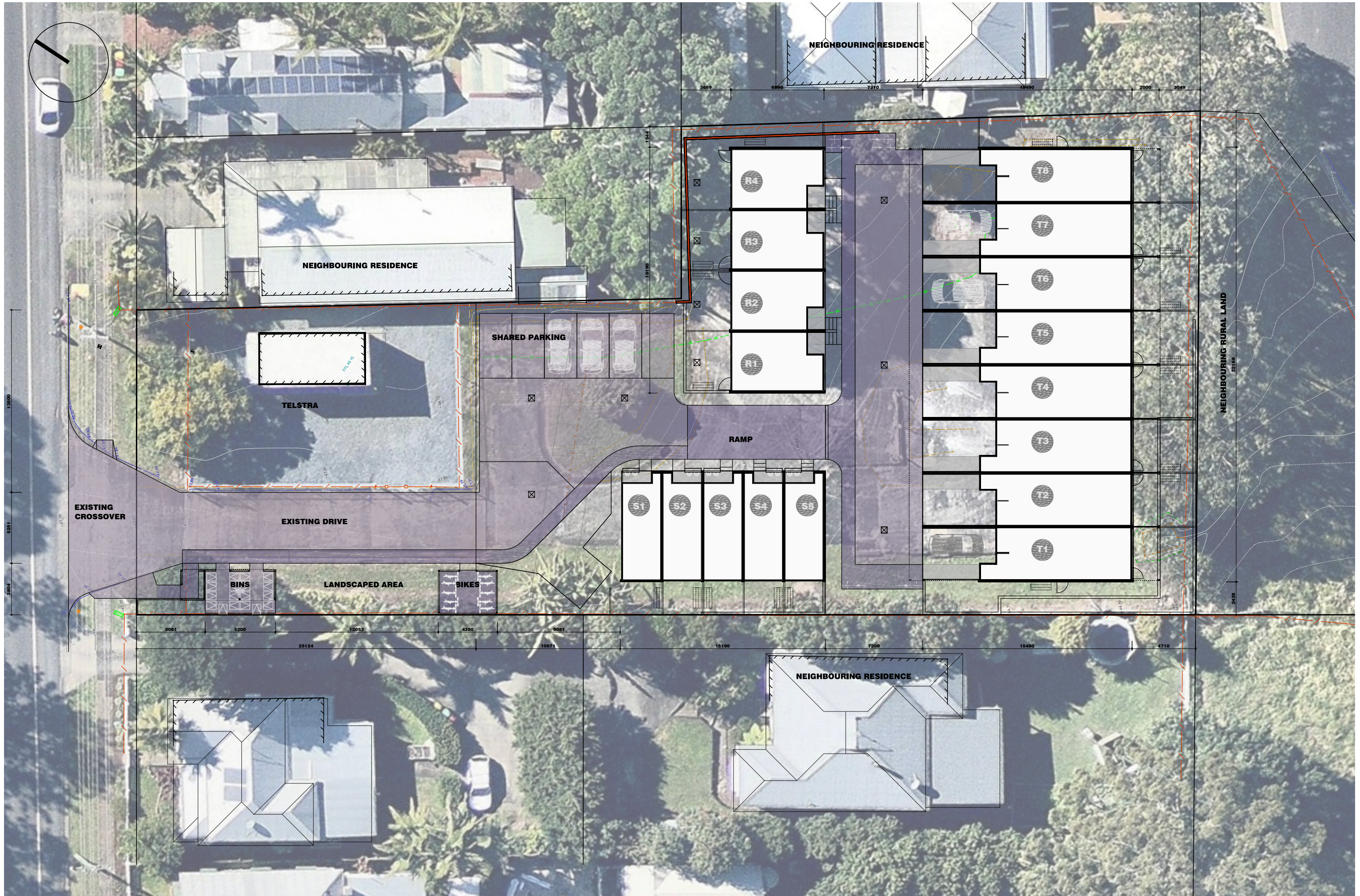
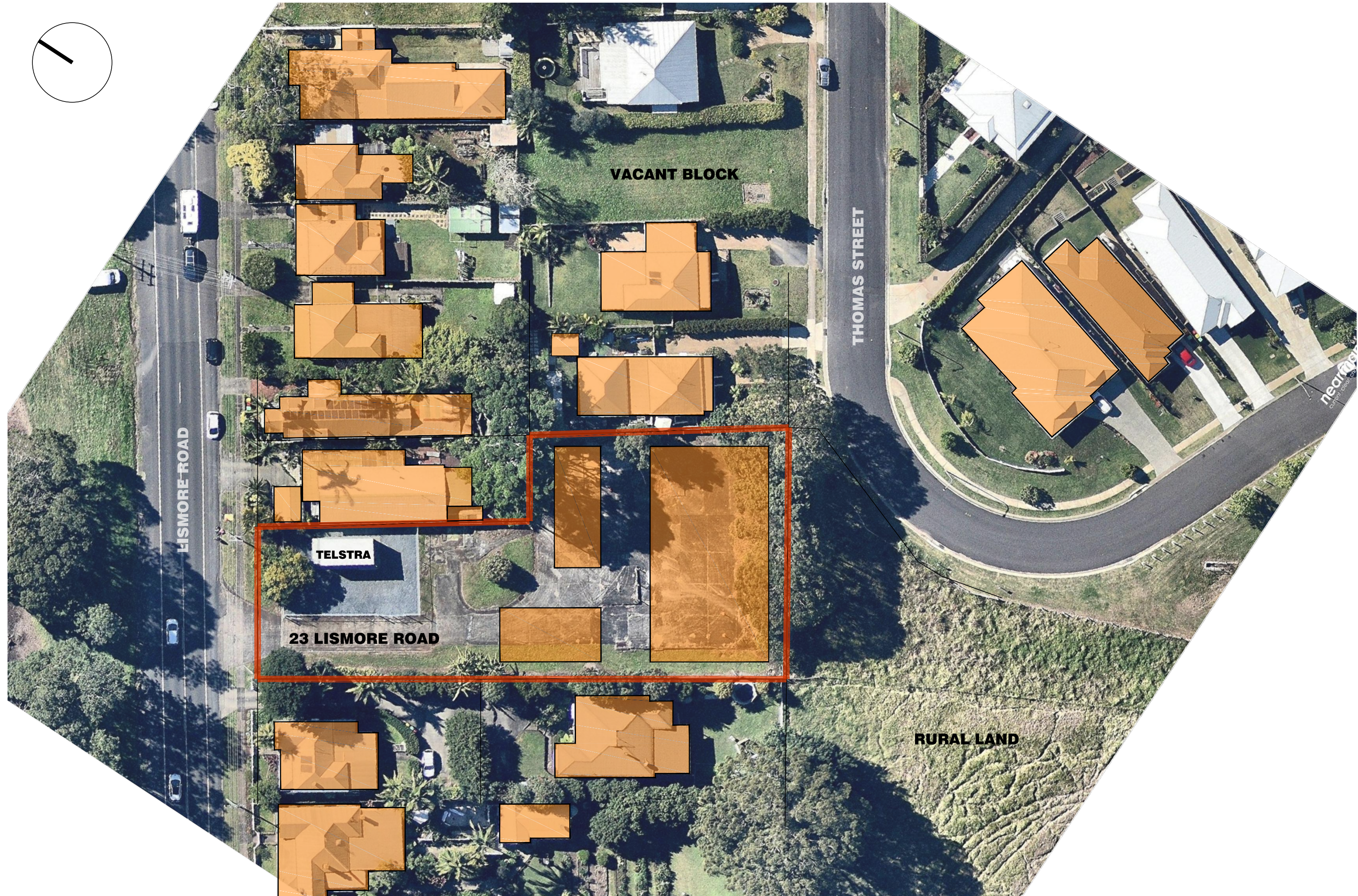
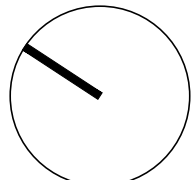


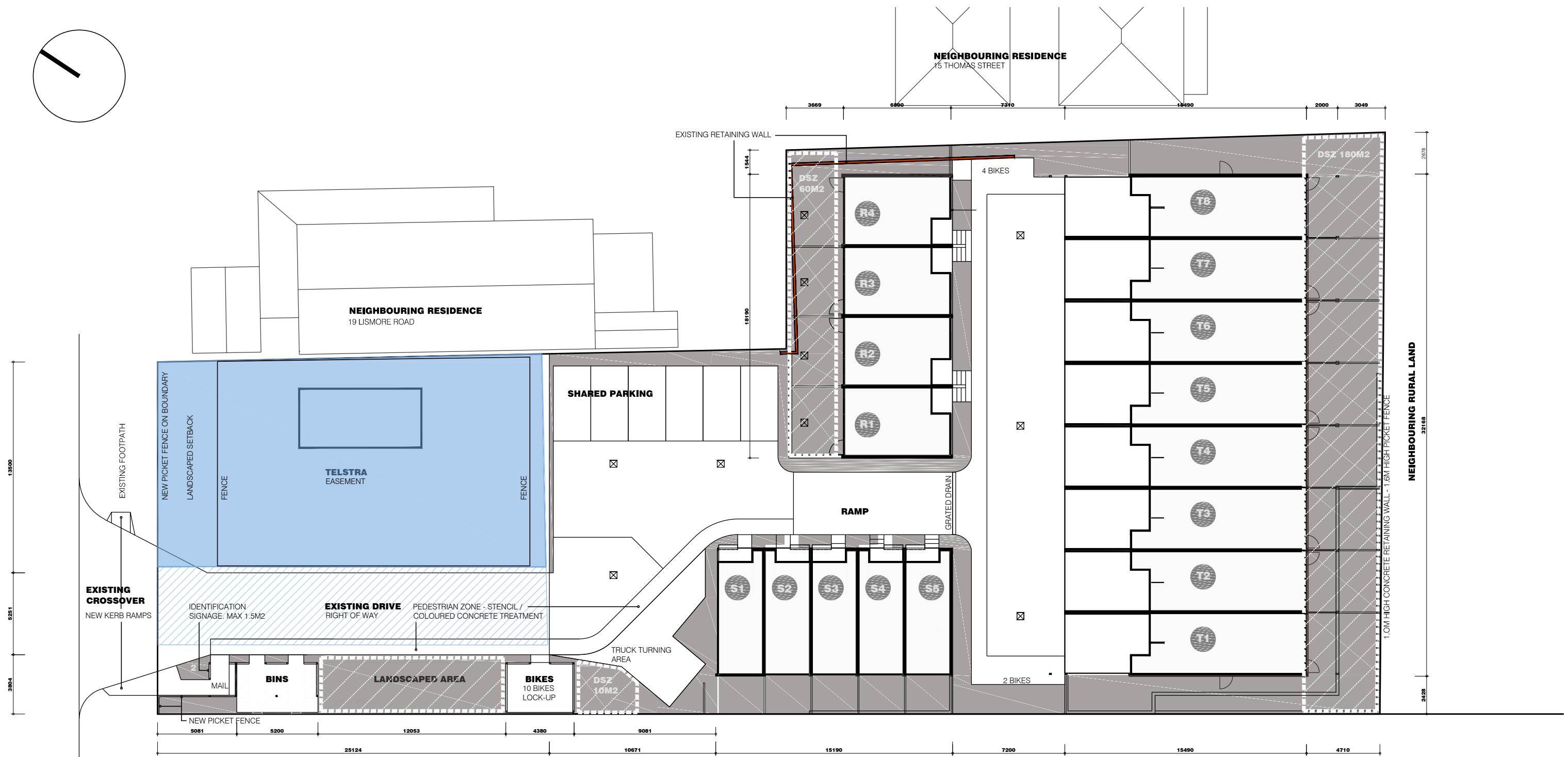
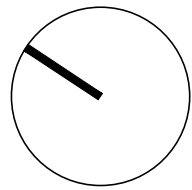
SITE AREA		FSR CALC		UNIT AREAS																TOTALS	
				S1	S2	S3	S4	S5	R1	R2	R3	R4	T1	T2	T3	T4	T5	T6	T7	T8	
TOTAL SITE AREA	2330	SITE AREA ASSESSED	1998	LOWER FLOOR	20	20	20	20	20	25	25	25	25	39	39	39	39	39	39	39	
TELSTRA EASEMENT	332	TOTAL GFA	1112	UPPER FLOOR	12	12	12	12	12	27	27	27	27	54	54	54	54	54	54	54	
RIGHT OF WAY	125	FSR	0.56:1	TOTAL GFA	32	32	32	32	32	52	52	52	52	93	93	93	93	93	93	93	1112
BALANCE	1873			CARPORT	-	-	-	-	-	0	0	0	0	19	19	19	19	19	19	19	



SITE PLAN - PHOTO

SITE PLAN

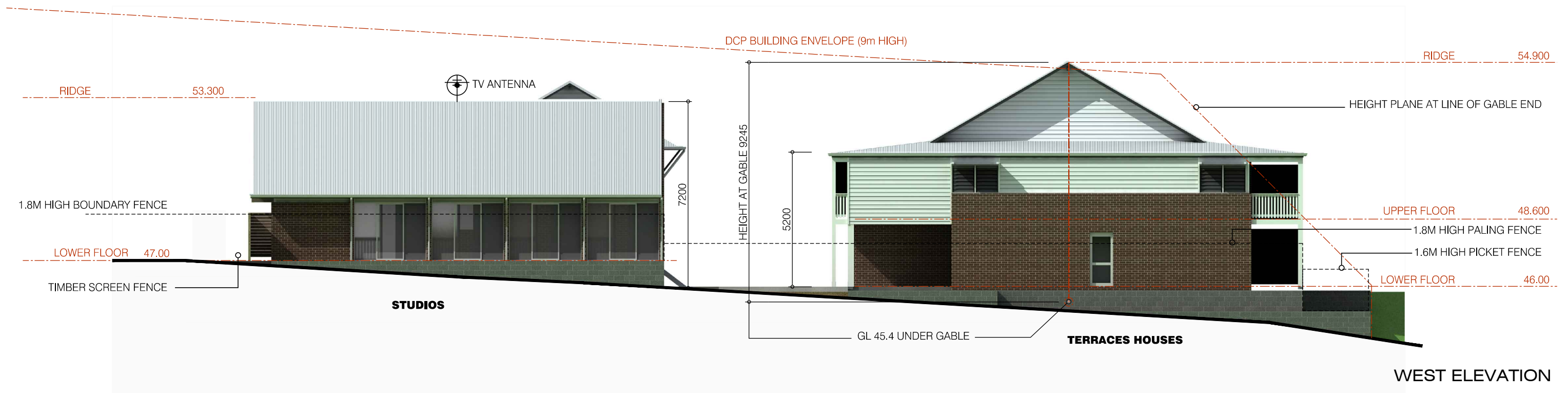
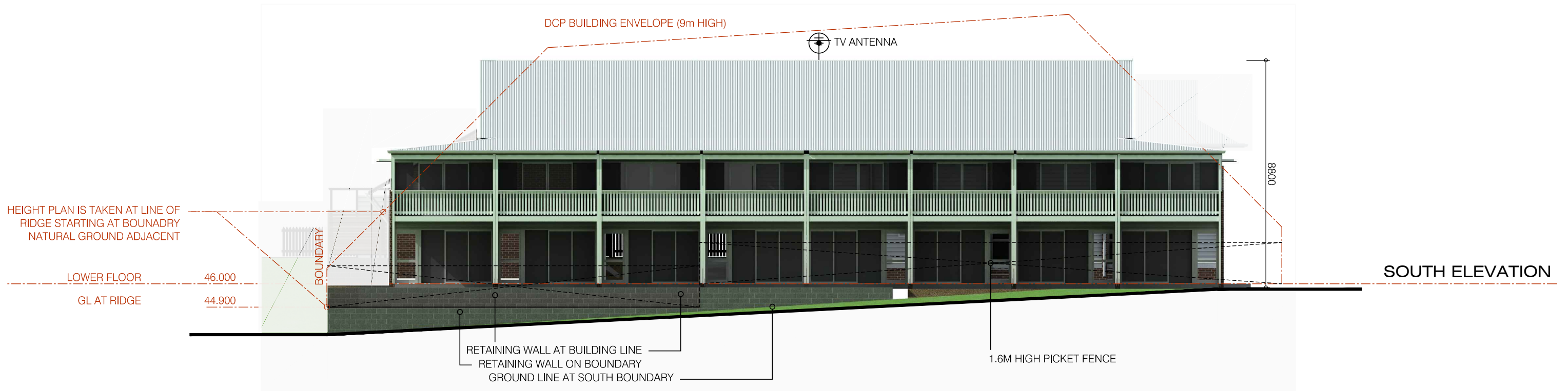


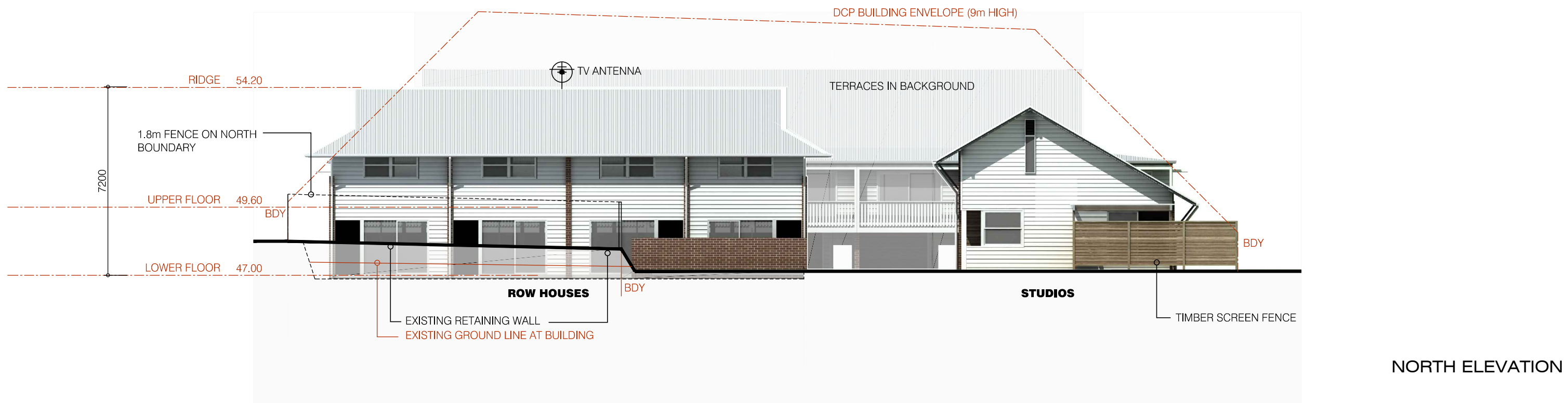
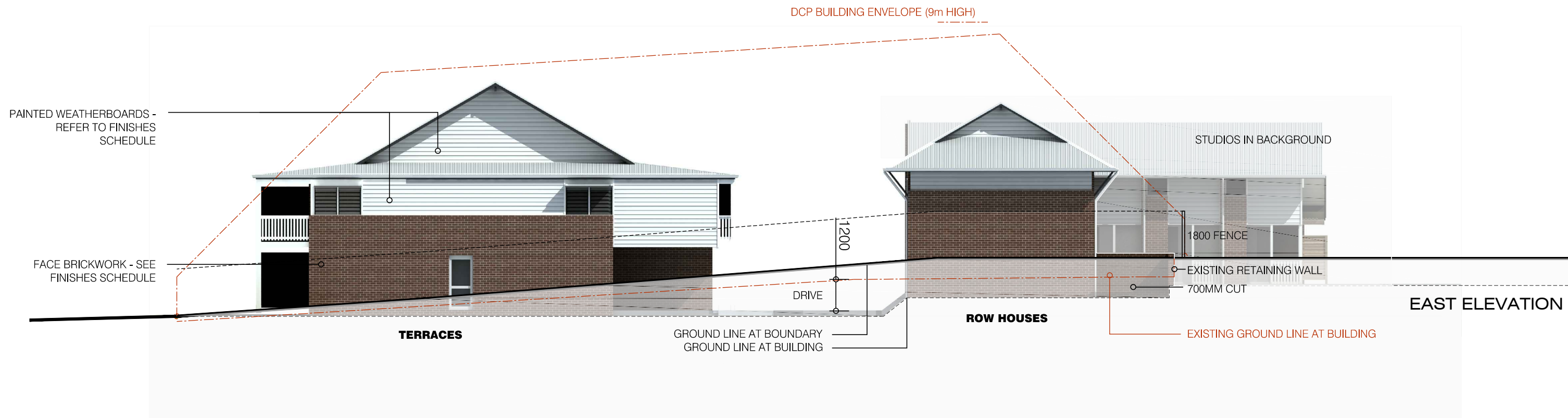


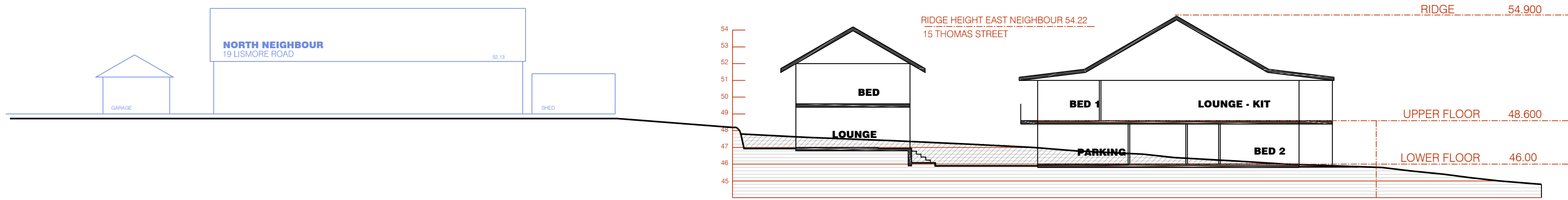
LANDSCAPED AREA

SITE AREA	2330	PROVIDED	REQD SEPP
TELSTRA EASEMENTS	332		
SITA AREA ASSESSED	1998		
PRIVATE LANDSCAPED	360		
COMMON LANDSCAPED	193		
TOTAL LANDSCAPED AREA	553	28%	30%
DEEP SOIL ZONES DSZ = MIN 3.0M WIDE	295	15%	15%

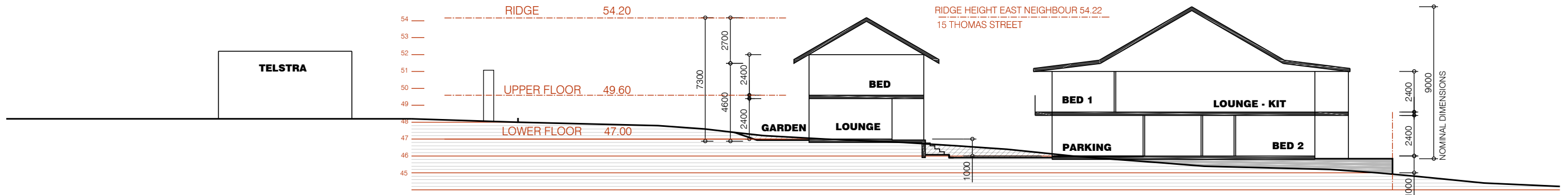
PRIVATE OPEN SPACE	S1	S2	S3	S4	S5	R1	R2	R3	R4	T1	T2	T3	T4	T5	T6	T7	T8	TOTALS
TERRACE	2	2	2	2	2	2	2	2	2									
BALCONY	-	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	
LANDSCAPED AREA	7	7	7	7	7	14	15	15	34	70	19	19	19	20	20	20	60	360
PRIVATE OPEN SPACE	9	9	9	9	9	16	17	17	36	78	28	28	28	28	28	28	66	



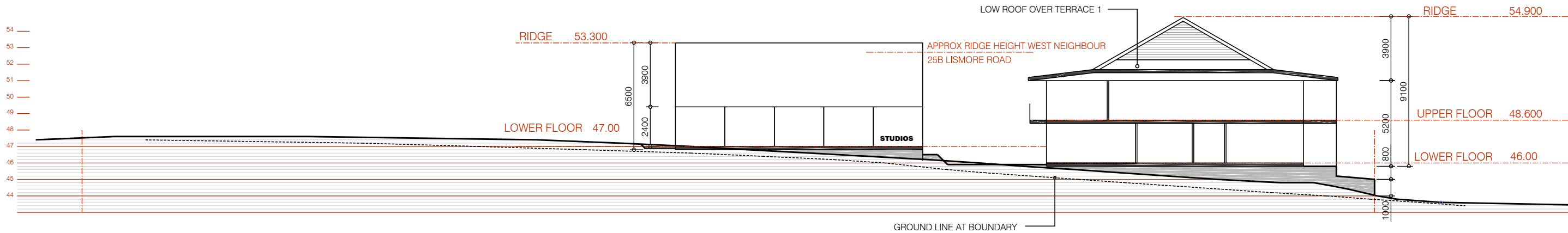




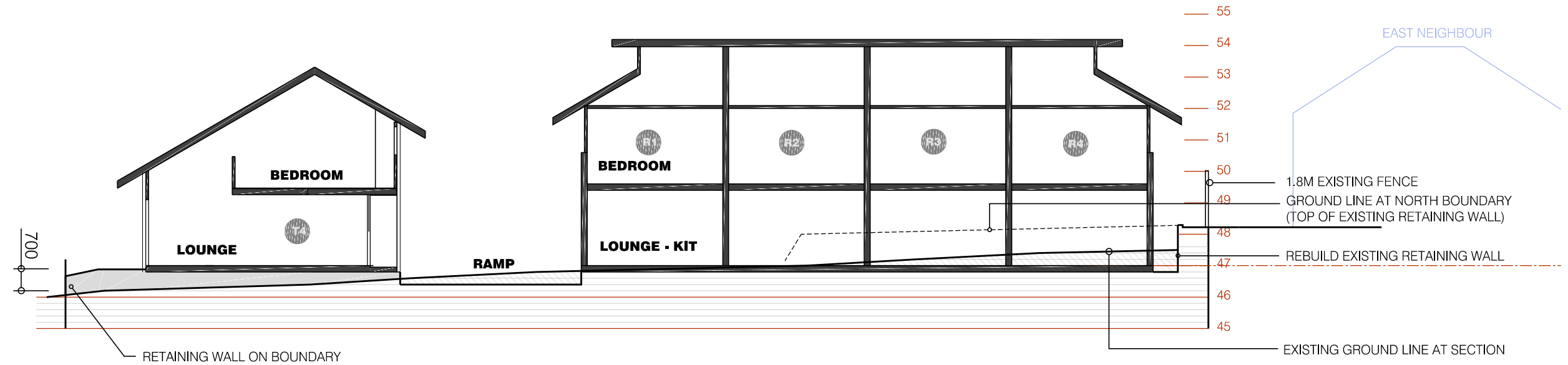
SITE SECTION A



SITE SECTION B



SITE SECTION C



SITE SECTION D

	<p>PAINTED FIBRE CEMENT BOARDS AND ASSOCIATED TRIMS OFF WHITE PAINT DULUX ANTIQUE WHITE USA OR CHINA WHITE</p> <p>CLADDING</p>		<p>POWDERCOATED ALUMINIUM WHITE COLORBOND DULUX VIVID WHITE</p> <p>WINDOW FRAMES</p>		<p>SELECTED TIMBER AUSTRALIAN HARDWOOD SELECTED OIL FINISH - ALLOW TO SILVER</p> <p>SELECTED WALLS AND FENCES</p>
	<p>RED BRICK SELECTED FIRED CLAY BRICKS</p> <p>EXTERNAL WALLS</p>		<p>GREY PAINT DARK GREY PAINT - COLORBOND MONUMENT</p> <p>FASCIAS AND OUTRIGGERS</p>		<p>CORRUGATED STEEL ROOFING COLORBOND SHALE GREY</p> <p>ROOFING & FLASHING</p>

EXTERNAL FINISHES

TV ANTENNA



INSTALL 1 DIGITAL TV ANTENNA PER BUILDING.

DOWN PIPES

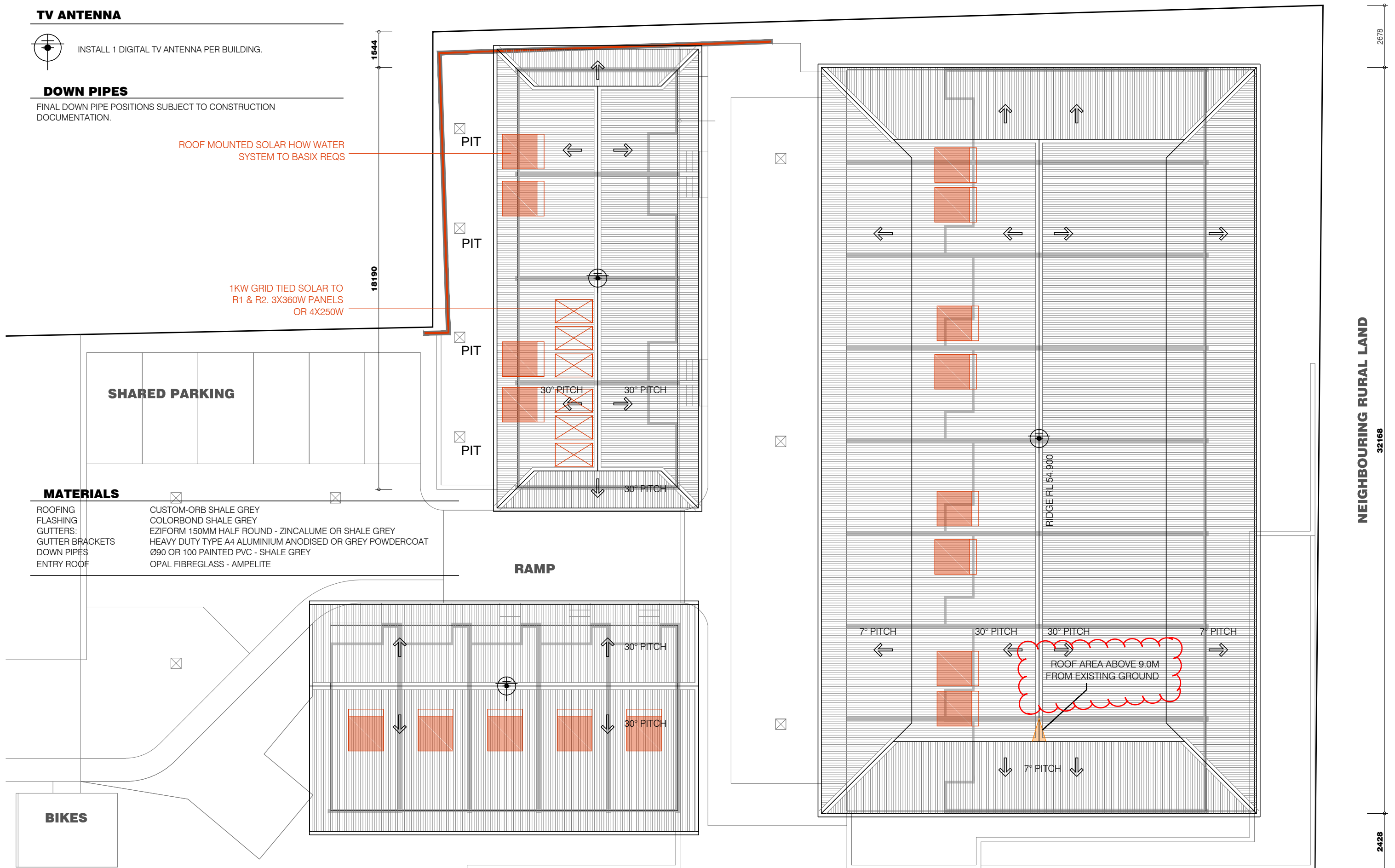
FINAL DOWN PIPE POSITIONS SUBJECT TO CONSTRUCTION DOCUMENTATION.

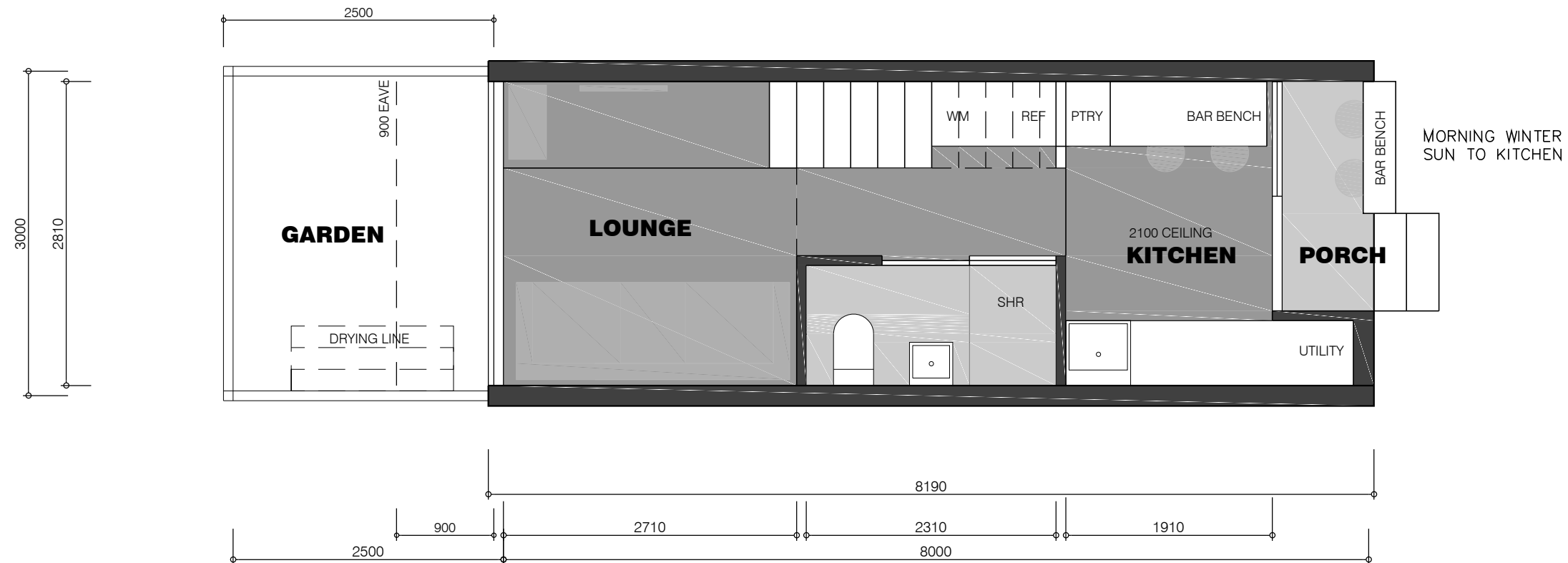
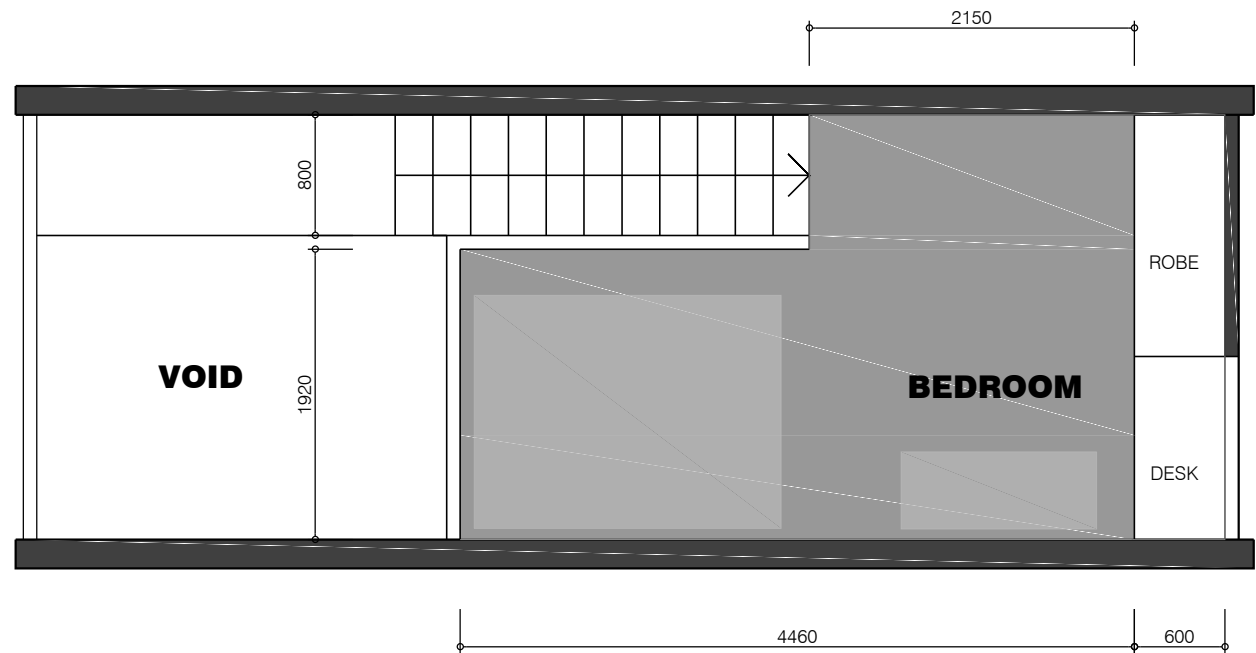
ROOF MOUNTED SOLAR HOW WATER SYSTEM TO BASIX REQS

1KW GRID TIED SOLAR TO R1 & R2. 3X360W PANELS OR 4X250W

MATERIALS

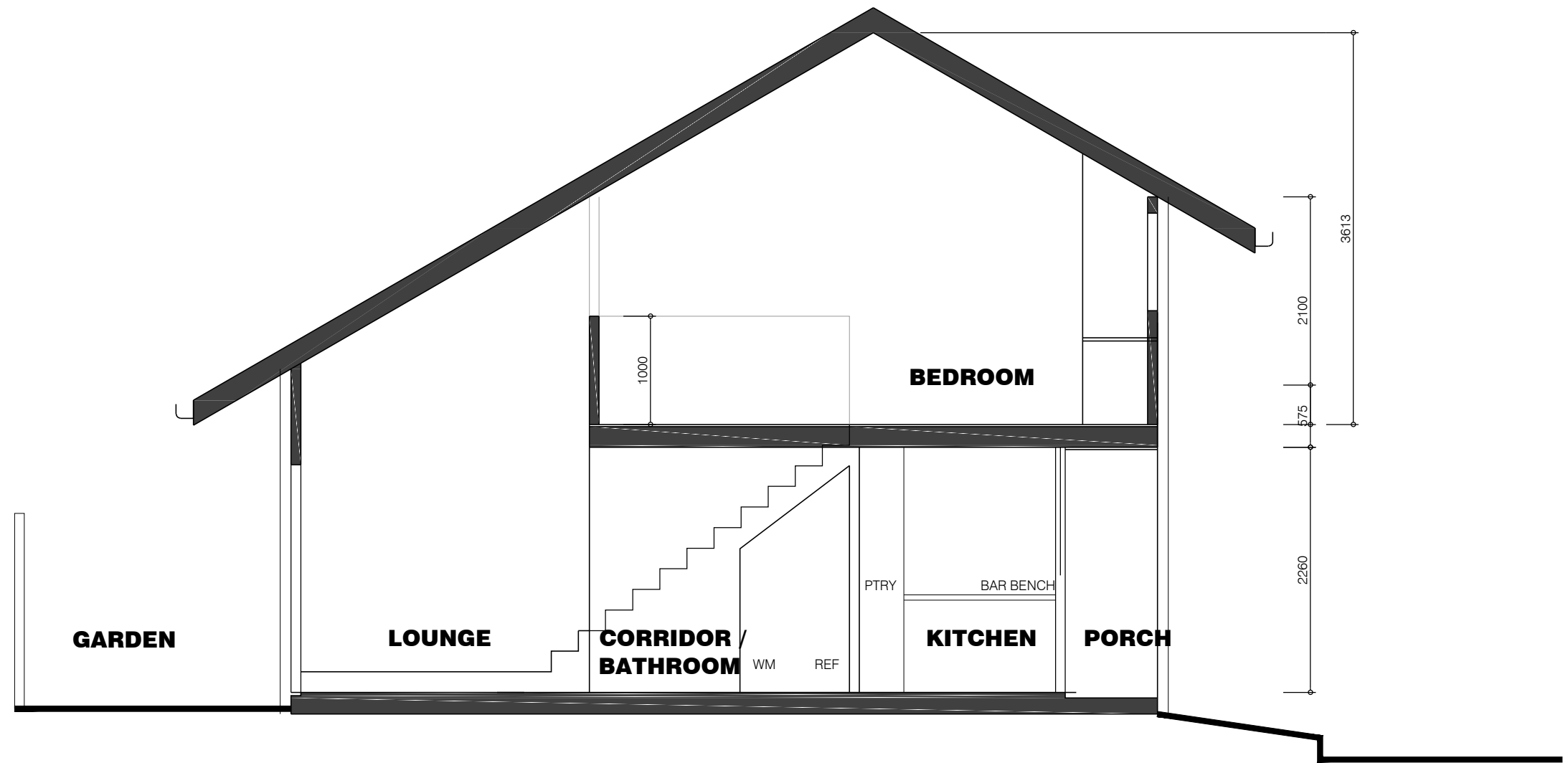
ROOFING	CUSTOM-ORB SHALE GREY
FLASHING	COLORBOND SHALE GREY
GUTTERS:	EZIFORM 150MM HALF ROUND - ZINCALUME OR SHALE GREY
GUTTER BRACKETS	HEAVY DUTY TYPE A4 ALUMINIUM ANODISED OR GREY POWDERCOAT
DOWN PIPES	Ø90 OR 100 PAINTED PVC - SHALE GREY
ENTRY ROOF	OPAL FIBREGLASS - AMPELITE





UNIT AREAS

BEDROOMS	1
LOWER FLOOR GFA	20
UPPER FLOOR GFA	12
TOTAL GFA	32
BALCONY - PORCH	2

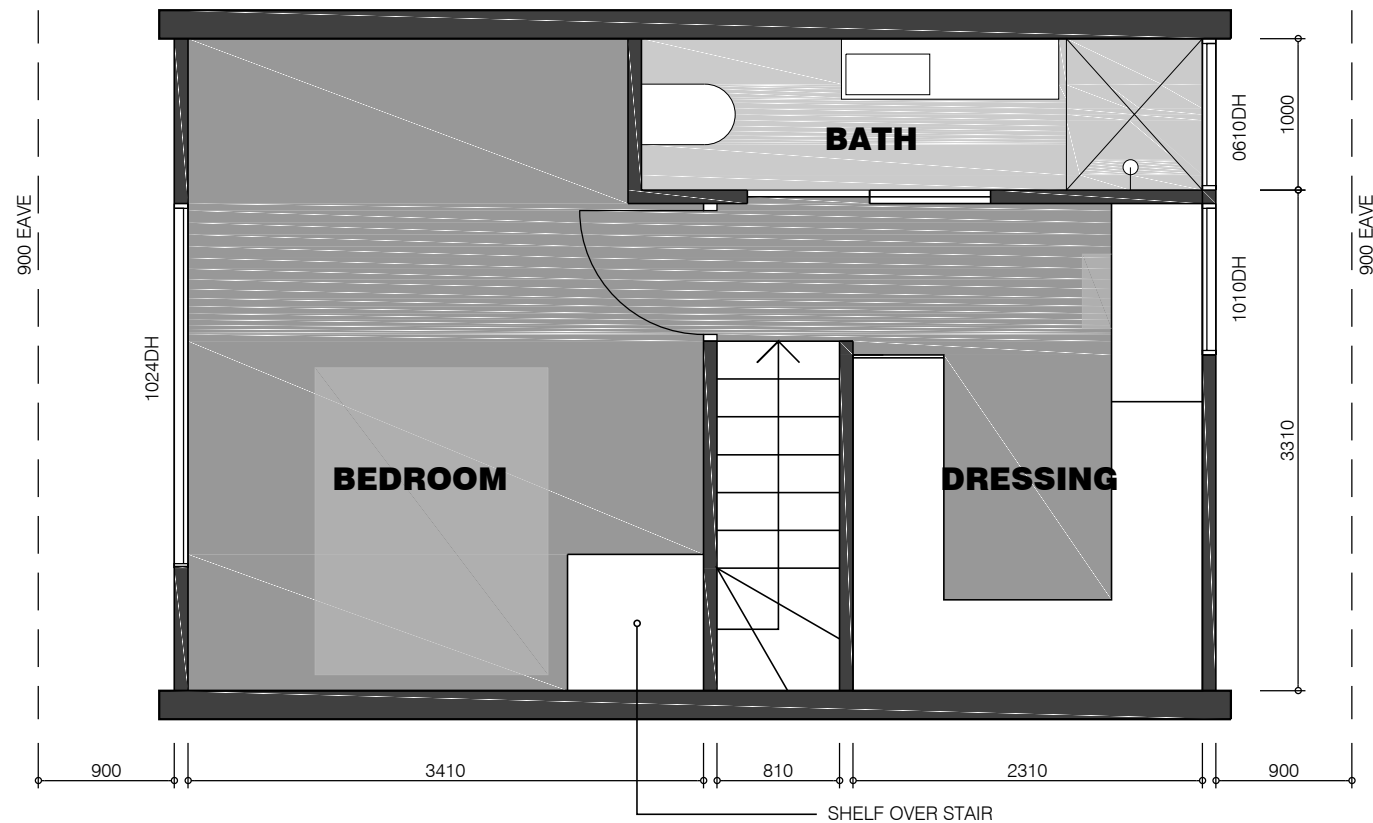


23 Lismore Street Bangalow				
SUMMARY OF BASIX COMMITMENTS FOR EACH UNIT				
This is a summary of the BASIX Commitments as detailed in the BASIX Certificate. Refer to the CURRENT BASIX Certificate for Complete details. For definitions refer to basix.nsw.gov.au				
WATER COMMITMENTS				
Fixtures				
3 Star Shower Heads	Yes (> 4.5 but <= 6L/min)			
3 Star Kitchen / Basin Taps	Yes	3 Star Toilet	Yes	
Alternative Water				
Minimum Tank Size (L)	3000	Collected from Roof Area (m2)	20	
Tank Connected To:				
All Toilets	No	Laundry W/M Cold Tap	No	
One Outdoor Tap	Yes			
THERMAL COMFORT COMMITMENTS - Refer to TPA Specification on plans				
ENERGY COMMITMENTS				
Hot Water	Solar (Electric Boost) 21 to 25 STCs			
Cooling System				
Living	None		N/A	
Bedrooms	1 Phase A/C		3 Star	
Heating System				
Living	None		N/A	
Bedrooms	1 Phase A/C		3 Star	
Ventilation				
1 x Bathroom	Fan ducted to exterior		Manual on/off	
Kitchen	Fan ducted to exterior		Manual on/off	
Laundry	Fan ducted to exterior		Manual on/off	
Natural Lighting				
Window/Skylight in Kitchen	As Drawn			
Window/Skylight in Bathrooms/Toilets	As Drawn			
Artificial Lighting (rooms to be primarily lit by fluorescent or LED lights)				
Number of bedrooms	All	Dedicated	Yes	
Number of Living/Dining rooms	All	Dedicated	Yes	
Kitchen	Yes	Dedicated	Yes	
All Bathrms/Toilets	Yes	Dedicated	Yes	
Laundry	Yes	Dedicated	Yes	
All Hallways	Yes	Dedicated	Yes	
OTHER COMMITMENTS				
Outdoor clothes line	Yes	Ventilated refrigerator space	Yes	
Stove/Oven	Electric cooktop & electric oven			
Alternative Energy	Photovoltaic System: 1 kW to R1 & R2 only			
January 2019	BSA Reference: 14538			
Building Sustainability Assessments	Ph: (02) 4962 3439			
enquiries@buildingsustainability.net.au	www.buildingsustainability.net.au			
Important Note				
The following specification was used to achieve the thermal performance values indicated on the Assessor Certificate and takes precedence over any other specification. If different construction elements are applied then the Assessor Certificate is no longer valid.				
Thermal Performance Specifications (does not apply to garage)				
External Wall Construction				
Brick Veneer & Lightweight	Added Insulation R2.0			
Internal Wall Construction				
Plasterboard on studs	Added Insulation None			
Cavity Brick (party walls)	R1.0			
Ceiling Construction				
Plasterboard	Added Insulation R3.5 to ceilings adjacent to roof space			
Roof Construction				
Metal	Colour Any	Added Insulation Foil + R1.0 blanket		
Floor Construction				
Concrete	Covering As drawn	Added Insulation None		
Timber	As drawn	R1.0 to floors where open below to T1 & T8		
Windows				
ALM-001-01 A	Glass and frame type Aluminium Type A Single clear	U Value 6.70	SHGC Range 0.51 - 0.63	Area sq m As drawn
ALM-002-01 A	Aluminium Type B Single clear	6.70	0.63 - 0.77	As drawn
Type A windows are awning windows, bifolds, casements, tilt 'n' turn windows, entry doors, french doors				
Type B windows are double hung windows, sliding windows & doors, fixed windows, stacker doors, louvres				
Skylights				
	Glass and frame type	U Value	SHGC	Area sq m
U and SHGC values are according to AFRC. Alternate products may be used if the U value is lower and the SHGC is within the range specified				
External Window Shading (eaves, verandahs, pergolas, awnings etc)				
All shade elements modelled as drawn				
Ceiling Penetrations (downlights, exhaust fans, flues etc)				
No adjustment has been made for losses to insulation arising from ceiling penetrations.				

UNIT AREAS

BEDROOMS	1
LOWER FLOOR GFA	25
UPPER FLOOR GFA	27
TOTAL GFA	52
BALCONY - PORCH	2

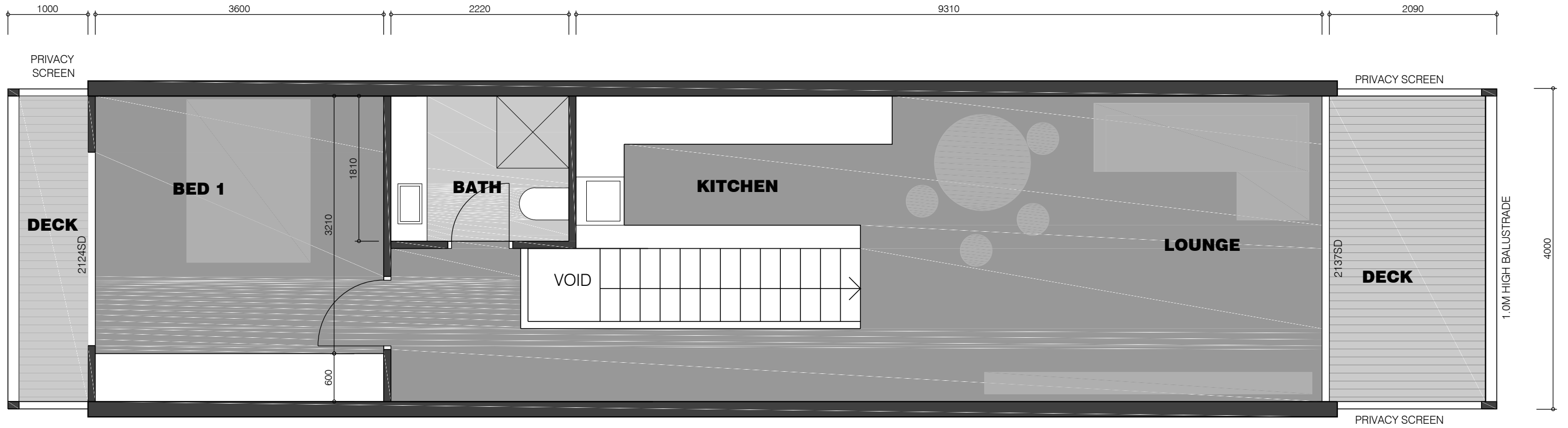
NOTE: NO ADDITIONAL WINDOWS IN END UNITS TO AVOID OVERLOOKING

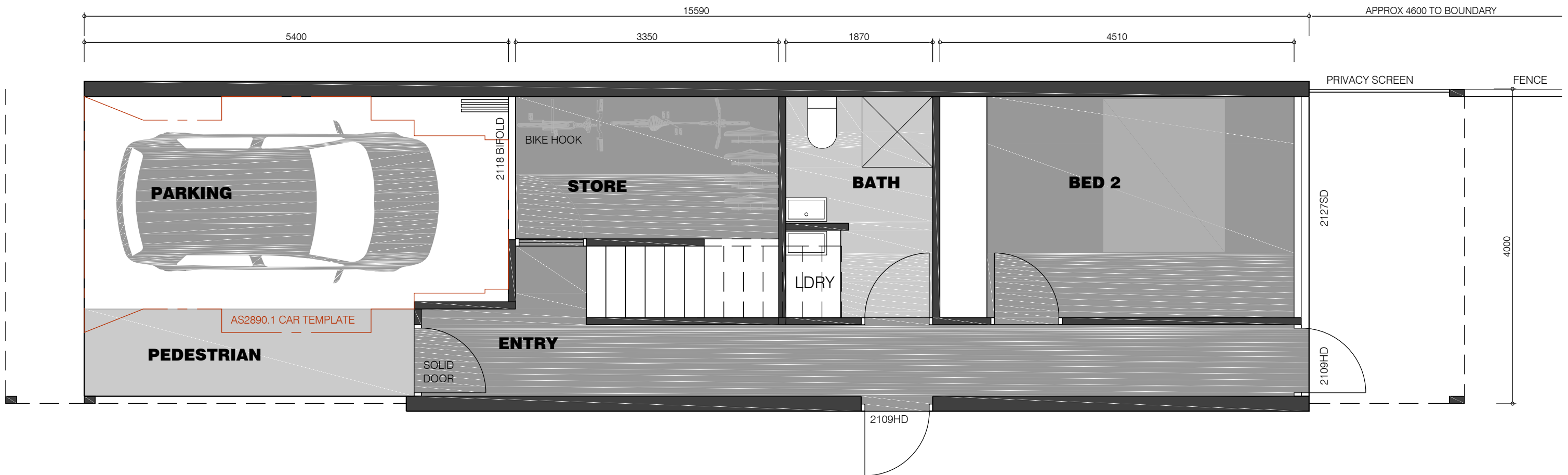
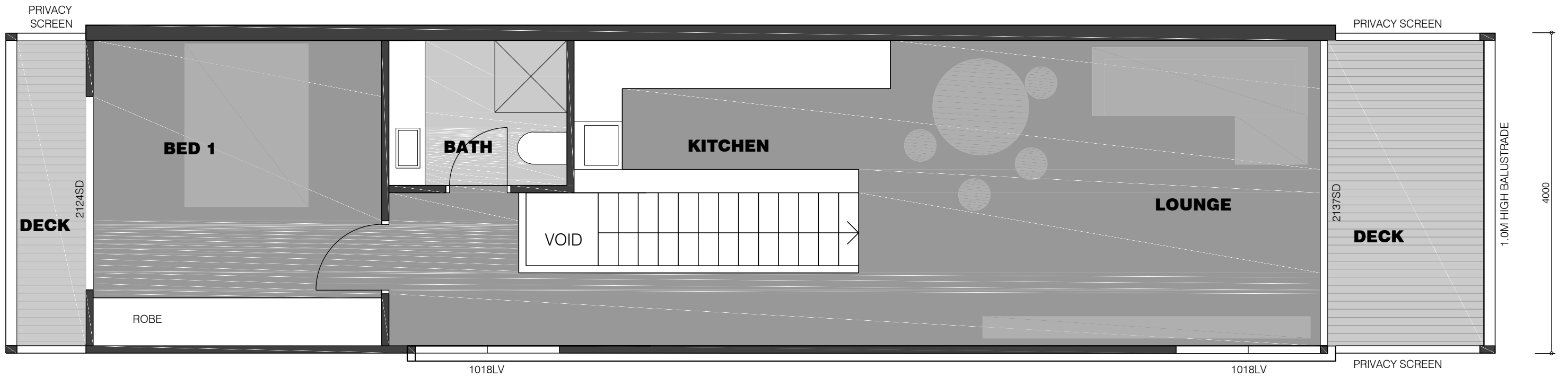


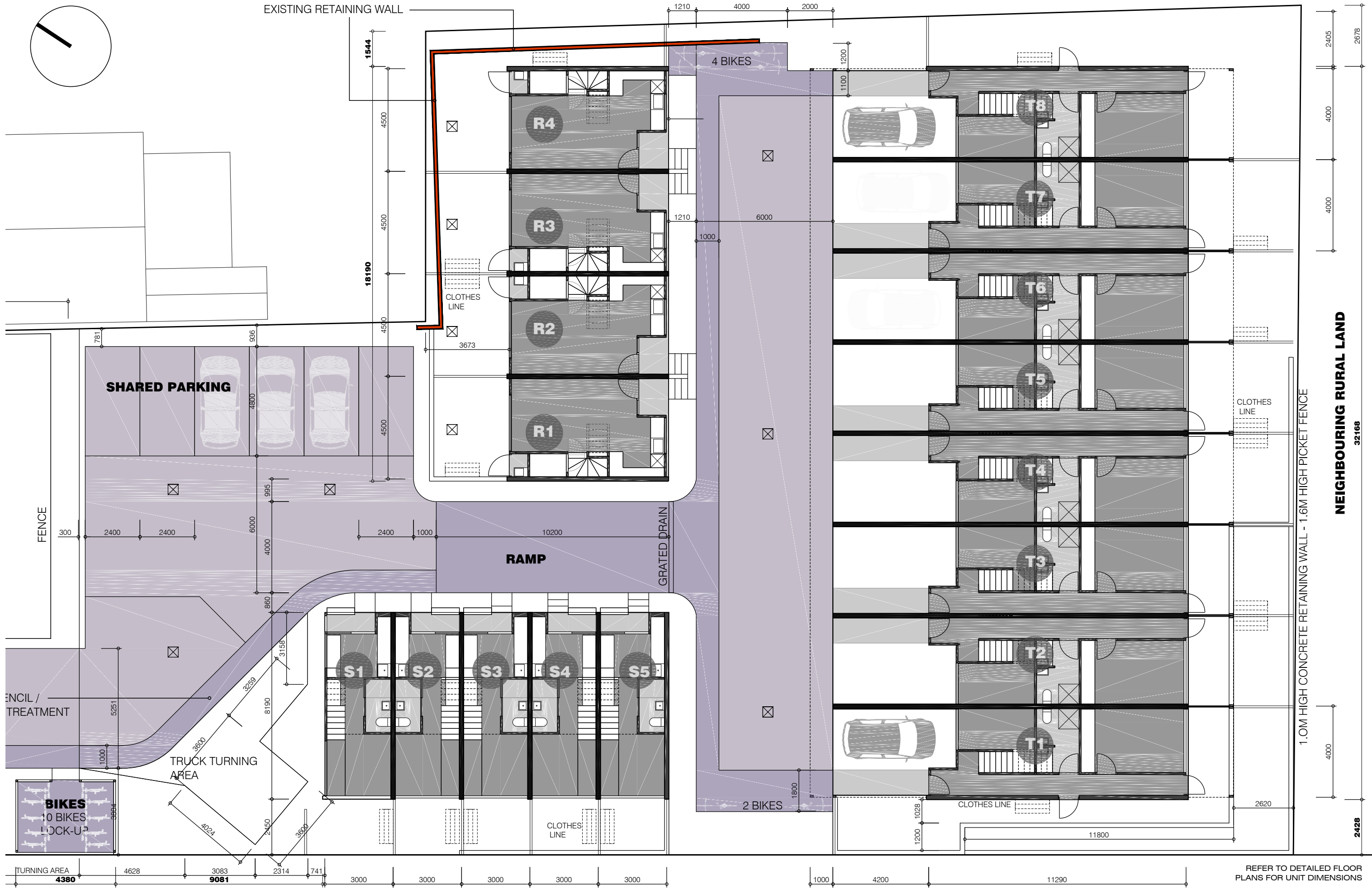
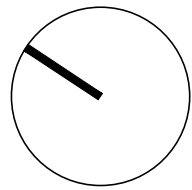
DETAILED PLAN - TYPICAL ROW HOUSE

23 LISMORE STREET BANGALOW
1:50 AT A3
05 MARCH.2019

D-D-03
DA SET









NEIGHBOURING RURAL LAND
32168

REFER TO DETAILED FLOOR PLANS FOR UNIT DIMENSIONS

UPPER FLOOR PLAN

23 LISMORE STREET BANGALOW
1:150 AT A3
12 MARCH .2019

D-P-02
DA SET

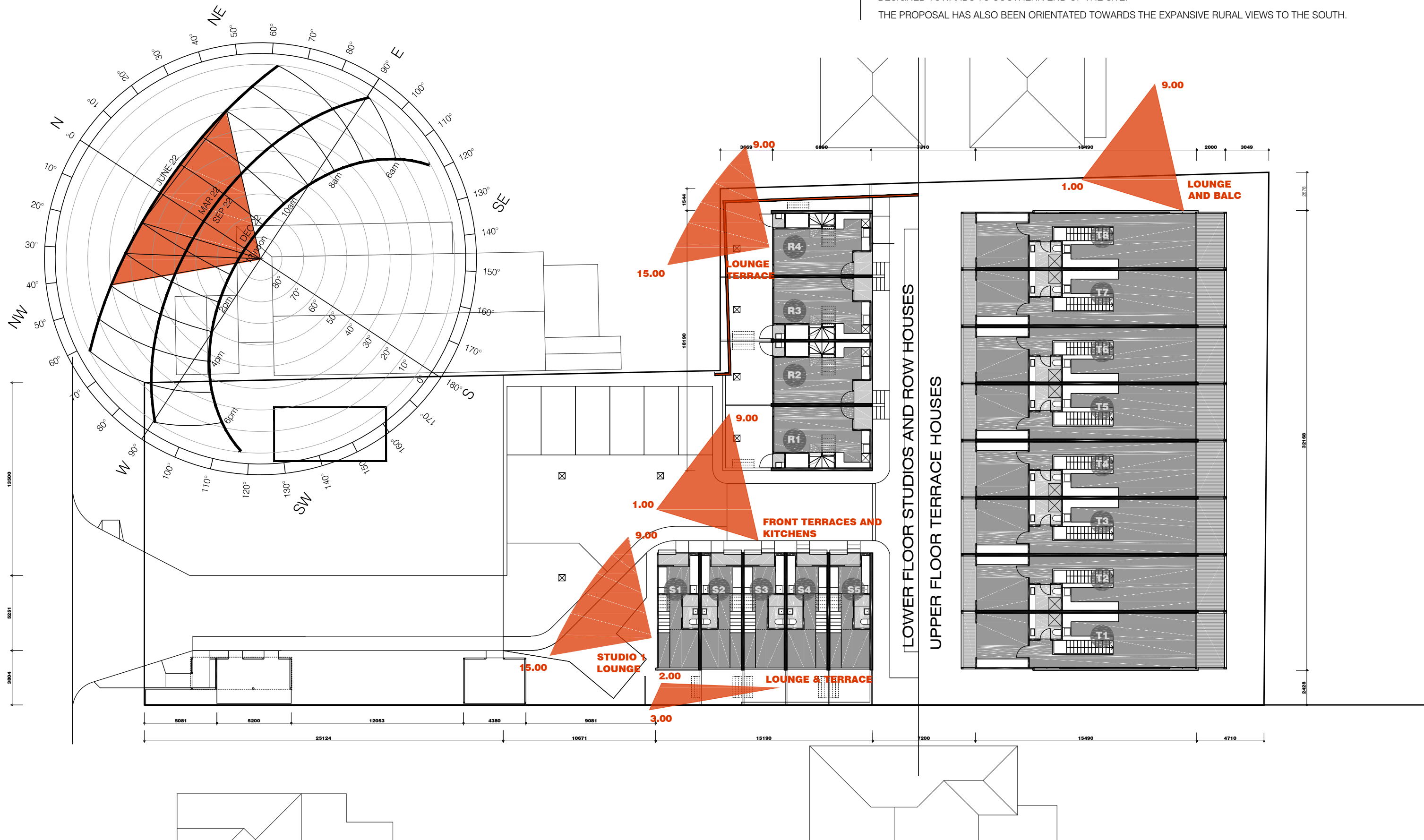
WINTER SUN

	S1	S2	S3	S4	S5	R1	R2	R3	R4	T1	T2	T3	T4	T5	T6	T7	T8	TOTALS
HRS BTWN 9AM & 3PM	6	5	5	5	5	6	6	6	6	0	0	0	0	0	0	0	4	60%

60% (OR 11 DWELLINGS) OF THE PROPOSED DWELLINGS RECEIVED THE REQUIRED SOLAR ACCESS. REFER TO THE SOLAR ACCESS PLAN.

THE SHAPE OF THE LOT, THE LONG ACCESS HANDLE AND THE LIMITATIONS PLACED BY THE TELSTRA EASEMENT (THE NORTH FACING FRONTAGE) DO NOT ALLOW SITE PLANNING WHICH SATISFIES THIS CLAUSE. IN ADDITION TO THE SITE CONSTRAINTS ABOVE, IN ORDER TO MINIMISE OVERLOOKING & OVERSHADOWING TOWARDS THE NEIGHBOURS (MOST NOTABLE THE SOUTH-EASTERN NEIGHBOUR) THE PROPOSED DEVELOPMENT HAS BEEN DESIGNED TOWARDS TO SOUTHERN END OF THE SITE.

THE PROPOSAL HAS ALSO BEEN ORIENTATED TOWARDS THE EXPANSIVE RURAL VIEWS TO THE SOUTH.



GRASSES, GROUND COVERS & CREEPERS

CATEGORY	BOTANICAL	COMMON	NOTES
02 CLUMPING GRASSES & FERNS	LOMANDRA LONGFOLIA + VAR DIANELLA REVOLUTA	MAT RUSH + VARIETIES FLAX LILY	ALL PATH AND GARDEN EDGES
03 GROUND COVERS	GRAVILLEA POORINDA	ROYAL MANTLE	GENERAL GROUND COVER - GARDEN EDGES
04 CREEPERS	HOYA AUSTRALIS STEPHANICA JAPONICA	NATIVE HOYS SNAKE VINE	GROW ON ENTRY GATEHOUSE TRELLIS

SHRUBS - SMALL TREES

CATEGORY	BOTANICAL	COMMON	NOTES
07 PALMS	LINOSPADIX MONOSTACHYS ARCHONTOPHOENIX CUNNINGHAMIANA	WALKING STICK PALM BANGALOW PALM	VERTICAL PLANTING BETWEEN BUILDINGS
08 SHRUBS & SCREEN PLANTING 2-3M	BANKSIA ERICIFOLIA ACACIA FLORIBUNDA ACACIA LONGIFOLIA CALLIATEMON PACHYPHYLLUS GREVILLEA BANKS + VAR LEPTOSPERMUM LIVERSIDGEI MELALEUCA NODOSA	HEATH BANKSIA WHITE SALLY WATTLE BEACH SALLY WATTLE CRIMSON BOTTLEBROSH BANKS GREVILLEA + OTHERS LEMON SCENTED TEA TREE NODDY MYRTLE	SCREEN PLANTING BETWEEN BUILDINGS AND SIDE BOUNDARIES AND LAYERED PLANTING TO DEEP SOIL ZONES

SURFACES

DRIVE	STANDARD GREY CONCRETE
PATHS	COLOURED CONCRETE WITH STAMPED COBBLE OR PAVER PATTERN
GARDENS	MIN 100MM THICK LOCAL NATIVE MULCH

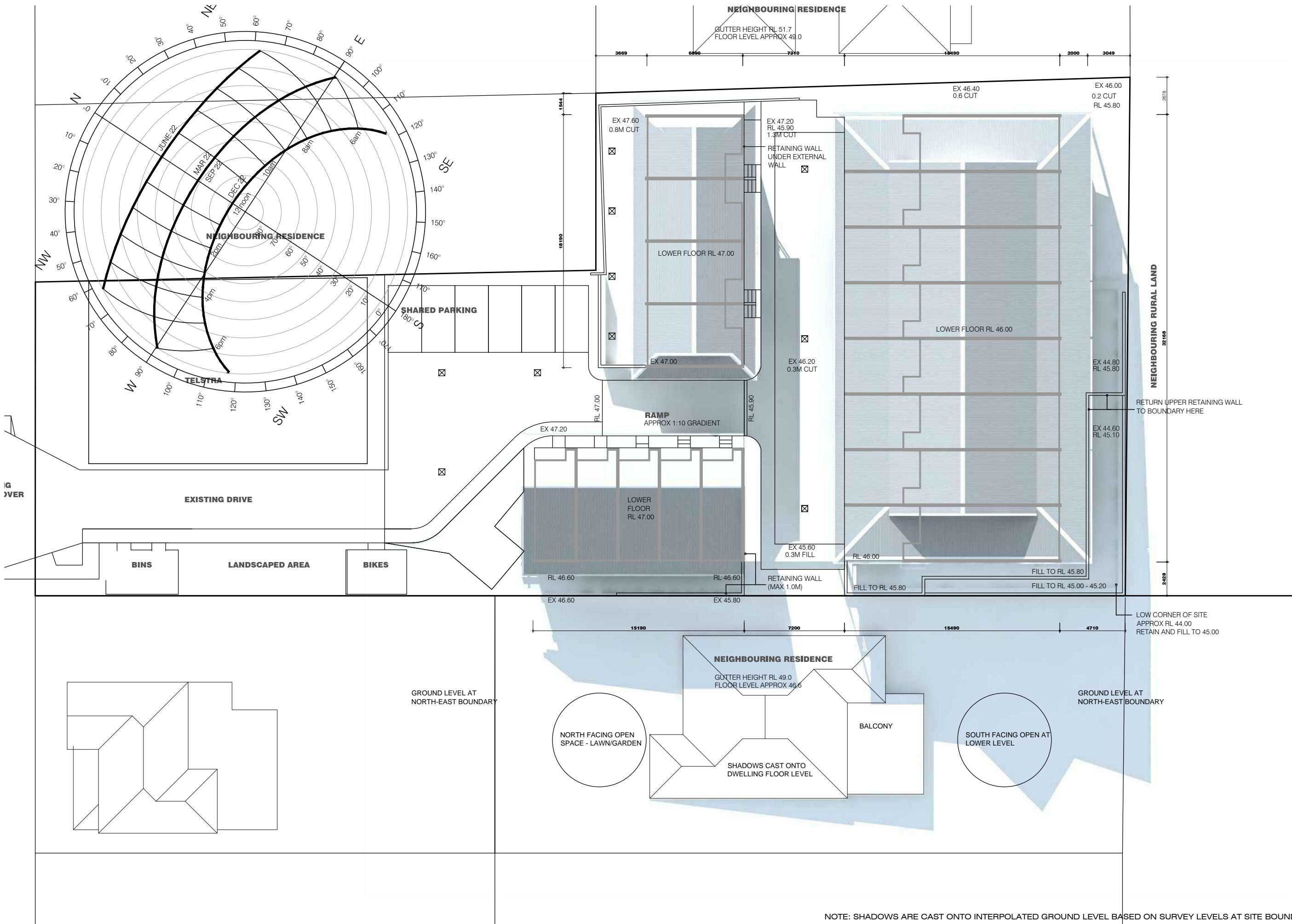
MEDIUM TREES & FEATURE TREES

CATEGORY	BOTANICAL	COMMON	NOTES
05 FEATURE TREE	PLUMERIA	FRANGINANI	
06 MEDIUM TREES (6-10M)	CUPANIOPSIS ANACARDIODES EUCALYPTUS FICIFOLIA	TUCKAROO RED FLOWERING GUM	

HERITAGE ZONE PLANTS

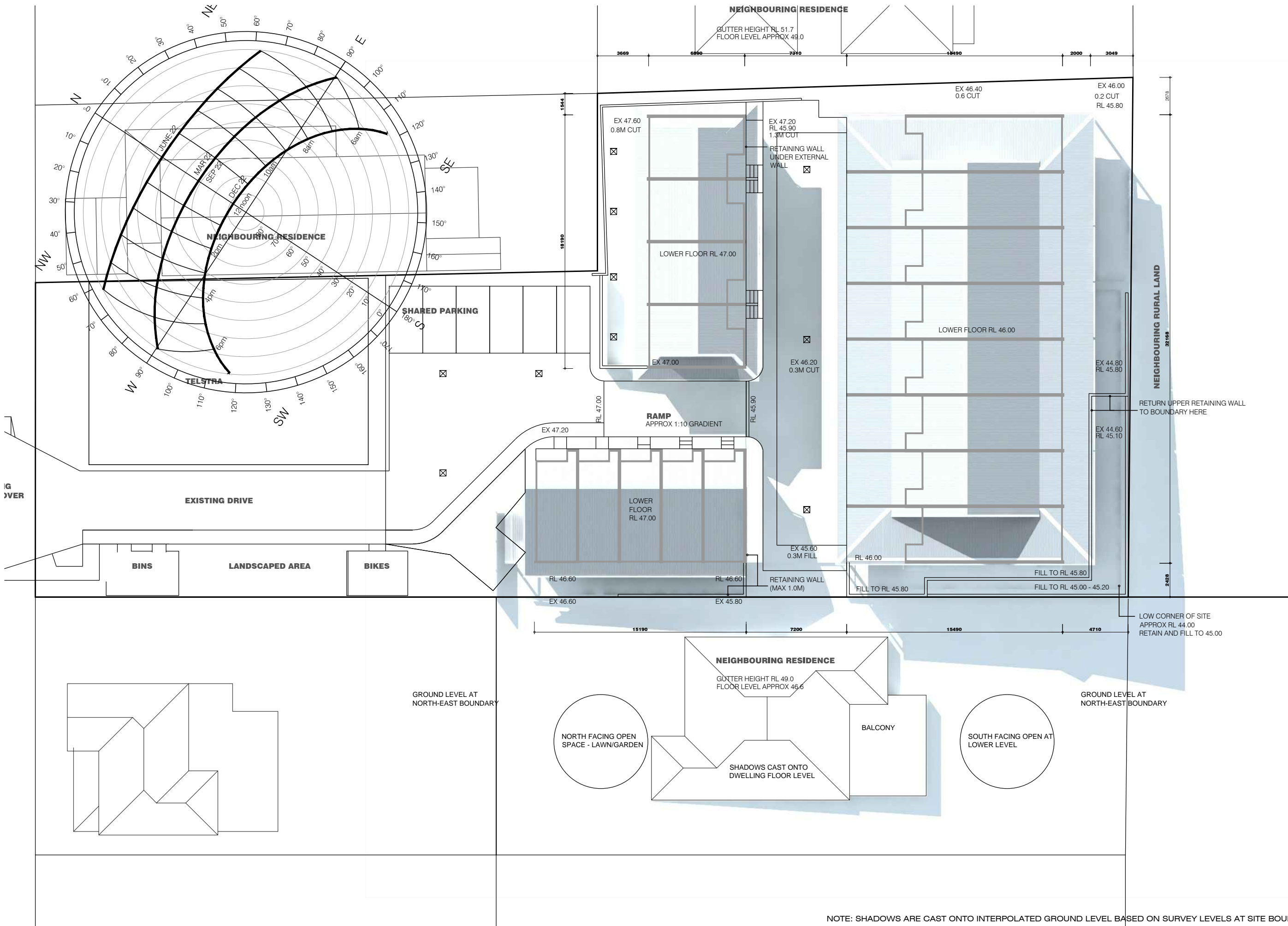
CATEGORY	BOTANICAL	COMMON	NOTES
09 HEDGE	ACMENA SMITHII	ALLYN MAGIC DWARF LILY PILLY	
10 SMALL TREES	MAGNOLIA GRANDIFLORA	MAGNOLIA LITTLE GEM	





NOTE: SHADOWS ARE CAST ONTO INTERPOLATED GROUND LEVEL BASED ON SURVEY LEVELS AT SITE BOUNDARY - 22 JUNE 2019

SHADOW DIAGRAM 9AM



NOTE: SHADOWS ARE CAST ONTO INTERPOLATED GROUND LEVEL BASED ON SURVEY LEVELS AT SITE BOUNDARY - 22 JUNE 2019

SHADOW DIAGRAM 10.30am

CONSTRUCTION WASTE

THROUGHOUT CONSTRUCTION, MAINTAIN SKIP BINS FOR SEPARATED CONSTRUCTION WASTE.

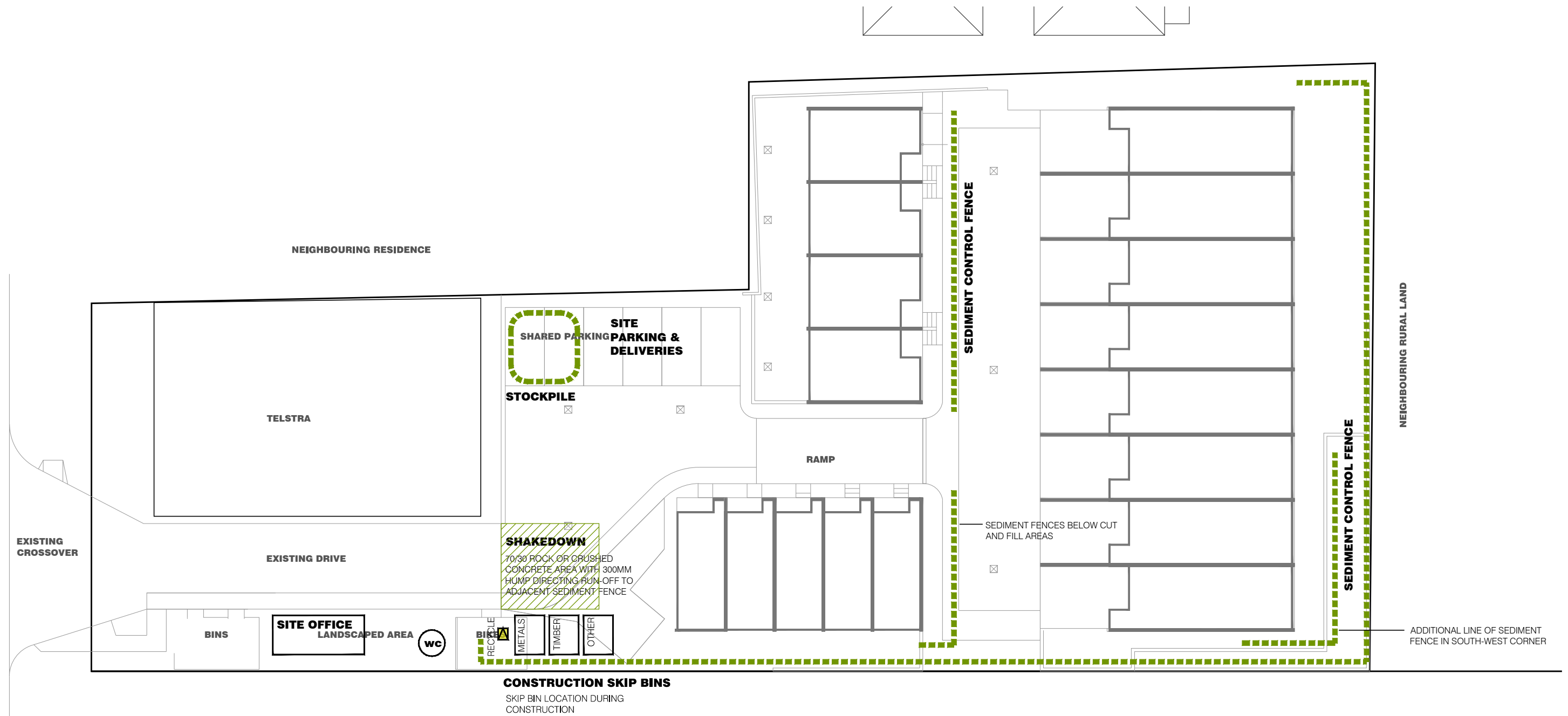
USE 240L RECYCLE BIN FOR DOMESTIC RECYCLABLE WASTE

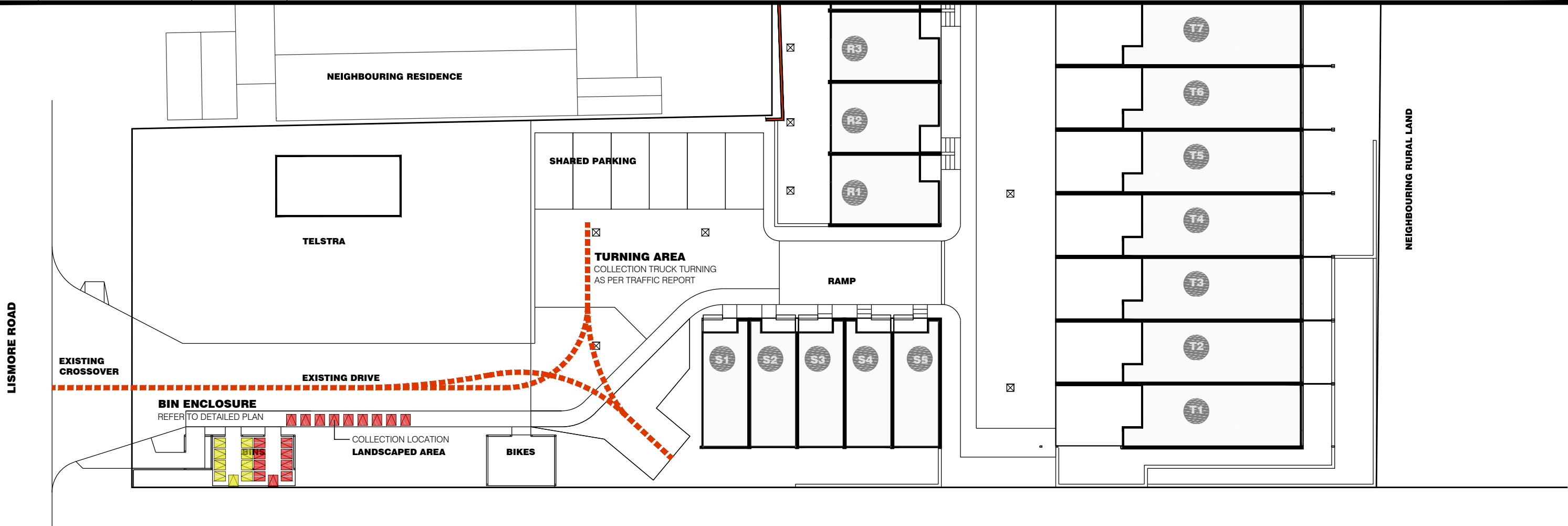
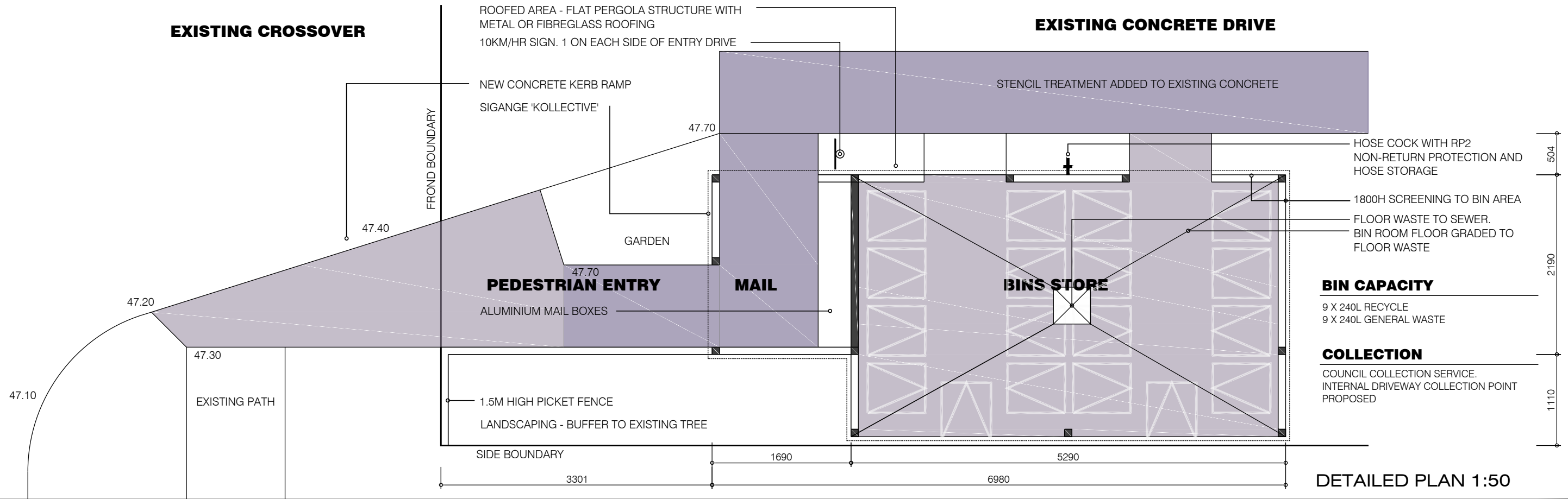
EROSION & SEDIMENT CONTROL

CONTROL SEDIMENT RUN-OFF FROM SITE DURING CONSTRUCTION AS PER "NORTHERN RIVERS LOCAL GOVERNMENT MANUALS AND STANDARD DRAWINGS & MANUALS.

INSTALL SEDIMENT CONTROL FENCE AS REQUIRED TO LOW SIDE OF SITE. (FILTER FABRIC FIXED TO STEEL POSTS @MAX 3m CENTRES. FABRIC TO EXTEND MIN. 200mm UNDER GROUND.)

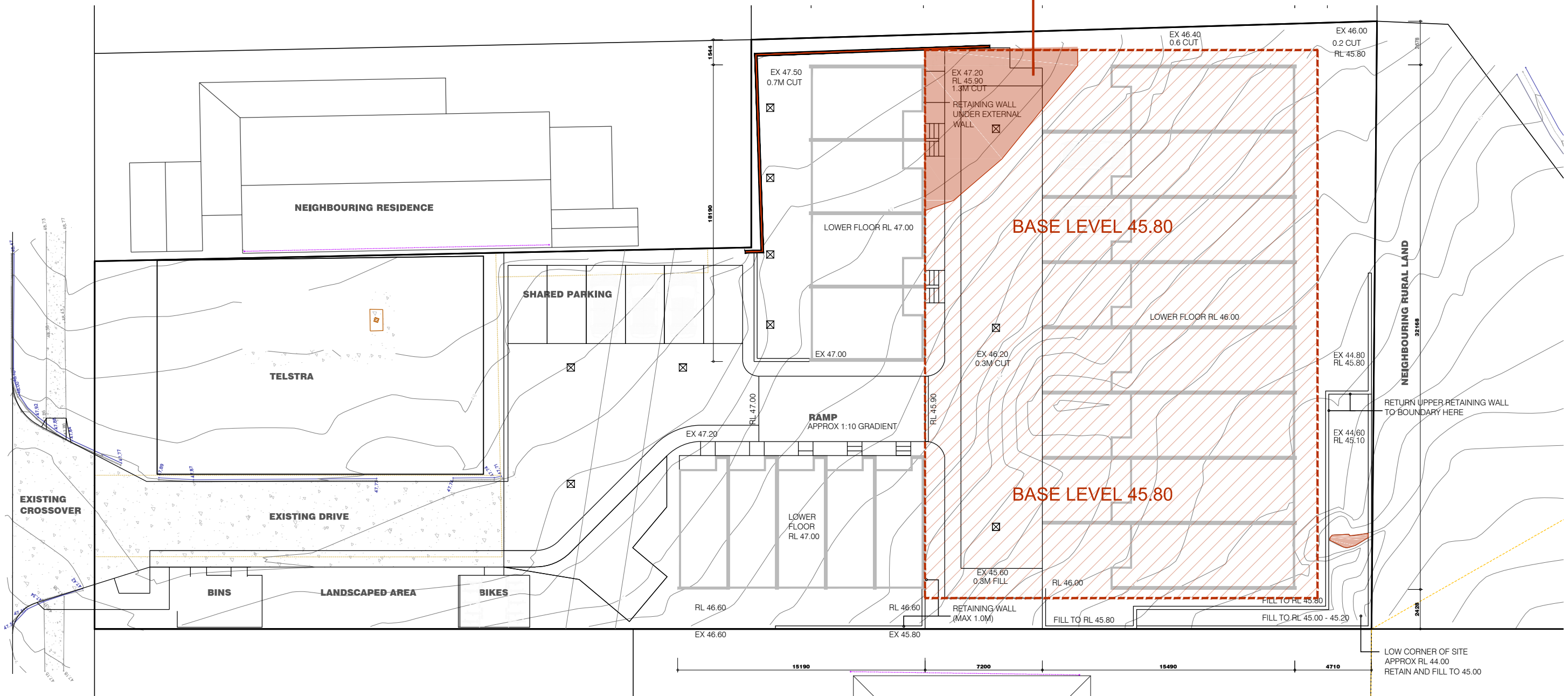
INSTALL SEDIMENT CONTROL FENCE OR HAY-BALE BARRIERS TO LOW SIDE OF ANY STOCKPILED EXCAVATED MATERIAL





LISMORE ROAD

AREA OF CUT >1.0M



STORMWATER STRATEGY

ROOF WATER.
527m² OF ROOF WATER IS DISCHARGED TO UNDER GROUND TANKS LOCATED AS SHOWN. THE REMAINDER OF STORMWATER IS DISCHARGED TO INTERNAL PITS.

STORMWATER RETENTION (BASIX REQS)
AS A BASIX REQUIREMENT EACH UNIT IS REQUIRED TO PROVIDE 3KL OF WATER STORAGE FOR GARDEN WATER. (TOTAL 50KL) 10 X 5KL INTERLINKED TANKS ARE PROPOSED WITH A SINGLE PUMP AND DEDICATED GARDEN WATER RETICULATION

ON-SITE DETENTION
IN ADDITION TO RETENTION, 1X5KL TANKS COLLECTS STORMWATER FROM RETENTION TANK OVERFLOW. A SLOW RELEASE AND OVERFLOW DIRECTS EXCESS STORMWATER TO THE EXISTING OUTLET AT THE SOUTH-WEST CORNER OF THE SITE

HARDSCAPE
INTERNAL PATHWAYS AND DRIVEWAYS NOT SERVICED WITH PITS DRAIN TO ADJACENT GARDEN BEDS. WHERE THERE ARE CONCENTRATED LOADS, A RUBBLE PIT OR PASSIVE DRAINAGE TRENCHES MAY BE REQUIRED.

ROOF WATER FROM THE BIKE STORE AND ENTRY AREA DISCHARGES TO STREET SYSTEM.



STORMWATER CALCS

SITE AREA	2330m ²
BASIX REQD ROOF AREA TO TANKS (20m ² /DW)	340m ²
ADDITIONAL ROOF AREA TO TANKS	187m ²
TOTAL ROOF AREA DIRECTED TO TANKS	527m ²
TOTAL TANK CAPACITY	55KL
CAPACITY - PRIVATE USE (BASIX)	50KL
STORAGE RATIO	9.6M ² /KL

DETENTION CALCS

EXISTING HARDSCAPE (IMPERVIOUS AREA)	1240m ²
PROPOSED IMPERVIOUS	1577m ²
BALANCE - DETENTION	187m ²

KEY

	QTY
 RETENTION TANK - 5KL UNDERGROUND STRUCTURAL POLY TANK	X10
 DETENTION TANK - 5KL UNDERGROUND STRUCTURAL POLY TANK	X1

