



LOCAL DEVELOPMENT PLAN LOT 9106 ILLAWARRA DRIVE, EATON



LEGEND

-  1.8m High Back Fence
-  2.2m High Noise Barrier

Noise Affected Lots:

-  Upper Floor - Package A
Ground Floor - Not Mandatory
-  Upper Floor - Package B
Ground Floor - Package A

NOISE AFFECTED LOTS

Quiet house design requirements are applicable to all noise affected lots identified on this Local Development Plan. Detail of quiet house design requirements (A & B) are included as Attachment 1.

Modifications to the quiet house design requirements may be approved by the Shire where it can be demonstrated that proposed development will be provided within the acceptable level of acoustic amenity and subject to the development proposal being accompanied by a Transportation Noise Assessment undertaken by a suitably qualified professional.

Building Permit Applications for dwellings on 'noise affected lots' shall be accompanied by a written statement from the applicant demonstrating that the relevant components of the Quiet House Design requirements have been complied with in accordance with this Local Development Plan.



Approval

This LDP has been approved by the Shire of Dardanup pursuant to Sch. 2, Pt. 6, Cl. 52(1)(a) of the *Planning and Development (Local Planning Schemes) Regulations 2015*.


Signature

9/8/2017
Date

Quiet House Design Requirements

Area	Orientation to road or rail corridor	Package A	Package B
		L _{Aeq,Day} up to 60dB L _{Aeq,Night} up to 55dB	
Bedrooms	Facing	<ul style="list-style-type: none"> Walls to R_w+C_{tr} 45dB Windows and external door systems: Minimum R_w+C_{tr} 28dB (Table 6.4), total glazing area up to 40% of room floor area. [if R_w+C_{tr} 31dB: 60%] [if R_w+C_{tr} 34dB: 80%] Roof and ceiling to R_w+C_{tr} 35dB (1 layer 10mm plasterboard) Mechanical ventilation as per Section 6.3.1 	<ul style="list-style-type: none"> Walls to R_w+C_{tr} 50dB Windows and external door systems: Minimum R_w+C_{tr} 31dB (Table 6.4), total glazing area up to 40% of room floor area. [if R_w+C_{tr} 34dB: 60%] Roof and ceiling to R_w+C_{tr} 35dB (1 layer 10mm plasterboard) Mechanical ventilation as per Section 6.3.1
	Side-on	<ul style="list-style-type: none"> As above, except glazing R_w+C_{tr} values for each package may be 3dB less, or max % area increased by 20% 	
	Opposite	<ul style="list-style-type: none"> No requirements 	<ul style="list-style-type: none"> As per Package A 'Side On'
Indoor living and work areas	Facing	<ul style="list-style-type: none"> Walls to R_w+C_{tr} 45dB Windows and external door systems: Minimum R_w+C_{tr} 25dB (Table 6.4), total glazing area limited to 40% of room floor area. [if R_w+C_{tr} 28dB: 60%] [if R_w+C_{tr} 31dB: 80%] External doors other than glass doors to R_w+C_{tr} 26dB (Table 6.4) Mechanical ventilation as per Section 6.3.1 	<ul style="list-style-type: none"> Walls to R_w+C_{tr} 50dB Windows and external door systems: Minimum R_w+C_{tr} 28dB (Table 6.4), total glazing area up to 40% of room floor area. [if R_w+C_{tr} 31dB: 60%] [if R_w+C_{tr} 34dB: 80%] External doors other than glass doors to R_w+C_{tr} 26dB (Table 6.4) Mechanical ventilation as per Section 6.3.1
	Side-on	<ul style="list-style-type: none"> As above, except the glazing R_w+C_{tr} values for each package may be 3dB less, or max % area increased by 20% 	
	Opposite	<ul style="list-style-type: none"> No requirements 	<ul style="list-style-type: none"> As per Package A 'Side On'
Other indoor areas	Any	<ul style="list-style-type: none"> No requirements 	<ul style="list-style-type: none"> No requirements
Outdoor living areas	Any	<ul style="list-style-type: none"> At least one outdoor living area located on the opposite side of the building from the transport corridor and/or At least one ground level outdoor living area screened using a solid continuous fence or other structure of minimum 2 metres height above ground level 	<ul style="list-style-type: none"> At least one outdoor living area located on the opposite side of the building from the transport corridor and/or At least one ground level outdoor living area screened using a solid continuous fence or other structure of minimum 2.4 metres height above ground level

Building element	Type	R _w +C _{tr} , dB	Example constructions
External wall	Steel framed	45	<p>One row of 92mm studs at 600mm centres with –</p> <ul style="list-style-type: none"> • resilient steel channels fixed to the outside of the studs; and • 9.5mm hardboard or 9mm fibre cement sheeting or 11mm fibre cement weatherboards fixed to the outside of the channels; and • 75mm thick glass or mineral wool insulation with a density of 11kg/m³ or • 75mm thick polyester insulation with a density of 14kg/m³, positioned between the studs; and • two layers of 16mm fire-protective grade plasterboard fixed to the inside face of the studs.
			<p>One row of 92mm studs at 600mm centres with –</p> <ul style="list-style-type: none"> • resilient steel channels fixed to the outside of the studs; and • one layer of 19mm board cladding fixed to the outside of the channels; and • 6mm fibre cement sheets fixed to the inside of the channels; and • 75mm thick glass or mineral wool insulation with a density of 11 kg/m³ or • 75mm thick polyester insulation with a density of 14 kg/m³, positioned between the studs; and • two layers of 16mm fire-protective grade plasterboard fixed to the inside face of the studs.
	Single leaf masonry, brick veneer	45	• Single leaf of 150mm brick masonry with 13mm cement render on each face.
		50	<p>Single leaf of 90mm clay brick masonry with –</p> <ul style="list-style-type: none"> • a row of 70mm x 35mm timber studs or 64mm steel studs at 600mm centres; and • a cavity of 25mm between leaves; and • 75mm thick glass or mineral wool insulation with a density of 11kg/m³ or 75mm thick polyester insulation with a density of 14kg/m³ positioned between studs; and • one layer of 10mm plasterboard fixed to the inside face.
			Single leaf of 220mm brick masonry with 13mm cement render on each face.
			150mm thick unlined concrete panel.
			200mm thick concrete panel with one layer of 13mm plasterboard or 13mm cement render on each face.
	Double brick	45	Two leaves of 90mm clay brick masonry with a 20mm cavity between leaves.
		50	<p>Two leaves of 90mm clay brick masonry with –</p> <ul style="list-style-type: none"> • a 50mm cavity between leaves; and • 50mm thick glass wool insulation with a density of 11kg/m³ or 50mm thick polyester insulation with a density of 14 kg/m³ in the cavity; and • Where wall ties are required to connect leaves, the ties are of the resilient type.
	<p>Two leaves of 110mm clay brick masonry with –</p> <ul style="list-style-type: none"> • a 50mm cavity between leaves; and • 50mm thick glass wool insulation with a density of 11kg/m³ or 50mm thick polyester insulation with a density of 14 kg//m³ in the cavity. 		

Building element	Type	Airborne weighted sound reduction rating with traffic correction R_w+C_{tr} , dB	Example constructions, with airtight seals according to Section 6.3.3
Window, uPVC, aluminium or timber frame	Sliding or double hung opening	23	<ul style="list-style-type: none"> • 4mm monolithic glass
		26	<ul style="list-style-type: none"> • Single pane glazing to R_w 33dB • 6mm monolithic or laminated glass • 6mm toughened safety glass • '6-12-6' double insulated glass unit (IGU))
		29	<ul style="list-style-type: none"> • Single pane glazing to R_w 36dB • 10mm monolithic (aka float) glass • 10mm laminated or toughened safety glass • 6mm-12mm-10mm double insulating
	Fixed sash, awning or casement type opening	26	<ul style="list-style-type: none"> • 4mm monolithic glass
		31	<ul style="list-style-type: none"> • Single pane glazing to R_w 33dB • 6mm monolithic or laminated glass • 6mm toughened safety glass • '6-12-6' double insulated glass unit (IGU))
		34	<ul style="list-style-type: none"> • Single pane glazing to R_w 36dB • 10mm monolithic (a.k.a. float) glass • 10mm laminated or toughened safety glass • 6mm-12mm-10mm double insulated glass unit (IGU))
Single external door, aluminium uPVC or timber frame	Fully glazed sliding door	24	<ul style="list-style-type: none"> • 6mm monolithic or laminated • 5 or 6mm toughened safety glass
		27	<ul style="list-style-type: none"> • 10mm monolithic or laminated • 10mm toughened safety glass
	Fully glazed hinged door	28	<ul style="list-style-type: none"> • Certified R_w 31dB acoustically rated door and frame including seals • 6mm monolithic or laminated • 5 or 6mm toughened safety glass
		31	<ul style="list-style-type: none"> • Certified R_w 34dB acoustically rated door and frame including seals • 10mm monolithic or laminated • 10mm toughened safety glass
	Solid core timber frame, side hinged	26	<ul style="list-style-type: none"> • Certified R_w 28dB acoustically rated door and frame system including seals • 35mm solid core timber
		30	<ul style="list-style-type: none"> • Certified R_w 32dB acoustically rated door and frame system including seals • 40mm solid core timber without glass insert • 40mm solid core timber with not less than 6mm