ACT Government | Suburban Land Agency

Residential Estate Housing Development Guide

Whitlam Stage 4A

June 2024

Housing Development Guide Whitlam - Stage 4A – June 2024

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We acknowledge the Ngunnawal people as traditional custodians of the ACT and recognise any other people or families with connection to the lands of the ACT and region. We acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

Annexure F - Whitlam Stage 4 Noise Management Plan 31

Version Control

Version	Date	Amendment Details
1.0	June 2024	Over the Counter Sales Documentation

Accessibility

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Disclaimer

The Suburban Land Agency makes no warranty regarding the accuracy or completeness of the information in this material and recommends obtaining independent legal, financial and accounting advice before considering purchasing land or making an offer to purchase land. The plans, examples and information contained herein are for illustrative purposes only and should not, without further inquiry, be relied upon as to their ultimate accuracy, to the extent permitted by law, the Suburban Land Agency will not be responsible for any loss or damage that may be incurred as a result of your reliance upon these materials.

Specific Requirements

1. Variations

The Suburban Land Agency reserves the right to vary this document from time to time. Variations will be issued via an addendum to affected buyers who have entered into a First Grant Contract for a Block.

2. Additional Requirements

Outlined below are additional requirements that apply to Stage 4A – June 2024 .

2.1. Verge Bond

The ACT Government, Suburban Land Agency has installed and established as part of the estate works in your new community, new street trees and grassing to the verge areas. The trees and grass provide a green streetscape and contribute to shading your new home from summer sun, as well as contributing to the creation of habitat for native fauna in the area.

The street trees are looked after by the ACT Government's land custodian, Transport Canberra and City Services, whilst the verge grassing is the responsibility of the lease holder of the block behind the verge.

As part of the construction of your new home, you are required to protect the verge assets during construction and make good any damage upon completion of your landscape works. The verge includes the area forward of your property boundary line to the kerb and gutter and can include ACT Government assets such as concrete footpaths, driveways, kerb and gutters, light poles, mini pillars, street trees and grassing.

This can include but is not limited to re-grassing the verge if areas fail due to construction related activities. If there is other damage, from construction related activities, such as damage to the new street tree, or concrete footpath you are required to notify the Suburban Land Agency, so an assessment can be made as to the best way to repair these assets. If there is damage to ACT Government assets, please contact the Suburban Land Agency Place Management team at SLAPlacemanagement@act.gov.au.

To ensure the verges are returned to their original state post construction, a $1000 bond will be required at the time of settlement. Within eight months of receiving your certificate of occupancy and no later than 36 months after settlement of your block, and once the verge is returned back to its original and established condition, the bond paid at time of settlement (and as detailed in your sales contract), can be reimbursed to you.

If you would like to change the verge surface treatment from grass to something else, such as a garden, please contact Transport Canberra and City Services on 13 22 81.

To claim your bond following the completion of your house, you will need to send an email to suburbanland@act.gov.au with the following information:

- Certificate of occupancy
- Photos of the verge showing its current condition
- If relevant, written agreement from Transport Canberra and City Services to a change in the verge treatment

When assessing a claim for bond return, the Suburban Land Agency may conduct an inspection of the verge to verify that it has been returned to its original condition.

If the Suburban Land Agency is not satisfied that the verge is in an acceptable condition, at its sole discretion it may choose to not return the bond and instead use the funds to repair the verge to its original condition.

If you require the use of the verge during construction, please contact Access Canberra on

13 22 81.

2.2. Home Energy Package Rebate

The Home Energy Package Rebate supports Buyers or Eligible First Transferees in designing an energy efficient home that will increase health and comfort and lower your running costs throughout the life of your home. The Buyer or First Transferee of an Eligible Block will be entitled to receive a Rebate amount of $10,000, where all the Eligibility Requirements have been fulfilled.

The Home Energy Package requires that Buyers or Eligible First Transferees of an Eligible Block include the following in the design and construction of their home:

1. **Energy**: Build an all-electric home that is not connected to the gas network; and
2. **Roof Colour**: Build a home that has a "light" coloured roof with a solar absorptance value of less than 0.5; and
3. **Hot Water System**: Install an electric heat pump or electric boost solar water heater; and
4. **Solar PV**: Install a Solar PV system with a minimum total rate output of 5kW; and
5. **Cooktop**: Install an electric oven and an electric cooktop in the kitchen; and
6. **Heating and Cooling**: Install an electric heating and/or cooling system; and
7. **Energy Monitoring**: Install an Energy Monitoring and/or Management system in the home; and
8. **EV Charging Point**: Install an electric vehicle charge point in the garage or carport.

For more information please refer to the "***Home Energy Rebate Program Eligibility Guidelines***".

2.3. Gas

Whitlam Stages 3 & 4 will not be connected to a gas network and gas will not be available to residents homes.

2.4. Solid Fuel Heating Systems

All residents within Whitlam are required to comply with the Solid Fuel Heating restriction in the Memorandum of Provisions incorporated into the Crown Lease. Buyers are not to install or use a solid fuel heating system on the premises without the prior written approval of EPSDD.

2.5. Acoustic Protection

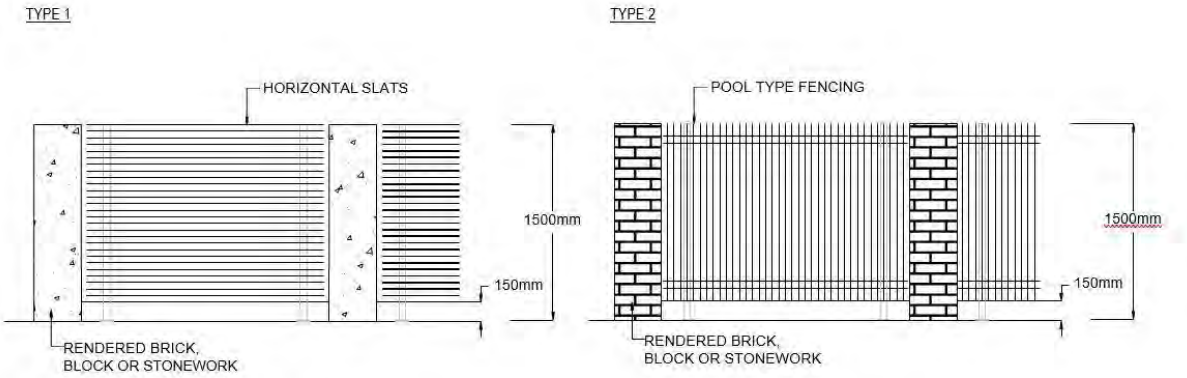
Facades on some homes facing William Hovell Drive require acoustic protection measures to address external road noise. These blocks (which are identified in the Block Details Table in Annexure B) will need to refer to *Annexure F - Whitlam Stage 4 Road Noise Impact Assessment and Overarching Noise Management Plan by WSP (June 2021)* for details of the acoustic protection measures.

Additionally, some blocks have been identified to have a minimum building height for acoustic protection along their block frontages to William Hovell Drive.

2.6. Mandatory Courtyard Wall

A number of blocks require a courtyard wall to be built along one edge. This is generally where a block faces Sculthorpe Avenue or is adjoining an open space pedestrian link. The specific blocks are identified on the Block Details Plan.

The courtyard wall is to be 1.5m high and constructed of rendered brick or stonework in combination with feature panels. Acceptable examples are shown below. Where a wall is required along the front boundary, the wall is required to be setback 600mm from the front boundary to enable landscaping to be planted in front of the wall. (Refer to drawing Planning Control Plan 1, Detail-1, Type 1 & Type 2). Where a boundary wall is required on a side boundary, the courtyard wall should terminate 5m from the primary frontage.



DETAIL 1 - APPLIES TO ROAD 01, ROAD 39 AND OPEN SPACES

A number of blocks require a transparent or semitransparent fence with a gate to be built along one edge. Depending on the location and block, certain blocks will need to install a maximum 1.5m height fence, other blocks will only require a 3m building setback for the transparent fence. The fence is to be visually softened with planting grown as a hedge along the boundary. This planting is required to be located wholly within the property boundary when grown. This provides better visual amenity from the street frontage.

2.7. Blocks over 550m2 – Side Setbacks

Blocks over 550m² are to have buildings setback a minimum 3m from the side property boundary 1 and 1.5m off the side boundary 2. Garages are also to be a minimum of 1.5m off the side boundary nominated, side boundary 2. There is to be no zero-side setback or no building right along the boundary. These setbacks provide for better visual amenity from the street frontage and between block. Refer to D5 - Molonglo Valley District Specifications in the Territory Plan for required setbacks.

2.8. Cut and Fill

Cut and fill requirements are required to minimize the effect of topography on the built form. This allows for better use of the sites and better outcomes of built homes.

Retaining walls along street frontages and adjacent to public open spaces are to be a maximum 1m height from the footpath level. We encourage the construction of buildings to incorporate any changes in levels within the design of the building. This will ensure the building will sit within the natural topography of the block. It will also ensure dwellings do not cut or fill more than the maximum 1.5m allowed within the ACT Territory Plan requirements. Any changes in the levels are to

be softened through terraced landscaped areas of maximum 1m in height. This could be through terraced retaining walls with planting or grassing.

2.9. Mandatory Habitable Room Above Garage

Certain residential blocks with frontages to rear lanes are required to incorporate habitable rooms above garages. A habitable room means a room used for normal domestic activities i.e. bedroom, living room, study etc. This aims to provide better passive surveillance of rear lanes. Refer to *D5 - Molonglo Valley District Specifications* for requirements.

2.10. Minimum 1.5m setback to lower floor level fronting laneway

Certain blocks addressing a laneway require a minimum 1.5m setback applicable to lower floor level. The purpose of this control is to ensure the homes are appropriately setback to the laneway and ensure a safe and inviting space through the laneway.

2.11. Bushfire Attack Level (BAL)

Your level of bush fire risk affects your development requirements – the higher the risk, the more protection you need. The term 'bush fire attack level', or BAL, is used to quantify this risk. Blocks identified will need to have buildings meet the Australian Standard Building requirements for Bushfire Attack Level (BAL) 12.5 (low), Bushfire Attack Level (BAL) 19 (Moderate) or Bushfire Attack Level (BAL) 29 (High) as specified on the Block Details Plan.

Annexure A - Estate Plan

Below is the Estate Plan for Stage 4A – June 2024 .

ESTATE MAP

Single Residential Blocks

Terraces

Multi Unit

Mixed Use

Local Centre

Community Facility

Playground

N

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Annexure B - Block Details Table

Below are the Block Details Table for Stage 4A – June 2024
Sections 106, 107, 110, 111, 112, 113, 114 and 115

Section	Block	Area (m2)	Maximum dwelling(s)	Block Typology	Mid-Sized Block	Large Block	Blocks with mid-sized block provision between 500m2 and 550m2	Corner Block	Surveillance Block	Limited Development Potential Block	BAL-29	BAL-19	BAL-12.5	Noise Protection Requirements Apply	Mandatory Courtyard Wall	Services Easement	Zoning	Sub stage	Block Details Plan	Block Detail Page	Block Fill Plan	Block Fill Page
106	1	380	1	Mid-size	√			√									RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	2	349	1	Mid-size	√												RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	3	349	1	Mid-size	√											√	RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	4	349	1	Mid-size	√											√	RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	5	387	1	Mid-size	√			√								√	RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	6	771	1	Large		√											RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	7	588	1	Large		√				√							RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	8	475	1	Mid-size	√												RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	9	519	1	Large		√	√										RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	10	524	1	Large		√	√										RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	11	529	1	Large		√	√						√				RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	12	547	1	Large		√	√	√			√						RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	13	563	1	Large		√		√			√						RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	14	530	1	Large		√	√						√				RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	15	535	1	Large		√	√										RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	16	540	1	Large		√	√										RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	17	545	1	Large		√	√										RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	18	549	1	Large		√	√										RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	19	638	1	Large		√											RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
106	20	807	1	Large		√											RZ1	4A1	4A1 - 2003	pg 17	4A1 - 1002	pg 22
107	1	471	1	Mid-size	√			√		√							RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	2	449	1	Mid-size	√												RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	3	456	1	Mid-size	√												RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	4	476	1	Mid-size	√												RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	5	550	1	Large		√	√			√							RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	6	519	1	Large		√	√			√							RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	7	463	1	Mid-size	√												RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	8	495	1	Mid-size	√												RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	9	491	1	Mid-size	√								√				RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	10	576	1	Large		√		√			√						RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	11	547	1	Large		√	√	√			√						RZ1	4A1	4A1 - 2003	pg 16	4A1 - 1003	pg 22
107	12	550	1	Large		√	√						√				RZ1	4A1	4A1 - 2003	pg 16	4A1 - 1003	pg 22
107	13	555	1	Large		√											RZ1	4A1	4A1 - 2003	pg 16	4A1 - 1003	pg 22
107	14	560	1	Large		√											RZ1	4A1	4A1 - 2003	pg 16	4A1 - 1003	pg 22
107	15	488	1	Mid-size	√												RZ1	4A1	4A1 - 2003	pg 16	4A1 - 1002	pg 22
107	16	544	1	Large		√	√			√							RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	17	554	1	Large		√				√							RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	18	562	1	Large		√											RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	19	455	1	Mid-size	√												RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	20	449	1	Mid-size	√												RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
107	21	471	1	Mid-size	√			√									RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
110	1	405	1	Mid-size	√			√					√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
110	2	299	1	Mid-size	√								√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
110	3	299	1	Mid-size	√								√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
110	4	299	1	Mid-size	√								√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
110	5	299	1	Mid-size	√								√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
110	6	299	1	Mid-size	√								√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
110	7	299	1	Mid-size	√								√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
110	8	299	1	Mid-size	√												RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
110	9	405	1	Mid-size	√			√									RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	1	333	1	Mid-size	√			√					√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	2	471	1	Mid-size	√			√					√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	3	471	1	Mid-size	√			√			√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	4	374	1	Mid-size	√				√		√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	5	374	1	Mid-size	√						√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	6	374	1	Mid-size	√						√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	7	374	1	Mid-size	√						√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	8	374	1	Mid-size	√				√		√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	9	374	1	Mid-size	√						√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	10	399	1	Mid-size	√						√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	11	399	1	Mid-size	√						√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
111	12	416	1	Mid-size	√			√	√		√						RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
112	1	610	1	Large		√		√			√					√	RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
112	2	540	1	Large		√	√				√					√	RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
112	3	540	1	Large		√	√				√					√	RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
112	4	580	1	Large		√		√			√					√	RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
112	5	758	1	Large		√				√			√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
112	6	539	1	Large		√	√										RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25

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112	7	545	1	Large		√	√								√		RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
112	9	548	1	Large		√	√								√		RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	10	684	1	Large		√											RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	11	719	1	Large		√											RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	12	541	1	Large		√	√						√				RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	13	585	1	Large		√		√			√						RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	14	591	1	Large		√		√			√						RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	15	580	1	Large		√							√				RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	16	690	1	Large		√											RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	17	650	1	Large		√				√						√	RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	18	595	1	Large		√										√	RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	19	534	1	Large		√	√								√		RZ1	4A1	4A1 - 2002	pg 16	4A1 - 1002	pg 22
112	20	494	1	Mid-size	√										√	√	RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
112	21	741	1	Large		√				√			√				RZ1	4A2	4A2 - 2002	pg 19	4A2 - 1002	pg 25
113	1	570	1	Large		√		√			√					√	RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
113	2	595	1	Large		√					√					√	RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
113	3	570	1	Large		√					√					√	RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
113	4	588	1	Large		√		√			√					√	RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
113	5	717	1	Large		√				√			√				RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
113	6	424	1	Mid-size	√												RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
113	7	510	1	Large		√	√								√		RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
113	8	540	1	Large		√	√								√		RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	9	540	1	Large		√	√										RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	10	540	1	Large		√	√										RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	11	540	1	Large		√	√						√				RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	12	540	1	Large		√	√						√		√		RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	14	540	1	Large		√	√								√		RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	15	540	1	Large		√	√										RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	16	540	1	Large		√	√										RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	17	540	1	Large		√	√										RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	18	540	1	Large		√	√								√		RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
113	19	485	1	Mid-size	√										√	√	RZ1	4A2	4A1 - 2001	pg 15	4A2 - 1001	pg 21
113	20	589	1	Large		√				√			√				RZ1	4A2	4A1 - 2001	pg 15	4A2 - 1001	pg 21
114	1	587	1	Large		√		√				√					RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	2	509	1	Large		√	√					√					RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	3	479	1	Mid-size	√							√					RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	4	420	1	Mid-size	√							√					RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	5	430	1	Mid-size	√							√					RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	6	474	1	Mid-size	√							√					RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	7	541	1	Large		√	√	√		√	√						RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	8	557	1	Large		√		√			√				√		RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	9	463	1	Mid-size	√								√				RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	10	449	1	Mid-size	√								√				RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	11	449	1	Mid-size	√												RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	12	479	1	Mid-size	√												RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	13	509	1	Large		√	√										RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
114	14	587	1	Large		√		√									RZ1	4A1	4A1 - 2001	pg 15	4A1 - 1001	pg 21
115	1	607	1	Large		√		√			√			√			RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
115	2	560	1	Large		√					√			√		√	RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
115	3	600	1	Large		√		√			√			√		√	RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
115	4	577	1	Large		√				√		√					RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
115	5	489	1	Mid-size	√							√					RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
115	6	485	1	Mid-size	√			√				√					RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
115	7	450	1	Mid-size	√			√					√			√	RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24
115	8	767	1	Large		√							√				RZ1	4A2	4A2 - 2001	pg 18	4A2 - 1001	pg 24

Annexure C - Block Details Plans

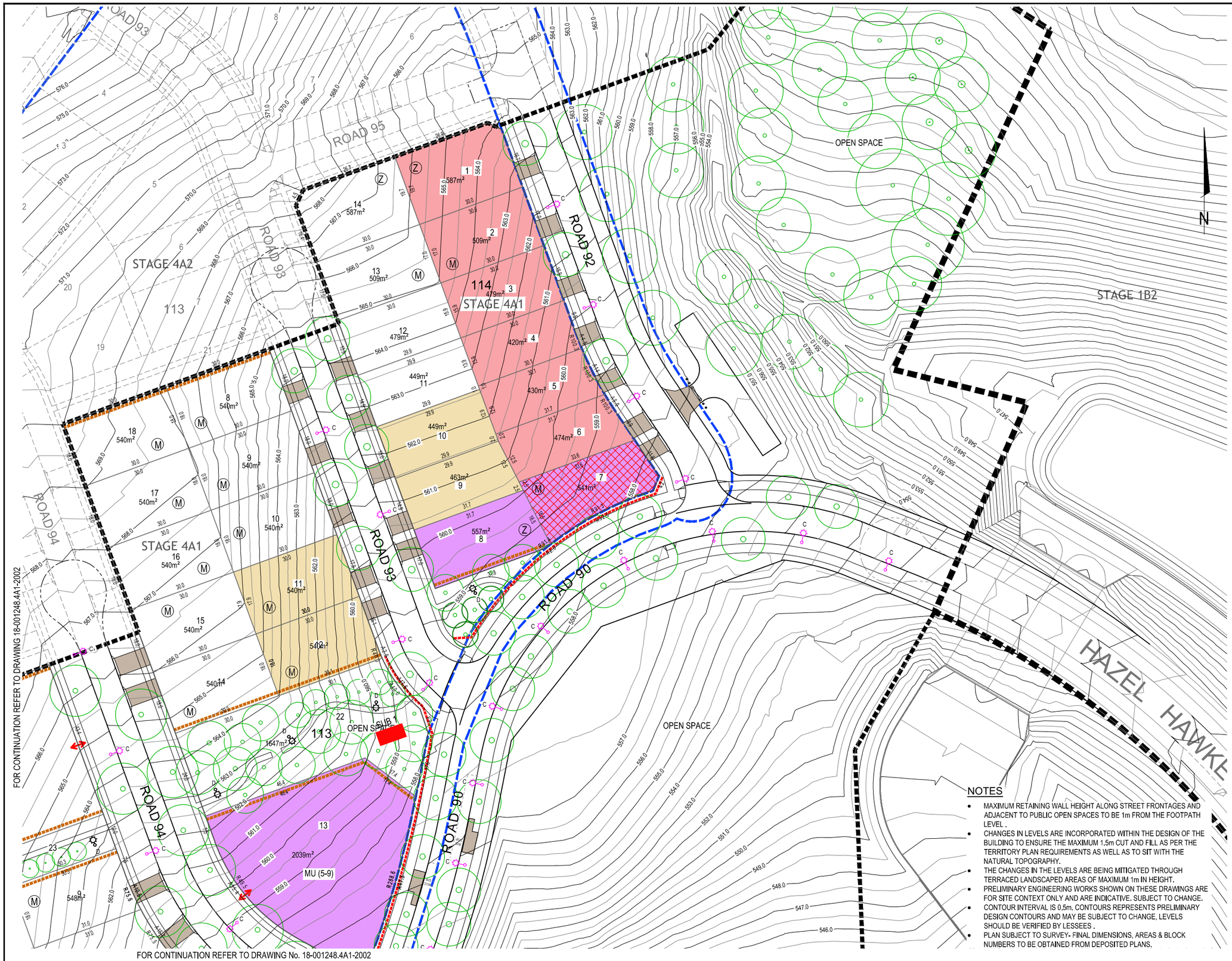
Below are the Block Details Plans for Stage 4A – June 2024

Sections 106, 107, 110, 111, 112, 113, 114 and 115

* Please note that:

The following Block Details Plans contain references to recently superseded Single Dwelling Housing Development Code.

The requirements shown in the Block Detail Plans still apply. Refer to the DS5 - Molonglo Valley District Specifications for more detail about these requirements.



LEGEND

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- APZ
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  - Refer to Whitlam Stage 4 - Road Noise Impact Assessment and Overarching Noise Management Plan, by WSP (June 2021)
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- Z — LOTS OVER 550m² - SIDE SETBACKS ARE MINIMUM OF 3.0M. GARAGES SETBACK IS 1.5M. NO ZERO SIDE SETBACK (Provision of *R14* of *Single Dwelling Housing Development Code* does not apply)
- M — MID SIZED BLOCK CONTROLS (500m²-<550m²) APPLY TO THESE BLOCKS (For the purpose of *R21 of Single Dwelling Housing Development Code*)
- NO VEHICLE ACCESS TO THIS SECTION OF BOUNDARY
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- -4.0- — MINIMUM 4m FRONT SETBACK
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- C / D — STREET LIGHT
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- DRIVEWAY LOCATION
- BUS STOP PAD

NOTES

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INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	JW	SKT			21/03/2024	
A	WC	EH			19/04/2024	BLOCK AND SECTION NO. UPDATED
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C	JW	JW			18/06/2024	PLAN DETAIL UPDATED
D	JW	JW			21/06/2024	BLOCK DETAIL UPDATED

AMENDMENTS

STATUS: HDG

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) — SCALE 1:1000 (A3)

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CLIENT: ACT Government | Suburban Land Agency

WAE No: .

PROJECT: WHITLAM ESTATE - STAGE 4A1

DRAWING TITLE: BLOCK DETAILS PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A1	2001	.	D

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-2001

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-2001

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-2003

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AMENDMENTS

STATUS: HDG

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) — SCALE 1:1000 (A3)

SPACELAB CREATING TIMELESS PLACES

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CLIENT: ACT Government — Suburban Land Agency

WAE No: .

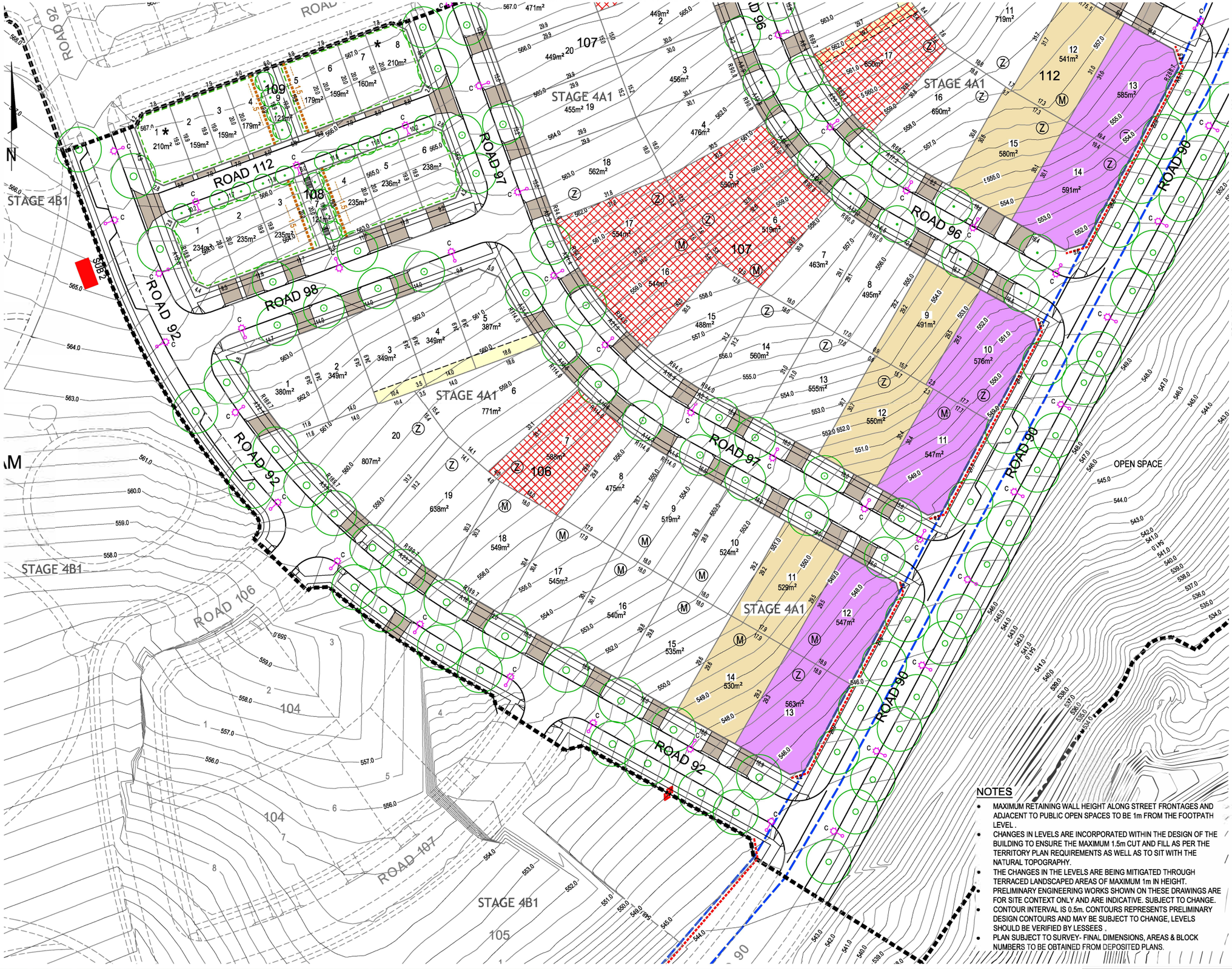
PROJECT: WHITLAM ESTATE - STAGE 4A1

DRAWING TITLE: BLOCK DETAILS PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A1	2002	.	C

DISCLAIMER: ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE.

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-2002



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AMENDMENTS

STATUS: HDG

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) — SCALE 1:1000 (A3)

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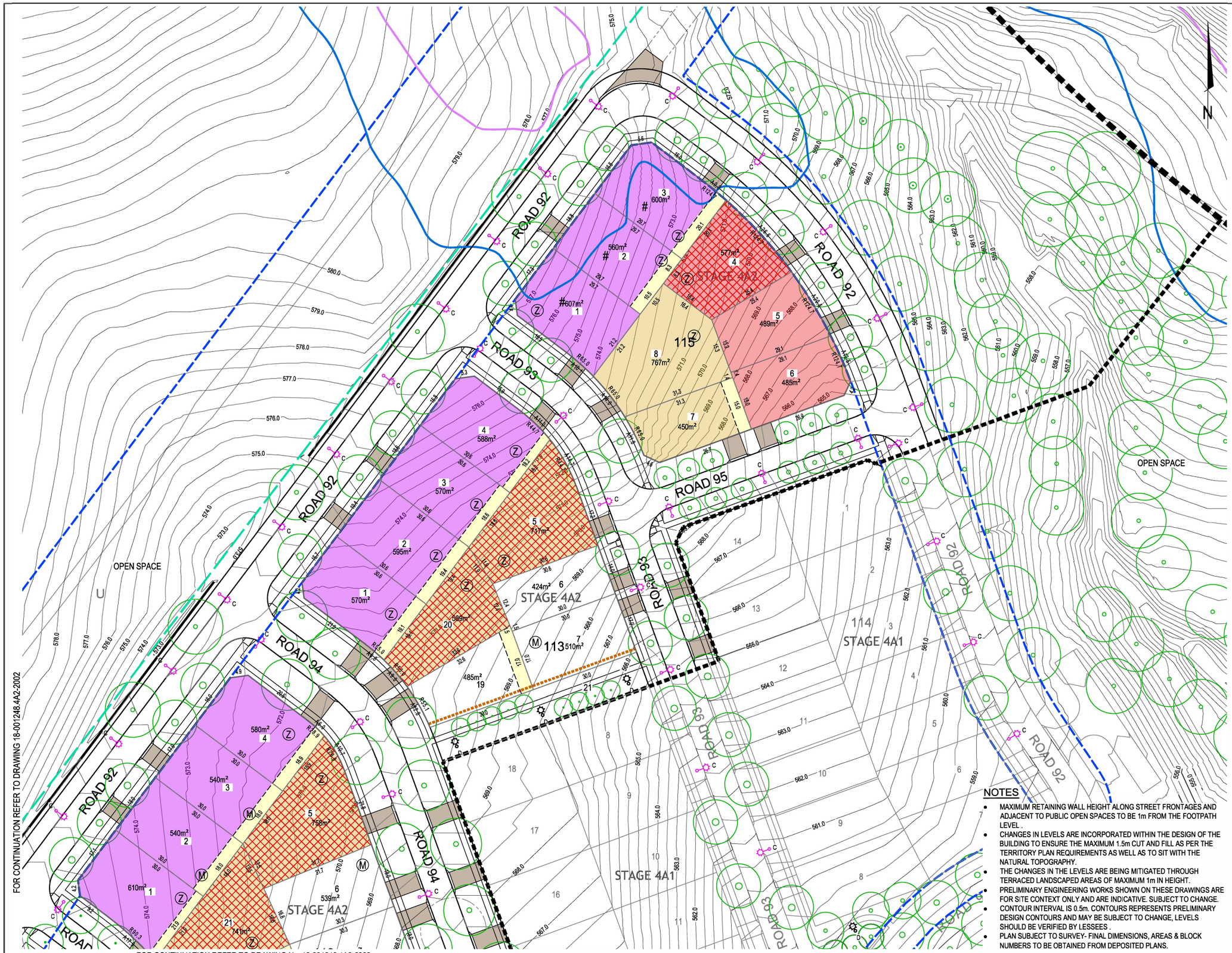
WAE No:

PROJECT: WHITLAM ESTATE - STAGE 4A1

DRAWING TITLE: BLOCK DETAILS PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A1	2003		C



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SPACELAB — CREATING TIMELESS PLACES

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CLIENT: ACT Government — Suburban Land Agency

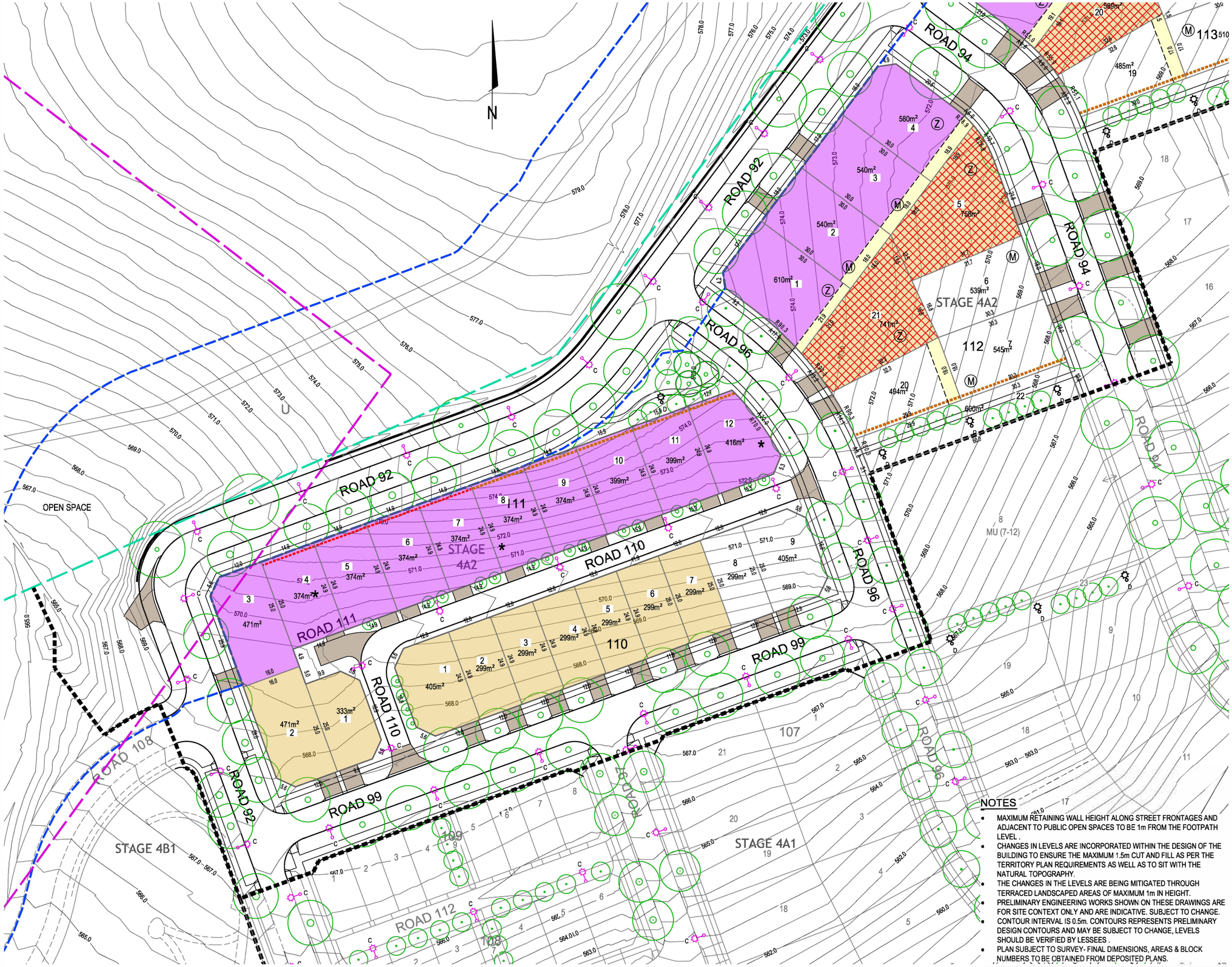
WAE No: .

PROJECT: WHITLAM ESTATE - STAGE 4A2

DRAWING TITLE: BLOCK DETAILS PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A2	2001	.	C

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A2-2001



FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A2-2001

LEGEND

- 1 — BLOCK IDENTIFIER
- 23 — SECTION IDENTIFIER
- 30.0 R70.0 A22.0 — BLOCK DIMENSIONS (m)
- 426m² — BLOCK AREA (m²)
- STAGE 4 BOUNDARY
- KAMA BUFFER BOUNDARY
- HERITAGE LISTED AREA
- APZ
- STAGING BOUNDARY
- SERVICES EASEMENT (width varies)
- # — FACADES FACING WILLIAM HOVELL DRIVE REQUIRE ACOUSTIC PROTECTION MEASURES TO ADDRESS EXTERNAL ROAD NOISE.
  - Refer to Whitlam Stage 4 - Road Noise Impact Assessment and Overarching Noise Management Plan, by WSP (June 2021)
- ACOUSTIC CONTOUR - LEQ, 15 HOUR 60DBA FOR GROUND LEVEL (1.5m ABOVE GROUND)
- ACOUSTIC CONTOUR - LEQ, 15 HOUR 60DBA FOR FIRST LEVEL (4.5m ABOVE GROUND)
- LIMITED DEVELOPMENT POTENTIAL BLOCK (*R49 of Estate Development Code*)
- INTEGRATED HOUSING DEVELOPMENT
- MANDATORY COURTYARD WALL TO A MAX. HEIGHT OF 1.5m
  - Constructed of rendered brick, block or stonework in combination with feature panels, and setback 600mm from the front boundary to incorporate landscaping. Refer to drawing PCP6, DETAIL-1, TYPE 1 & TYPE 2;
  - Courtyard wall along secondary frontage to terminate at 5m from primary frontage.
- * — MANDATORY HABITABLE ROOM ABOVE GARAGE (*R62 of Estate Development Code*)
- ◀ — MANDATORY ZERO SETBACK (Nominated as Side Boundary 2 for the purpose of *R15 of Single Dwelling Housing Development Code*)
- Ⓩ — LOTS OVER 550m² - SIDE SETBACKS ARE MINIMUM OF 3.0M. GARAGES SETBACK IS 1.5M. NO ZERO SIDE SETBACK (Provision of *R14* of *Single Dwelling Housing Development Code* does not apply)
- Ⓜ — MID SIZED BLOCK CONTROLS (500m²-<550m²) APPLY TO THESE BLOCKS (For the purpose of *R21 of Single Dwelling Housing Development Code*)
- NO VEHICLE ACCESS TO THIS SECTION OF BOUNDARY
- 1.5 — MINIMUM 1.5m SIDE SETBACK. APPLICABLE TO LOWER FLOOR LEVEL
- 4.0 — MINIMUM 4m FRONT SETBACK
- PROPOSED RETAINING WALL
- BUILDINGS TO COMPLY WITH AS 3959:2018 - BUSHFIRE ATTACK LEVEL (BAL) - 29 (HIGH)
- BUILDINGS TO COMPLY WITH AS 3959:2018 - BUSHFIRE ATTACK LEVEL (BAL) - 19 (MODERATE)
- BUILDINGS TO COMPLY WITH AS 3959:2018 - BUSHFIRE ATTACK LEVEL (BAL) - 12.5 (LOW)
- INDICATIVE STREET TREE LOCATIONS
- 567.0 — DESIGN CONTOUR (@ INTERVAL 0.5m)
- STREET LIGHT
- SUB 1 — SUBSTATION
- INDICATIVE MULTI UNIT DRIVEWAY LOCATION
- DRIVEWAY LOCATION
- BUS STOP PAD

NOTES

- MAXIMUM RETAINING WALL HEIGHT ALONG STREET FRONTAGES AND ADJACENT TO PUBLIC OPEN SPACES TO BE 1m FROM THE FOOTPATH LEVEL .
- CHANGES IN LEVELS ARE INCORPORATED WITHIN THE DESIGN OF THE BUILDING TO ENSURE THE MAXIMUM 1.5m CUT AND FILL AS PER THE TERRITORY PLAN REQUIREMENTS AS WELL AS TO SIT WITH THE NATURAL TOPOGRAPHY.
- THE CHANGES IN THE LEVELS ARE BEING MITIGATED THROUGH TERRACED LANDSCAPED AREAS OF MAXIMUM 1m IN HEIGHT.
- PRELIMINARY ENGINEERING WORKS SHOWN ON THESE DRAWINGS ARE FOR SITE CONTEXT ONLY AND ARE INDICATIVE. SUBJECT TO CHANGE.
- CONTOUR INTERVAL IS 0.5m. CONTOURS REPRESENTS PRELIMINARY DESIGN CONTOURS AND MAY BE SUBJECT TO CHANGE, LEVELS SHOULD BE VERIFIED BY LESSEES .
- PLAN SUBJECT TO SURVEY- FINAL DIMENSIONS, AREAS & BLOCK NUMBERS TO BE OBTAINED FROM DEPOSITED PLANS.

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	JW	SKT	dw	JL	21/03/2024	
AMENDMENTS						
A	WC	EH	dw	JL	19/04/2024	BLOCK AND SECTION NO. UPDATED
C	JW	JW	dw	JL	18/06/2024	PLAN DETAIL UPDATED

STATUS: HDG

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) — SCALE 1:1000 (A3)

SPACELAB CREATING TIMELESS PLACES

CLIENT: ACT Government | Suburban Land Agency

WAE No: -

PROJECT: WHITLAM ESTATE - STAGE 4A2

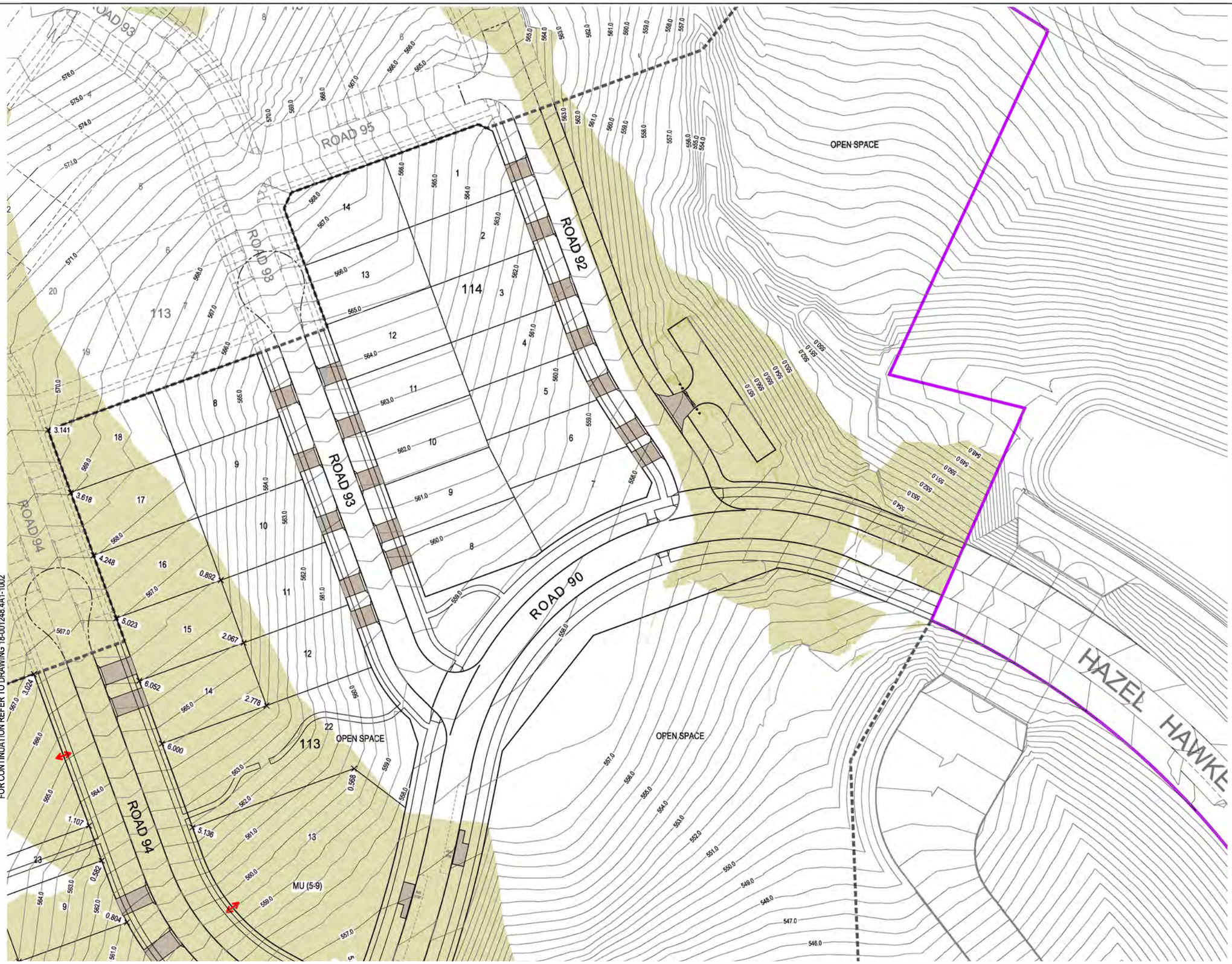
DRAWING TITLE: BLOCK DETAILS PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A2	2002	-	C

Annexure D - Block Fill Plans

Below are the Block Fill Plans for Stage 4A – June 2024

Sections 106, 107, 110, 111, 112, 113, 114 and 115



LEGEND

1	BLOCK IDENTIFIER
23	SECTION IDENTIFIER
	AREA OF KNOWN FILL (DEPTH IN METRES)
567.0	DESIGN CONTOUR (@ INTERVAL 0.5m)
	STAGE BOUNDARY
	ESTATE BOUNDARY
× 2.133	FILL DEPTHS (IN METRES)
↔	INDICATIVE MULTI UNIT DRIVEWAY LOCATION

N

WARNING

PLAN IS SUBJECT TO DA APPROVAL. THIS PLAN ONLY INDICATES AREAS OF FILL OF WHICH THE DEVELOPER AND THEIR AGENTS ARE AWARE. IT HAS NOT BEEN CHECKED BY THE TERRITORY, AND THE TERRITORY DOES NOT GUARANTEE ITS ACCURACY. IN NO WAY SHOULD THIS PLAN BE READ AS A CONCLUSIVE STATEMENT OF THE FULL EXTENT OF THE FILL THAT MAY BE FOUND ON THE WHOLE LAND DEPICTED. LESSEES AND PURCHASERS SHOULD MAKE THEIR OWN INQUIRIES IN REGARD TO THE EXACT DRAINAGE, GEOTECHNICAL AND FILL CONDITIONS AFFECTING THEIR BLOCKS.

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	WC	SKT			27/02/2024	
A	WC	EH			19/04/2024	BLOCK AND SECTION NO. UPDATED

STATUS: HDG

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) — SCALE 1:1000 (A3)

SPACELAB CREATING TIMELESS PLACES

egis

www.egis-group.com

CLIENT: ACT Government | Suburban Land Agency

WAE No: ,

PROJECT: WHITLAM ESTATE - STAGE 4A1

DRAWING TITLE: FILL ON BLOCK PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A1	1001	,	A

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-1001

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-1001

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-1003

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-1003

N

LEGEND

1	BLOCK IDENTIFIER
23	SECTION IDENTIFIER
	AREA OF KNOWN FILL (DEPTH IN METRES)
567.0	DESIGN CONTOUR (@ INTERVAL 0.5m)
	STAGE BOUNDARY
	ESTATE BOUNDARY
× 2.133	FILL DEPTHS (IN METRES)
↔	INDICATIVE MULTI UNIT DRIVEWAY LOCATION

WARNING

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INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
AMENDMENTS						
A	WC	EH	JW	JL	19/04/2024	BLOCK AND SECTION NO. UPDATED

STATUS: HDG

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) — SCALE 1:1000 (A3)

SPACELAB CREATING TIMELESS PLACES

egis

www.egis-group.com

CLIENT: ACT Government | Suburban Land Agency

WAE No: .

PROJECT: WHITLAM ESTATE - STAGE 4A1

DRAWING TITLE: FILL ON BLOCK PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A1	1002	.	A

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-1002

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A1-1002

LEGEND

1	BLOCK IDENTIFIER
23	SECTION IDENTIFIER
	AREA OF KNOWN FILL (DEPTH IN METRES)
567.0	DESIGN CONTOUR (@ INTERVAL 0.5m)
	STAGE BOUNDARY
	ESTATE BOUNDARY
× 2.133	FILL DEPTHS (IN METRES)
↔	INDICATIVE MULTI UNIT DRIVEWAY LOCATION

WARNING

PLAN IS SUBJECT TO DA APPROVAL. THIS PLAN ONLY INDICATES AREAS OF FILL OF WHICH THE DEVELOPER AND THEIR AGENTS ARE AWARE. IT HAS NOT BEEN CHECKED BY THE TERRITORY, AND THE TERRITORY DOES NOT GUARANTEE ITS ACCURACY. IN NO WAY SHOULD THIS PLAN BE READ AS A CONCLUSIVE STATEMENT OF THE FULL EXTENT OF THE FILL THAT MAY BE FOUND ON THE WHOLE LAND DEPICTED. LESSEES AND PURCHASERS SHOULD MAKE THEIR OWN INQUIRIES IN REGARD TO THE EXACT DRAINAGE, GEOTECHNICAL AND FILL CONDITIONS AFFECTING THEIR BLOCKS.

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	WC	SKT	JW	GL	27/02/2024	
AMENDMENTS						
A	WC	EH	JW	GL	19/04/2024	BLOCK AND SECTION NO. UPDATED

STATUS: HDG

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) — SCALE 1:1000 (A3)

SPACELAB CREATING TIMELESS PLACES

egis
www.egis-group.com

CLIENT: ACT Government | Suburban Land Agency

WAE No: .

PROJECT: WHITLAM ESTATE - STAGE 4A1

DRAWING TITLE: FILL ON BLOCK PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A1	1003	.	A

N

LEGEND

1	BLOCK IDENTIFIER
23	SECTION IDENTIFIER
	AREA OF KNOWN FILL (DEPTH IN METRES)
567.0	DESIGN CONTOUR (@ INTERVAL 0.5m)
	STAGE BOUNDARY
	ESTATE BOUNDARY
× 0.530	FILL DEPTHS (IN METRES)
↔	INDICATIVE MULTI UNIT DRIVEWAY LOCATION

WARNING

PLAN IS SUBJECT TO DA APPROVAL. THIS PLAN ONLY INDICATES AREAS OF FILL OF WHICH THE DEVELOPER AND THEIR AGENTS ARE AWARE. IT HAS NOT BEEN CHECKED BY THE TERRITORY, AND THE TERRITORY DOES NOT GUARANTEE ITS ACCURACY. IN NO WAY SHOULD THIS PLAN BE READ AS A CONCLUSIVE STATEMENT OF THE FULL EXTENT OF THE FILL THAT MAY BE FOUND ON THE WHOLE LAND DEPICTED. LESSEES AND PURCHASERS SHOULD MAKE THEIR OWN INQUIRIES IN REGARD TO THE EXACT DRAINAGE, GEOTECHNICAL AND FILL CONDITIONS AFFECTING THEIR BLOCKS.

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A2-1002

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	WC	SKT	JW	JL	27/02/2024	
A	WC	EH	JW	JL	19/04/2024	BLOCK AND SECTION NO. UPDATED

STATUS: HDG

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) — SCALE 1:1000 (A3)

SPACELAB CREATING TIMELESS PLACES

egis www.egis-group.com

CLIENT: ACT Government | Suburban Land Agency

WAE No: .

PROJECT: WHITLAM ESTATE - STAGE 4A2

DRAWING TITLE: FILL ON BLOCKS PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A2	1001	.	A

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A2-1001

FOR CONTINUATION REFER TO DRAWING No. 18-001248.4A2-1001

LEGEND

1	BLOCK IDENTIFIER
23	SECTION IDENTIFIER
	AREA OF KNOWN FILL (DEPTH IN METRES)
567.0	DESIGN CONTOUR (@ INTERVAL 0.5m)
	STAGE BOUNDARY
	ESTATE BOUNDARY
× 0.530	FILL DEPTHS (IN METRES)
	INDICATIVE MULTI UNIT DRIVEWAY LOCATION

WARNING

PLAN IS SUBJECT TO DA APPROVAL. THIS PLAN ONLY INDICATES AREAS OF FILL OF WHICH THE DEVELOPER AND THEIR AGENTS ARE AWARE. IT HAS NOT BEEN CHECKED BY THE TERRITORY, AND THE TERRITORY DOES NOT GUARANTEE ITS ACCURACY. IN NO WAY SHOULD THIS PLAN BE READ AS A CONCLUSIVE STATEMENT OF THE FULL EXTENT OF THE FILL THAT MAY BE FOUND ON THE WHOLE LAND DEPICTED. LESSEES AND PURCHASERS SHOULD MAKE THEIR OWN INQUIRIES IN REGARD TO THE EXACT DRAINAGE, GEOTECHNICAL AND FILL CONDITIONS AFFECTING THEIR BLOCKS.

INITIAL ISSUE	DES	DRN	CHK	APP	DATE	AMENDMENT DETAILS
	WC	SKT	JW	JL	27/02/2024	
A	WC	EH	JW	JL	19/04/2024	BLOCK AND SECTION NO. UPDATED

STATUS: HDG

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) — SCALE 1:1000 (A3)

SPACELAB CREATING TIMELESS PLACES

egis www.egis-group.com

CLIENT: ACT Government | Suburban Land Agency

WAE No: ,

PROJECT: WHITLAM ESTATE - STAGE 4A2

DRAWING TITLE: FILL ON BLOCKS PLAN

PROJECT No.	DRAWING No.	EDP No	REVISION
18-001248.4A2	1002	,	A

Annexure E – Whitlam Verge Bond Refund Form

Application form for the Whitlam Verge Bond Refund.

ACT Government | Suburban Land Agency

APPLICATION

For the Whitlam Verge Bond Refund

OCTOBER 2021

APPLICATION

For the Whitlam Verge Bond Refund

As part of the construction of your new home, you are required to protect the verge assets during construction and make good any damage upon completion of your landscape works. The verge includes the area forward of your property boundary line to the kerb and gutter and can include ACT Government assets such as concrete footpaths, driveways, kerb and gutters, light poles, mini pillars, street trees and grassing.

During construction on the Land, the Buyer must protect the Verge Assets and remediate and make good any damage to the Verge Assets to the satisfaction of the Seller. Making good includes (but is not limited to) repairing Verge Assets and re-grassing or re-planting the Verge to the satisfaction of the Suburban Land Agency.

To ensure the verges are returned to their original state post construction, a $1000 bond was required at the time of settlement. Within six months of receiving your certificate of occupancy and no later than 30 months after settlement of your block, and once the verge is returned back to its original and established condition, the bond paid at time of settlement (and as detailed in your sales contract), can be reimbursed to you via this application form.

Important

- [x] This Application Form must be read in conjunction with the Whitlam Housing Development Guide's relevant to your stage.
- [x] This Application Form must be fully completed by the Buyer or the Eligible Transferee.
- [x] The Declaration in Section 2 of this Application Form must be signed by each person who is the Buyer or Transferee of the Block.
- [x] The documents set out in Section 3 of this Application Form must be submitted to the Agency with this Application Form.
- [x] Application Forms which are not complete or signed, or which are not accompanied by the required supporting documents, may not be considered by the Agency.

SECTION 1: APPLICATION DETAILS

Buyer/Eligible Transferee Name

☐ Buyer who is the current Crown Lessee; or

☐ Eligible Transferee who is the current Crown Lessee

First Name _____ Last Name _____

First Name _____ Last Name _____

Company Name (if any) _____

Block Details

Description of Block on First Grant Contract Block _____ Section _____ Suburb _____

Street Address of Block _____

_____

Buyer or Eligible Transferee's Contact Details

Postal Address _____

Phone Number _____

Email Address _____

SECTION 2: DECLARATION

Buyer/Eligible Transferee Name

☐ I am:

- The Buyer listed in the First Grant Contract and the current Crown Lessee; or
- An Eligible Transferee and have notified the Suburban Land Agency and am the current Crown Lessee.

☐ I certify that this Application Form is submitted within six months of receiving a certificate of occupancy and no later than 30 months after settlement of the block.

☐ I certify that any Verges adjacent to the Block and effected works on the Block have been restored as they were prior to Settlement or been accepted by Transport Canberra City Services (TCCS).

☐ I certify that I have remediated and made good any damage to the Verge Assets to the satisfaction of the Suburban Land Agency. Making good includes (but is not limited to) repairing Verge Assets and re-grassing or re-planting the Verge to the satisfaction of the Seller.

☐ I certify that all Verges adjacent to the Block are clean and free from building materials, refuse or rubbish.

☐ I certify that documents provided with this Application Form are true and complete copies of the relevant documents.

☐ I certify that the information contained in this Application form is true and complete in all respects.

☐ I as the Buyer or Eligible Transferee give permission of the Agency to inspect the Block and take photos as necessary.

Signature of the Buyer/Eligible Transferee /Application 1 _____ Date ____/____/____

Signature of the Buyer/Eligible Transferee /Application 1 _____ Date ____/____/____

SECTION 3: SUPPORTING DOCUMENTS

I attached copies of the following documents:

☐ Photos of the current verge condition

☐ Certificate of Occupancy and Use

☐ A letter of approval from TCCS for any work conducted in the Verge (if required)

☐ Email confirmation of transfer of block (if required)

SECTION 4: PAYMENT DETAILS

FOR REFUND OF THE VERGE BOND

The refund is to be paid to the Buyer/Eligible Transferee's bank account, details below.

(The bank must be an Australian Bank).

Bank Name _____

Bank Branch _____

Account Name _____

BSB No. _____ Account Number _____

Submitting your application form

Completed Application Forms should be sent via email with the required supporting documentation to **suburbanland@act.gov.au**

or send it by post:

Whitlam Verge Bond Refund
Suburban Land Agency
GPO Box 158, Canberra ACT 2601

ACT Government | Suburban Land Agency

Annexure F - Whitlam Stage 4 Noise Management Plan

Whitlam Stage 4 Road Noise Impact Assessment and Overarching Noise Management Plan by WSP (June 2021)

CALIBRE PROFESSIONAL SERVICES

WHITLAM STAGE 4

ROAD NOISE IMPACT ASSESSMENT AND OVERARCHING NOISE MANAGEMENT PLAN

JUNE 2021

Question today
Imagine tomorrow
Create for the future

Whitlam Stage 4
Road noise impact assessment and overarching noise management plan

Calibre Professional Services

WSP
Level 1, 121 Marcus Clarke Street
Canberra ACT 2601
PO Box 1551
Canberra ACT 2600

Tel: +61 2 6201 9600
Fax: +61 2 6201 9666
wsp.com

REV	DATE	DETAILS
2	28/06/2021	Updated
1	28/05/2021	Updated
0	05/05/2021	Initial Issue

	NAME	DATE	SIGNATURE
Prepared by:	Linnea Eriksson	28/06/2021	
Reviewed by:	Zhang Lai	28/06/2021	
Approved by:	Zhang Lai	28/06/2021	

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EXECUTIVE SUMMARY

WSP Australia Pty Ltd has prepared a road noise impact assessment to support the Estate Development Plan of Stage 4 of the Whitlam development.

The assessment has been prepared in reference to the planning requirements of the Roads ACT Noise Management Guidelines 2018. If necessary, guidance from Single Dwelling Housing Development Code and Multi Unit Housing Development Code would also be referenced.

The purpose of this report is to assess the potential road noise impact on the proposed residential subdivision and if necessary, provide discussion of possible noise mitigation strategies within the scope and bounds of the subdivision project. Previous stages of Whitlam have typically resolved to the outcome where certain land blocks would exceed the external noise planning guideline level per the Roads ACT Noise Management Guidelines and provision of mitigation will lie within the responsibility of the developers of these 'noise affected' individual land blocks.

If applicable when the external noise planning guideline levels are exceeded, information for land purchasers to guide the selection of façade glazing with respect to meeting the road traffic noise intrusion requirements of relevant residential zone development codes would be provided in this report. It should be noted that following this guidance does not guarantee Development Application Approval or Building Application Approval for individual blocks, and further detailed assessment may be required on a site-by-site basis, particularly if the proposed construction departs from the recommendations contained in this report. Information is provided for costing and selection purposes only.

Computer noise modelling of the planned duplication of William Hovell Drive has been undertaken based on the appropriate input parameters. Input parameters include 2031 predicted traffic volumes and SMEC's design for the William Hovell Drive duplication. Results predict the likely future road traffic noise levels impacting on the façade of the future dwellings adjacent to the arterial road.

Based on the results, it was found that the external noise levels for the 60 dBA $L_{eq,\ 15\text{-}hour}$ and 55 dBA $L_{eq,\ 9\text{-}hour}$ guideline levels in NMG are exceeded for one block (W4 4A2 A – a) at the first floor.

Indicative building envelope construction requirements have been recommended for Block W4 4A2 A – a if an additional level is built in order to meet the internal noise level goals as discussed in Section 5. Implementation of the suggested constructions (subject to detailed design) are expected to allow the proposed development at the residential blocks adjacent to the arterial road to meet the current planning requirements.

For all other assessed receivers, there are no acoustic requirements for the façade constructions to meet the current planning requirements.

It should, however, be noted that the road design seems to be favourable for noise reduction and had a notable impact on the predicted results. Any change in road design from what has been used in this prediction model, detailed in Section 4.1.4, will result in the need for this road noise assessment to be reviewed and updated.

1 INTRODUCTION

WSP Australia Pty Ltd (WSP) has been engaged by Calibre Professional Services to conduct a road noise impact assessment and prepare an overarching Noise Management Plan (NMP) as part of the preparation of the Estate Development Plan for the proposed Stage 4 of the Whitlam subdivision. The project site is located in the Molonglo Valley, south of William Hovell Drive and west of John Gorton Drive.

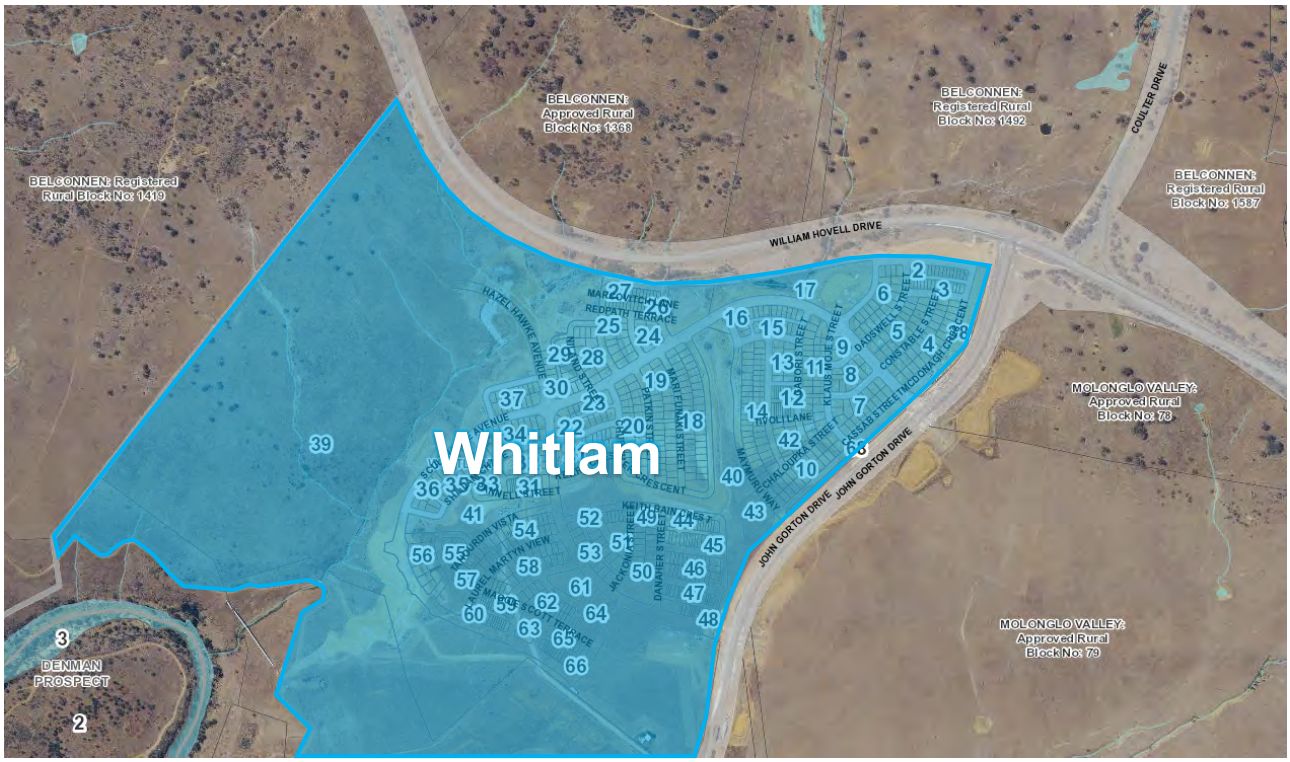
The suburb of Whitlam is the first stage of the Molonglo 3 urban development area, with the existing Coppins Crossing Road to the east. The Coppins Crosing Road corridor is being progressively upgraded and will be known as John Gorton Drive. The project site is also bounded by Kama Reserve to the west and the Molonglo River to the south. The project area is illustrated on the aerial photograph in Figure 1.1. Approximately 2,700 dwellings are planned for the suburb of Whitlam, as well as a school and other community facilities.

Road noise assessments were previously conducted as part of the Whitlam Stages 1 and 2 Road Noise Impact Assessment (2270809B, dated 20th July 2018). A revised version of the road noise model used for the previous study will serve as the basis of the assessment for this NMP.

The primary objectives of this NMP are to:

- Predict and assess the likely road traffic noise levels impacting on the future building façade of developments on the residential blocks in Whitlam Stage 4
- If necessary, for the land blocks that exceed the external noise planning guideline levels, provide indicative acoustic building envelope construction requirements that respond to these road traffic noise levels.

All assessments are conducted in accordance with the Roads ACT Noise Management Guidelines (2018).



Source: ACTmapi, accessed 27 April 2021

Figure 1.1 Aerial photograph of the project site

2 PLANNING REQUIREMENTS

The relevant noise criteria applicable to the project site have been established in accordance with the following documents:

- Roads ACT Noise Management Guidelines 2018 (NMG)
- Single Dwelling Housing Development Code (SDHDC)
- Multi Unit Housing Development Code (MUHDC)
- AS 3671:1989 Acoustics – Road traffic noise intrusion – Building siting and construction (AS3671)

2.1 ROADS ACT NOISE MANAGEMENT GUIDELINES

Proposed noise sensitive developments located adjacent to arterial or major collector roads in the ACT are to be planned, designed, and constructed in line with the Roads ACT Noise Management Guidelines (NMG, 2018).

The NMG provides road traffic noise planning guideline levels for new developments based on the land / building usage. Based on our interpretation of the NMG, the proposed project is classified as 'New Developments on Existing Roads' and the noise planning guidelines applicable are as follows:

- External noise levels for proposed noise sensitive residential developments located adjacent to arterial or major collector roads (based on existing conditions at the receiver):
  - 60 dBA daytime $L_{eq,\ 15\text{-}hour}$ from 7am to 10pm (1 metre from façade).
  - 55 dBA $Leq_{,\ 9\text{-}hour}$ from 10pm to 7am (1 metre from façade).

  OR
- Internal noise levels that meet the requirements outlined in Australian New Zealand Standard AS 2107:2016 (AS/NZS 2107).

Internal noise levels provided in AS/NZS 2107 relevant to the Whitlam development are outlined in Table 2.1.

Table 2.1 AS/NZS 2107:2016 relevant internal noise levels

ITEM	TYPE OF OCCUPANCY/ACTIVITY	DESIGN SOUND LEVEL ($LA_{EQ,\ T}$) RANGE
Houses and apartments in inner city areas or entertainment districts or near major roads		
7	Apartment common areas (e.g. foyer, lift lobby)	45 to 50
	Living areas	35 to 45
	Sleeping areas (night time)	35 to 40
	Work areas	35 to 45

2.2 ACT HOUSING DEVELOPMENT CODES

With regard to potential noise intrusion to the proposed residential units, Rule 67 of the MUHDC and Rule 42 of the SDHDC states that:

Where a block has one or more of the following characteristics:

i) *identified in a precinct code as being potentially affected by noise from external sources*

ii) ***adjacent to a road carrying or forecast to carry traffic volumes greater than 12,000 vehicles per day***

iii) *located in a commercial zone*

iv) *adjacent to a commercial or industrial zone*

dwellings should be constructed to comply with the relevant sections of all of the following:

a) AS/NZS 2107:2000 – Acoustics – Recommended design sound levels and reverberation times for building interiors (the relevant satisfactory recommended interior design sound level)

b) AS/NZS 3671 – Acoustics – Road Traffic Noise Intrusion Building Siting and Design

For other than road traffic noise, compliance with this rule is demonstrated by a noise management plan prepared by a member of the Australian Acoustical Society with experience in the assessment of noise, and endorsed by the EPA. For other than road traffic noise, the noise level immediately adjacent to the dwelling is assumed to be the relevant noise zone standard specified in the ACT Environment Protection Regulation 2005.

For road traffic noise, compliance with this rule is demonstrated by an acoustic assessment and noise management plan, prepared by a member of the Australian Acoustical Society with experience in the assessment of road traffic noise, and endorsed by the ACT Government entity responsible for Transport Planning.

As emboldened in the quotation above, the proposed development triggers Rule 67 by being identified as being located adjacent to a road carrying traffic volumes greater than 12,000 vehicles per day. Details of the predicted vehicle count on the arterial roads around the Whitlam developments are presented in Section 4.1.3.

It should be noted that AS2107:2000 currently referenced in the SDHDC and MUHDC has been superseded by a revised issue dated 2016. The older version was however referenced in this NMP as per required by the SDHDC and MUHDC.

2.3 ROAD TRAFFIC NOISE INTRUSION

AS 3671:1989 *Acoustics – Road traffic noise intrusion – Building siting and construction* (AS3671) is concerned with road traffic noise intrusion to buildings near to major roads. AS3671 provides guidelines for determining necessary building envelope constructions to achieve the internal noise levels recommended in AS2107.

Table 2.2 outlines the recommended building construction categories required to achieve satisfactory internal noise levels for a residential building, as per AS2107 (see Table 2.1). This is a guideline only, and the actual reduction afforded will depend upon the frequency content of the noise. Note that where significant low frequency noise is evident, the guidelines in AS3671 may not be sufficient.

Table 2.2 AS3671 residential building construction categories

BUILDING TYPE	RESIDENTIAL BUILDING CONSTRUCTION CATEGORY			
	Category 1	Category 2	Category 3	Category 4
External road traffic noise level, dB L_{Aeq}	≤45	>45 ≤60	>60 ≤75	>75

BUILDING TYPE	RESIDENTIAL BUILDING CONSTRUCTION CATEGORY			
	Category 1	Category 2	Category 3	Category 4
Most onerous proposed project assessment level, dB L_{Aeq}	Sleeping areas ≤35	Sleeping areas ≤35	Sleeping areas ≤35	Sleeping areas ≤35
Resulting necessary Traffic Noise Reduction (TNR)	≤10	>10 ≤25	>25 ≤35	>40

According to AS3671, the categories referenced in Table 2.2 are:

- Category 1 – Standard construction: openings including open windows may comprise up to 10% of the exposed façade.
- Category 2 – Standard construction except for lightweight elements or all glass facades (both of which require acoustic advice). Windows, doors and other openings should be closed.
- Category 3 – Special construction as advised in the Standard. Windows, doors and other openings should be closed.
- Category 4 – Special acoustic advice should be sought.

Following noise predictions for this project, all of the development blocks assessed (see Section 4) were found to be **Category 2**, requiring closable windows and a degree of acoustic consultancy support in final glazing selections.

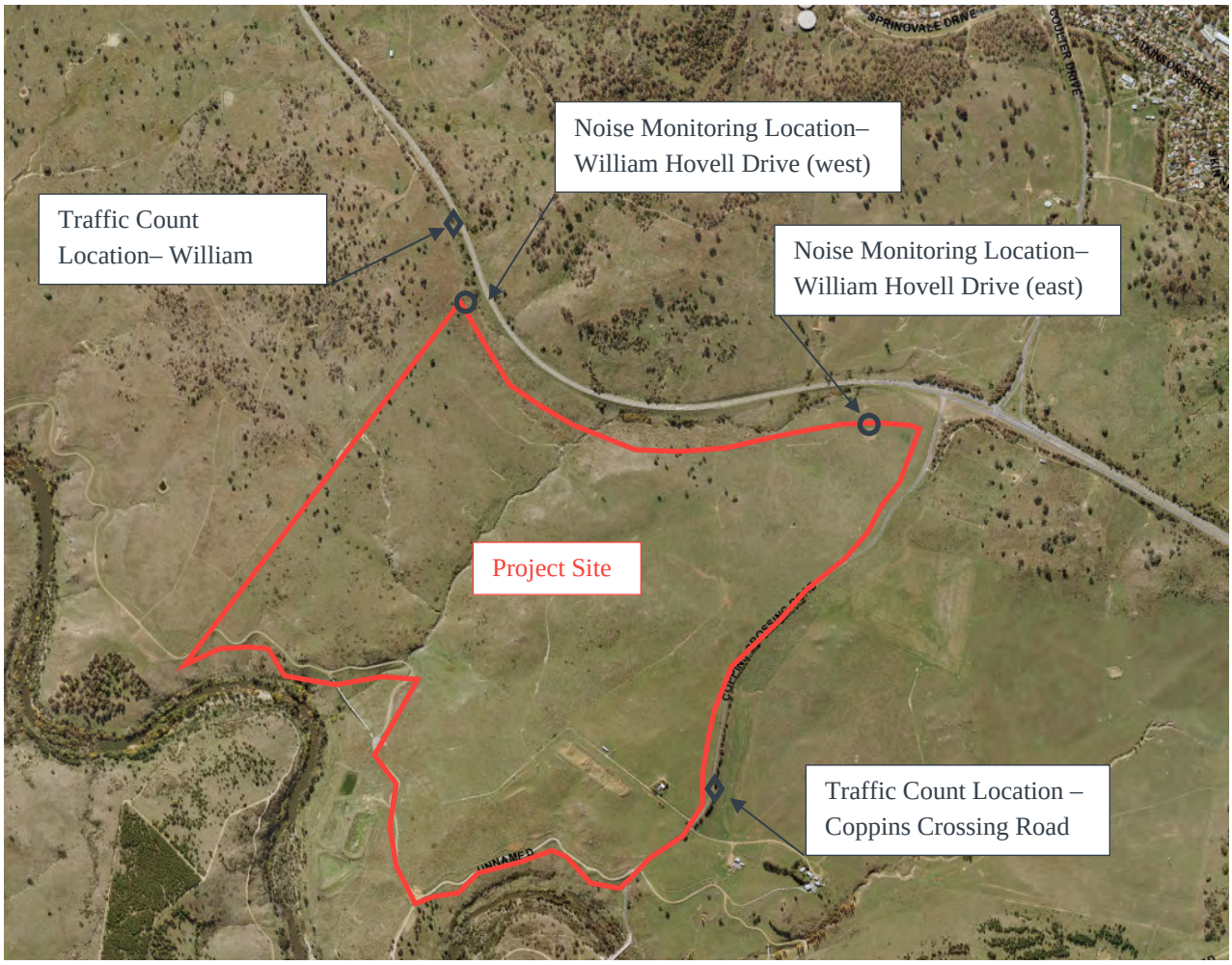
3 EXISTING AMBIENT NOISE ENVIRONMENT

As mentioned in Section 1, the noise model for Whitlam Stage 4 is based on the road noise assessments conducted as part of the Whitlam Stages 1 and 2 Road Noise Impact Assessment (2270809B, dated 20th July 2018).

As part of the Road Noise Impact Assessment for Stage 1 and 2 environmental noise monitoring were carried out to gain an understanding of the road traffic noise levels. The noise monitoring was carried out in 2017 of the then existing section of William Hovell Drive adjacent to Whitlam.

Noise monitoring was conducted at two representative locations within the project area. Additionally, traffic counts were conducted concurrently with the noise monitoring to enable calibration of the noise model for the Whitlam Stages 1 and 2 Road Noise Impact Assessment. Upon getting a calibrated noise model based on ‘existing’ conditions, a model scenario is subsequently set up to include the proposed design for Stage 4 of the subdivision and future duplication of WHD (SMEC’s design received 9 March 2021)

The noise and traffic monitoring locations are presented in Figure 3.1. The noise monitoring locations were selected such that there is a clear line of sight to the traffic flow along William Hovell Drive at both extents of the project site.



Source: *ACTmapi, accessed 10 August 2017*

Figure 3.1 Aerial photograph of the project site including approximate locations of noise monitoring and traffic counts

Unattended noise monitoring was conducted using an ARL type EL-316 noise logger (S/N 16-306-008) and a Norsonic Nor140 sound level meter (S/N 1406503). The instruments' signal chain was checked at the commencement and conclusion of the noise monitoring, with the variation in recorded levels was within ±0.5 dB.

All unattended noise monitoring equipment was programmed to continuously record statistical noise level indices in 15-minute intervals including L_{max}, L_1, L_{10}, L_{50}, L_{90}, L_{99}, L_{min} and L_{eq}.

All traffic counters were programmed to record continuously in one hour intervals including a breakdown of 13 vehicle classifications according to AustRoads94 scheme.

3.1 NOISE MONITORING RESULTS

The noise monitoring results collected at the selected representative locations and the corresponding traffic flows are summarised in Table 3.1 and Table 3.2 respectively. These results have been used collectively as part of the model calibration process. Noise monitoring and traffic results are presented as the average of daily 18-hour, 15-hour, and 9-hour periods during the overall monitoring period for assessment.

Table 3.1 Noise monitoring dates and results

LOCATION (REFER TO Figure 3.1)	DESCRIPTION AND DATES	MEASURED NOISE LEVEL, dBA		
		$L_{10,\ 18\text{-hour}}$	$L_{eq,\ 15\text{-hour}}$	$L_{eq,\ 9\text{-hour}}$
William Hovell Drive (west)	Existing greenfield site Saturday 3 June to Friday 9 June 2017 (inclusive)	69	66 2.7 dB lower than $L_{10,\ 18\text{-hour}}$	60 8.7 dB lower than $L_{10,\ 18\text{-hour}}$
William Hovell Drive (east)	Existing greenfield site Saturday 3 June to Friday 9 June 2017 (inclusive)	64	62 2.6 dB lower than $L_{10,\ 18\text{-hour}}$	56 8.1 dB lower than $L_{10,\ 18\text{-hour}}$

Table 3.2 Traffic count results

ROAD	DIRECTION	SPEED LIMIT, KM/H	18-HOUR		15 HOUR		9 HOUR	
			LV	HV	LV	HV	LV	HV
William Hovell Drive	Eastbound	90	8,526	319	7625	289	1254	48
	Westbound		7,915	355	7505	336	552	25

(1) Results from traffic counting in 2016 obtained by WSP for Calibre Consulting

3.2 ADDITIONAL STUDIES

Additional studies presented in this section are presented for context only and have not been used for validation or calibration of road noise model.

A noise monitoring survey was undertaken by SLR consulting in May 2020 at two locations in the vicinity of William Hovell Drive. Locations were located further South along Willam Hovell Drive than the locations used by WSP, presented in Figure 3.2. Results from the noise monitoring are presented in Table 3.3. Concurrent traffic count was understood to not have been conducted.

Figure 3.2 Aerial photograph of the project site including approximate locations of SLR noise monitoring

Table 3.3 Results from noise monitoring survey undertaken by SLR May 2020

MEASUREMENT LOCATION	DESCRIPTION AND DATES	NOISE LEVEL, dBA, $L_{eq,\ 15\text{-hour}}$
NM1	Existing greenfield site Friday 24 April to Tuesday 5 May 2020 (inclusive)	64 (1)
NM2	Existing greenfield site Friday 24 April to Tuesday 5 May 2020 (inclusive)	70

(1) Based on noise data during the first week of the monitoring period. The noise logger results during the second week indicated acoustic drift, which resulted in much lower noise levels than expected. Consequently, those results have been excluded.

4 NOISE ASSESSMENT

Noise modelling for Whitlam Stage 4 is based on the validated noise model for Whitlam Stages 1 and 2 Road Noise Impact Assessment (2270809B, dated 20th July 2018). Validation of noise model for Stages 1 and 2 was based on traffic count and noise monitoring of the then existing section of William Hovell Drive adjacent to Whitlam. Stage 4 noise model is based on current SMEC's design of the William Hovell Drive duplication (received 9 March 2021).

4.1 NOISE MODELLING APPROACH

4.1.1 PREDICTION ALGORITHM

The noise modelling has been conducted using the SoundPLAN (version 8.2) suite of acoustic prediction software, using the Calculation of Road Traffic Noise (CoRTN) algorithm (UK Department of Environment Welsh Office 1988).

4.1.2 NOISE DESCRIPTORS

Noise prediction results are calculated by the validated noise model as $L_{Aeq,18\ hour}$ levels. To convert the noise levels to the $L_{Aeq,\ 15\ hour}$ and $L_{Aeq,\ 9\ hour}$ levels that corresponds to the planning guideline levels outlined in Section 2, corrections have been applied to the calculated results. These corrections have been applied based on the processed noise monitoring results as summarised in Table 3.1.

$L_{Aeq,18\ hour}$ has been used in the model since it was the descriptor used in the *Draft Noise Management Guideline* (1996) which was superseded by NMG, however, when the noise model for Stages 1 and 2 was created it was still in use.

4.1.3 TRAFFIC DATA

Traffic forecast figures for the ultimate duplication of William Hovell Drive as per SMEC's design are presented in Table 2.1 to assist with the modelling of the future scenario.

Table 4.1 Traffic forecast data for 2031

TRAFFIC VOLUME	MODELLED VEHICLE SPEED	2031 VOLUME (1) (AADT)	2031 18-HR VOLUME	% HEAVY VEHICLES
Eastbound	90 km/h	10,207	9,697	3.2
Westbound	90 km/h	9.718	9,232	6.6

(1) Data from SLR report issued August 2020, Ref No: 670.11111-R01-v2.0.docx

For noise assessment purposes, a conversion factor of 0.97 has been applied to the 2031 forecasted traffic volumes to obtain the 18-hour volumes presented in Table 4.1. This conversion factor is based on the traffic count data recorded during 2017 noise monitoring, presented in Table 3.2.

It should be noted that these traffic volumes are lower than what was used in the previous noise modelling for Whitlam Stage 3. Data presented in Table 4.1 have been used for this assessment as it is the more recent data of the two and therefore deemed most suitable.

4.1.4 PAVEMENT AND ROAD DESIGN

Current SMEC's design of the duplication of William Hovell Drive used in the noise model (file name: x_des_rd01.dxf, provided on 9 March 2021).

Modelling of future scenarios has been performed assuming road pavement surfaces and correction factors presented in Table 4.2.

Table 4.2 Modelled road surface and corresponding correction factor

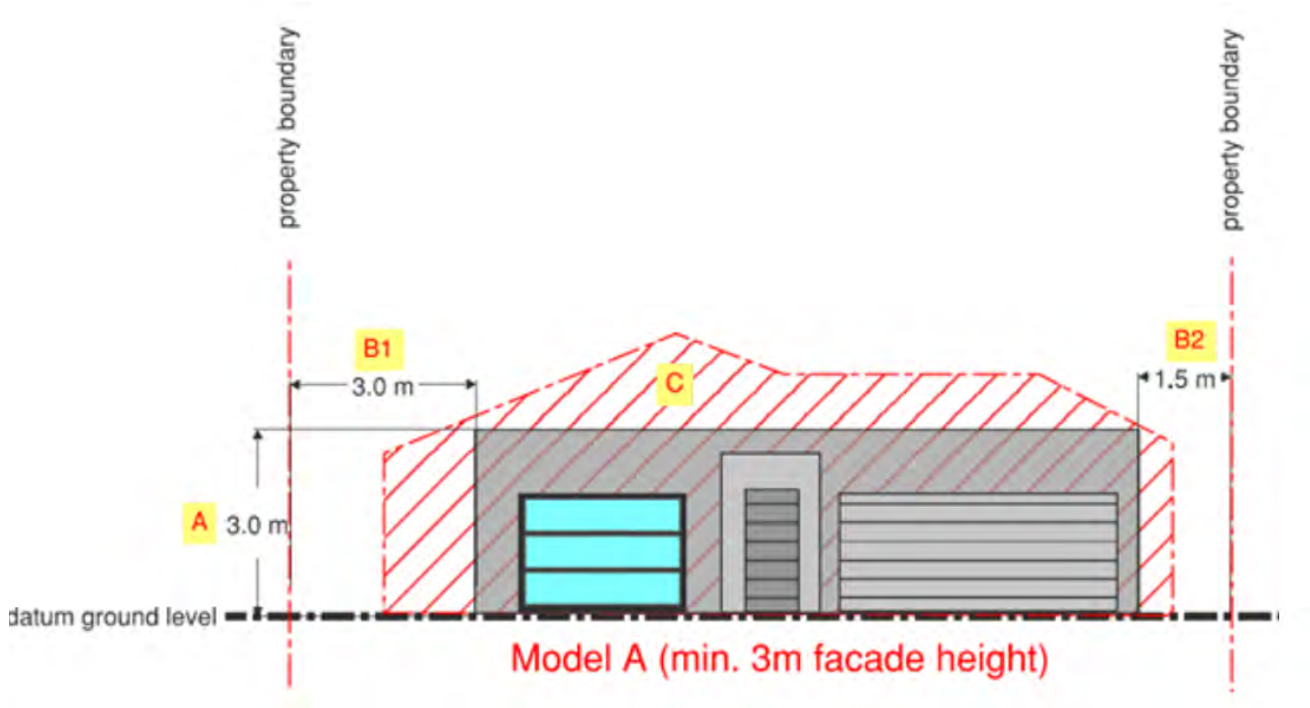
DIRECTION	ROAD SURFACE (1)	ROAD SURFACE CORRECTION (1)
Westbound	50 mm AC14 + Prime (AMC00) + 7mm low cutter seal	+2
Eastbound	Prime (AMC00) + 7 mm sprayed seal	+2

(1) Data from SLR report issued August 2020, Ref No: 670.11111-R01-v2.0.docx

4.1.5 BUILDINGS

For the purpose of this assessment, single storey buildings with direct frontage to William Hovell Drive are assumed to be single level houses of 3 metres in height (as illustrated in Figure 4.1). These buildings are assumed as such build form are typically regarded as represent a 'standard minimum' dwelling height. Actual build form of houses may be taller, which will provide additional acoustic shielding benefit to land areas further away from the road corridor assessed in this report.

In addition, a separate model was run with buildings for selected receiver locations (R1, R2, R3, R12, R13 and R15) to have two floors above ground. Each level modelled as 3 metres in height.



(A: minimum overall building height; B: maximum setback from side boundaries; C: example of building that meets minimum required height and width as modelled.)

Figure 4.1 Modelled dwelling for Whitlam Stage 4

4.1.6 RECEIVER LOCATIONS

Single point receivers have been generated at the centre of each building façade, 1.0 meters in front of the façade. The noise assessment was primarily undertaken for all of the identified blocks closest to William Hovell Drive, which are set at 1.5 metres above the design ground surface. Locations of single point representative receivers are shown in Figure 4.2 and Figure 4.3. In addition to noise contour maps were also calculated to provide a graphical representation of the road traffic noise impact on Whitlam stage 4, calculated at 1.5 meters to represent noise impact on the ground floor receivers.

In addition, considerations have also been provided to noise impact on possible double storey buildings. An initial screening assessment was also undertaken by analysing the noise contour map calculated at 4.5 meters above design ground level, supported by further single point receivers results for blocks identified as at risk of exceeding the external noise planning guideline levels for first floor receivers.

All predicted receiver levels are inclusive of the 2.5 dB façade correction factor implemented by the CoRTN algorithm.

Figure 4.2 Plan showing residential block layout of Whitlam Stage 4

Figure 4.3 Noise model receiver locations

4.2 NOISE MODEL VALIDATION

The noise monitoring and traffic count results presented in Table 3.1 and Table 3.2 were used to perform a noise model validation process. The traffic count results were input to the noise model and the predicted noise levels output by the model were compared against the measured noise levels. The results of the validation process are provided in Table 4.3.

Table 4.3 Model validation results

LOCATION (REFER TO Figure 3.1)	MEASURED NOISE LEVEL, dBA $L_{10, 18HR}$	PREDICTED NOISE LEVEL, dBA $L_{10, 18HR}$	DIFFERENCE, dB
William Hovell Drive (west)	69	66	-3
William Hovell Drive (east)	64	65	+1

According to the NSW Environment Noise Management Manual (ENMM) released by the NSW Roads and Maritime Services (RMS, previously Roads and Traffic Authority, RTA), it was noted that "*it should be recognised that noise prediction modelling has some accuracy limitations and will commonly produce acceptable errors of around 2 dBA*". This approach to validation has generally been accepted in the ACT and various other interstate jurisdictions.

Considering that the difference between the measured and predicted noise levels at the selected representative receivers is an average of ±2 dB, it can be concluded that the noise model provides results which enable a reliable assessment of the project. A +1 dB correction factor has been provided to all model results as a conservative approach.

4.3 NOISE PREDICTION RESULTS

It was noted that current William Hovell Drive duplication road design completed by SMEC appears favourable from an acoustics perspective and has a high impact on the results presented in this Section.

4.3.1 GROUND FLOOR RECEIVERS

Predicted external noise levels for the assessed single point receivers at Ground Floor are presented in Table 4.4.

Table 4.4 Representative receiver results – Ground Level

RECEIVER LOCATION	BLOCK	PREDICTED NOISE LEVELS (YEAR 2031) dBA		COMPLYING WITH EXTERNAL NOISE LEVELS (NMG)
		FAÇADE CORRECTED, $L_{EQ, 15-H}$	FAÇADE CORRECTED, $L_{EQ, 9-H}$	
R1	W4 4A2 A – a	60	54	Yes
R2	W4 4A2 A – h	59	53	Yes
R3	W4 4A2 A – g	59	53	Yes
R4	W4 4A2 C – a	59	53	Yes
R5	W4 4A2 C – t	57	51	Yes
R6	W4 4A2 C – s	57	51	Yes
R7	W4 4A2 C – r	57	51	Yes
R8	W4 4A2 D – a	56	50	Yes
R9	W4 4A2 D – u	56	50	Yes
R10	W4 4A2 D – t	56	50	Yes
R11	W4 4A2 D – s	56	50	Yes
R12	W4 4A2 A – b	59	53	Yes
R13	W4 4A2 A – c	59	53	Yes
R14	W4 4A2 A – d	59	53	Yes
R15	W4 4A2 A – f	60	54	Yes
R16	W4 4A2 A – e	59	53	Yes
R17	W4 4A2 B – a	59	53	Yes
R18	W4 4A2 B – b	59	53	Yes
R19	W4 4A2 B – c	58	52	Yes
R20	W4 4A2 B – d	58	52	Yes
R21	W4 4A2 B – e	58	52	Yes
R22	W4 4A2 B – f	58	52	Yes
R23	W4 4A2 B – g	58	52	Yes
R24	W4 4A2 B – n	59	53	Yes
R25	W4 4A2 B – m	55	49	Yes
R26	W4 4A2 B – l	54	48	Yes
R27	W4 4A2 B – k	54	48	Yes
R28	W4 4A2 B – j	53	47	Yes
R29	W4 4A2 B – i	53	47	Yes

RECEIVER LOCATION	BLOCK	PREDICTED NOISE LEVELS (YEAR 2031) dBA		COMPLYING WITH EXTERNAL NOISE LEVELS (NMG)
		FAÇADE CORRECTED, $L_{EQ, 15\text{-}H}$	FAÇADE CORRECTED, $L_{EQ, 9\text{-}H}$	
R30	W4 4A2 B – h	55	49	Yes

In addition, both the 60 dBA $L_{eq, 15\text{-}hour}$ and 55 dBA $L_{eq, 9\text{-}hour}$ contour lines with the façade correction, corresponding to the planning guidelines discussed in Section 2, are plotted graphically. The figures containing these noise contour lines are presented in Appendix A.

Due to the topography of Whitlam Stage 4 the first row of houses do not always effectively shield the second row, see Figure 4.4, which is evident in the results in Table 4.4.

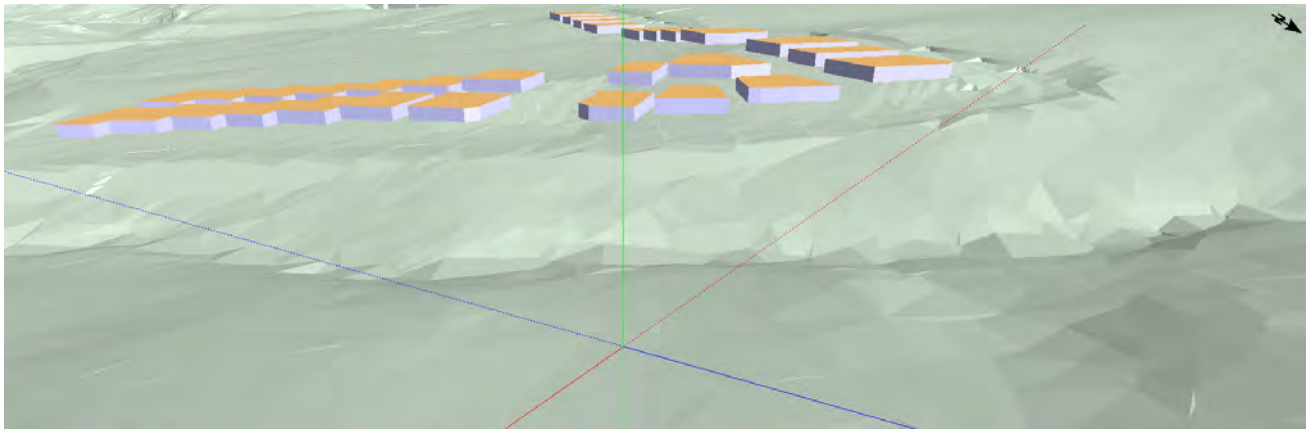


Figure 4.4 3D view of noise model from view of William Hovell Drive

It should be noted that in addition to the margin of noise modelling error as discussed in Section 4.1, the contour lines have limited accuracy and it is expected that the presented location of the noise contour lines are within ±10 metres.

Based on the results presented in Table 4.4, it was found that the planning guidelines for external noise levels are complied with at all receiver locations.

4.3.2 FIRST FLOOR RECEIVERS

Due to the effect of the topography of Whitlam Stage 4, as discussed in Section 4.3.1, the first floor noise levels were modelled for selected receivers.

Predicted external noise levels for the assessed single point receivers at First Floor are presented in Table 4.5.

Table 4.5 Representative receiver results – First Floor

RECEIVER LOCATION	BLOCK	PREDICTED NOISE LEVELS (YEAR 2031) dBA		COMPLYING WITH EXTERNAL NOISE LEVELS (NMG)
		FAÇADE CORRECTED, $L_{EQ, 15\text{-}H}$	FAÇADE CORRECTED, $L_{EQ, 9\text{-}H}$	
R1	W4 4A2 A – a	61	55	No
R2	W4 4A2 A – h	59	53	Yes
R3	W4 4A2 A – g	59	53	Yes
R12	W4 4A2 A – b	57	54	Yes
R13	W4 4A2 A – c	57	54	Yes
R15	W4 4A2 A – f	57	54	Yes

In addition, both the 60 dBA $L_{eq, 15\text{-}hour}$ contour lines with the façade correction has been created at 4.5 m above ground to indicate noise propagation at the approximate height of First Floor, corresponding to the planning guidelines discussed in Section 2, are plotted graphically. The figures containing these noise contour lines are presented in Appendix A.

Based on the results presented in Table 4.5 it was found that the planning guidelines for external noise levels are exceeded at one receiver location – R1 (block W4 4A2 A – a). If this block is considered to have multiple levels mitigation measures will be necessary.

5 RECOMMENDED MINIMUM FAÇADE CONSTRUCTIONS

Based on the results of the noise assessment in Section 4, predicted noise levels at the following receiver are shown to exceed the Planning Guidelines' external noise level criteria:

- First Floor of receiver R1 (block W4 4A2 A – a)

Recommended minimum façade constructions outlined in this section are only required to be met for above listed receiver. However, it is recommended that as a general approach, all residential building facades that have frontage to the William Hovell Drive are capable of being fully closed/sealed and incorporate acoustic seals to windows and doors.

5.1 GLAZING

The following recommendations for glazing are applicable for façades that have direct and partial frontage to William Hovell Drive. This means that an occupant inside the space would have direct line of sight to the road. For façades that face away from the arterial road, standard glazing constructions without specific sound insulation requirements would be suitable. This means that for each final block configuration, the actual position of side and rear windows would need to be reviewed. This will be particularly important for corner blocks or end terraces. The following construction recommendations are provided to suit the predicted external noise levels:

- Window system meeting ≥32 dB R_w (≥30 dB R_w+ C_{tr}); for example:
  - ≥6.38 mm laminated glass, or;
  - A double-glazed system of ≥6 mm float glass | ≥12 mm air gap | ≥6 mm float glass
  - ≤6.6 m^2 maximum glazed facade area for each enclosed room
  - Framing system included in the R_w calculation

For assessment purposes, a bedroom was assumed for be approximately 3.5 m^2, while a living room is assumed to be 5.5 m^2 in floor areas.

It should also be noted that the glazing configuration and adopted glazing areas nominated above represent one possible construction combination. These glazing types are based on WSP's understanding of glazing types that are likely to be routinely used in residential construction, that typically do not require bespoke design/manufacture. Other combinations are possible and can be capable of meeting the planning requirements.

The selected window frame system and acoustic seals must not degrade the overall sound insulation performance of the window system.

5.2 WALLS

In general, a well-mortared brick veneer or any masonry construction is acoustically suitable on this development without further recommendations.

If lightweight cladding is used on the façade with direct and partial frontage to the arterial road the following typical minimum constructions would provide adequate façade sound insulation to meet the internal noise levels given in Table 2.1:

- External wall meeting ≥51 dB R_w (≥42 dB R_w+ C_{tr}); for example:
  - ≥ 9 mm compressed fibre cement board (or boards of total surface mass ≥13 kg/m^2), and

- Insulated cavity
  - ≥ 90 mm frame fully filled with fibrous acoustic insulation (≥14 kg/m^3); and
- Internal cladding
  - ≥ 2 layers of 13 mm standard core plasterboard (or other boards of surface mass ≥8.5 kg/m^2 each layer)

It should be noted that there are a wide range of equivalent lightweight constructions that would provide similar façade sound insulation. Any proposed design that does not meet the nominated facade requirements for glazing, height and materials as detailed above should be reviewed by an acoustic consultant as design progresses. It is also noted certain plasterboard, cladding and wall system manufacturers provide design guidelines that will include estimate sound insulation rating (R_w) based on tests or expert opinion. Provided that these are sourced from reputable suppliers, it is expected that these design guides can be used to select the appropriate wall systems to meet the noise reduction requirements (e.g. CSR Red Book, Knauf, Boral).

5.3 VENTILATION

It is assumed that openable windows will be the principal form of ventilation for these sites. All noise assessment has been undertaken assuming that windows can be closed by the occupant.

If permanently open in-wall passive ventilation is pursued for these buildings, the associated reduction in overall composite façade sound insulation performance should be reviewed by an acoustic consultant at the design stage.

6 CONCLUSION

WSP Australia has conducted a road noise impact assessment and prepared an overarching Noise Management Plan suitable for inclusion in the Development Application for residential blocks in Whitlam Stage 4.

The assessment has been prepared in reference to the planning requirements of the Single Dwelling Housing Development Code and Multi Unit Housing Development Code in regard to building envelope sound insulation performance, as well as requirements in Roads ACT Noise Management Guidelines 2018 (NMG).

Computer noise modelling of the planned duplication of William Hovell Drive as per SMEC's design has been undertaken based on the appropriate input parameters, which resulted in prediction of the likely future road traffic noise levels impacting on the façade of the future dwellings adjacent to the arterial road.

Based on the results, it was found that the NMG external noise guideline levels for day and night are exceeded for one block (W4 4A2 A – a) at First Floor.

Indicative building envelope construction requirements have been recommended for block W4 4A2 A – a if an additional level above ground floor is built in order to meet the internal noise level goals as discussed in Section 5. Implementation of the suggested constructions (subject to detailed design) are expected to allow the proposed development at the residential blocks adjacent to the arterial road to meet the current planning requirements.

For all other assessed receivers, there are no acoustic requirements for the façade constructions to meet the current planning requirements.

It should, however, be noted that the road design seems to be favourable for noise reduction and had a high impact on the predicted results. Any change in road design from what has been used in this prediction model, detailed in Section 4.1.4, will trigger the need for a new road noise assessment.

APPENDIX A

NOISE CONTOUR MAPS

R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
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R23
R24
R25
R26
R27
R28
R29
R30

Map: 2031_Daytime	Author: LE
Date: 29/04/2021	Approved by: ZL

N

0 30 60 90 m

1:7500 at A3

To be read in conjunction with WSP document: PS124326-ACO-Whitlam Stage4-REP-01 Rev0

Map Source: Google Satellite

Legend

Predicted Noise Levels (Leq,15-h)
- 55 - 60 dBA
- 60 - 65 dBA
- > 65 dBA

- Selected Whitlam Stage 4 Buildings
- Whitlam Stage 4 residential blocks outline

Whitlam Stage 4

2031 Predicted Daytime Noise Level
1.5m above ground

wsp

R1
R2
R3
R12
R13
R15
R14
R16
R4
R5
R6
R7
R17
R24
R18
R25
R19
R26
R20
R27
R21
R28
R22
R29
R23
R30
R8
R9
R10
R11

Map: 2031_Daytime	Author: LE
Date: 29/04/2021	Approved by: ZL

N

0 30 60 90 m

1:7500 at A3

To be read in conjunction with WSP document: PS124326-ACO-Whitlam Stage4-REP-01 Rev0

Map Source: Google Satellite

Legend

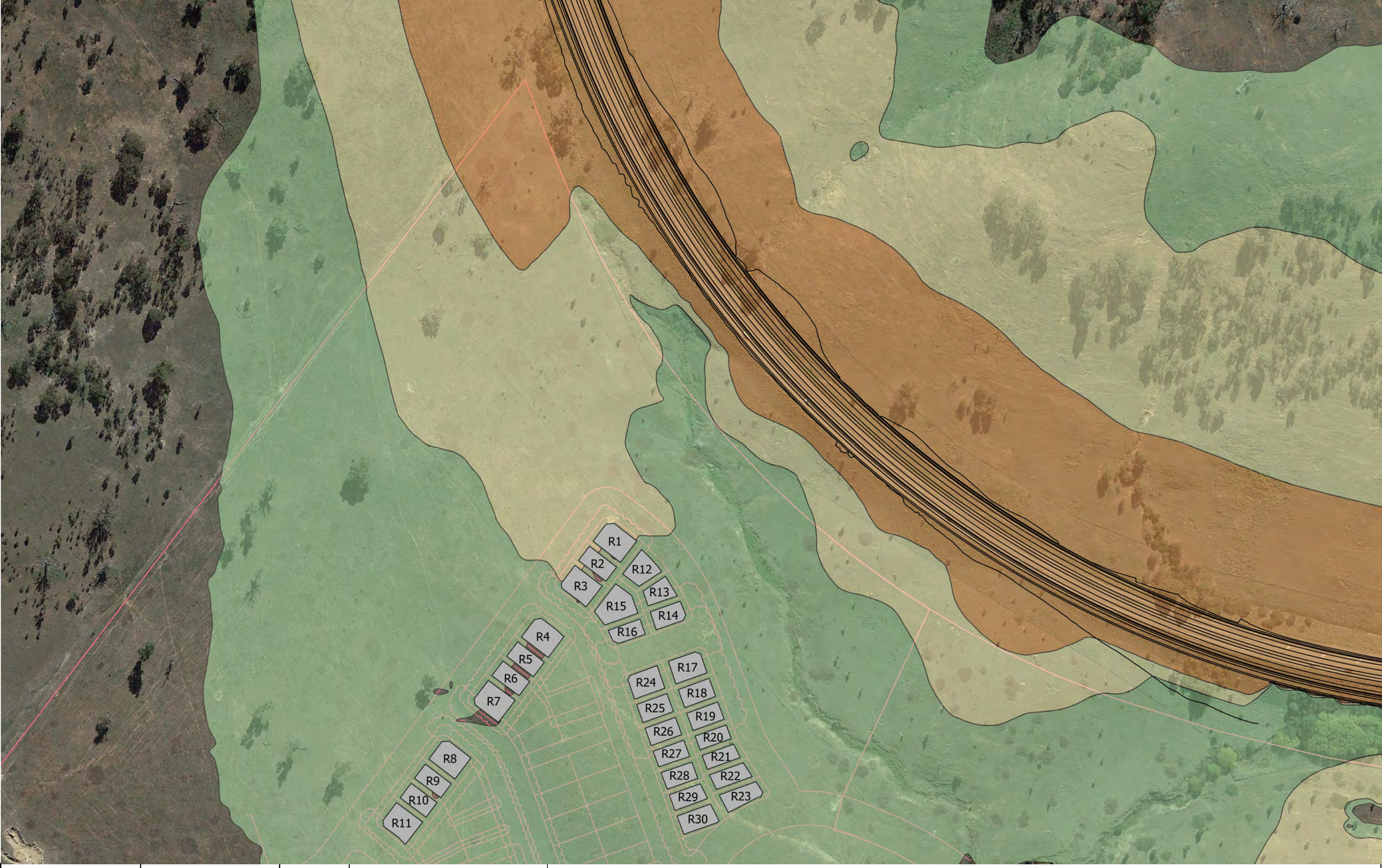
Predicted Noise Levels (Leq,15-h)
- 55 - 60 dBA
- 60 - 65 dBA
- > 65 dBA

- Selected Whitlam Stage 4 Buildings
- Whitlam Stage 4 residential blocks outline

Whitlam Stage 4

2031 Predicted Nighttime Noise Level
1.5m above ground

wsp



Map: 2031_Daytime	Author: LE	N
Date: 29/04/2021	Approved by: ZL	

To be read in conjunction with WSP document: PS124326-ACO-Whitlam Stage4-REP-01 Rev0

Map Source: Google Satellite

0 30 60 90 m

1:7500 at A3

Legend

Predicted Noise Levels (Leq,15-h)
- 55 - 60 dBA
- 60 - 65 dBA
- > 65 dBA

Selected Whitlam Stage 4 Buildings

Whitlam Stage 4 residential blocks outline

Whitlam Stage 4

2031 Predicted Daytime Noise Level
4.5m above ground

Suburban Land Agency
480 Northbourne Avenue
Dickson ACT 2602

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