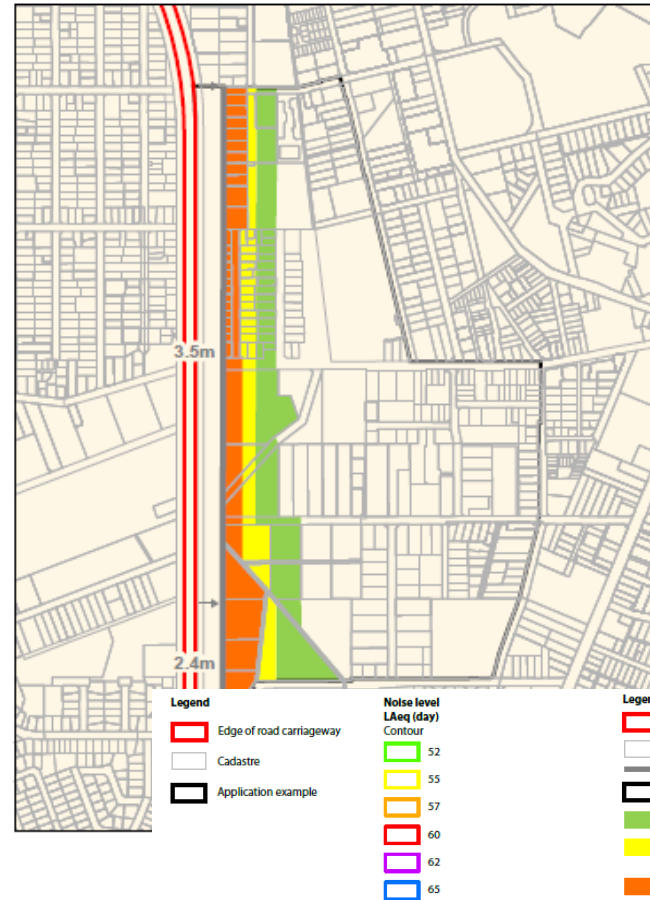
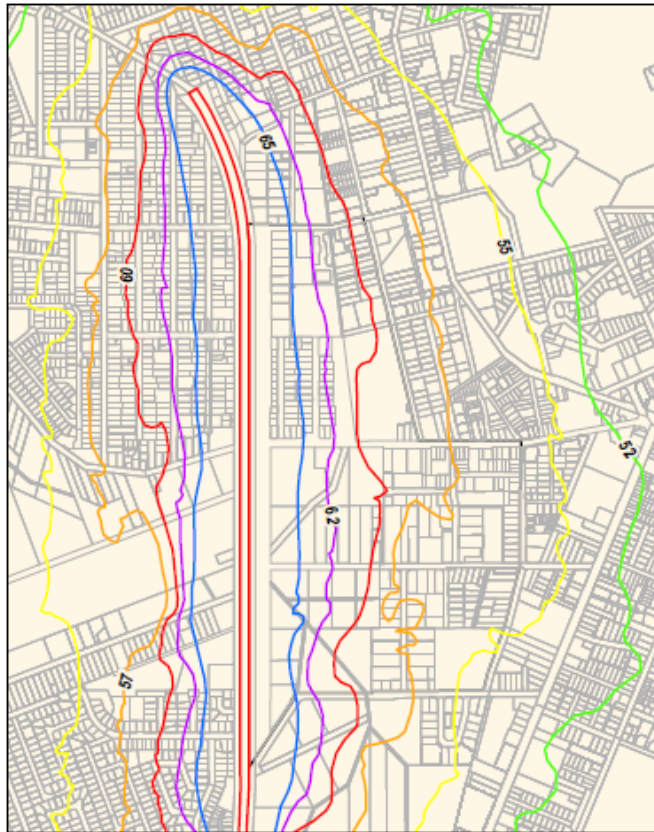


# KEY CHANGES- NOISE EXPOSURE FORECAST

- Introduction of noise exposure categories with corresponding QH treatment requirements as a deemed-to-comply option.
- Revision of the noise levels based on case testing
- No noise sensitive land use recommended within 40m of Freight development of
- Simplification of the table by removing reference to speed limits, vehicle type characteristics and heavy vehicle percentages
- Concession (4dB reduction can be applied) for existing screening development between the noise source and receiver.



# KEY CHANGES- NOISE CONTOUR MAPPING



**Figure 6:** Noise Management Plan Contour Map  
- prior to any proposed noise mitigation

**Figure 7:** Noise Management Plan Contour Map  
- showing noise mitigation measures

# OTHER IMPROVEMENTS

- Dual (target and limit) criteria replaced with a single value
- Application of noise criteria to infrastructure upgrade proposals
- New or upgrade infrastructure proposals to treat the second floor (and more if practicable) of affected noise-sensitive development (previous policy only required ground floor).
- Enhanced guidance on the content and form of a detailed noise assessment and a noise management plan reports.
- More user friendly Noise assessment worksheet

<b>Step 1</b> Identify the relevant noise source (road or rail) from SPP 5.4 policy mapping and list in the Noise Exposure Forecast worksheet. If subject site is near multiple mapped corridors, all need to be included in the worksheet. For road vehicle per day data and % heavy vehicle mix information, visit the Main Roads Western Australia Traffic Map website: <a href="https://trp.pps.mtrroads.wa.gov.au/TrafficMap">https://trp.pps.mtrroads.wa.gov.au/TrafficMap</a> Locate the nearest site for which there is monitoring data and use the most recent vehicle per day and heavy vehicle mix information available. Round up to the nearest vehicle per day line or heavy vehicle mix line in the Noise Exposure Forecast.	Site description and summary of proposal		
<b>Step 2</b> Measure the distance from relevant noise source(s) to receiver. The distance is defined as the three dimensional distance between the edge of the nearest road cartage way or the centreline of the nearest rail tracks to either: <ul style="list-style-type: none"> <li>• if the position and extent of the noise sensitive building position can be reasonably determined, one metre outside the nearest external façade or opening to a normally occupied space; or</li> <li>• a point which reasonably represents where each future noise sensitive development could be constructed nearest the transport asset and is within three (3) metres of the lot boundary.</li> </ul> Insert measured distances into the Noise Exposure Forecast table.	1) list road/rail corridors (as mapped) and VPD/heavy vehicle mix	2) for each corridor, measure the distance to subject site/development	3) Noise Exposure Forecast noise level (dB)/ Exposure category
<b>Step 3</b> Locate the closest scenario in the Noise Exposure Forecast table (rounding up or down to the closest VPD/heavy vehicle mix). Identify the forecast noise level (dB) and corresponding exposure category in the Noise Exposure Forecast table (rounding to the nearest noise level (dB) where measured distance is between intervals) and put this into the worksheet.			
<b>Step 4</b> If the subject site is impacted upon by multiple noise sources, use the formula in table to arrive at a single noise level. Use Noise Exposure Forecast table to identify a single relevant noise exposure category and corresponding policy requirements (Noise Management Plan required, quiet house requirements or no further measures).	4) Where there are multiple road/rail noise sources: (4) Add correction if the two highest values in highlighted column (3) above are: dB equal or within 1dB of each other = +3dB; different by 2 or 3dB = +2dB; different by 4-7dB = +1dB		
<b>Step 5</b> For scenarios with multiple noise sources, add the highest noise source value (column 3) to the correction.	5) Sum of the maximum LAeq value from column 3) and the above correction		
<b>Step 6</b> If there is existing development between the subject site and the road or rail corridor (as defined), describe this in the worksheet. It is permissible to drop 4dB (approximately one noise exposure category) to account for screening effects.	6) Screening development? Drop 4dB (one Exposure Category) if desired		
<b>Step 7</b> Determine final noise level/exposure category and corresponding policy requirements in the Noise Exposure Forecast worksheet, which is to accompany your planning or development application.	7) Final noise level and Exposure Category		

Proposals	New/upgrade	Noise Criteria <sup>1</sup>			Where outdoor criteria must be met
		Outdoor		Indoor	
		Day (LAeq(Day) dB) (6 am–10 pm)	Night (LAeq(Night) dB) (10 pm–6 am)	(LAeq(Day) or LAeq(Night) dB)	
Noise sensitive land use and/or development	New noise sensitive land use and/or development within the trigger distance of an existing/proposed transport corridor	55	50	40 (living and work areas) 35 (bedrooms) Refer to Note 2	Outdoor all floors
Roads	New	55	50	NA	Outdoor first two floors (more if practicable)
	Upgrade	60 <sup>3</sup>	55 <sup>3</sup>	NA	
Railways	New	55	50	NA	Outdoor first two floors (more if practicable)
	Upgrade	60 <sup>3</sup>	55 <sup>3</sup>	NA	





# $L_{Amax}$ and Vibration

- Concerns about increased costs & the need to balance housing affordability
- No wider planning and regulatory framework/ agreement that enables control of transport noise (freight rail) at source.
- Adding an additional metric/vibration to the policy will added further complexity and have financial and time implications for policy delivery
- Concerns that transport infrastructure already emits noise in excess of  $L_{Amax}$  which present risk to government, in particularly implications on METRONET
- Adopting the  $L_{Amax}$  metric and vibration will not address the existing problem

# NEXT STEPS

- Advertising:  
12 September 2017  
to 15 December 2017
- Consider submissions:  
Engage with Technical  
Working Group
- WAPC endorsement
- Government endorsement
- Implementation & training

