LEGEND

- Local Development Plan Boundary
- Residential RMD-25
- Residential RMD-40
- Primary Frontage
- Secondary Frontage
- Footpath
- Retaining wall
- Designated garage location

Quiet House Design

- Upper Floor - Package A / Ground Floor - Not Required
- Upper Floor - Package A / Ground Floor - Package A
- Upper Floor - Package B / Ground Floor - Package A
- Upper Floor - Package B / Ground Floor - Package B

ENDORSEMENT OF MANAGER PLANNING & LAND SERVICES

SIGNATURE: .....

DATE: .....

LOCAL DEVELOPMENT PLAN No.153

Stages 13, 16 & 17 Ocean Hill Private Estate, LAKELANDS Page 1 of 5

A CP Land Project

NORTH

Scale: 1:2000 @ A3

0 20 40 60m

PLAN: CPLOH-4-005 REVISION: A
DATE: 02/09/2025 DRAWN: JP
PROJECTION: PCG 94 PLANNER: DM
DATUM: AHD CHECK: CM

cdp
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All lots encompassed by this Local Development Plan (LDP) are pursuant to Part 5 - *Medium Density Single Houses in Structure Plan Areas* (**R-MD Codes**) of City of Mandurah Local Planning Policy 1 - Residential Design Codes Policy **(LPP1)**.

Additional Estate built form provisions are 'Deemed to Comply' requirements in Residential Design Code (R-Codes) Volume 1, Single House Development, and are intended to ensure consistent built form outcomes.

All other requirements of the Local Planning Scheme and Residential Design Code (R-Codes) Volume 1 shall be satisfied in all other matters.

<table>
<tr><th colspan="3">Local Development Plan Provisions – Ocean Hill Private Estate</th></tr>
<tr><td colspan="2">1. Noise Management – Road Noise</td><td>a) To address rail noise from Mandurah Road, 'Package A' and 'Package B' – Deemed to Satisfy Construction Standards are required for ground and upper floors as identified on the LDP. Package details are provided in Appendix A.
b) Building permit applications to the City of Mandurah must demonstrate compliance with the relevant 'Deemed to Satisfy Construction Standards', including the provision of mechanical ventilation. Alternative construction methodology can be used subject to City of Mandurah approval upon advice from a suitably qualified acoustic consultant.</td></tr>
<tr><td colspan="2">R-CODES VOLUME 1 PROVISIONS FOR R25 & R40 CODED AREAS VARIED BY THIS LDP</td><td>ADDITIONAL ESTATE BUILT FORM PROVISIONS – ALL DENSITIES</td></tr>
<tr><td>1. Street setback and front fences
(R-Codes 5.1.2 & 5.2.4)</td><td rowspan="2">Refer to relevant density and development provisions under Part 5 of LPP 1 – Residential Design Codes Policy (R-MD Codes).</td><td>a) The design of dwellings for nominated corner lots must include a side return which has at least one major opening facing the direction of the Secondary street.
The side return must be articulated so to present as an extension of the front elevation and must not be obstructed by visually impermeable fencing.
b) Any Estate provided fencing/retaining on private lots must not be modified without written approval from the City of Mandurah and shall be maintained as visually permeable by landowners where applicable.</td></tr>
<tr><td>2. Setback of carports and garages, garage width and parking
(R-Codes 5.2.1, 5.2.2, 5.3.3 and 5.3.5)</td><td><u>General</u>
a) The preferred side of the lot on which the garage should be located is as designated for those lots identified on the Plan. Garages in these locations are to be built to the side boundary.
b) All other garage locations are subject to the location of infrastructure services, dedicated on-street parking bays and Estate retaining, landscaping and fencing.
c) Garages to corner lots may be exempted from the deemed-to-comply requirement of being setback at least 0.5m behind the dwelling alignment if:
i. the garage extends no more than 1.5m forward of the main dwelling alignment; and
ii. a portico, porch or veranda is provided to the Primary street dwelling façade to offset the visual impact of the garage protrusion.</td></tr>
</table>

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APPENDIX A - QUIET HOUSE PACKAGES

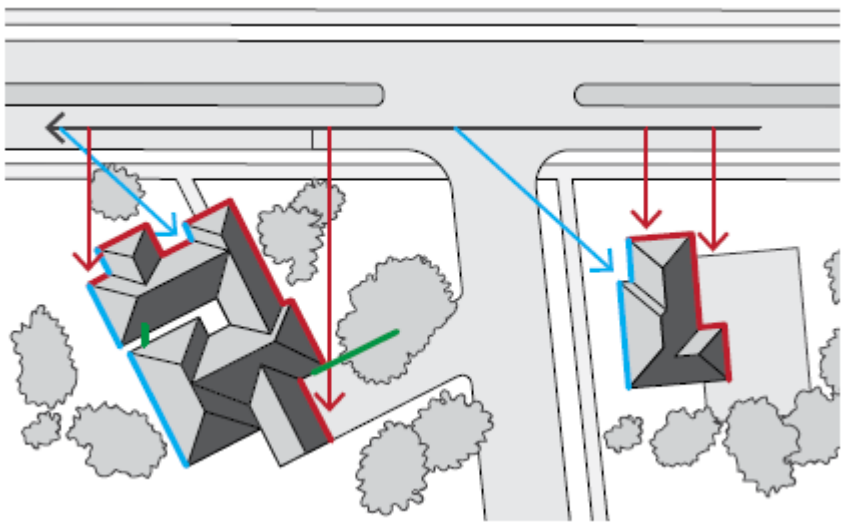
The packages and information provided on the following pages are taken from *Road and Rail Noise Guidelines* (September 2019).

Where outdoor and indoor noise levels received by a noise-sensitive land-use and/or development exceed the policy's noise target, implementation of quiet house requirements is an acceptable solution.

The quiet house packages are not the only solution to achieving acceptable internal transport noise levels. A suitably qualified acoustical engineer or consultant may also determine more tailored acoustic design requirements for buildings in a transport noise corridor by carrying out acoustic design in accordance with relevant industry standards. This includes the need to meet the relevant design targets specified in AS/NZS 2107:2016 for road traffic noise.

With regards to the packages, the following definitions are provided:

- **Facing** the transport corridor (red): Any part of a building façade is 'facing' the transport corridor if any straight line drawn perpendicular (at a 90 degree angle) to its nearest road lane or railway line intersects that part of the façade without obstruction (ignoring any fence).
- **Side-on** to transport corridor (blue): Any part of a building façade that is not 'facing' is 'side-on' to the transport corridor if any straight line, at any angle, can be drawn from it to intersect the nearest road lane or railway line without obstruction (ignoring any fence).
- **Opposite** to transport corridor (green): Neither 'side on' nor 'facing', as defined above.



Quiet House Package A

56-58 dB $L_{Aeq(Day)}$ & 51-53 dB $L_{Aeq(Night)}$

Element	Orientation	Room	
		Bedroom	Indoor Living and Work Areas
External Windows	Facing	• Up to 40% floor area ($R_w + C_{tr} \geq 28$): ○ Sliding or double hung with minimum 10mm single or 6mm-12mm-10mm double insulated glazing; ○ Sealed awning or casement windows with minimum 6mm glass. • Up to 60% floor area ($R_w + C_{tr} \geq 31$): ○ Sealed awning or casement windows with minimum 6mm glass.	• Up to 40% floor area ($R_w + C_{tr} \geq 25$): ○ Sliding or double hung with minimum 6mm single or 6mm-12mm-6mm double insulated glazing; • Up to 60% floor area ($R_w + C_{tr} \geq 28$); • Up to 80% floor area ($R_w + C_{tr} \geq 31$).
	Side On	As above, except $R_w + C_{tr}$ values may be 3 dB less or max % area increased by 20%.	
	Opposite	No specific requirements	
External Doors	Facing	• Fully glazed hinged door with certified $R_w + C_{tr} \geq 28$ rated door and frame including seals and 6mm glass.	• Doors to achieve $R_w + C_{tr} \geq 25$: ○ 35mm Solid timber core hinged door and frame system certified to R_w 28 including seals; ○ Glazed sliding door with 10mm glass and weather seals.
	Side On	As above, except $R_w + C_{tr}$ values may be 3 dB less.	
	Opposite	No specific requirements	
External Walls	All	• $R_w + C_{tr} \geq 45$: ○ Two leaves of 90mm thick clay brick masonry with minimum 20mm cavity; or ○ Single leaf of 150mm brick masonry with 13mm cement render on each face; or ○ One row of 92mm studs at 600mm centres with: ▪ Resilient steel channels fixed to the outside of the studs; and ▪ 9.5mm hardboard or fibre cement sheeting or 11mm fibre cement weatherboards fixed to the outside; ▪ 75mm thick mineral wool insulation with a density of at least 11kgkg/m^3; and ▪ 2 x 16mm fire-rated plasterboard to inside.	
Roofs and Ceilings	All	• $R_w + C_{tr} \geq 35$: ○ Concrete or terracotta tile or metal sheet roof with sarking and at least 10mm plasterboard.	
Outdoor Living Areas		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.	

Quiet House Package B

59-62 dB $L_{Aeq(Day)}$ & 54-57 dB $L_{Aeq(Night)}$

Element	Orientation	Room	
		Bedroom	**Indoor Living and Work Areas**
External Windows	Facing	• Up to 40% floor area ($R_w + C_{tr} \geq 31$): ○ Fixed sash, awning or casement with minimum 6mm glass or 6mm-12mm-6mm double insulated glazing. • Up to 60% floor area ($R_w + C_{tr} \geq 34$): ○ Fixed sash, awning or casement with minimum 10mm glass or 6mm-12mm-10mm double insulated glazing.	• Up to 40% floor area ($R_w + C_{tr} \geq 28$): ○ Sliding or double hung with 6mm-12mm-10mm double insulated glazing; ○ Sealed awning or casement windows with minimum 6mm glass. • Up to 60% floor area ($R_w + C_{tr} \geq 31$); • Up to 80% floor area ($R_w + C_{tr} \geq 34$).
	Side On	As above, except $R_w + C_{tr}$ values may be 3 dB less or max % area increased by 20%.	
	Opposite	As above, except $R_w + C_{tr}$ values may be 6 dB less or max % area increased by 20%.	
External Doors	Facing	• Fully glazed hinged door with certified $R_w + C_{tr} \geq 31$ rated door and frame including seals and 10mm glass.	• Doors to achieve $R_w + C_{tr} \geq 28$: ○ 40mm Solid timber core hinged door and frame system certified to R_w 32 including seals; ○ Fully glazed hinged door with certified $R_w + C_{tr} \geq 28$ rated door and frame including seals and 6mm glass.
	Side On	As above, except $R_w + C_{tr}$ values may be 3 dB less or max % area increased by 20%.	
	Opposite	As above, except $R_w + C_{tr}$ values may be 6 dB less or max % area increased by 20%.	
External Walls	All	• $R_w + C_{tr} \geq 50$: ○ Two leaves of 90mm thick clay brick masonry with minimum 50mm cavity between leaves and 25mm glasswool or polyester (24kg/m^3). Resilient ties used where required to connect leaves. ○ Two leaves of 110mm clay brick masonry with minimum 50mm cavity between leaves and 25mm glasswool or polyester insulation (24kg/m^3). ○ Single leaf of 220mm brick masonry with 13mm cement render on each face. ○ 150mm thick unlined concrete panel or 200mm thick concrete panel with one layer of 13mm plasterboard or 13mm cement render on each face. ○ Single leaf of 90mm clay brick masonry with: ▪ A row of 70mm x 35mm timber studs or 64mm steel studs at 600mm centres; ▪ A cavity of 25mm between leaves; ▪ 50mm glasswool or polyester insulation (11kg/m^3) between studs; and ▪ One layer of 10mm plasterboard fixed to the inside face.	
Roofs and Ceilings	All	• $R_w + C_{tr} \geq 35$: ○ Concrete or terracotta tile or metal sheet roof with sarking and at least 10mm plasterboard ceiling with R3.0+ fibrous insulation.	
Outdoor Living Areas		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	