PARK LANE

8 OSBORNE PLACE, STIRLING

PROJECT REF: 1802

PLANNING REPORT

DYNAMIC PLANNING AND DEVELOPMENTS

Prepared for
Locus Development Group
1/295 Rokeby Road
Subiaco WA 6008

History and Status of this Document

Revision	Date issued	Prepared by	Reviewed by	Revision type
Rev 1	29/9/23	RC	NT	Lodgement

Document Printed
File Name 230829 1802 Osborne Place DA Report.doc
Author/s Reegan Cake
Name of Document Planning Report
Document Version Rev 1

.

PLANNING REPORT

Table of Contents

DYNAMIC PLANNING AND DEVELOPMENTS

1.0 Introduction

Dynamic Planning and Developments acts on behalf of the registered proprietor of Lot 79 (No. 8) Osborne Place, Stirling (herein referred to as the 'subject site').

This planning report has been prepared in support of an Application for Planning Approval for a proposed 'Multiple Dwelling' development at the subject site. The planning report contains the following pertinent details of the proposal relevant to the assessment of the proposed application:

- Details of the proposal;
- Detailed assessment of the proposal against the relevant planning provisions applicable under the City of Stirling Local Planning Scheme No. 3, the Stirling Centre Structure and the Northern Precinct Local Development Plan and any relevant Local Planning Policies; and
- Detailed justification of any variations sought.

In addition to this planning report, the following documentation has been provided in order to assist the City of Stirling in determining the proposed application:

- Certificate of Title (**Appendix 1**)
- Relevant development plans (**Appendix 2**).
- Traffic Impact Statement (**Appendix 3**).
- Acoustic Report (**Appendix 4**).
- Waste Management Plan (**Appendix 5**).

It will be demonstrated in subsequent sections of this submission that the proposed development is entirely appropriate for approval.

2.0 Site Details

2.1 Legal Description

The subject site is legally described as:

Lot	Plan	Volume	Folio	Street Address
79	30013	1281	698	8 Osborne Place, Stirling

The area of the subject site is 3,719m².

A copy of the Certificate of Title pertinent to the subject site is provided as part of the application package.

2.2 Locational and Land Use Context

2.2.1 Regional Context

The subject site is located within the City of Stirling municipal area and within the designated Stirling City Centre area. The site benefits from access to both Karrinyup Road and the Mitchell Freeway which will afford future residents key regional road and public transport access to the broader Perth Metropolitan Area.

Amenities in the broader area include Karrinyup Shopping Centre 3km to the west, Trigg Beach 6km to the west, Stirling Train Station 800m away and numerous areas of regional and local open space.

Figure 1 below depicts the subject site in its regional context.

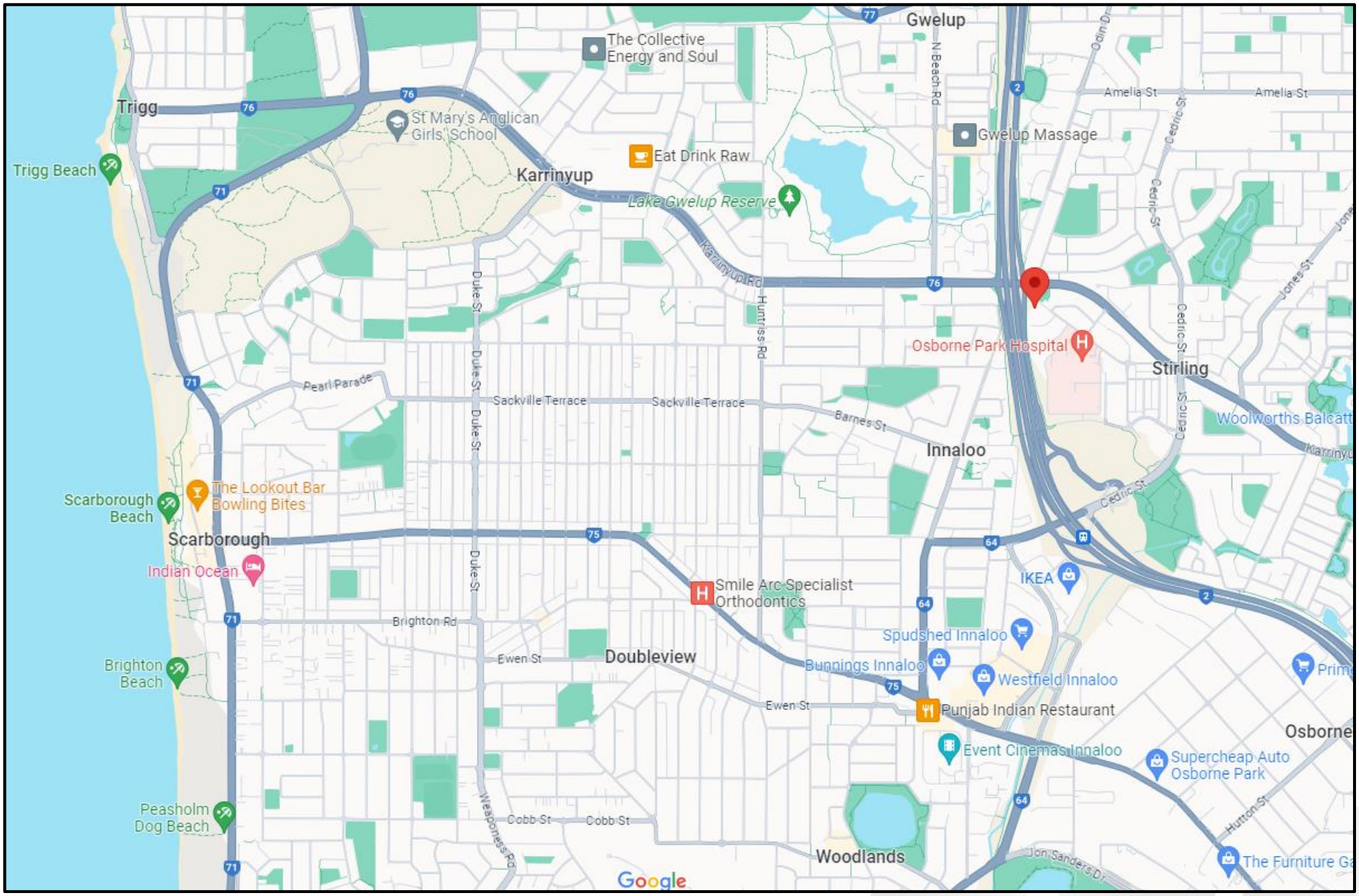


Figure 1 – Regional Context

DYNAMIC PLANNING AND DEVELOPMENTS

2.2.2 Local Context

Locally, the subject site is unique in it's context with a number of site specific contextual elements that were considered in detail as part of the planning process. These included:

- Proximity to the freeway and the traffic noise that results.
- A large acoustic wall on the western boundary to mitigate against the traffic noise.
- Positioned at the end of a cul-de-sac with a portion of the street frontage adjacent to a dual use path connected to the freeway.
- Proximity and outlook to a local park on the opposite side of Osborne Place.
- Proximity to the Osborne Park hospital (250m).

The surrounding local area is characterised by older single houses on large blocks with much of the existing development established in the 1970's. As a result, the built form in the area is dated and consequently appropriate for infill development.

Figure 2 provides some contextual imagery of the site itself.

Figure 3 provides examples of existing built form along Osborne Place.

Figure 4 provide a local contextual analysis of the subject site.

THE SITE & IMMEDIATE SURROUNDS


NORTH-EAST CORNER OF SITE


SITE FRONT

SITE FRONT


NORTH-WEST CORNER OF SITE


CUL-DE-SACK


DUAL ACCESS PATH TRAVELLING SOUTH

Figure 2 – Contextual imagery of the subject site

DYNAMIC PLANNING AND DEVELOPMENTS

STREETSCAPE—OSBORNE PLACE

EXISTING BUILDINGS ON OSBORNE PLACE

PARK ACROSS FROM SITE

Figure 3 – Osborne Place built form

DYNAMIC PLANNING AND DEVELOPMENTS

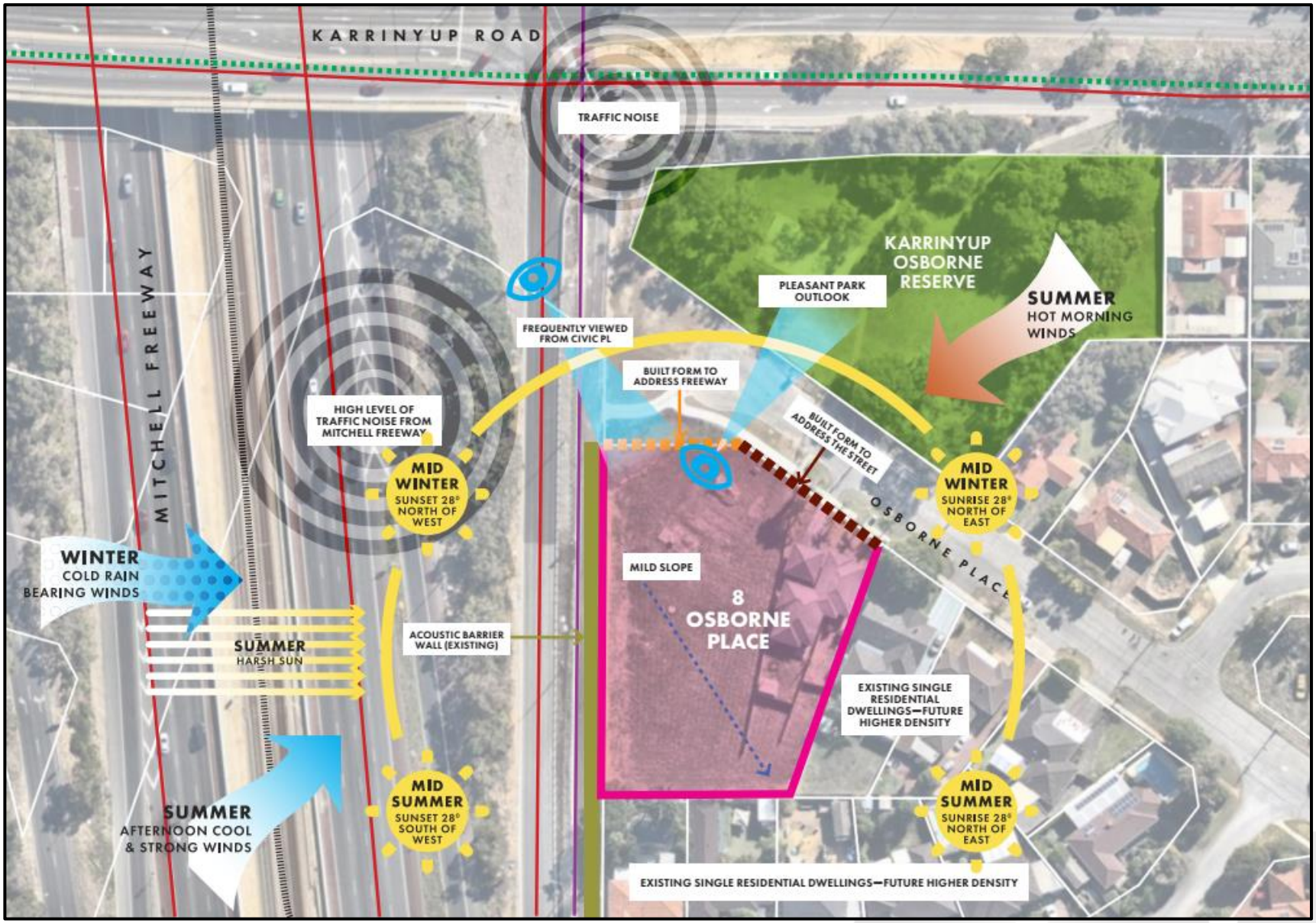


Figure 4 – Local context analysis

DYNAMIC PLANNING AND DEVELOPMENTS

3.0 Planning Framework

3.1 Metropolitan Region Scheme (MRS)

The subject site is zoned 'Central City Area' under the provisions of the Metropolitan Region Scheme (MRS). In accordance with this zoning, the City of Stirling have prepared and adopted the Stirling City Centre Structure Plan. It will be demonstrated that the proposed development is consistent with the Stirling City Centre Structure Plan and as such consistent with the 'Central City Area' zoning applicable under the MRS. The subject site also abuts a Primary Regional Road reservation associated with the Mitchell Freeway however no access to or from the freeway and the development is proposed.

3.2 City of Stirling Local Planning Scheme No. 3 (LPS No. 3)

The subject site is zoned 'Development' under the provisions of LPS No. 3. The objectives of the 'Development' zone are:

a) *To provide for coordinated development through the application of a comprehensive structure plan to guide subdivision and development.*
b) *To avoid the development of land for purposes likely to compromise its future development for purposes, or in a manner likely to detract from the amenity or integrity of the area.*

In accordance with the 'Development' zoning, the City of Stirling have adopted the Stirling City Centre Structure Plan and associated Stirling City Centre Special Control Area. The Special Control Area gives force and effect to the provisions of the structure plan and details land use permissibility for the subject site which has been addressed in Section 5 of this report.

3.3 Stirling City Centre Structure Plan & Northern Precinct Local Development Plan

The subject site falls within the Stirling City Centre Structure Plan area and specifically the Northern Precinct. In accordance with the provisions of the structure plan, the Northern Precinct Local Development Plan (LDP) has been adopted to guide subdivision and development at the subject site. The LDP provides development requirements for the proposed development to be considered against which is addressed in Section 5 of this report.

3.4 State Planning Policies

State Planning Policy 7.0: Design of the Built Environment (SPP7.0)
This policy prescribes a number of design principles to be considered in the assessment of the proposed development and as part of the Design Review Panel (DRP) process.

State Planning Policy 5.4: Road and Rail Noise (SPP5.4)
Due to the subject site's proximity to the Mitchell Freeway, the provisions of SPP 5.4 are relevant and have been examined as part of a detailed acoustic report prepared to support the proposed application. This has been provided in **Appendix 4**.

3.5 Local Planning Policies

Local Planning Policies applicable to the proposed development are address in Section 5 and include:

- Local Planning Policy 6.3 – Bin Storage Areas.
- Local Planning Policy 6.6 – Landscaping.
- Local Planning Policy 6.11 – Trees and Development.

4.0 Proposal Details

The proposed development seeks approval for a 'Multiple Dwelling' development at the subject site and will represent one of the first and most significant developments within the Northern Precinct of the Stirling City Centre Structure Plan area since the adoption of the framework. The intent of Locus Development Group is to deliver the entire development and sell a completed built form product to the end consumer as opposed to a house and land package model which will ensure improved and coordinated built form outcomes.

A summary of the proposed development includes:

- A total of twenty two (22) individual dwellings, each with a portion of plot ratio overlap between another dwelling proposed on site.
- There will be four (4) distinct unit types proposed with a mixture of 2 and 3 bedroom product. In a number of the units there will be minor variations on the prominent unit type design in order to respond to the units location within the development.
- Units 1-16 will be provided with double garages with Units 17-22 provided with a single open air car park, all of which will be accessed from a communal driveway. The dwellings have been provided with a staggered setback to the communal driveway in order to introduce some visual articulation to this space and reduce the prominence of the garage doors.
- The communal driveway will have a decorative paving in order to illustrate pedestrians have priority and further increase the activation of this space.
- There will be five (5) visitor car parking bays in the verge area as well as an array of landscaping in order to beautify the verge area.
- Whilst the development does not provide any communal open space, there is a total of 864sqm of private open space across the development.
- The development will provide a landscaped buffer to adjoining properties to the south and east and a nil setback to the freeway boundary.
- The designs of each dwelling will include varied building materials and colours with a mix of face brick, fibre cement cladding, textured board, bagged brick and render

4.1 Design Review Panel

To ensure a robust design process occurred prior to the lodgement of the development application, the proposed development was presented to the City's Design Review Panel who considered the proposal against the provisions of State Planning Policy 7.0. A summary of the relevant comments and the proposed design response has been provided in the below table.

It is commented that the development is due to be presented to the DRP a second time shortly after lodgement of the development application.

DRP Comments	Design Response
Principle 1 – Context and Character	
• The Panel acknowledged that they understood the complex array of constraints that relate to this site, (as outlined by the Applicant in their presentation), including *inter alia* the multiple dwelling zoning and associated setbacks, plus the current economic circumstances regarding builders and the general lack of appetite for risk, especially in this sector of the 'development marketplace'. • Mention was also made by the Applicant that they have endeavoured, as much as possible, to comply with the Medium Density Design Codes, (which were very recently deferred by the Minister). The Panel commended this approach and strongly encouraged the Applicant team to continue to use these as a guide in the interest of achieving a higher level of amenity and a better overall outcome. • Comment was made by the Panel that the proposal responds well to the built form context and character of the immediate environs, including the necessary responses to the freeway and expressed their appreciation for the work done on the context analysis. • It was noted by the Panel that there is no overall site plan with internal layouts and openings showing how each unit relates to one another as a whole. The Panel requested that the Applicant provide such plans at subsequent meetings. • Comment was made by the Panel that the architectural form and materiality would benefit from further design development and requested additional information to assist in further reviews, including: levels, colours, materials, finishes, swept path movements, fencing, internal furniture layouts and air conditioning condenser locations. • It was noted that the imagery on the plans and elevations didn't achieve the same level of sophistication, (including articulation, variation in building heights, variety of colours and materiality, spaciousness, and generosity of fenestration), as the precedent imagery as shown under 'aesthetics' in the presentation. The Panel encouraged the Applicant to pursue the level of	• The medium density design codes have remained front of mind in the amended plans with regard to the size and layout of the dwelling and private open space areas. • An updated masterplan with the ground floor plans has been added to the development plan set. • The architectural form, materials, colours, levels etc. has developed further with this additional information included in the updated development plan set. • The provided precedent imagery has been used and relied on to guide materiality etc. in the amended development plans. • The design of Unit 1 and the presentation to the street has been considered in detail with additional glazing being provided to ensure surveillance of the street is achieved.

sophistication and aspirations as indicated in the precedent imagery provided. • The Panel considered that, from a strictly design perspective, the zero side boundary setback on Unit 01 was acceptable in light of the unusual lot configuration at the end of a cul-de-sac, which in this case results in a particularly wide verge space creating the same end effect as a greater setback. The Applicant's intent to improve the verge landscape further supports this position. Though the Panel did also make comment that a higher level of passive surveillance on the western façade of this unit is required and that direct access from the street would be a significant improvement.	
Principle 2 – Landscape Quality	
• It was noted by the Panel that there is a high percentage of deep soil and a large number of trees provided, which is a positive attribute and a good gesture. • The placement of a large tree at the end of the driveway was also seen as a positive outcome. • Comment was made by the Panel that site planning is a big part of 'getting the design right' and whilst it was acknowledged that a central driveway made sense, there was concern expressed around the size, shape and functionality of the Communal Open Space, also noting that as this is a multiple dwelling development, there is a requirement for 132sqm of such space. This Communal Open Space should be a design priority, not merely a convenient left over space. • The Panel expressed further concern that the triangular Communal Open Space was closeted away behind a row of dedicated car parking bays. This has compromised both the visual amenity that this space might otherwise have provided, as well as restricting physical access to this area, all of which should be further addressed to achieve a better outcome offering a higher level of amenity. • Comment was made by the Panel that citrus trees tend to struggle in alkaline soil. The suggestion was made to obtain the services of an arborist.	• The communal open space area has been removed in order for this to not be considered as a 'left over space' with additional private open space areas being provided which are considered more likely to be well utilised, • Alternate species type to the citrus trees has been included in the updated landscaping plan. • Units 11 & 12 (previously 15 and 16) have been provided with more generous private open space areas that have improved landscape amenity.

• The Panel felt that the level of landscape amenity provided to Units 15 and 16 are overly compromised.	
Principle 3 – Built Form and Scale	
• The Panel acknowledged that the low, (as compared to the intent of the town planning scheme), two-storey, 'grouped-dwelling-style' of development was a direct product of the current (and foreseeable) circumstances affecting the building industry, particularly in relation to apartments. • Comment was made by the Panel that it would have been helpful to have dimensions on the drawings which would have provided a better understanding of bedroom sizes and outdoor living areas. • Swept path movements are also required to ensure that vehicular access is achievable. • The Panel also noted it would be beneficial to include internal furniture layouts and ground floor plans in the overall site plans for subsequent reviews. • The Panel recommended articulating the driveway to reduce the impact of the long driveway and allow improved active frontages. • The Panel felt that the development would benefit significantly from having a number of single car units, which would help also help reduce the monotony and purely car orientated character of the driveway space. • The Panel noted that there was a high degree of similarity between some of the unit types, and that overall there was insufficient variety and/or articulation, falling short of the aspirational 'precedent' photographs included in the presentation.	• Dimensions and furniture have been added to the plans for context around room sizes and outdoor living areas. In this regard, the intent has been to broadly comply the size and layout of dwellings noted in the medium density design codes. • Swept paths have been included in the Traffic Impact Assessment provided as part of the lodgement process. • Garages of Unit Type B have been setback further with a generous balcony area added above that projects forward and adjoins the primary living area which reduces the impact of the garage doors and articulates and activates the driveway area. This design change together with the landscaping of the communal driveway we feel has reduced the car orientated feel of the driveway. • Floor plan changes have been made to increase variety and differences between unit types across the development with four dwelling types and variations on the A and B dwelling types proposed.
Principle 4 – Functionality and Build Quality	
• The Panel noted that it would be beneficial to have swept path movements shown on the plans as some areas, particularly at the end of the driveway, look tight. • The Panel mentioned there was an general lack of information available in relation to functionality and build quality in this first presentation.	• Swept paths have been included in the Traffic Impact Assessment provided as part of the lodgement process. • Additional design and development with regard to site and floor plan layouts has occurred with additional information presented in the plan set.

• The Panel noted that the 'balcony storerooms', as well, as the triangular ground floor storeroom, are problematic and require further thought and resolution. • The Panel noted that there appeared to be some conflicts between the already tight access points to the units and the driveway landscape areas as shown on the landscape site plan, which requires further resolution. • The Applicant was advised that, having submitted under multi-res zoning, that SPP7.3 4.9 Universal Design applies, which stipulates the requirement for 20% LHA silver level, or 5% of LHA platinum level apartments to be included.	• Balcony storerooms have been removed in favour of storerooms within the garages. Triangular storerooms have also been removed in favour of a communal storeroom area for the use of Units 17-22.
Principle 5 – Sustainability	
• No discussion was held around sustainability. • Further information is required with regard to sustainability to ensure a properly integrated approach to this important aspect of the design.	• Sustainability measures included as part of the proposed development include: 1. Solar PV ready roofs (conduits in place). 2. Separate EV charging circuits in garages (Unit Types A, B and D only). 3. Light coloured roofs. 4. Natural cross ventilation. 5. Use of native plans and waterwise planting. 6. WELS rated water fixtures and energy efficient appliances.
Principle 6 – Amenity	
• It was noted by the Panel that solar access into the living areas looked to be good, apart from Unit 16. • Comment was made by the Panel that the storerooms compromise both the bedrooms and balconies in their current location and these should be reviewed, along with the triangular, ground floor storeroom. • The Panel expressed concern in relation to the amount of private open space allocated for Units 15 and 16 and commented that it is essential that the living areas in all apartments have direct access to these spaces and vice versa. • Comment was made by the Panel that the space for the 2x2 units is generous although the 3x2 units require further work. • A request was made by the Panel for the Applicant to provide the location of the air conditioning condensers on the plans,	• Balcony storerooms have been removed in favour of storerooms within the garages. Triangular storerooms have also been removed in favour of a communal storeroom area for the use of Units 17-22. • Units 11 & 12 (previously 15 and 16) have been provided with more generous private open space areas. • Changes to the floor plan layout have resulted in upper floor living and access to a second private open space area in the form of a first floor balcony for the Unit Type B product.

noting that the placement of these on balconies is not acceptable. • The Panel recommended exploring ways of giving over more land by integrating some single parking to increase the amenity of the proposal.	
Principle 7 – Legibility	
• Comment was made by the Panel there is currently no separate pedestrian access path. The Applicant was urged to think about how the driveway and pavement pattern are detailed and consider the pedestrian experience and commented that the landscape architect would be able to assist with this. • The Panel expressed some concern in relation to the visibility of the entrances and suggested further consideration of the entrances, in concert with the driveway landscape treatments, and the principles of way finding should be applied. • It was stated by the Panel that access / way finding to the communal area is not clear, being largely obscured by the dedicated car parking bays.	• A separate pedestrian path has been contemplated, however the design intent is to create a communal driveway that feels more like a space where the pedestrian is the priority over the vehicle through landscaping. This is hoped to also encourage use as a communal space. • The communal open space area has been removed in order for this to not be considered as a 'left over space' with additional private open space areas being provided which are considered more likely to be well utilised.
Principle 8 – Safety	
• Comment was made that there is a lack of passive surveillance from Unit 01 to the street. It was mentioned this could be improved by reviewing how this apartment better addresses the street. • The central driveway, being dominated by garage doors, offers nothing by way of activation, or passive surveillance, at ground level. • The location of the storerooms on the first level further exacerbates this problem by limiting the outlook from both bedrooms or balconies.	• The Unit 1 design has been modified to be a variation on the Type B product to provide additional glazing and passive surveillance of the street. • Garages of Unit Type B have been setback further with a generous balcony area added above that projects forward and adjoins the primary living area which reduces the impact of the garage doors and articulates and activates the driveway area. This design changes also resulted in the removal of the first floor storerooms.
Principle 9 – Community	
• The Panel considered that it was a very positive attribute that Units 17-22 addressed the street. However, this isn't the case for Unit 1, which is not supported. • It was acknowledged by the Panel that the Applicant has recognised that the community would not likely welcome a larger (high-rise) development in this area.	• As discussed above, the Unit 1 design has been modified to provide passive surveillance of the street. It is commented that we don't view this frontage as a 'street frontage' more a side frontage to the development given it is positioned at the end of a cul-de-sac. • Whilst the removal of the communal open space may be viewed as a negative with regard to community. It is commented that the site is

	in very close proximity to a park across Osborne Place which will enable community interaction.
Principle 10 – Aesthetics	
• Comment was made by the Panel that the aesthetics of the proposal are heading in the right direction, but notwithstanding the overall development is too monotonous and requires further development, more along the lines of the precedent photographs provided in the presentation package. • The central driveway is dominated by garage doors, presenting a rather bleak and un-activated frontage and entry experience. • The Panel expressed some concern about the prominent location of the bin store by the front gate. The Applicant was advised that, if the bin store was to remain in this location, then it would need particular attention to detail architecturally.	• Further information on aesthetics has been provided in the updated development plans with the use of varied materials and colours to encourage visual interest in the development. • As previously noted, the garages of the Type B product have been setback further from the communal driveway with primary living areas and balconies to reduce the impact of the garages and increase the activation of the driveway. • The nature of the bin store design is such that this has been incorporated into the architectural design of the built form, so much so that you wouldn't know it is a bin store.

5.0 Assessment

The statutory provisions applicable to the subject site require assessment of the proposal to be undertaken against the requirements noted in the following documents:

- City of Stirling Local Planning Scheme No. 3.
- State Planning Policy 5.4 – Road and Rail Noise.
- Stirling City Centre Structure Plan & Northern Precinct Local Development Plan.
- Local Planning Policy 6.3 – Bin Storage Areas.
- Local Planning Policy 6.6 – Landscaping.
- Local Planning Policy 6.11 – Trees and Development.

The below sections will address the relevant land use permissibility, planning considerations and development requirements outlined in the abovementioned statutory planning documents.

5.1 Land Use Permissibility

The proposed development seeks approval for a 'Multiple Dwelling' land use for each proposed dwellings at the subject site. Whilst the proposed development looks and feels like a townhouse typology, there is an element of plot ratio overlap between each of the dwellings which excludes them from the 'Grouped Dwelling' land use definition and results in them being classified as 'Multiple Dwellings'.

Relevant definitions and evidence to demonstrate the 'Multiple Dwelling' land use classification has been provided below:

'Grouped Dwelling – a dwelling that is one of a group or two or more dwellings on the same lot such that no dwelling is placed wholly or partly vertically above or below another, except where special conditions of landscape topography dictate otherwise, and includes a dwelling on a survey strata with common property.

'Multiple Dwelling – a dwelling in a group of more than one dwelling on a lot where any part of the plot ratio area of a dwelling is vertically above any part of the plot ratio area of any other but:

- *Does not include a grouped dwelling; and*
- *Includes any dwellings above the ground floor in a mixed use development.'*

'Plot Ratio - Means the ratio of the gross total of the areas of all floors of buildings on a site to the area of land within the site boundaries. For this purpose, such areas shall include the area of any walls but not include the areas of lift shafts, stairs or stair landings common to two or more dwellings, machinery, air conditioning equipment rooms, non habitable space that is wholly below natural ground level, areas used exclusively for the parking of wheeled vehicles at or below natural ground level, lobbies or amenities areas common to more than one dwelling, or balconies or verandas.'

As all of the proposed dwellings include a portion of 'plot ratio' area either above or below that of another dwelling, as has been illustrated in Figure 5, the dwellings are unable to be classified as 'Grouped Dwellings' and instead are classified as 'Multiple Dwellings'. Whilst the extent of plot ratio overlap is limited to linen closets or similar it is still 'plot ratio' area.

Figure 5 – Example of Plot Ratio Overlap

In accordance with the Northern Precinct Local Development Plan, the City Residential land use category is the only land use category capable of approval at the subject site. As noted in Table 6.11.9 'Multiple Dwellings' are a 'Permitted (P)' land use within the 'City Residential land use category and as such it warrants approval subject to compliance with the relevant development requirements.

5.2 State Planning Policy 5.4 – Road and Rail Noise (SPP5.4)

Given the subject sites proximity to the Kwinana Freeway, it falls within the trigger distance noted in SPP5.4 as requiring an acoustic analysis to assess whether or not prescribed noise levels can be achieved.

Herring Storer Acoustics were engaged to undertake this analysis for the proposed development with their report include in Appendix 4. In undertaking their analysis, they determined that there were a number of exceedances to the prescribed noise levels and as a result the proposed development would be required to incorporate Quiet House Design requirements into the detailed design process, post planning approval.

Provided the Quiet House Design requirements are being met and a futher assessment is undertaken, the noise levels received at the proposed development would comply with those specified in SPP5.4.

5.3 Development Requirements

The proposed development requires consideration and assessment against the requirements outlined in the below mentioned documents:

- Stirling City Centre Structure Plan & Northern Precinct Local Development Plan.
- Local Planning Policy 6.3 – Bin Storage Areas.
- Local Planning Policy 6.6 – Landscaping.
- Local Planning Policy 6.11 – Trees and Development.

The table below provides a summary of our assessment of the proposed development against deemed to comply requirements outlined in the abovementioned documents. Where variations have been noted, the development has been assessed against the relevant design objectives.

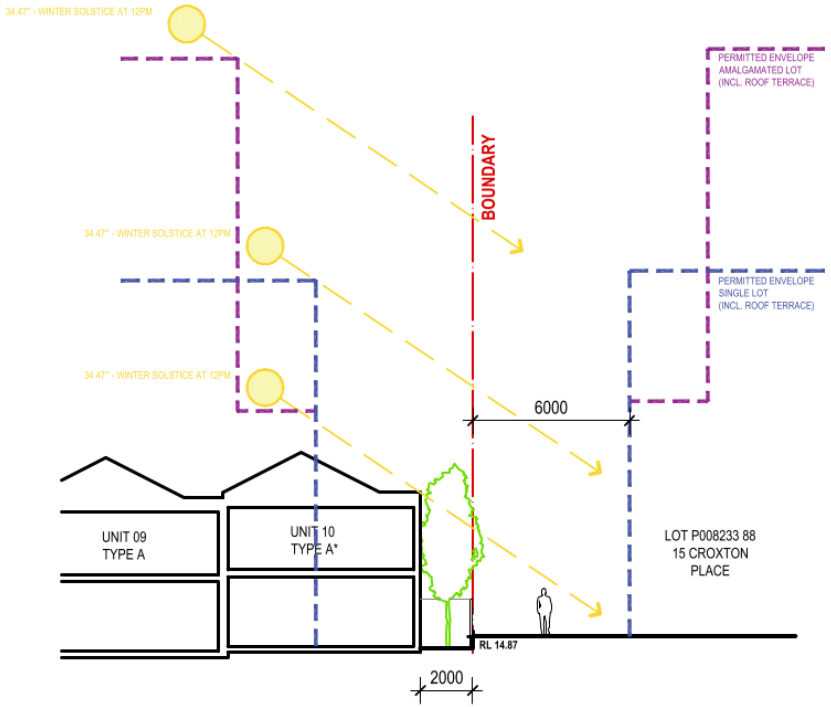
General Provisions of the Northern Precinct Local Development Plan		
Planning Framework Provisions		**Developments Compliance**
2.1 Built Form & Design		
Lot Size	**Objectives** • To ensure air movement, view corridors and green spaces between residential buildings; and • To prevent fragmentation of landholdings in order to enable development intensification with appropriate	Not applicable – subdivision is not being proposed.
	Provisions • As per Sub Precinct Area (refer Section 3).	
Lot Street Frontage	**Objectives** • To ensure that the frontage of lots do not constrain the ability to provide gaps in residential building frontages along the street; and • To prevent fragmentation of landholdings in order to enable development intensification.	Lot frontage is existing and not proposed to be modified.
	Provisions • Minimum lot frontage of 16m. • Maximum lot frontage of 70m.	
Dwelling Mix	**Objectives** • To ensure a number of smaller dwellings are developed.	The proposed development includes a mix of typologies with a two and three bedroom product being offered which addresses diversity within the development. More broadly the nature of the product being offered as part of the proposed development is such that it varies greatly to what is existing in the area and represents a high quality infill development that will appeal to a wide demographic and allow residents to downsize in the same area without needing to occupy a traditional apartment.
	Provisions • All developments and subdivisions comprising of ten or more dwellings shall provide a minimum of 10% single bedroom dwellings as part of the development; and • Single bedroom dwelling provision is to be calculated by rounding to the nearest whole number. In the case of exactly 0.5 the requirement shall be rounded up to the nearest whole number.	• No single bedroom dwellings are being proposed in lieu of two being required. Justification • The development includes a vastly different product to what exists in the local area and will represent a quality infill development. In this regard, despite not providing the dwelling

		diversity internally, it introduces dwelling diversity into the broader area.
Multiple Dwelling Size	**Objectives** • To ensure multiple dwellings have sufficient space to cater for the needs of residents.	Due to the nature of the proposed development, the dwellings are vary generously proportioned in comparison to traditional apartments and will easily meet the needs of residents.
	Provisions • Minimum multiple dwelling size of 40sqm plot ratio area, excluding outdoor living areas and external storage and car parking areas.	• All dwellings greatly exceed the minimum plot ratio area of 40sqm.
Minimum number of dwellings	**Objectives** • To achieve the dwelling targets outlined in the Stirling City Centre Structure Plan.	The proposed development greatly exceeds the minimum dwelling targets set for Precinct 3B.
	Provisions • Except for single dwellings, ancillary dwellings and grouped dwellings, the minimum number of dwellings required in a development or subdivision shall be calculated using formula below and the numbers outlined in Figures 3 and 4.	• The minimum dwelling yield for the site is 1.24 dwellings with 22 dwellings being proposed.
Wall Height	**Objectives** • To protect habitable rooms and outdoor living areas of existing landowners and reduce bulk of buildings.	The proposed development is of a very low scale compared to what is permitted i.e. two storeys instead of five. In this regard, the impacts to adjoining landowners by way of building bulk is much less than a compliant built form outcome.
	Provisions • 9m for typical single lot. • 15m for amalgamated lots. • Top of external wall (concealed roof) 1.0m above wall height limit outlined in sub precinct areas; and • Floor to ceiling heights on upper floors are to be as per sub precinct provision.	• The maximum wall height proposed is around 6.5m from the Type C unit types fronting the street. • The floor to ceiling heights is only 2.435m for upper floors and 2.657m for lower ground floors. Justification • Whilst the ceiling heights are not being met, the proposed development is not a traditional apartment development, in this regard the dwellings benefit from open air, unenclosed outdoor living that gives a greater perception of space. • The amenity afforded to residents is still of a high quality in that the ceiling heights are broadly consistent with the requirements of the medium density design codes.

Architectural features above Wall Height	**Objectives** • To add architectural interest to the street façade which contributes to the streetscape.	The proposed development is positioned at the end of a cul-de-sac and as such the design focus for the streetscape aspect has been the portion of the subject site directly fronting Osborne Place. In this regard Units 17-22 positively contribute to the streetscape and achieve a level of architectural interest through a mixture of landscaping, varied building materials and outdoor living areas that open directly to the street.
	Provisions • Maximum 1.0m projection for 15% on any frontage.	• No projections above wall heights are proposed.
Roof Height	**Objectives** • To limit the impact of bulk and scale on adjoining neighbours.	As previously noted, the proposed development is of a low scale in comparison to what is permitted under the planning framework, in this regard there will be no undue building bulk and scale impacts resulting from roof heights at the proposed development.
	Provisions • 14m for single lots. • 22.5m for amalgamated lots. • For skillion roofs, a maximum additional height of 2.0m above the wall height can be approved, but on one side only. • Maximum roof height for buildings 4 storeys and below shall be 3.0m with a 33-degree pitch from the top of the wall; and • Maximum roof height of buildings over 4 storeys in height shall be 5.0m with a 33-degree pitch from the top of the wall.	• All roof heights are less than 14m.
Bonus Height	**Objectives** • To allow bonus heights where lots are identified as 'Landmark' sites and are amalgamated.	Not applicable – no bonus height is being sought.
	Provisions • To achieve a bonus height as outlined in Clause 3.3, development shall require the amalgamation of the groups of lots outlined in Figure 20, 22, 24 and 26.	
Street Setbacks	**Objectives** • To ensure that buildings provide a consistent frontage to the street; and	The area adjoining the subject site is at the start of a transition to higher density development. In this regard consistency with the existing street setbacks shouldn't be encouraged.

	• To provide visually accessible areas of open space on privately owned land	The ground floor of the Unit Type C dwellings fronting Osborne Place have their outdoor living areas fronting the street.
	Provisions • 3m primary street setback. • 3m secondary street setback.	• Unit 1 proposes a nil setback to the primary street. Justification • As previously noted the subject site is located at the end of a cul-de-sac and where the Unit 1 setback variation exists is past the termination of the road reserve. In this regard, the boundary to Unit 1 is not a traditional 'primary street' interface with this existing in front of Unit 17-22 where the 3m setback has been provided. • The reduced setback, given the above context has been supported by the DRP provided an appropriate level of surveillance and activation is achieved. • The verge adjacent to the Unit 1 is of a considerable depth and this space will be landscaped to improve the streetscape appearance adjacent to Unit 1. • In addition to the glazing to Unit 1, this dwelling will also have a balcony and outdoor living area that overlooks the street to increase passive surveillance of the street.
Side/Rear Setbacks	**Objectives** • To provide sufficient space for trees and landscaped areas. • To protect habitable rooms and outdoor living areas of existing landowners and reduce bulk	The proposed development where adjoining other residential properties has provided at least a 2m wide buffer or landscaping strip which will allow for sufficient space for trees to be accommodated. Further, as noted earlier, the scale of the built form proposed, despite the reduced side and rear setbacks will not impact on adjoining properties, by way of bulk and scale, any more than a compliant approved development would.
	Provisions • 4.0m to a major opening to a habitable room with a major opening or balcony above ground level; and • 3m side setbacks • 6m rear setback or 3m for corner single lots.	• No major openings to a habitable room or balconies are facing adjoining properties. • There is a nil setback proposed to the western boundary. • There is a 1m tapered 2.5m setback proposed to the eastern boundary. • There is a 2m rear setback proposed. Justification

		• The reduced setback to the western boundary is a result of this frontage being the freeway. In this regard there will be no impact on any adjoining landowners and the reduced setback allows additional northern light access to the ground floor living areas. • The reduced setback to the eastern boundary really results from the angled boundary and the dwellings being perpendicular to either the street or the communal driveway as this results in sections where the 3m setback is unable to be complied with. Despite this the impact of the built form on adjoining properties will be minimal with sufficient space for landscaping still available. • The setback to the rear, despite being much less than the required 6m will not have a profound impact on the adjoining properties to the rear and the 2m setback will still be sufficient for a landscaped buffer to be implemented. Evidence to demonstrate the lack of bulk and scale impacts has been illustrated in the below diagram which compares the proposed development with a compliant 5 storey development that is setback 6m. In addition to bulk and scale, there will be no undue overshadowing or visual privacy impacts that result from the proposed development.

		
Setbacks between Buildings on the Same Lot (3 storeys and below)	**Objectives** • To protect habitable rooms and outdoor living areas of existing landowners and reduce bulk; and • To allow sufficient space for landscaping and trees.	The nature of the proposed development, not being a typical apartment building and only being two storeys in height ensures that setbacks between buildings is not necessary with sufficient space provided along the boundaries with existing residential properties for landscaping.
	Provisions • Minimum 4.0m distance habitable buildings for developments incorporating from 6 to 12 units. • Minimum 5.0m distance between habitable buildings or developments incorporating from 13 to 20 units; and • Minimum 8.0m distance between habitable buildings or developments incorporating more than 20 units.	• Whilst the required setback of 6m between buildings is acknowledged, this requirement is intended for traditional apartment towers and is not applicable to the proposed development.
	Objectives	Not applicable.

DYNAMIC PLANNING AND DEVELOPMENTS

Setbacks Between Buildings (4 storeys and above)	• To provide sufficient space for light, cross ventilation, outlook, landscaping, and trees between buildings; and • To reduce buildings bulk **Provisions** • As per Section 3 and corresponding figures; and • As per Table 2	
Minor Projections into Setback Area	**Objectives** • To allow for architectural features to have minor projections into the setback area whilst providing sufficient space for light, cross ventilation, outlook, landscaping, and trees between buildings; and • To protect major openings to habitable rooms and outdoor living areas of existing landowners and reduce bulk. **Provisions** • Maximum projection of 0.75m for chimneys, unenclosed balconies, eaves over-hang and other architectural features	Not applicable – no minor projections into setback areas.
Open Rooftop Terraces	**Objectives** • To maximise the useability of roof space whilst minimising impacts on adjoining properties. **Provisions** • Rooftops may be used as an open terrace. • Rooftops shall not include habitable rooms. • All rooftop terraced areas shall be set back a minimum of 4.0m from the side and rear boundaries. • Pergola rafters may extend to the edge of the terrace. • Maximum 10% of rooftop terrace may be covered by impermeable roof unless it can be demonstrated there is sufficient access to uncovered space. • Rooftop terraces can be included in the calculation of required communal open space; and • Pergolas and structures on the rooftop may exceed buildings heights by a maximum of 3.0m	Not applicable – no rooftop terraces proposed.

Outdoor Living Areas	**Objectives** • To ensure that every dwelling has sufficient outdoor space to cater for the needs of residents	The proposed development includes a very generous provision of outdoor living areas with each provide having an outdoor living area provision above 20sqm. This space will accommodate the recreational desires of residents and will be a functional and well landscaped part of the dwellings.
	Provisions Each dwelling shall be provided with either: • One balcony with minimum dimension of 2.4m and minimum area of 10sqm; or • One courtyard accessed directly from a habitable room with minimum dimension of 4m and minimum area of 20sqm	• Where balconies are proposed and attached to the primary living area they are a minimum dimension of 2.6m and are a total of 13.5sqm in area. • Where ground floor courtyards are relied upon as the primary outdoor living areas they exceed the required 20sqm in all instances. • The minimum dimension for some ground floor courtyards are less than 4m Justification • Despite the variation to the minimum required dimensions, these spaces are still more than functional with a minimum dimension of 3m and benefit of the reduced dimension is that often the primary living areas are more generous in area.
Communal Open Space	**Objectives** • To encourage social interaction between residents and workers in a development and provide spaces for rest and recreation	Whilst the lack of communal open space is acknowledged, it is considered that sufficient space exists for community interaction and recreation both within the development and also the adjoining area of public open space that exists on the opposite side of the Osborne Place.
	Provisions • Residential Developments incorporating between six and twelve units (inclusive) shall provide a minimum of 40sqm of communal open space with a minimum dimension of 4.0m; or • Residential Developments incorporating between thirteen and twenty units (inclusive) shall provide a minimum of 80sqm of communal open space with a minimum dimension of 5.0m; or • Residential Developments incorporating more than twenty units or all non-residential development shall	• 0sqm of communal open space is provided in lieu of 372sqm. Justification • Whilst there is no communal space provided as part of the proposed development, there is a surplus of private open space being proposed as part of the development that residents are more likely to enjoy. • The nature of the development is less reliant on the provision of communal open space than a traditional apartment development that usually only has 10sqm of private open space with the communal open space provided for residents

	provide communal open space of no less than 10% of the lot area with a minimum dimension of 8.0m • A minimum of 50% of the communal open space shall be designed as landscaped areas inclusive of soft landscaping and shall include shade trees. • A maximum 10% of total communal open space area to be covered with an impermeable roof cover; and • Communal facilities such as BBQ's, seating, shade structures, tables etc. shall be provided.	to enjoy. In this regard the proposed development includes 864sqm of private open space which greatly exceeds the combination of 372sqm of communal open space and 220sqm of private open space that would be provided in a traditional apartment development (22 dwellings x 10sqm of balcony area). • The ability for interaction between residents remains for residents given the proximity to the public open space across from the development along Osborne Pace. • Whilst a communal driveway is used primarily for access, the nature of the paving design increases the priority of the pedestrian and is likely to encourage use of this space for recreational activities.
Special Purpose Dwellings	**Objectives** • To ensure residential development is provided for people with or without special needs, providing ancillary accommodation, which is independent or semi-independent to residents of the single.	Not applicable.
	Provisions • As per the Ancillary Provisions of the Residential Design Codes	
Facades and Walls (Ground Storey to 3rd Storey)	**Objectives** • To ensure that buildings facades are articulated, indented with openings, and use different materials and colours.	The proposed facades of the dwellings use a range of materials and colours throughout to distinguish between each dwelling and provide a variety of dwelling designs. There is also a mixture of dwellings with and without balconies to provide articulation to the development throughout.
	Provisions • No wall (other than side boundary walls with nil setback) to be longer than 10.0m in length without indentation. • Minimum indentation to be at least 1.0m deep and 2.0m wide; and • As per sub precinct area (refer Section 3)	• No wall longer than 10m without indentation.
Balconies	**Objectives** • To ensure that the bulk of the building is reduced and provides articulation.	The use of balconies within the development, particularly along the communal driveway assist in achieving articulation to the proposed dwellings and reducing the impact of garages along the driveway.

	Provisions • Balcony balustrades shall be 75% visually permeable.	• All balcony balustrades shall be greater than 75% visually permeable.
External Fixtures	**Objectives** • To ensure that services do not detract from the streetscape and adjoining properties.	The proposed services for the development will be contained in a central area at the front of the site and will be screened from the view of the street and adjoining properties.
	Provisions • All service meters and related infrastructure are to be screened as viewed from the street; and • All external fixtures such as television and radio antennae, satellite dishes, plumbing vents and pipes, air conditioners and hot water systems are to be screened as viewed from the street and adjoining properties.	• The proposed service metres etc. will be included in a central services area that will be screened from view from the street. • Other external fixtures will not be visible from the street, the communal driveway or adjoining properties
Essential Facilities	**Objectives** • To ensure provision is made for external storage, rubbish collection/storage areas and clothes drying areas that are adequate to meet the needs of residents.	Units 1-16 will be provided with bin and dwelling storage within the proposed garages with Units 17-22 provided with access to a communal bin store and consolidate storeroom area.
	Provisions • Every dwelling shall be provided with an enclosed storage area of at least 4.0sqm, minimum 1.5m dimension, which may be accessed from outside the dwelling. • Every dwelling shall be provided with a clothes-drying area (communal or private) that is not visible from the street. Alternatively, every dwelling shall be provided with a clothes dryer: and • Bin Storage areas shall be provided in accordance with the City's Bin Storage Areas Policy and shall not be located within landscaped areas or building setback areas.	• All dwellings will be provided with a storeroom that is 4sqm in area with a minimum dimension of 1.5m. • All dwellings will be provided with a clothes drying area. • Bin storage areas has been discussed below and within the provided Waste Management Plan.
Outbuildings	**Objectives** • To ensure that outbuildings do not detract from the streetscape or amenity of the area.	Not applicable.
	Provisions	

	• Outbuildings shall have a minimum dimension of 1.0m. • Outbuildings shall not be located within the street setback areas or landscaping areas; and • Shall be in accordance with the relevant clauses relating to outbuildings as contained in the Residential Design Codes.	
Basements	**Objectives** • To allow appropriate uses while ensuring basement developments do not impact on underground services, neighbouring developments, or groundwater flows.	Not applicable.
	Provisions • Bedrooms and living areas shall not be permitted in the basement. • Basements are not to interfere with any service infrastructure unless written approval has been obtained from the relevant authority/s; and • Basements must be setback at least one metre from any lot boundary.	
2.2 Streetscape Relationship		
Location of Land Use Category	**Objectives** • To ensure active non-residential uses on the ground floor of mixed-use developments; and • To ensure that non-residential uses do not have a detrimental impact on residential uses.	No non-residential uses are proposed.
	Provisions • City Residential	The proposed development is consistent with the 'City Residential' land use category.
Non-Residential Ground Floor Frontages	**Objectives** • To ensure that active non-residential frontages face the street and portray an attractive and inviting frontage.	Not applicable.
	Provisions • Minimum of 80% clear glazing; and • Have non-residential uses on the ground floor facing the street.	
	Objectives	Not Applicable.

Non-residential Entry Points	• To ensure pedestrian entrances are clearly defined and designed to enable safe and comfortable access.
	Provisions
	Entry shall:
	• Directly face the street
	• Be at ground level; and
	• Include at least two of the following:
	  o Signage above the entry door
	  o Indentation of the entry point, where recessed entrances are provided, they should be truncated at an angle to the pedestrian route of no less than 60 degrees.
	  o Highlighting of the entry point through the use of different materials; and
	• Increased awning height above the entry point to no higher than 4.0m above footpath level.	

Residential Entry Points	**Objectives** • To ensure that all residential buildings have an entry point facing the primary street on the ground level. **Provisions** • Entry points to be no more than 1.2m above the ground level of residential and mixed-use development. • In a mixed-use development, the residential entrance is to be differentiated from the commercial entrance; and • Each development shall have entry points facing all streets and residential uses on the ground floor facing the street	All proposed dwellings abutting Osborne Place have a separate pedestrian entry at the ground level through their outdoor living areas. • Entry points are at ground level. • Development is not mixed use. • Entry points from Osborne Place and each dwelling with direct street frontage has access from the street.
Surveillance of Streets, Public Open Space & Public Access Ways	**Objectives** • To ensure there is passive surveillance of public open space areas and public access ways for safety; and • To ensure buildings address streets, Public Open Space and Public Access Ways with balconies and major openings to habitable rooms.	The proposed development includes a number of balconies and living spaces that overlook the communal driveway area in addition to Units 17-22 which have outdoor living areas and primary living areas that are orientated toward the street.

	Provisions • The building shall have courtyards and balconies facing all streets; and • The building shall provide a minimum of one major opening from a habitable room for every dwelling that orients to the street, public open space, and public access way on the ground floor.	• The development includes courtyard facing Osborne Place. • All dwellings facing the street or communal driveway have at least one major opining in this direction.
Major Openings to Habitable Rooms	**Objectives** • To ensure that there is sufficient access to natural light, ventilation, and outlook from all habitable rooms.	All dwellings have major openings to habitable rooms which will allow a generous access to natural light and ventilation. Further the design is such that it maximises access to natural light.
	Provisions • One major opening (exceeding 1sqm) shall be provided to each habitable room and have a sill height less than 1.6m above floor height.	• All habitable rooms have major openings.
Weather Protection	**Objectives** • To support a comfortable external environment for pedestrians.	The proposed development is residential only and as such awnings to the public realm is not required.
	Provisions • Awnings shall have a minimum depth of 2.5m • Awnings shall have a maximum vertical clearance from the pavement level of 3.5m (4.0m for entry points) • Awnings shall be constructed using materials that are opaque and non-reflective; and • New awnings shall match with existing awnings (where present).	
Street Walls and Fences	**Objectives** • To promote surveillance of the street	Units 17-22 have dwellings facing the street and include low height and visually permeable fencing to ensure surveillance of the street is able to be achieved.
	Provisions • Front walls and fences within primary street and secondary street setback area are visually permeable above 1.2m to a maximum height of 1.8m	• Fencing to the street is no higher than 1.3m and is visually permeable throughout.

Excavation or Fill	**Objectives** • To ensure that development follows the topography of the land.	The existing site is very flat with the extent of site works very limited to enable the development to follow the topography of the land.
	Provisions • A maximum of 0.5m of fill above the natural ground level is permitted; and • Excavation within all boundaries shall have no limit.	• No more than 0.5m of fill is proposed in any locations. • Limited to no excavation is required to accommodate the development.
Retaining Walls	**Objectives** • To ensure development considers and responds to the natural features of the site and requires minimal excavation/fill. • Where excavation/fill is necessary, all finished levels respecting the natural ground level at the lot boundary of the site as viewed from the street.	Not applicable – no retaining is required to accommodate the proposed development.
	Provisions • For residential development as per the Residential Design Codes; and • For non-residential development a maximum of 0.5m retaining wall is permitted above natural ground level.	
Levels	**Objectives** • To ensure that there is equitable access for pedestrians and that excessive differences will not have a negative impact on the amenity of the area.	The proposed development is very level with pedestrian access available to the entry of all dwellings.
	Provisions • The ground floor level of buildings shall match footpath level for all non-residential and mixed-use development. • Basement parking structures between a street frontage and the main front elevation are no more than 1.2m above natural ground level for residential developments; and • A maximum of 0.5m of fill is permitted above natural ground level.	• All ground floor levels match that of the street and / or the communal driveway. • No basement parking proposed. • No more than 0.5m of fill is proposed.

Landscaping	**Objectives** • To improve the visual appeal of development, screen service areas and provide shade and green relief in built up areas.	The proposed landscaping has been well thought out with the provision of shade and landscape buffers to adjoining properties a key priority.
	Provisions • A landscaping Plan shall be submitted for all non-residential developments and all residential developments with five or more dwellings in accordance with the City's Landscaping Policy. • Landscaping shall be provided in all landscaping areas and setback areas as illustrated in Section 3 and in accordance with the City's relevant Tree Policy. • All ground floor courtyards shall include one tree. • Landscaping strips, setback areas and ground floor courtyards shall include trees (minimum 45 litres, with a potential to reach 8-10m height). • Trees shall be planted every 5.0m and include other soft landscaping. • All developments shall make provision for deep planting zones in the rear landscaping strip and other landscaping areas; and • Street Trees shall be planted in front of all developments, at 7.0m intervals, where possible.	• A landscaping plan has been provided as part of the development plans. • Landscaping has been proposed in all setback areas. • All ground floor courtyards will include at least one tree. • The proposed setback areas will accommodate 100L tree that will achieve 6m in height. • Trees along the boundaries are planted every 5m with other soft landscaping around them. • Deep soil areas has been provided in the rear landscaping street and throughout the development. • 9 street trees have been proposed and the site has 66,m of street frontage.
Lighting, Safety and Security	**Objectives** • To ensure appropriate lighting to improve safety.	Lighting will be provided to the communal driveway and parking areas to ensure it is well lit in the evenings.
	Provisions • Shall be in accordance with the City's Mixed Use and Commercial Centre Zone Guidelines.	• The proposed development is not a mixed use or commercial development.
2.3 Access and Parking		
Parking Provisions	**Objectives** • To provide parking for short term visitors, residents, and employees.	The proposed development includes an appropriate resident and visitor parking provisions that exceeds that of the R-Codes.
	Provisions • Parking shall be provided in accordance with the Parking Policy applicable to this Local Development Plan and.	• Not applicable.

	• Residential parking ratios as per the Residential Design Codes.	• The proposed parking provision exceeds what is required by the R-Codes with 1 bay per dwelling required for resident parking and 5 resident bays.
Design and Location of Car Parking Bays	**Objectives** • To ensure that car parking areas do not disrupt the continuity of building frontages. • To ensure that parking is not visible from any street; and • To ensure parking is sleeved with residential and non-residential buildings.	Parking proposed at the development does not impact the street frontage / presentation and will not be visible from the street with it hidden behind the entry statement where located within the setback area.
	Provisions • Car parking bays located within a building shall be located in accordance with Figures 6, 7, 8, 9 and 10; and • Where side setbacks are required (refer Section 3), no parking areas permitted in the setback area; and • Basement car parking is permitted in all situations.	• Car parking has been located within the primary street setback. • Side setbacks are not required for parking. • Basement car parking is not proposed/necessary. Justification • Despite the car parking being located within the primary street setback area, it has been located behind the entry statement of the development and the services area which effectively screen the parking from view.
Vehicle Access	**Objectives** • To ensure vehicle access ways are safe and easily traversed. • To limit the number of, and width of crossovers, reducing the impact on pedestrians, traffic, movement, and safety; and • To minimise the amount of land used for driveways.	The proposed development has one vehicular access point with the driveway width limited to the area required for safe vehicle access. The intent of the accessway is to prioritise the pedestrian and make it a low speed environment.
	Provisions • Driveways serving up to 15 dwellings shall be 3.0m wide. • Driveways servicing mixed use developments and developments of more than 15 dwellings shall be 6.0m wide; and • Convex mirrors and/or pedestrian warning devices shall be provided where driver line of sight is obscured by buildings or landscaping.	• Not applicable. • Driveway is at least 6m wide. • Not applicable.

Crossovers	**Objectives** • To limit the number of crossovers, reducing the impact on pedestrians and traffic	Only one crossover to the proposed development is proposed at the end of a cul-de-sac which ensures there will be no impact on pedestrians or traffic.
	Provisions • No more than one crossover is permitted for any one site. • Existing redundant crossovers will be required to be removed at the expense of the developer and the verge reinstated; and • Maximum crossover width 6.0m.	• Only one crossover is proposed. • Existing crossovers will be removed. • Crossover is 6m in width.
2.4 Other Considerations		
Signage	**Objectives** • To ensure there is not a proliferation of signage within the streetscape.	Not Applicable
	Provisions • Signage detail shall be in accordance with the Stirling City Centre Structure Plan.	
Sound Attenuation	**Objectives** • To ensure that noise from non-residential uses does not adversely affect amenity of residential development.	Not Applicable
	Provisions • Noise attenuation of non-residential uses shall be in accordance with the City's Mixed Use and Commercial Centre Design Guidelines; and • An acoustic report is required for all non-residential uses.	
Existing Buildings	**Objectives** • To ensure only major extensions to existing buildings are assessed under the provisions of the LDP.	Not Applicable
	Provisions • Major additions, two storey additions or single storey buildings and structures more than 200sqm shall be assessed under the provisions of this LDP.	
	Objectives	Not Applicable

Single and Grouped Dwellings	• To ensure applications for single dwellings and additions are assessed under the Residential Design Codes. **Provisions** • Applications for single dwellings and additions to existing single dwellings shall be assessed under the R20 provisions of the Residential Design Codes; and • Additions to existing grouped dwellings as per the R40 provisions of the Residential Design Codes.	
Local Planning Policies		
LPP 6.3 Bin Storage Areas	• Bin storage shall be a minimum width of 3.5m and have a minimum depth of 2.5m. • The bin store shall be located behind the building setback line. • The bin store shall ensure adequate space is available for the waste truck to access the bin store. • The bin store shall be 1.8m high and not visible from the street. • The bin store materials shall match the building. • The bin store shall be sealed and regularly cleaned and maintained. • The bin store shall be capable of drainage.	• The proposed bin store is sufficient in area to accommodate the required bins as it will simply service Units 17 to 22 with other units having bins within the garage. • The bin store is located behind the setback line. • The bin store will be enclosed and will be a height of 1.8m • The bin store is proposed to be the same material as the rest of the development. • As per the submitted waste management plan the bin store will be required with cleaning and drainage facilities.
LPP 6.6 Landscaping	**Objectives:** • Landscape design enhances streetscape and pedestrian amenity; improves the visual appeal and comfort of open space areas; an provides an attractive outlook for habitable rooms. • Plan selection is appropriate to the orientation, exposure and site conditions and is suitable for the adjoining uses. • Landscape design includes water efficient irrigation systems and, where appropriate incorporates water harvesting or water re-use technologies. • Landscape design is integrated with the design intent of the architecture including its built form, materiality, key functional areas and sustainability strategies.	The proposed landscaping has been designed by a qualified landscape architect with species selection suited to the site and area meaning the proposed landscaping will prosper and enhance the amenity of residents and the streetscape. Reliance on waterwise landscaping will be critical.

	Provisions	
	Landscaping Areas The following requirements are applicable to all applications subject of this policy: • All individual planting areas, excluding those in or adjacent to public car parks, must have a minimum width in any direction of 500mm and a minimum plantable area of two square metres; and • The inclusion of verge areas (abutting the site) in the overall landscaping design is required.	• All planting areas are minimum 500mm in area. • The verge area has been included in the landscaping plan.
	Plant Numbers & Types • All landscaped areas (beds) are required to be planted with a suitable number of plants that satisfy the objectives of this policy (plant numbers will be assessed with due regard to the eventual size of the species selected). Species should be chosen to suit the climate, environment, location and required function whilst taking into consideration surrounding landscapes. The use of native species is encouraged to reduce water and fertiliser use.	• The density, type and size of species is considered to be appropriate to the chosen location on site and local area.
	Street Trees • The provision of new street tree(s) are required where no street tree(s) currently exist. Species must be approved by the City.	• 9 additional street trees are being proposed.
	Retention of Existing Vegetation • Council encourages the retention of existing vegetation and will consider the exercise of discretion in its application of scheme requirements and adopted local policies where such a variation would allow for the retention of significant existing vegetation on a site. (Note: Concessions cannot	• No existing vegetation is available for retention.

	apply to non-discretionary provisions such as residential density). *Reticulation and Mulching* • All landscaped areas shall be reticulated unless the applicant can provide satisfactory evidence that reticulation is not necessary. A minimum depth of 75mm of mulch (gravel not permitted) is to be applied to all landscaping beds. *Parking Areas* • A minimum of 1 tree per 4 bays for residential development and 1 tree per 6 bays for non-residential development (Minimum 45 litre container for exotics and 11 litre containers for natives) is required in open parking areas. Shrubs are generally not permitted as they may interfere with sight lines in and around parking areas and driveways. Acceptable examples of tree planting patterns within car parking areas are shown in the following illustrations.	• All landscaping areas will be reticulated with 75mm of mulch. • No parking areas have more than 3 open car bays together. However, there is a tree located between the two lots of three car bays.
LPP 6.11 Trees and Development	**Objectives** • To promote and facilitate development that enables existing significant trees to be retained; • To minimise the removal of significant trees on zoned land as a consequence of development; • To protect significant trees which are to be retained on zoned land and existing street trees during the demolition and construction phase of development; • To ensure appropriate advanced trees are planted which are suited to their environment and location where significant trees have been removed or do not exist on zoned land; • To ensure suitable advanced trees are planted on verges forming part of the road reserves abutting a	The subject site does not include any vegetation capable of retention both on the site and within the verge and it proposes a large number of additional trees throughout the development which will greatly improve the canopy coverage at the site.

	development site where street trees have been removed; • To protect and increase the long term viability of City trees on verges adjacent to development sites; and • To preserve the existing streetscapes within the City • Site planning maximises retention of existing healthy and appropriate trees and protects the viability of adjoining trees; • Adequate measures are taken to improve tree canopy (long term) or to offset reduction of tree canopy from pre-development condition; and • Development includes deep soil areas, or other infrastructure to support planting on structures, with sufficient area and volume to sustain healthy plant and tree growth.	
	Provisions • The retention of significant trees may be imposed as a condition of development approval in accordance with Clause 68(2) of the Planning and Development (Local Planning Schemes) Regulations 2015 and Clause 10.3 of the Local Planning Scheme No.3 (refer to Appendix 1 for further information). • Where the Council approves development on a site which, at the time of subdivision or demolition does not contain a significant tree or involves the removal of a significant tree from the land, the Council may, as a condition of development approval, require advanced trees approved by the Council to be planted by the applicant in particular locations on the site in accordance with: o In the case of Multiple Dwellings: Design Element 3.3 Table 3.3a of State Planning Policy 7.3 Residential Design Codes Volumes 2 – Apartments; or o For all other development: Table 1 below:	• No significant trees exist on site. • Trees are proposed to be added in excess of the requirements of the policy.

SITE AREA	NUMBER OF ADVANCED TREES TO BE PLANTED
1m² - 500m²	1
501m² - 1,000m²	2
1,001m² - 1,500m²	3
1,501m² - 2,000m²	4
Over 2,000m²	1 for every 500m² (or part thereof)

- Where the maximum ratio specified in Table 1 is inconsistent with the maximum ratio specified by a Local Planning Policy, Structure Plan, Activity Centre Plan Local Development Plan or State Planning Policy 7.3 Residential Design Codes which applies to the particular site or the area in which the site is located, the maximum ratio of that specific planning instrument shall apply and the Council may as a condition of development approval, require advanced trees approved by the Council to be planted in particular locations on the site in accordance with that maximum ratio.
- Where the Council approves development on a site with a condition of development approval requiring the retention of a significant tree or the planting of an advanced tree, the following minimum soil space (at ground level free of intrusions) is required around each tree:
    - In the case of Multiple Dwellings: in accordance with Design Element 3.3 Table 3.3b of the Residential Design Codes – Volume 2; or
    - For all other development: 9m2.
- Significant trees being retained as part of a proposed development are to be protected during the demolition and construction phase of development.

Street Trees

- The Council may impose a condition of development approval to require the planting of an advanced tree, at the applicant's cost, on an

- The proposed number of trees exceed relevant ratios and R-Code requirements.
- A landscape architect has confirmed the minimum soil space available at the site is sufficient to accommodate the proposed tree.
- No significant trees are available for retention.
- Nine (9) street trees are proposed as part of the proposed development.

	abutting road reserve. All new developments that do not have a street tree on the verge will have a tree planted in the next available planting season, as deemed appropriate by the City, and included as a condition of development along with a contribution payment by the applicant towards the cost of the tree/s planted as per Council's Fees and Charges.	
	• Street and reserve trees need to be protected at development sites in order to preserve the amenity of streetscapes and neighbourhoods	• No street trees exist at the site.
	• A minimum setback of a crossover/driveway from any street tree on the verge is required. The setback distance will be in direct relation to the Diameter at Breast Height (DBH) of the street tree: o DBH of up to 200mm requires a minimum setback of one metre; o DBH of 201mm to 400mm requires a minimum setback of two metres; o DBH of 401mm or greater requires a minimum setback of three metres. Should the distances required need to be less than the above specifications, a site inspection will need to be conducted to determine if the distance can be reduced on a tree by tree basis. Council inspection fees and charges may apply	• No street trees exist at the site and as such the setback considerations are not relevant.
	• To keep retained trees in a sound condition and to reduce the impact on its root system, no setback requests less than 1.0 metre will be accepted	• No trees are available for retention.
	• The City prioritises tree retention on City managed land adjacent to development sites, and will only consider removal when no other reasonable design alternative exists. Where a tree is to be removed/pruned, the landowner/applicant will be required to meet the contributory costs associated with the removal and replacement of the tree and will be required to compensate the City for the	• No street trees are existing within the verge of the subject site.

	costs associated with the loss of the tree asset (as outlined in Section 5 'Bonds and Payments' of the City's Street and Reserve Trees Policy). • Replacement street trees that are required as a result of being removed through the development process will be in line with the following: o A minimum of one replacement tree will be planted on the verge adjacent to the development; o Where a number of frontages are created due to subdivision, then a minimum of one tree shall be planted on each frontage, space permitting; o Where there is room for more than one tree on each frontage/lot, then multiple trees will be planted in relation to the available space; o Any additional replacement trees that are not able to be planted on the verge adjacent to the development will be planted elsewhere in the City and at the City's discretion; o All replacement trees will be of a species and size that is acceptable to the City; and o The replacement cost will be met by the developer/applicant (as outlined in Section 5 'Bonds and Payments' in the City's Street and Reserve Trees Policy)	• No trees are being removed so no requirement for replacement trees exist.

6.0 Conclusion

Based on the contents of this planning report, it is clear that the project proposal is appropriate for approval as it is broadly consistent with the applicable planning framework and introduces a high-quality infill development in an area that has been planned for redevelopment for many years.

The proposed development is considerate of the local community with regard to impacts on adjoining landowners and is considered to provide a housing product that will appeal to downsizers in the local market as well a range of other demographics.

With regard to the above, the support of the City of Stirling and the Metro Inner North is warranted with approval likely to be the catalyst for subsequent development in the area.

Appendices

DYNAMIC PLANNING AND DEVELOPMENTS

APPENDIX 1 – Certificate of Title

DYNAMIC PLANNING AND DEVELOPMENTS

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
1281	**698**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts
REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 79 ON DIAGRAM 30013

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

LATENZA 2 PTY LTD OF UNIT 1 295 ROKEBY ROAD SUBIACO WA 6008

(T P741654) REGISTERED 12/10/2023

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

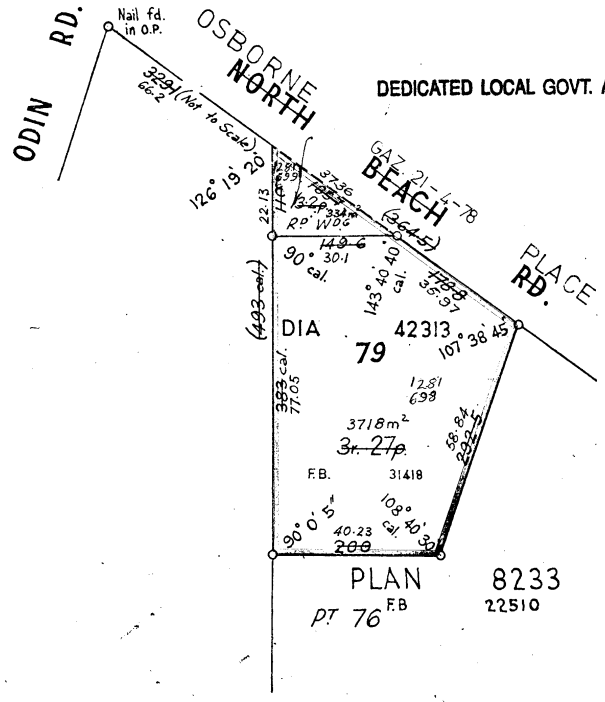
STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	1281-698 (79/D30013)
PREVIOUS TITLE:	1058-853
PROPERTY STREET ADDRESS:	8 OSBORNE PL, STIRLING.
LOCAL GOVERNMENT AUTHORITY:	CITY OF STIRLING

Town or District.	Number of Lot or Location.	Field Book.	Scale	Certificate in which Land is Vested:	Area
PERTHSHIRE	Pt Lot 76 of Loc. A	22447	1: 1267 ~~160 lks Chains to one inch~~	Vol. 1058 Fol. 853	~~A. R. P.~~ ~~1a 0r 0·2~~ 4052 m²

City of Stirling
14 Nov 2023
RECEIVED



IN ORDER FOR DEALINGS R2K
in the 25 foreshore

DIA 30013

DRAWN BY L.T.Q.
R.V.R.

CI

CERTIFICATE

I hereby certify that this survey was performed by me personally (or under my own personal supervision, inspection and field check) in strict accordance with the Licensed Surveyors (Guidance of Surveyors) Regulations, 1961.

Date 5-2-64

Jas T Cameron
Licensed Surveyor.

Approved by Town Planning Board

FILE 21953 Pt
30 JAN 1964

Chairman

Date 3/2/64

Approved	On	Registered	Diagram No.
W. T. MEHARRY Inspector of Plans and Surveys	Plan 2926		30013
Examined [illegible] Date 16 3 64	Diagram		
B.O.S. Cal BK 6 P.8.	Index Plan ~~2750(3)~~ PERTH 2000 10.32	1/15922	

1025/11/56—800—O

DKT Dia 30013

APPENDIX 2 – Development Plans

DYNAMIC PLANNING AND DEVELOPMENTS

City of Stirling
14 Nov 2023
RECEIVED

371150 371150

48550 48600 48650

371100 371100

371050 371050

371000 371000

8647 49 80 81 82 88 87 86 85 84

ON-RAMP FREEWAY MITCHELL

OSBORNE PLACE

CROXTON PLACE

Lot 79
D30013
3718m²

9000
Plug
RL 12.910

9003
Plug
RL 13.764

9002
SP
RL 13.403

9001
DS Bit D/way
RL 13.974

Concrete Wall
Bitumen Cyclepath
Sound Wall - TOW 17.46
Kerb
Concrete Footpath
Wire Fence
Brick Pier
Steps & Brick Wall
Concrete Dway
Old Concrete Slabs
Well
Long Grass
Grass
Shed
Brick Shed
Single Storey Brick House
Single Storey House
No Access to Backyard
Ridgeline RL 18.68
Ridgeline RL 19.08
Ridgeline RL 16.78
Ridgeline RL 17.79
Ridgeline RL 18.98
FL 14.67
FL 13.85
1.6m fibre fence
1.8m metal fence
Limited Access
Limited Access/ Visibility
Limited Access - Retaining Wall Approx 2 metre offset from Boundary
Potential resurface in the future
No Kerb - under construction

30.01
90°
143°40'40"
35.97
107°38'45"
58.84
90°00'05"
40.23
108°40'30"
77.05

Class 2/3 Accuracy Statement

This survey has been completed to CLASS 2/3 Accuracy
Hard Stand Areas are to Class 2 Accuracy
Horizontal Accuracy ± 20mm
Vertical Accuracy ± 20mm
All other Areas are to Class 3 Accuracy
Horizontal Accuracy ± 30mm
Vertical Accuracy ± 50mm
This note is an integral part of this plan

Landgate SCDB only

Existing boundaries have been extracted from Landgate's Spatial Cadastral Database, which is only a model of the cadastre. The depicted boundary locations are a graphical representation only and as they have not been re-established by survey. MNG does not guaranteed the position unless stated otherwise. Re-establishment of lot boundaries by a Licensed Surveyor is recommended for any works on or about a boundary.
This note is an integral part of this plan

Detail/Feature Survey

Surface features and levels have been surveyed to meet the requested scope of works accuracy. The surface may be contoured to depict topography or defined only by spot heights.For clarity on hard copy some level information is not shown, refer to 3D digital file. Above ground indicators (markers) of underground services are located where visible. Third parties utilising this information should confirm the capture accuracies meet requirements prior to use.
This note is an integral part of this plan.

BYDA - Class D

Underground services have been compiled from information obtained from a Before-You-Dig-Australia search. Service locations have not been verified by MNG. Alignments are indicative only. Prior to demolition, excavation or construction, users should satisfy themselves to the currency of services, which may have been altered or new services installed on or near the subject site. Refer to the date and method of acquisition.
This note is an integral part of this plan

Rev.	Description	Drawn	Date	Checked
A	Initial Issue	JA	23/10/23	MJ

Surveyor:- JA
Survey Date:- 20/10/2023
Precal/Cad:- SCDB

ISO 9001 - ISO14001 - ISO45001
Global-Mark.com.au®

SCALE 1:500 @ A3
0 10 20
ALL DISTANCES ARE IN METRES
For a true to scale reproduction of this plan, plot it to A3 with the Paging Scaling set to None.

The boundaries shown on this plan were not re-established as part of this survey, therefore this plan does not guarantee their accuracy. Existing easements, encumbrance or interest are not depicted and a title search is recommended to obtain this information. Re-establishment of the cadastral boundaries is recommended for any proposed works on or near existing boundaries.

Lot 79 (#8) Osborne Place
Stirling, 6021
Detail Survey

CLIENT:
Locus Development Group

The contents of this plan are current and correct as of the date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plans currency by contacting the McMullen Nolan Group.

MCMULLEN NOLAN GROUP
Level 1, 2 Sabre Crescent
Jandakot, W.A. 6164
PO Box 3526, Success
W.A. 6964, Australia
Offices in: Perth | Melbourne | Kimberley| South West WA

Tel: (08) 6436 1599
Fax: (08) 6436 1500
info@mngsurvey.com.au
www.mngsurvey.com.au
ABN 90 009 363 311

Project Mngr:	Matt Jilley	Datum	PCG2020/AHD

105861 - DE - 001 - A
Job Number | Type | Plan Number | Revision

ROAD FEATURES
- Traffic Junction Box
- Traffic Signals - 1 Aspect
- Traffic Signals - 2 Aspect
- Traffic Signals - 3 Aspect
- Traffic Signals - 4 Aspect
- Pedestrian Signals
- Sign On One Pole
- Sign Multiple Poles
- Overhead Sign
- Traffic Controller Box
- Finger Sign (F SIGN)
- Traffic Earth Pit
- Police Traffic Camera
- Guide Post
- Km Marker (SLKP)
- Traffic Count

ELECTRICAL
- Earth Pit (Earth)
- Electrical Pillar (E)
- Electrical Dome (WP)
- Light Pole - Directional
- Power Pole
- Transformer Single Pole
- Stay Pole
- Steel Wire Anchor
- High Mast Lighting (HL)
- Electrical Cable Marker (E)
- MRWA Cable Marker (M)
- MRWA Electrical Cable Box (MR)
- Electrical Cable Pit/Box (E)
- MRWA Distribution Board (EDB)
- High Tension Power Pole (PP)
- Electrical Supply Pole (EP)
- Ground Floodlight (GFL)
- MRWA Electrical Manhole
- Meter Box (MB)
- Power Meter Box
- Electrical Transformer
- MRWA Light Pole
- MRWA Multiple Light Pole

COMMUNICATION
- Telstra Pit
- Telstra Pillar
- Telstra Marker
- Telstra Pole
- Telephone Booth (T)
- Emergency Phone (TEL)
- Antenna
- Telstra Elevated Joint (TEJ)
- Cable Marker (Optus)
- Telstra Tower
- Communication Manhole

WATER
- Water Meter (M WM)
- Water Stop Valve (M WA)
- Hydrant (Ground Level) (G.HYD)
- Hydrant (Pillar) (FH)
- Water Bore (WB)
- Stand Pipe
- Reticulation Sprinkler
- Reticulation Control Valve (M WA)
- Well (WELL)
- Water Main Marker (M)
- Water Tap
- Flushing Point (M FP)
- Air Valve (M AV)
- Peizometer (P)
- Hydrant Booster Box

GAS
- Gas Marker (G)
- Gas Valve (M GV)
- Gas Test Valve (M GTV)
- LPG Tank (LPG)
- Gas Test Pit (Gas Pit)
- Gas Manhole

DRAINAGE
- Invert Level
- Overt Level (^ OL)
- Flood Level (FL)
- Water Line (WL)
- Flood Level Indicator (FL)
- Storm Water Grate
- Drainage Gully
- Drainage Manhole
- Drainage Headwall

SEWER
- Sewer Vent
- Sewer Line Marker (S)
- Sewer Inspection Shaft (S IS)
- Sewer Inspection Opening (S IO)
- Sewer Manhole

RAIL
- Rail Traffic Signals (RAIL 3)
- Rail Traffic Control Box (RAIL)
- Rail Telephone Box (T)
- Rail Cable Pit (RAIL)
- Rail Cable Marker (T)
- Rail SLK Post (SLKP)
- Manhole - Rail Cable (RC)

STRUCTURE
- Deck Level (D.L.)
- Floor Level (FL)
- Column Centre

GENERAL
- Clothes Hoist
- Air Conditioner
- Marker Unk/Undefined (?)
- Undefined Manhole
- Control Of Access Sign
- Count Station
- Advertising Sign (AD)
- Windmill
- Stock Trough (TROUGH)
- Litter Bin (BIN)
- Mail Box (MAIL)
- Parking Meter (PM)
- Bus Stop (BUS)
- Ticket Machine (T)
- Borehole (BORE)
- Flag Pole (FLAG)
- Bollard
- Fuel Bowser
- Underground Filler (UTF)
- Diesel Tank (D)
- Oil Main Marker (?)
- Security Post (T)
- Tank (TANK)

GROUND FEATURES
- Natural Surface (12.34)
- Aerial Survey Marker
VEGETATION
- Tree Details - Canopy & Trunk
- Tree 0.1m-0.3m Trunk Diameter
- Tree 0.3m-0.5m Trunk Diameter
- Tree 0.5m-1.0m Trunk Diameter
- Tree > 1.0m Trunk Diameter
- Bush
- Die Back Area - Marker
- Nesting Tree
- Tree Trunk / Stump
- Grass Tree
SURVEY CONTROL
- Star Iron Picket
- Trig Point
- SSM
- Bench Mark (BM)
- Photo Point
- Cadastral Peg/Post (OP)
- Reference Peg (R.PEG)
- Alignment Control
- Spring Head Nail
- Spike (SP)
- TBM
- Peg Placed / Found

ROAD FEATURES
- Edge Of Bitumen
- Road Shoulder
- Edge Of Unsealed Road
- On Road
- Centre Of Road
- Kerb Top
- Kerb Bottom
- Cattle Grid
- Centre Of Driveway
- Edge Of Driveway
- Pedestrian Ramp
- Pedestrian Crosswalk
- Track
- Parking Bay
- Line Markings 1m Line & 1m Gap
- Line Markings 1m Line & 3m Gap
- Line Markings 3m Line & 9m Gap
- Lane Marking (9m*3m GAP)
- Lane Markings - Audible
- Shared Pathway - Guide Line 900mm*300mm GAP
- Footpath/Shared Path - Give Way 200mm*200mm GAP
- Giveway/Hold/Turn Lines 600mm*600mm GAP
- Double Barrier Line
- Overtaking Lane Left
- Overtaking Lane Right
- Single Solid Line
- Arrow Straight
- Arrow Straight/Left
- Arrow Straight/Right
- Arrow Left
- Arrow Right
- Arrow 3 Ways
- Arrow Right & Left
- Arrow U-Turn
- Arrow Merge
- Painted Lettering On Seal
- Painted Bicycle Traffic Signal Detector
- Guardrail - W Beam
- Guardrail - Thrie
- Barrier Concrete
- Barrier Steel Rope
- Barrier - Single Rail
- Barrier - Double Rail
- Barrier Triple Rail
- Bridge Barrier - (All Types)
- Bridge Expansion Joints
- Bridge - Outside Of Deck
- Soffit String

STRUCTURE
- Bridge
- Abutment
- Columns
- Piers
- Underpass
- Ramp
- Steps/Stairs
- Edge Of Concrete
- Bus Shelter
- Memorial
- Ruin
- Building / Structure
- Awning
- Shed
- Verandah
- Door Opening
- Window
- Roof Gutter Line
- Roof Ridge Line
- Top Of Wall
- Brick Wall
- Concrete Wall
- Livestock Grid

GROUND FEATURE
- Major Contour (10)
- Minor Contour
- Bank Bottom
- Bank Top
- Line Of Levels
- Levee Top
- Levee Bottom
- Rock Outcrop
- Ridge Line
- Borrow Pit
- Earthworks Area
- Ground Subsidence
- Rock Pitching

VEGETATION
- Tree Line/Canopy
- Bush Line
- Hedge
- Garden Bed
- Lawn Area
- Vineyard
- Plantation
- Orchard
- Nursery
- Market Garden
- Recreational Area
- Trunk Circumference Circle
- Tree-line Face Of Trunks

ELECTRICAL
- Varible Message Sign
- Electrical Structure String
- Overhead Powerlines - Null Height
- Overhead Powerlines - True Height
- High Tension Power Lines - Null Height
- High Tension Power Lines - True Height

COMMUNICATION
- Unidentifed Service Pit
- Telstra Cable (T)
- Amcom Cable

WATER
- Water Pipe (W)

GAS
- Gas Line (G)

DRAINAGE
- Drainage Pipe (D)
- Drainage Culvert
- Floodway
- Drain
- Edge Of Drain
- Sump
- Waters Edge
- Swamp
- Dam
- Edge Of Creek/Water
- Centre Of Channel
- Wet Area
- Flood Level Line
- Waterways Cross Section

SEWER
- Sewer Pressure Main (PM)
- Sewer Pipe (S)

RAIL
- Railway Platform
- On Rail
- Rail Boom Gate
- Rail Underground Cable
- Dual Gauge Rail
- Narrow Gauge Rail
- Cross Setion - Rail
- Standard Gauge Rail
- Rail U/G Cable

CADASTRAL
- MNG Precal/Re Established
- (SCDB) - State Cadastral Data Base
- Cadastre By Others

GENERAL
- Swimming Pool
- Tank Perimeter
- Mine Shaft
- Mine Workings
- Koppa Logging Fence
- Fence/Gate
- Wall
- Top Of Barrier / Wall etc
- Retaining Wall
- Boundary Line
- Footpath
- Gas Cylinder/Tank
- Brick Paving
- Bike Rack
- Bench Seating
- Handrail

UNDERGROUND SERVICES

UNDERGROUND SERVICES - inDIRECT MEASUREMENT - CLASS B

(PZA)	Underground Amcom/Vocus Cable
(PZC)	Underground Drainage Pipe
(PZE)	Underground Electrical Cable
(PZF)	Underground Western Power Comms
(PZG)	Underground Gas Line
(PZH)	Underground MRWA Comms
(PZI)	Underground MRWA Power
(PZJ)	Underground NBN Comms
(PZK)	Underground TPG /Pipe Networks
(PZN)	Underground Next Gen Comms
(PZO)	Underground Optus Fibre_Optic
(PZP)	Underground Optus Copper
(PZR)	Underground Rail Services
(PZS)	Underground Sewer Pipe
(PZT)	Underground Telstra Copper
(PZU)	Underground Unknown Service
(PZV)	Underground Telstra Optic_Fibre
(PZW)	Underground Water Pipe
(PZX)	Underground Reticulation Pipe
(PZZ)	Abandoned Service

(MAIN ROADS - SURFACE LOCATION) - CLASS B
POINT MEASRUED AT GROUND LEVEL DIRECTLY ABOVE TRACED SERVICE

HA	AMCOM/VOCUS Cable - Surface Location
HC	Drainage Pipe / Stormwater - Surface Location
HE	Electrical Cable - Surface Location
HF	Western Power Communication - Surface Location
HG	Gas Line - Surface Location
HH	MRWA Communication - Surface Location
HI	MRWA Power - Surface Location
HJ	Underground NBN Fibre - Surface Location
HK	Underground TPG/Pipe Networks Surface Location
HN	Next Gen Communication - Surface Location
HO	Optus Optic_Fibre - Surface Location
HP	Optus Copper - Surface Location
HR	Rail Services - Surface Location
HS	Sewer Pipe - Surface Location
HT	Telstra Copper - Surface Location
HU	Unknown Service - Surface Location
HV	Telstra Optic_Fibre - Surface Location
HW	Water Pipe - Surface Location
HX	Reticulation - Surface Location
HZ	Abandoned Service - Surface Location

UNDERGROUND SERVICES
DIRECT MEASUREMENT - CLASS A

(PQA)	Underground Amcom/Vocus Cable
(PQC)	Underground Drainage Pipe
(PQE)	Underground Electrical Cable
(PQF)	Underground Western Power Comms
(PQG)	Underground Gas Line
(PQH)	Underground MRWA Comms
(PQI)	Underground MRWA Power
(PQJ)	Underground NBN Comms
(PQK)	Underground TPG /Pipe Networks
(PQN)	Underground Next Gen Comms
(PQO)	Underground Optus Fibre_Optic
(PQP)	Underground Optus Copper
(PQR)	Underground Rail Services
(PQS)	Underground Sewer Pipe
(PQT)	Underground Telstra Copper
(PQU)	Underground Unknown Service
(PQV)	Underground Telstra Optic_Fibre
(PQW)	Underground Water Pipe
(PQX)	Underground Reticulation Pipe
(PQZ)	Abandoned Service

(MAIN ROADS - UNVERIFIED, NO MEASURMENT) DBYD COMPILED - CLASS C AND D

QA	AMCOM/VOCUS Cable - Unverified, No Measurement
QC	Drainage Pipe / Stormwater - Unverified, No Measurement
QE	Electrical Cable - Unverified, No Measurement
QF	Western Power Communication - Unverified, No Measurement
QG	Gas Line - Unverified, No Measurement
QH	MRWA Communication - Unverified, No Measurement
QI	MRWA Power- Unverified, No Measurement
QJ	Underground NBN Comms - Unverified, No Measurement
QK	Underground TPG/Pipe Networks - Unverified, No Measurement
QN	Next Gen Communication - Unverified, No Measurement
QO	Optus Optic_Fibre - Unverified, No Measurement
QP	Optus Copper - Unverified, No Measurement
QT	Telstra Copper - Unverified, No Measurement
QV	Telstra Optic_Fibre - Unverified, No Measurement
QR	Rail Services - Unverified, No Measurement
QS	Sewer Pipe - Unverified, No Measurement
QU	Unknown Service - Unverified, No Measurement
QW	Water Pipe - Unverified, No Measurement
QX	Reticulation - Unverified, No Measurement
QZ	Abandoned Service - Unverified, No Measurement

City of Stirling
14 Nov 2023
RECEIVED

Rev.	Description	Drawn	Date	Checked
H	U/G Services Amended	SAH	30/10/2020	TKI

SCALE 1:1000 @ A3
0 10 20 30 40 50
ALL DISTANCES ARE IN METRES
For a true to scale reproduction of this plan, plot it to A3 with the Paging Scaling set to None.

The contents of this plan are current and correct as of the date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plans currency by contacting the McMullen Nolan Group.

Surveyor:- MNG
Survey Date:-30/06/2020
Precal/Cad:- 30/06/2020

ISO 9001 - AS/NZS 4801, ISO45001 Global-Mark.com.au

N

The boundaries shown on this plan were not re-established as part of this survey, therefore this plan does not guarantee their accuracy. Existing easements, encumbrance or interest are not depicted and a title search is recommended to obtain this information. Re-establishment of the cadastral boundaries is recommended for any proposed works on or near existing boundaries.

MNG
McMULLEN NOLAN GROUP
Level 1, 2 Sabre Crescent
Jandakot, W.A. 6164
PO Box 3526, Success
W.A. 6964, Australia
Offices in: Perth | Melbourne | Kimberley| South West WA
Tel: (08) 6436 1599
Fax: (08) 6436 1500
info@mngsurvey.com.au
www.mngsurvey.com.au
ABN 90 009 363 311

McMULLEN NOLAN GROUP
FEATURE SURVEY - GENERAL LEGEND

CLIENT: N/A

Project Mngr	Datum
MNG Group	LOCAL

95465 - DOC - 012 - H
Job Number | Type | Plan Number | Revision

Drawing List

Survey By **MNG.**

A0.00 Legend

A0.01 Drawing List _Rev B
A0.02 Materials/ Finishes_Rev A

A1.00 Master Plan and Elevations

A1.01 Master Plan_Rev B
A1.02 Master Plan Elevations 1 & 2_Rev B
A1.03 Master Plan Elevations 3 & 4_Rev B
A1.04 Master Plan Elevations 5 & 6_Rev B
A1.05 Master Plan Elevation 7_Rev B
A1.06 Site Sections AA & BB_Rev A
A1.07 Master Plan (With Ground Floor Internals)_Rev A
A1.08 Master Plan (With First Floor Internals) _Rev A
A1.09 Overshadowing Diagram_Rev A

A2.00 Type A & B

A2.01 Type A & B (Unit 2 - 7)_Ground Floor Plan_Rev A
A2.02 Type A & B (Unit 2 - 7)_First Floor Plan_Rev A
A2.03 Type A & B (Unit 2 - 7)_Elevation_Rev B

A3.00 Type C & C*

A3.01 Type C (Unit 17 - 22)_Ground Floor & First Floor Plans_Rev A
A3.02 Type C (Unit 17 - 22) _Elevations_Rev B
A3.03 Type C (Unit 17 - 22) _Elevations_Rev B

A4.00 Type D

A4.01 Type D (Unit 11 - 12)_Ground Floor Plans_Rev A
A4.02 Type D (Unit 11 - 12)_First Floor Plans_Rev A
A4.03 Type D (Unit 11 - 12)_Elevations_Rev B

A5.00 Type A & A*

A5.01 Type A & A* (Unit 8 - 10)_Ground Floor Plans_Rev A
A5.02 Type A & A* (Unit 8 - 10)_First Floor Plans_Rev A
A5.03 Type A & A* (Unit 8 - 10)_Elevations_Rev B

A6.00 Type B*

A6.01 Type B* (Unit 1)_Plans_Rev A
A6.02 Type B* (Unit 1)_Elevations_Rev B

A7.00 Type A & A* Mirrored

A7.01 Type A & A*Mirrored (Unit 13 - 16)_Ground Floor Plans_Rev A
A7.02 Type A & A*Mirrored (Unit 13 - 16)_First Floor Plans_Rev A
A7.03 Type A & A*Mirrored (Unit 13 - 16)_Elevations_Rev B

City of Stirling
24 Nov 2023
RECEIVED

KARRINYUP
OSBORNE
RESERVE

OSBORNE PLACE

10 OSBORNE PLACE

11 CROXTON PLACE

13 CROXTON PLACE

15 CROXTON PLACE

EXISTING VERGE TREES
TO BE PROTECTED

PROPOSED NEW VISITOR
BAYS TO CITY'S REQ.

REMOVED EXISTING
CROSSOVER & MAKE
GOOD

REMOVED EXISTING
CROSSOVER & MAKE
GOOD

PROPOSED NEW LANDSCAPE
TREES - SEE LANDSCAPE
PLAN

PROPOSED NEW LANDSCAPE
TREES - SEE LANDSCAPE
PLAN

PROPOSED CROSSOVER
TO CITY'S REQ.

EXISTING FOOTPATH

EXISTING FOOTPATH

EXISTING ACOUSTIC WALL

EXISTING DUAL USE PATH

LINE OF PERMITTED SETBACK

COMMUNAL
DRIVEWAY

UNIT 22
(TYPE C*)
(FFL @ 00c)
RL 14.45

UNIT 21
(TYPE C)
(FFL @ 00c)
RL 14.45

UNIT 20
(TYPE C)
(FFL @ 00c)
RL 14.25

UNIT 19
(TYPE C)
(FFL @ 00c)
RL 14.25

UNIT 18
(TYPE C)
(FFL @ 00c)
RL 14.05

UNIT 17
(TYPE C)
(FFL @ 00c)
RL 14.05

UNIT 16
(TYPE A(m)*)
(FFL @ 00c)
RL 14.87

UNIT 15
(TYPE A(m))
(FFL @ 00c)
RL 14.87

UNIT 14
(TYPE A(m))
(FFL @ 00c)
RL 14.96

UNIT 13
(TYPE A(m))
(FFL @ 00c)
RL 14.96

UNIT 12
(TYPE D)
(FFL @ 00c)
RL 14.87

UNIT 11
(TYPE D(m)*)
(FFL @ 00c)
RL 14.87

UNIT 01
(TYPE B*)
(FFL @ 00c)
RL 14.33

UNIT 02
(TYPE A)
(FFL @ 00c)
RL 14.33

UNIT 03
(TYPE B)
(FFL @ 00c)
RL 14.33

UNIT 04
(TYPE A)
(FFL @ 00c)
RL 14.69

UNIT 05
(TYPE B)
(FFL @ 00c)
RL 14.69

UNIT 06
(TYPE A)
(FFL @ 00c)
RL 14.87

UNIT 07
(TYPE B)
(FFL @ 00c)
RL 14.87

UNIT 08
(TYPE A)
(FFL @ 00c)
RL 14.96

UNIT 09
(TYPE A)
(FFL @ 00c)
RL 14.96

UNIT 10
(TYPE A*)
(FFL @ 00c)
RL 14.96

COURT
(FFL @ -100mm)
RL 14.77

COURT
(FFL @ -100mm)
RL 14.77

COURT
(FFL @ -100mm)
RL 14.86

COURT
(FFL @ -100mm)
RL 14.86

COURT
(FFL @ -100mm)
RL 14.77

COURT
(FFL @ -100mm)
RL 14.77

GARAGE
(FFL @ -100mm)
RL 14.77

GARAGE
(FFL @ -100mm)
RL 14.77

GARAGE
(FFL @ -100mm)
RL 14.86

GARAGE
(FFL @ -100mm)
RL 14.86

GARAGE
(FFL @ -100mm)
RL 14.77

GARAGE
(FFL @ -100mm)
RL 14.77

GARAGE
(FFL @ -100mm)
RL 14.23

GARAGE
(FFL @ -100mm)
RL 14.23

GARAGE
(FFL @ -100mm)
RL 14.23

GARAGE
(FFL @ -100mm)
RL 14.59

GARAGE
(FFL @ -100mm)
RL 14.59

GARAGE
(FFL @ -100mm)
RL 14.77

GARAGE
(FFL @ -100mm)
RL 14.77

GARAGE
(FFL @ -100mm)
RL 14.86

GARAGE
(FFL @ -100mm)
RL 14.86

GARAGE
(FFL @ -100mm)
RL 14.86

COVERED CAR BAYS

COVERED CAR BAYS

SERVICES

BIKE RACK (6)

BINS

ENTRY SIGN

LETTERBOXES

LIGHT (BOLLARD)

LIGHT (BOLLARD)

LIGHT (BOLLARD)

ST

RL 13.97

RL 14.0

RL 14.18

RL 14.68

RL 14.68

RL 14.80

6000 VISITOR

2300

3100

4100

1000

1053

1535

7390

1985

3430

4030

3000

1895

2790

2530

2000

1785

375

2400

2400

2400

300

380

2400

2400

2400

300

5400

5550

5500

5595

5400

6040

5800

6100

5500

300

6420

9975

8345

6000

1500

5600

8830

3180

3000

50

7485

7550

2000

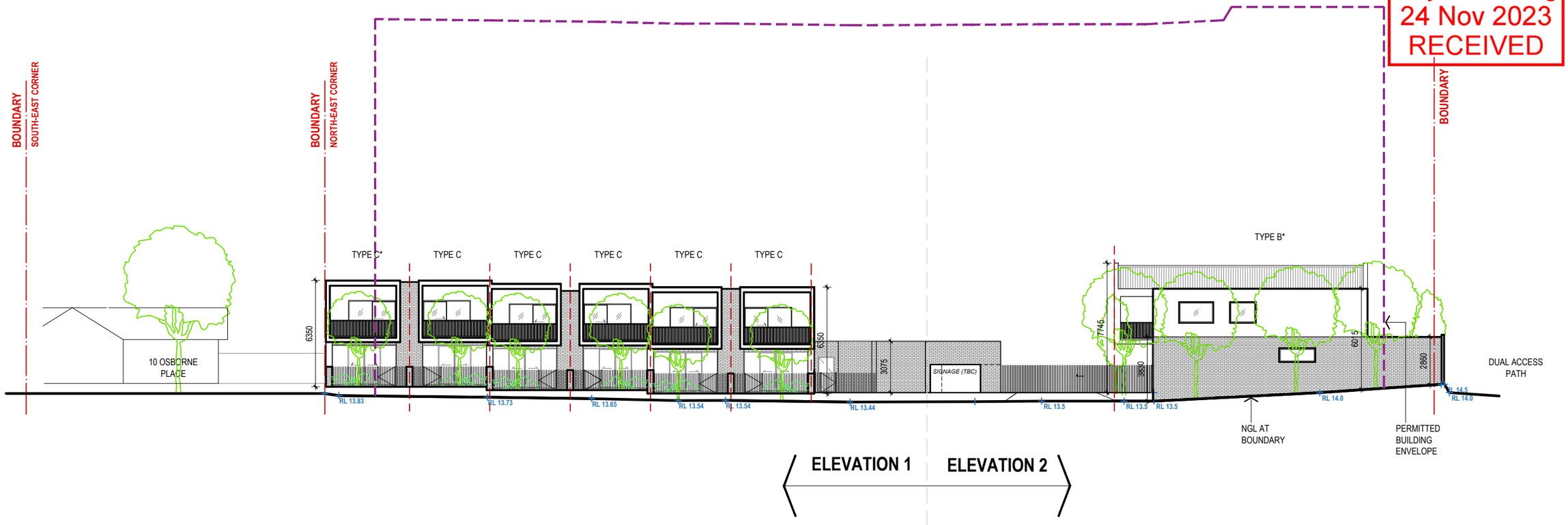
TBM 12.95

TBM 15.67

PENNOCK
ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	MASTER PLAN	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.01	B	23.11.23

0 1 5m 10m

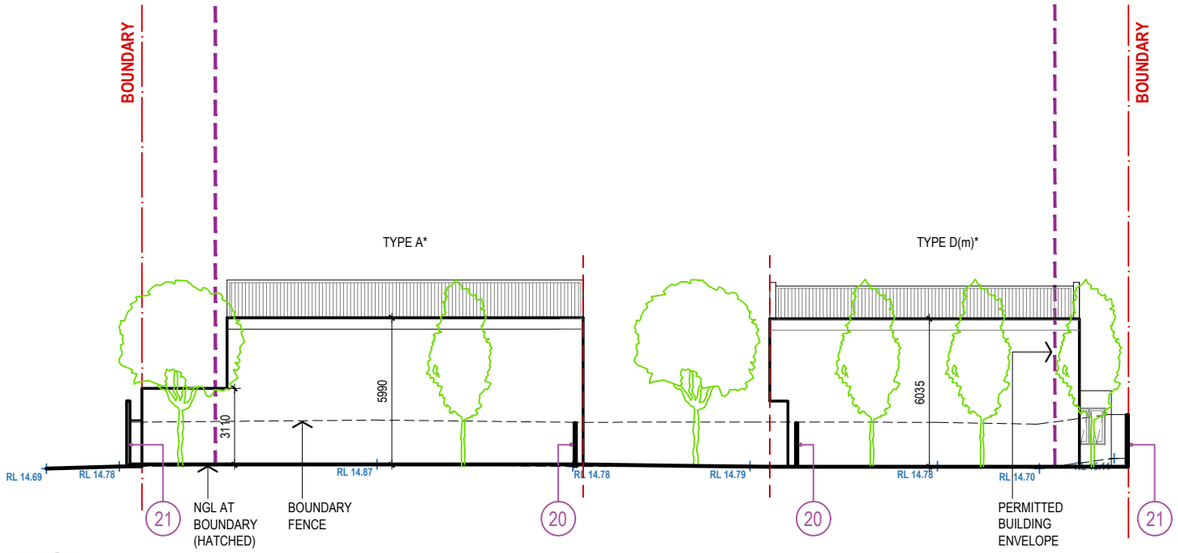


PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	MASTER PLAN ELEVATIONS 1 & 2	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.02	B	23.11.23

0 1 5m 10m

ELEVATION 3



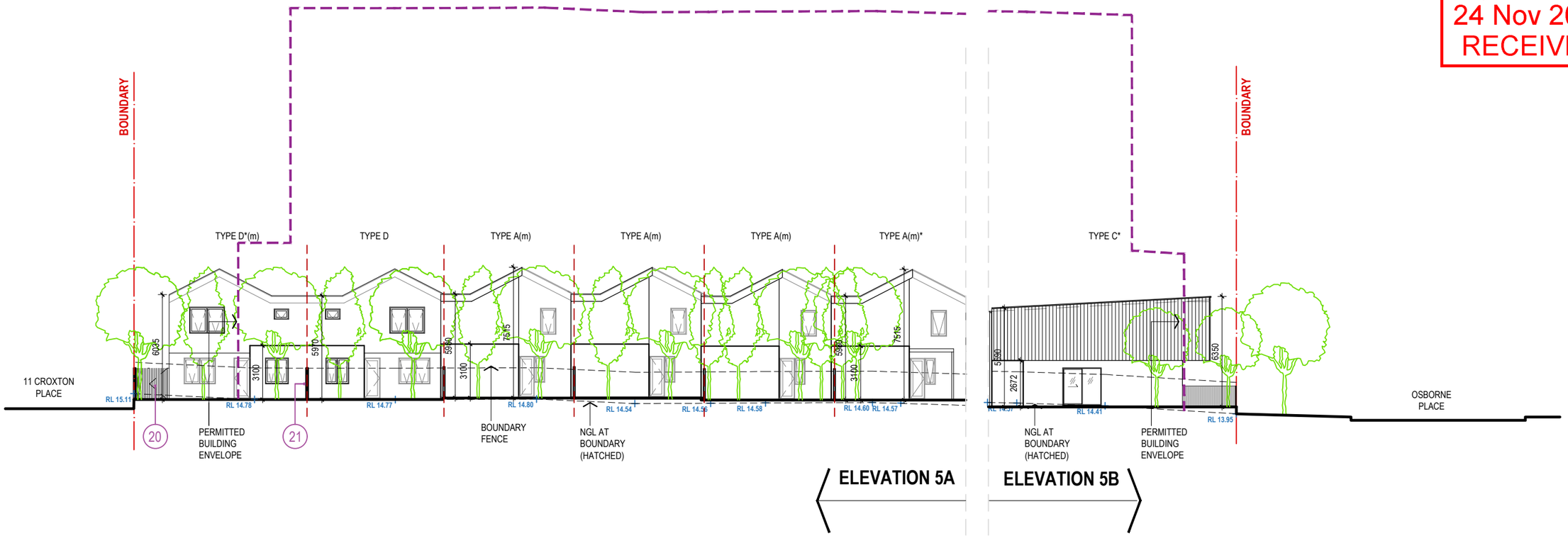
ELEVATION 4

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	MASTER PLAN ELEVATIONS 3 & 4	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.03	B	23.11.23

0 1 5m 10m

City of Stirling
24 Nov 2023
RECEIVED

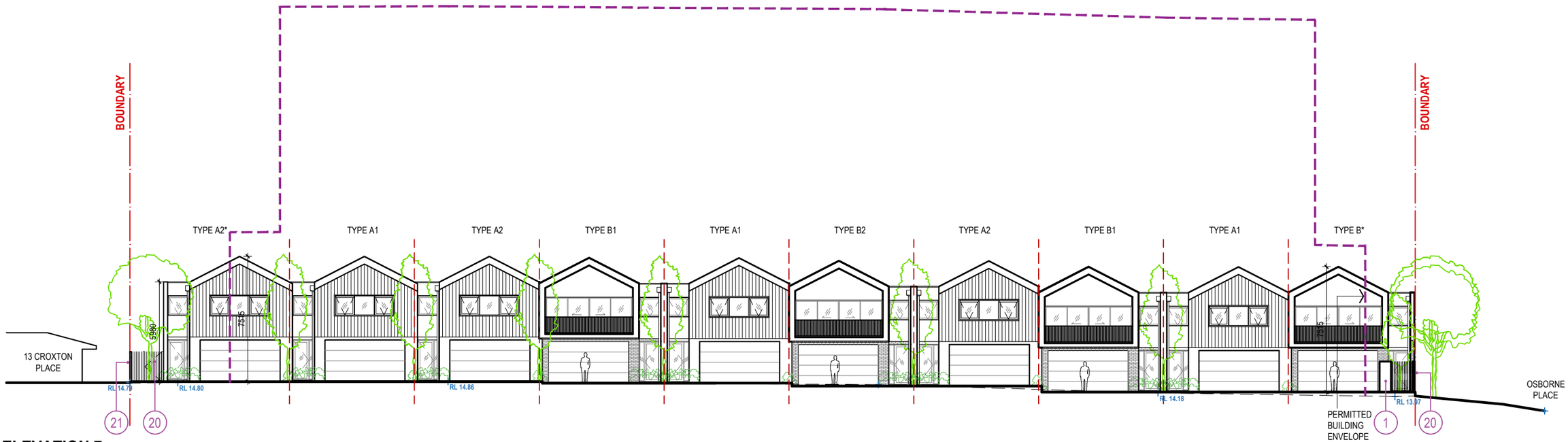


ELEVATION 6

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	MASTER PLAN ELEVATIONS 5 & 6	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.04	B	23.11.2023

0 1 5m 10m

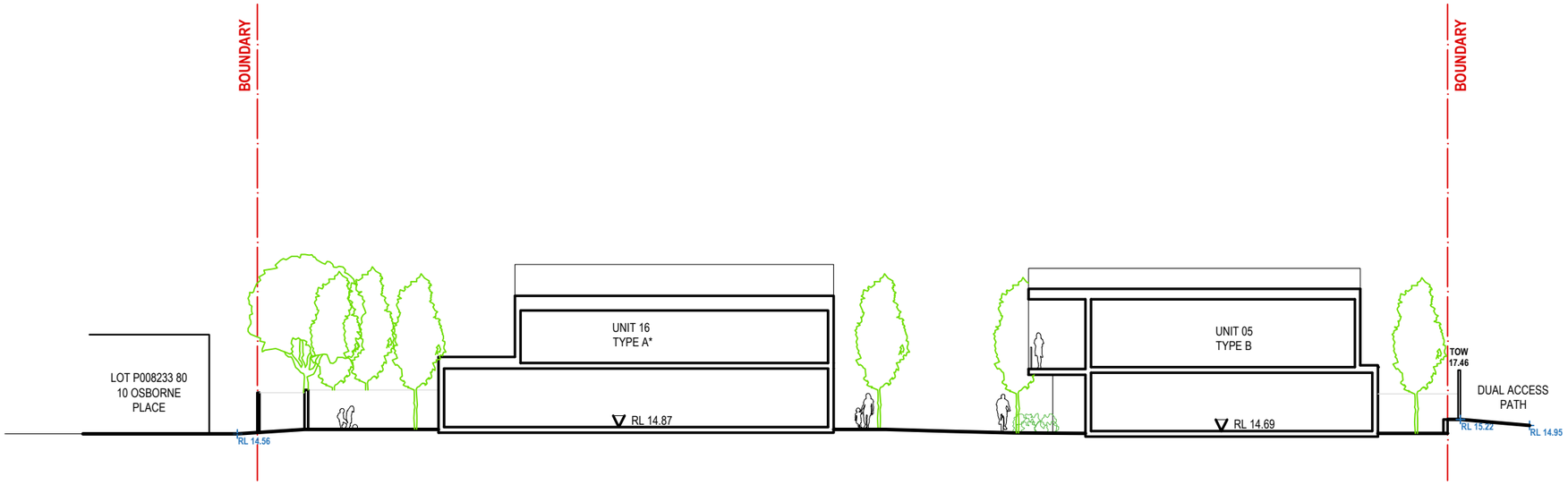


ELEVATION 7

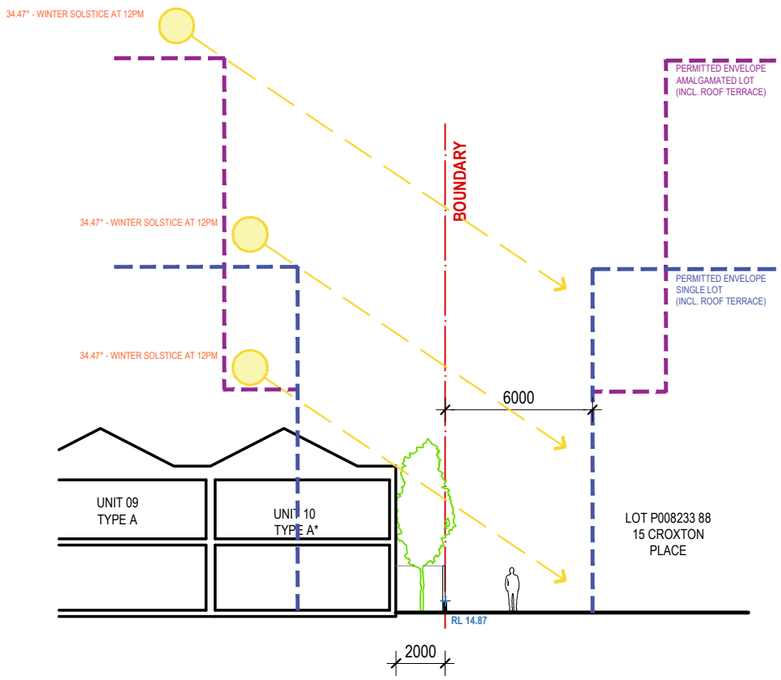
PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	MASTER PLAN ELEVATION 7	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.05	B	23.11.2023

PENNOCK ARCHITECTS

0 1 5m 10m



SECTION AA



SECTION BB

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	MASTER PLAN SITE SECTIONS	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.06	A	14.11.2023

0 1 5m 10m

City of Stirling
24 Nov 2023
RECEIVED

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	GROUND FLOOR MASTER PLAN	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.07	A	14.11.23

0 1 5m 10m

City of Stirling
24 Nov 2023
RECEIVED

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	FIRST FLOOR MASTER PLAN	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.08	A	14.11.23

0 1 5m 10m

City of Stirling
24 Nov 2023
RECEIVED

KARRINYUP
OSBORNE
RESERVE

OSBORNE PLACE

EXISTING VERGE TREES TO BE PROTECTED

PROPOSED NEW VISITOR BAYS TO CITY'S REQ.

REMOVED EXISTING CROSSOVER & MAKE GOOD

REMOVED EXISTING CROSSOVER & MAKE GOOD

PROPOSED NEW LANDSCAPE TREES - SEE LANDSCAPE PLAN

PROPOSED NEW LANDSCAPE TREES - SEE LANDSCAPE PLAN

EXISTING FOOTPATH

EXISTING FOOTPATH

PROPOSED CROSSOVER TO CITY'S REQ.

ENTRY SIGN

LETTERBOXES

SERVICES

BINS

BIKE RACK (6)

LIGHT (BOLLARD)

LIGHT (BOLLARD)

LIGHT (BOLLARD)

EXISTING ACOUSTIC WALL

EXISTING DUAL USE PATH

COMMUNAL DRIVEWAY

10 OSBORNE PLACE

11 CROXTON PLACE
(787m²)

13 CROXTON PLACE
(721m²)

15 CROXTON PLACE
(827m²)

Ridgeline RL 19.08

Ridgeline RL 16.78

Ridgeline RL 17.79

UNIT 01 (TYPE B*) (FFL @ 00c) RL 14.33
UNIT 02 (TYPE A) (FFL @ 00c) RL 14.33
UNIT 03 (TYPE B) (FFL @ 00c) RL 14.33
UNIT 04 (TYPE A) (FFL @ 00c) RL 14.69
UNIT 05 (TYPE B) (FFL @ 00c) RL 14.69
UNIT 06 (TYPE A) (FFL @ 00c) RL 14.87
UNIT 07 (TYPE B) (FFL @ 00c) RL 14.87
UNIT 08 (TYPE A) (FFL @ 00c) RL 14.96
UNIT 09 (TYPE A) (FFL @ 00c) RL 14.96
UNIT 10 (TYPE A*) (FFL @ 00c) RL 14.96
UNIT 11 (TYPE D(m)*) (FFL @ 00c) RL 14.87
UNIT 12 (TYPE D) (FFL @ 00c) RL 14.87
UNIT 13 (TYPE A(m)) (FFL @ 00c) RL 14.96
UNIT 14 (TYPE A(m)) (FFL @ 00c) RL 14.96
UNIT 15 (TYPE A(m)) (FFL @ 00c) RL 14.87
UNIT 16 (TYPE A(m)*) (FFL @ 00c) RL 14.87
UNIT 17 (TYPE C) (FFL @ 00c) RL 14.05
UNIT 18 (TYPE C) (FFL @ 00c) RL 14.25
UNIT 19 (TYPE C) (FFL @ 00c) RL 14.25
UNIT 20 (TYPE C) (FFL @ 00c) RL 14.45
UNIT 21 (TYPE C) (FFL @ 00c) RL 14.45
UNIT 22 (TYPE C*) (FFL @ 00c) RL 14.45

GARAGE (FFL @ -100mm) RL 14.23
GARAGE (FFL @ -100mm) RL 14.23
GARAGE (FFL @ -100mm) RL 14.23
GARAGE (FFL @ -100mm) RL 14.59
GARAGE (FFL @ -100mm) RL 14.59
GARAGE (FFL @ -100mm) RL 14.77
GARAGE (FFL @ -100mm) RL 14.77
GARAGE (FFL @ -100mm) RL 14.86
GARAGE (FFL @ -100mm) RL 14.86
GARAGE (FFL @ -100mm) RL 14.86
GARAGE (FFL @ -100mm) RL 14.77
GARAGE (FFL @ -100mm) RL 14.77
GARAGE (FFL @ -100mm) RL 14.86
GARAGE (FFL @ -100mm) RL 14.86
GARAGE (FFL @ -100mm) RL 14.77
GARAGE (FFL @ -100mm) RL 14.77
GARAGE (FFL @ -100mm) RL 14.77

COVERED CAR BAYS 7 18 22
COVERED CAR BAYS 19 20 21

COURT (FFL @ -100mm) RL 14.77
COURT (FFL @ -100mm) RL 14.77
COURT (FFL @ -100mm) RL 14.86
COURT (FFL @ -100mm) RL 14.86
COURT (FFL @ -100mm) RL 14.77
COURT (FFL @ -100mm) RL 14.77

ST

EXTENT OF OVERSHADOWING: 7m² (WINTER SOLSTICE AT 12PM) 1% of LOT

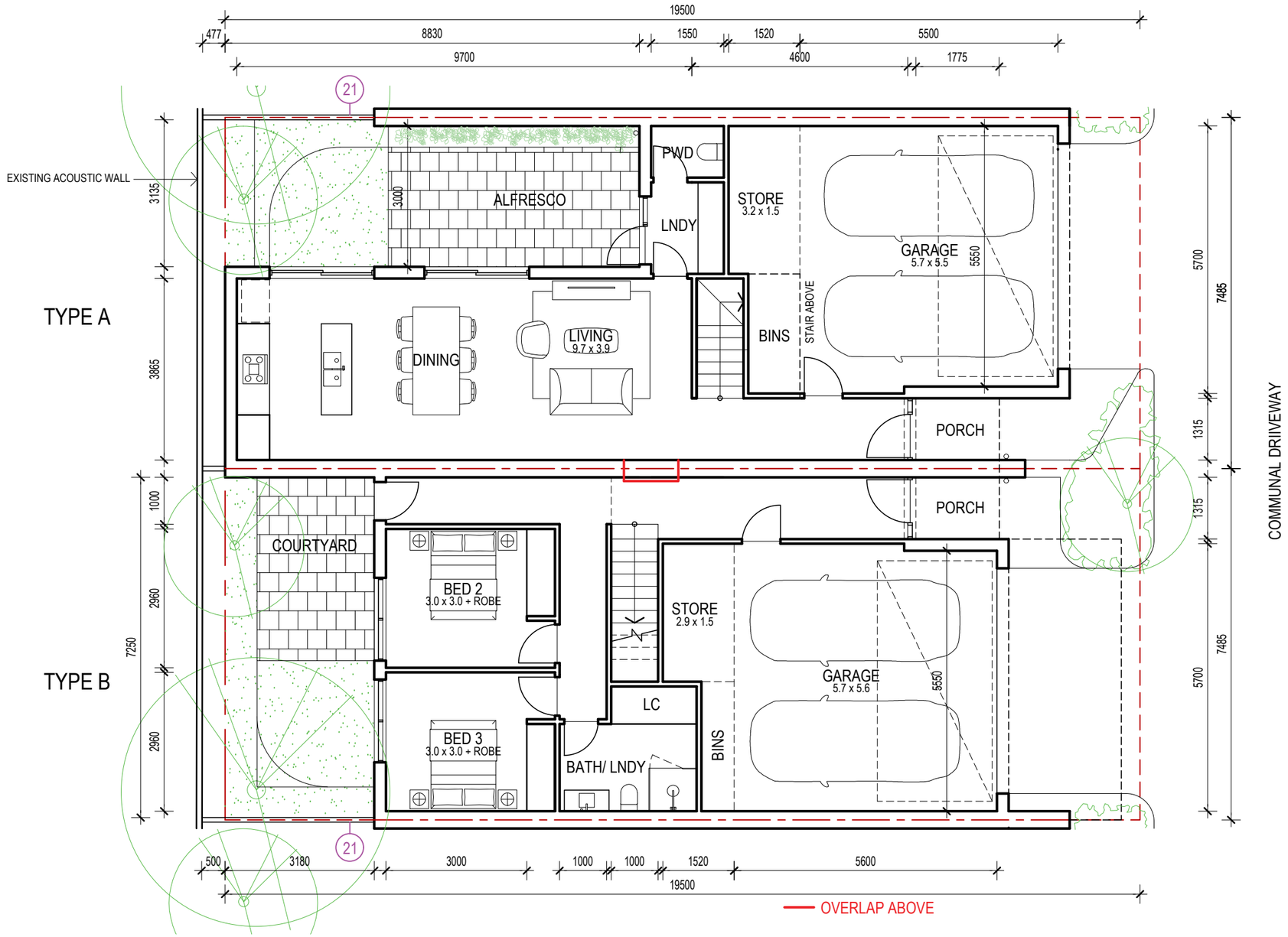
EXTENT OF OVERSHADOWING: 56m² (WINTER SOLSTICE AT 12PM) 7.8% of LOT

EXTENT OF OVERSHADOWING: 123m² (WINTER SOLSTICE AT 12PM) 14.9% of LOT

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	OVERSHADOWING DIAGRAM	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.09	A	14.11.23

PENNOCK ARCHITECTS

0 1 5m 10m



TYPE A

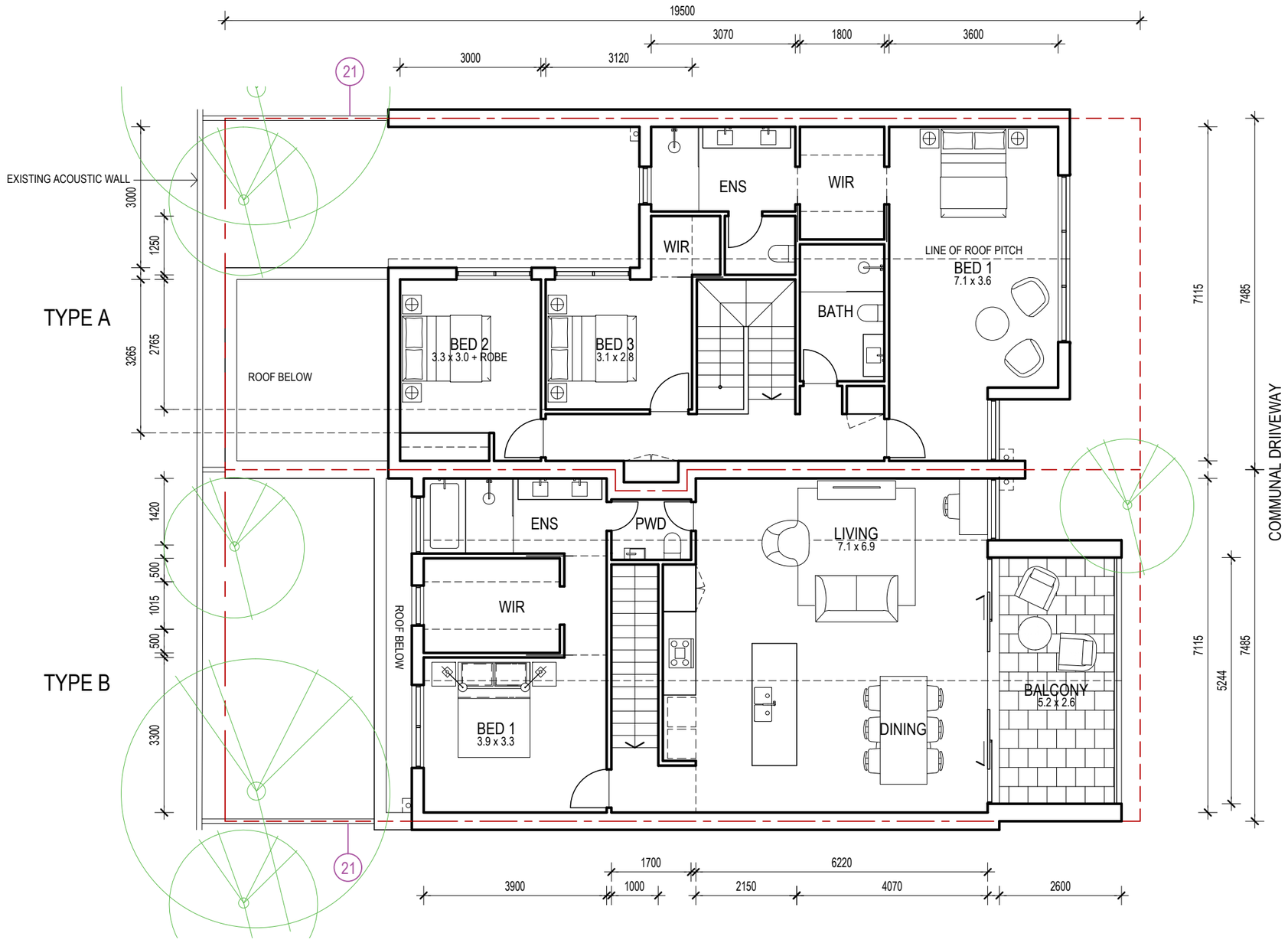
TYPE B

GROUND FLOOR

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & B (UNIT 2 - 7) GROUND FLOOR	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A2.01	A	14.11.23

PENNOCK ARCHITECTS

0 1 2.5 5m

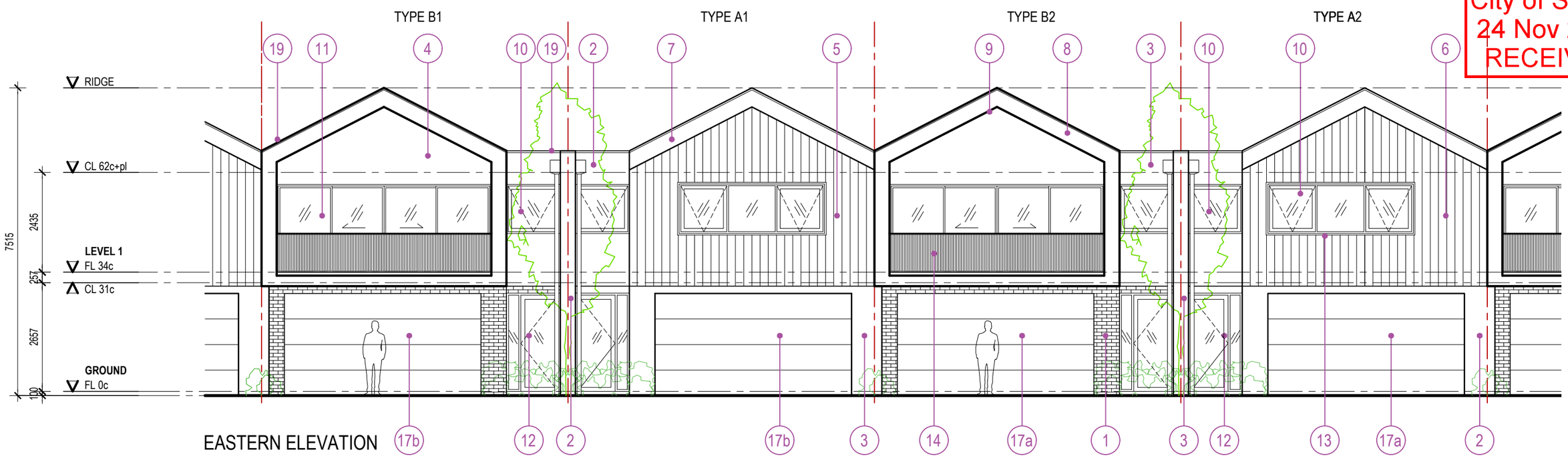


FIRST FLOOR

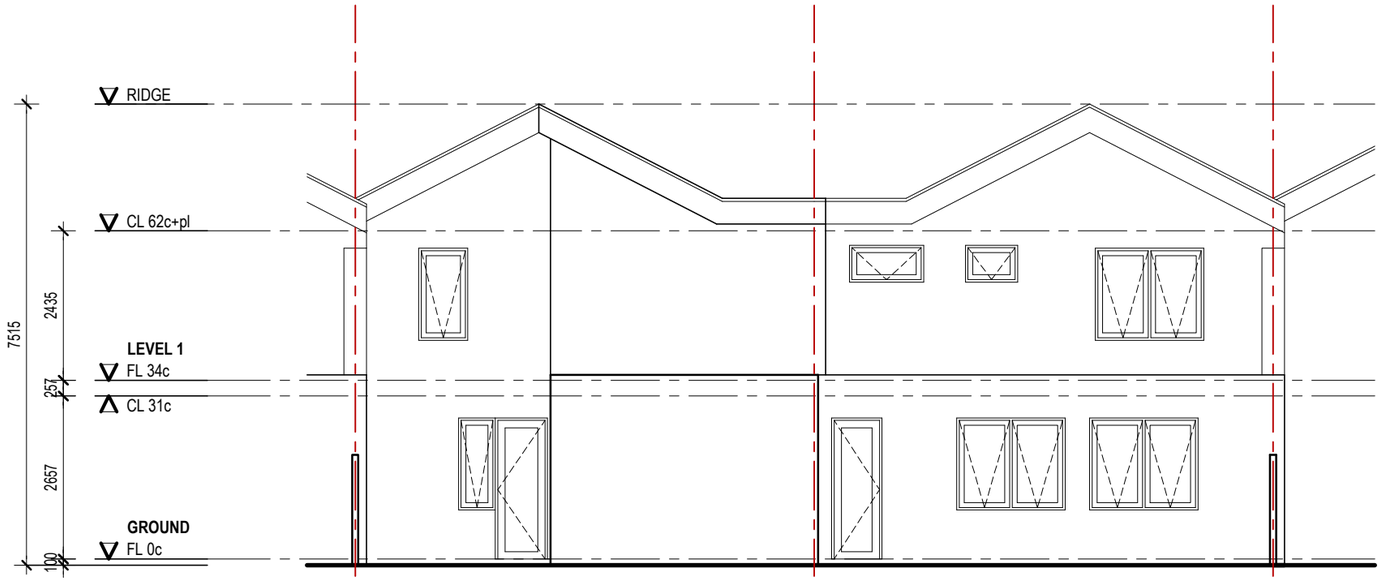
PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & B (UNIT 2 - 7) FIRST FLOOR	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A2.02	A	14.11.23

0 1 2.5 5m



EASTERN ELEVATION



WESTERN ELEVATION

MATERIALS/ FINISHES

1. Face Brickwork. Colour: Red
2. Bagged Brickwork. Paint finish. Colour: White
3. Rendered Brickwork. Paint finish. Colour: White
4. Rendered Brickwork. Paint finish. Colour: Colorbond Southerly (or similar)
5. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: White
6. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: Black
7. Fascia board. Paint finish. Colour: White
8. Textured board. Paint finish. Colour: White
9. Soffit lining. Fibre cement sheet, paint finish Colour: Colorbond Southerly (or similar)
10. Awning windows: Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black.
11. Aluminium Sliding doors. Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black
12. Glazed Entry Door with fixed side panel. Aluminium framing. Finish: powdercoat paint. Colour: Black
13. Bespoke feature surround to glazing: Aluminium extrusions. Finish: Powdercoat paint. Colour: Black
14. Aluminium Routered Balustrade, 1000mm high, 40x40mm tubes. Powdercoat. Colour: Black
15. Vertical aluminium battens. Finish: Powdercoat paint. Colour: TBC
16. Steel Structure. Finish: Powdercoat paint. Colour: TBC
17a. Sectional roller door. Finish: Colorbond Finish. Colour: Monument
17b. Sectional roller door. Finish: Colorbond Finish. Colour: Dover White
18. Profiled Steel Sheet Roofing. Colorbond Finish. Colour: TBC
19. Metal cappings and flashings. Colorbond Finish. Colour: TBC
20. Aluminium Vertical Blade Gate and Fencing System. Powdercoat. Colour: Black
21. Boundary/ inter-unit dividing fencing. Colorbond Finish. Colour: Monument

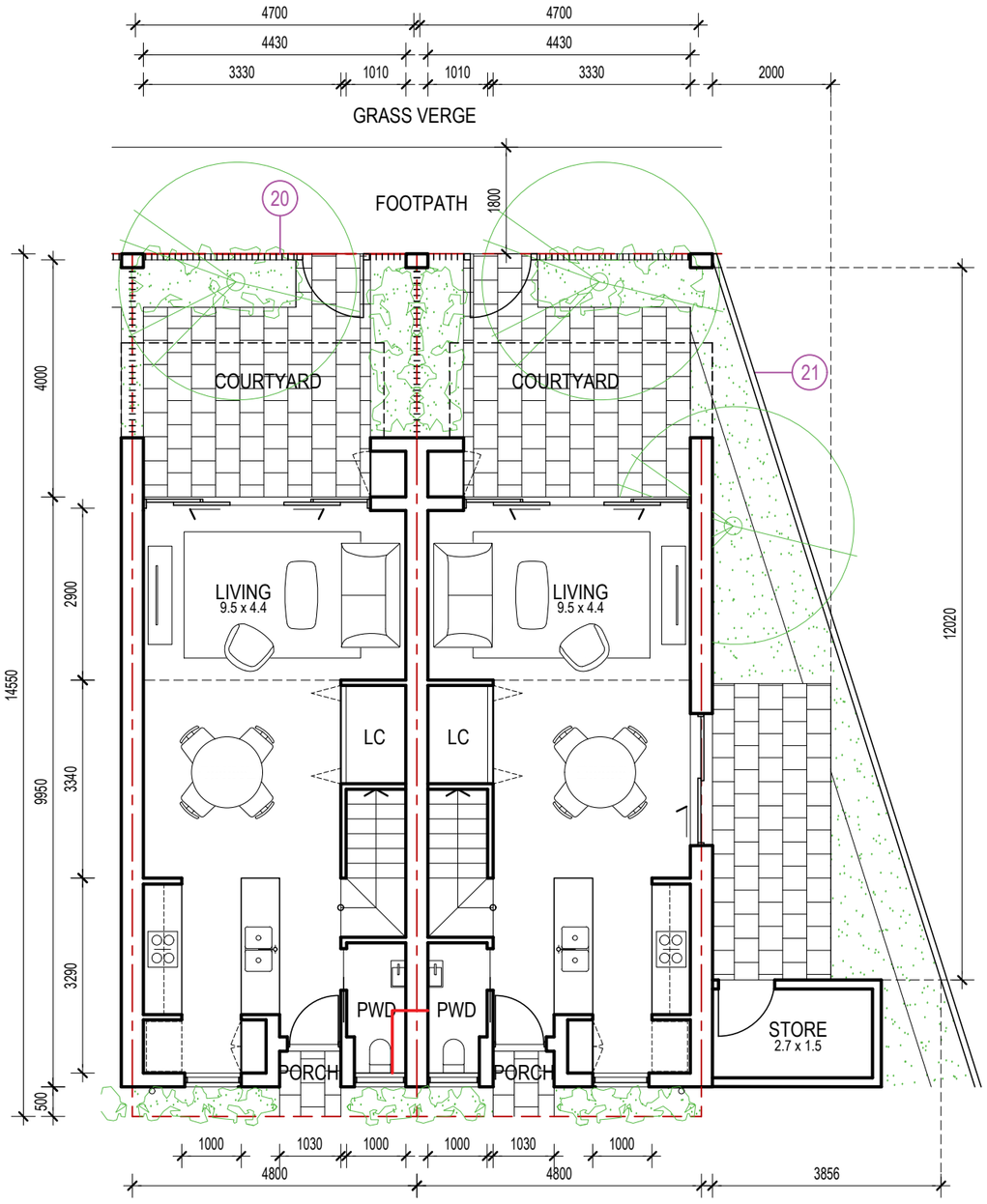
PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & B (UNIT 2 - 7) ELEVATION E & W	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A2.03	B	23.11.23

0 1 2.5 5m

TYPE C
(UNIT 21)

TYPE C*
(UNIT 22)

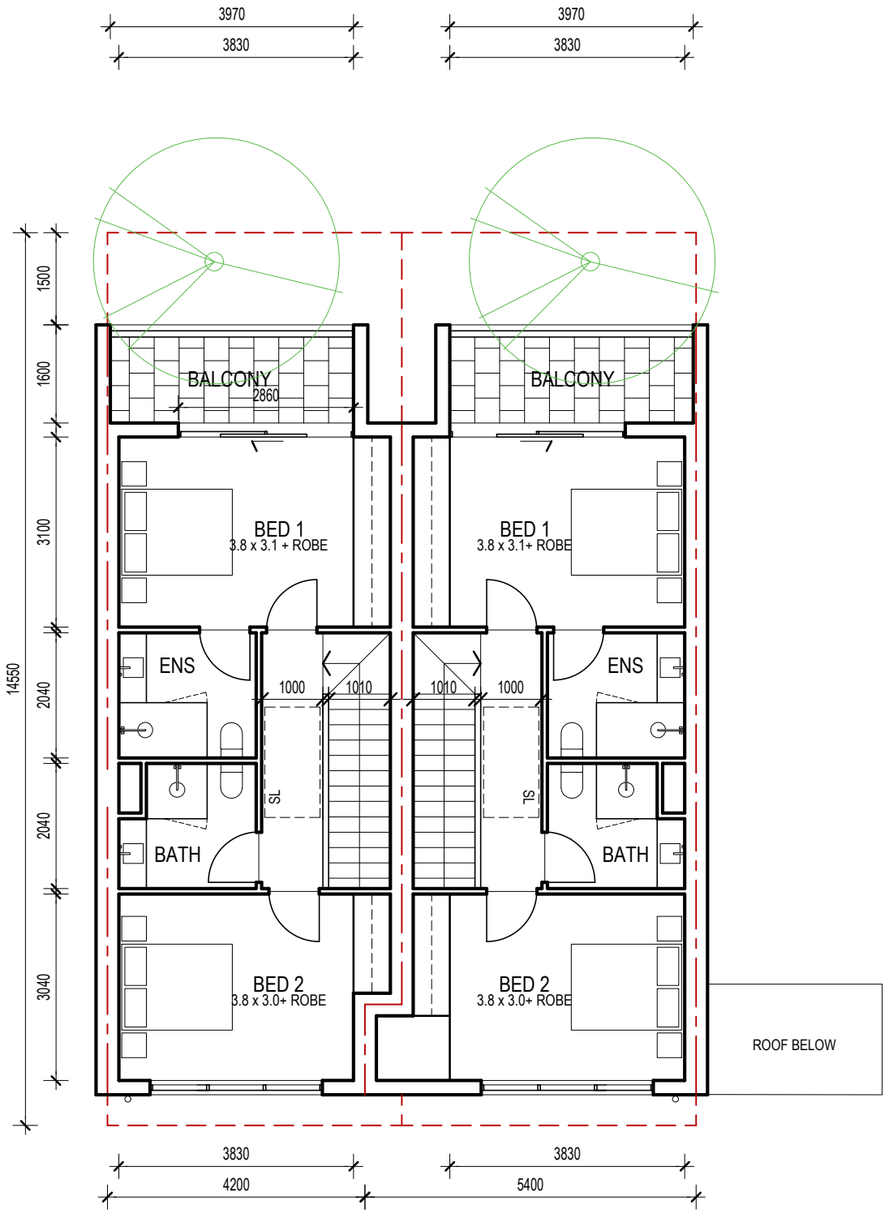


GROUND FLOOR

OVERLAP ABOVE

TYPE C
(UNIT 21)

TYPE C*
(UNIT 22)

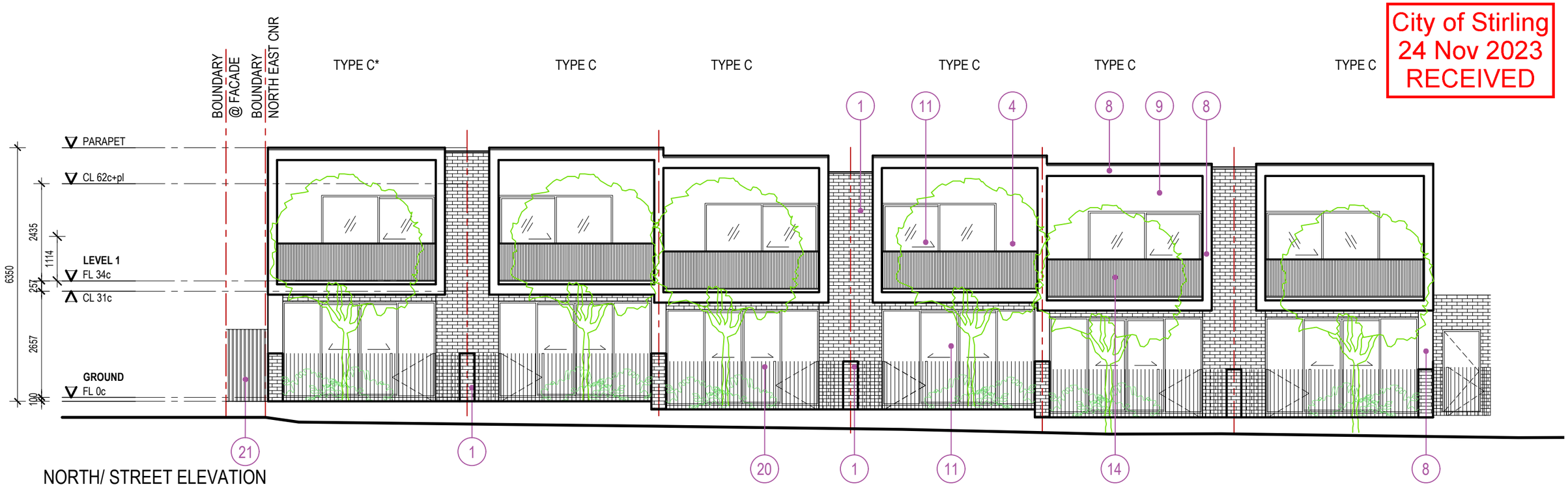


FIRST FLOOR

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE C PLANS (UNIT 17-22) GROUND & FIRST FLOOR	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A3.01	A	23.11.23

PENNOCK ARCHITECTS

0 1 2.5 5m



NORTH/ STREET ELEVATION

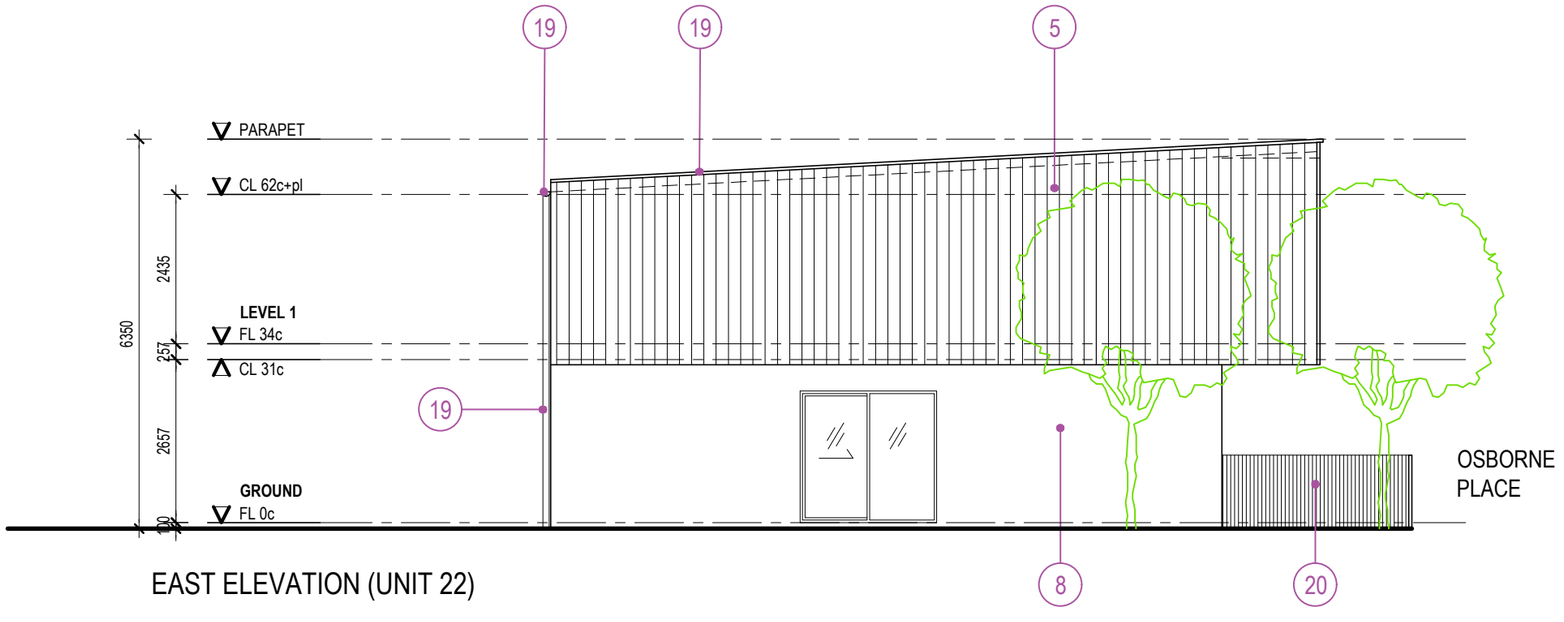
MATERIALS/ FINISHES

1. Face Brickwork. Colour: Red
2. Bagged Brickwork. Paint finish. Colour: White
3. Rendered Brickwork. Paint finish. Colour: White
4. Rendered Brickwork. Paint finish. Colour: Colorbond Southerly (or similar)
5. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: White
6. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: Black
7. Fascia board. Paint finish. Colour: White
8. Textured board. Paint finish. Colour: White
9. Soffit lining. Fibre cement sheet, paint finish Colour: Colorbond Southerly (or similar)
10. Awning windows: Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black.
11. Aluminium Sliding doors. Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black
12. Glazed Entry Door with fixed side panel. Aluminium framing. Finish: powdercoat paint. Colour: Black
13. Bespoke feature surround to glazing: Aluminium extrusions. Finish: Powdercoat paint. Colour: Black
14. Aluminium Routered Balustrade, 1000mm high, 40x40mm tubes. Powdercoat. Colour: Black
15. Vertical aluminium battens. Finish: Powdercoat paint. Colour: TBC
16. Steel Structure. Finish: Powdercoat paint. Colour: TBC
17a. Sectional roller door. Finish: Colorbond Finish. Colour: Monument
17b. Sectional roller door. Finish: Colorbond Finish. Colour: Dover White
18. Profiled Steel Sheet Roofing. Colorbond Finish. Colour: TBC
19. Metal cappings and flashings. Colorbond Finish. Colour: TBC
20. Aluminium Vertical Blade Gate and Fencing System. Powdercoat. Colour: Black
21. Boundary/ inter-unit dividing fencing. Colorbond Finish. Colour: Monument

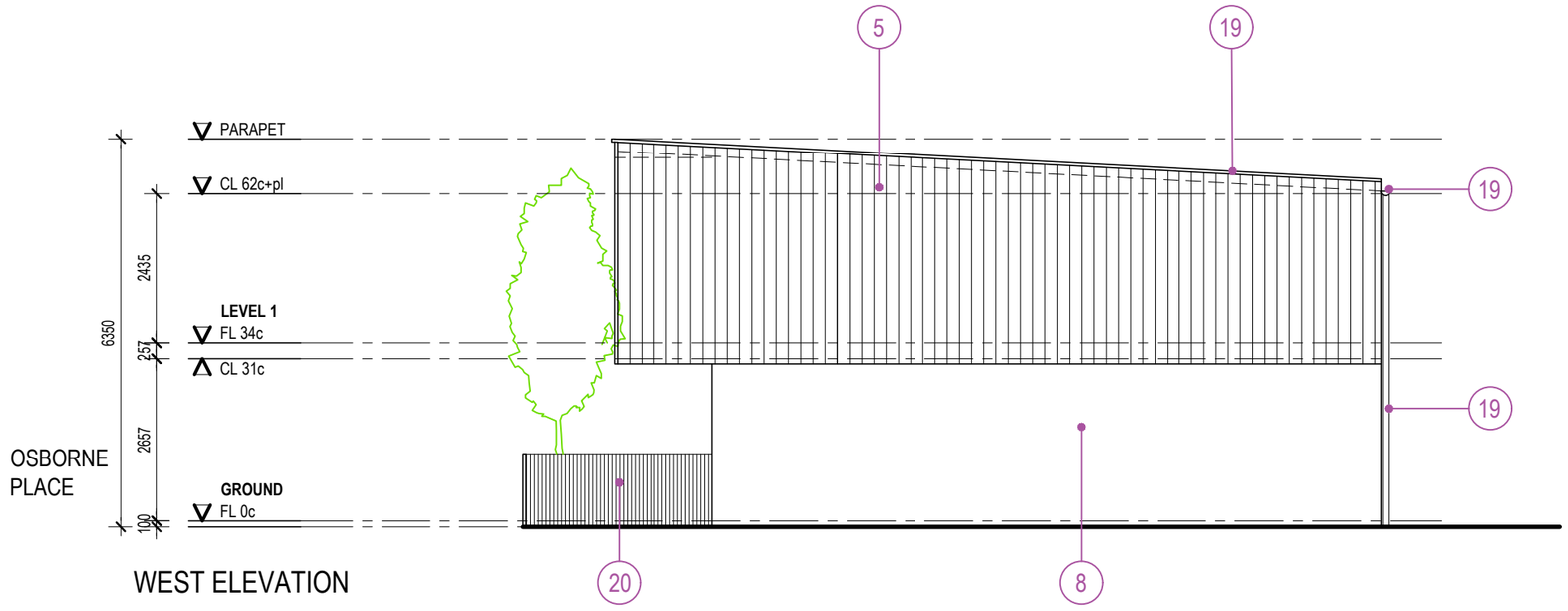
PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE C (UNIT17-22) ELEVATION N	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A3.02	B	23.11.23

0 1 2.5 5m



EAST ELEVATION (UNIT 22)



WEST ELEVATION

NOTE: CARPORT AND STORES IN FOREGROUND ARE NOT DRAWN

MATERIALS/ FINISHES

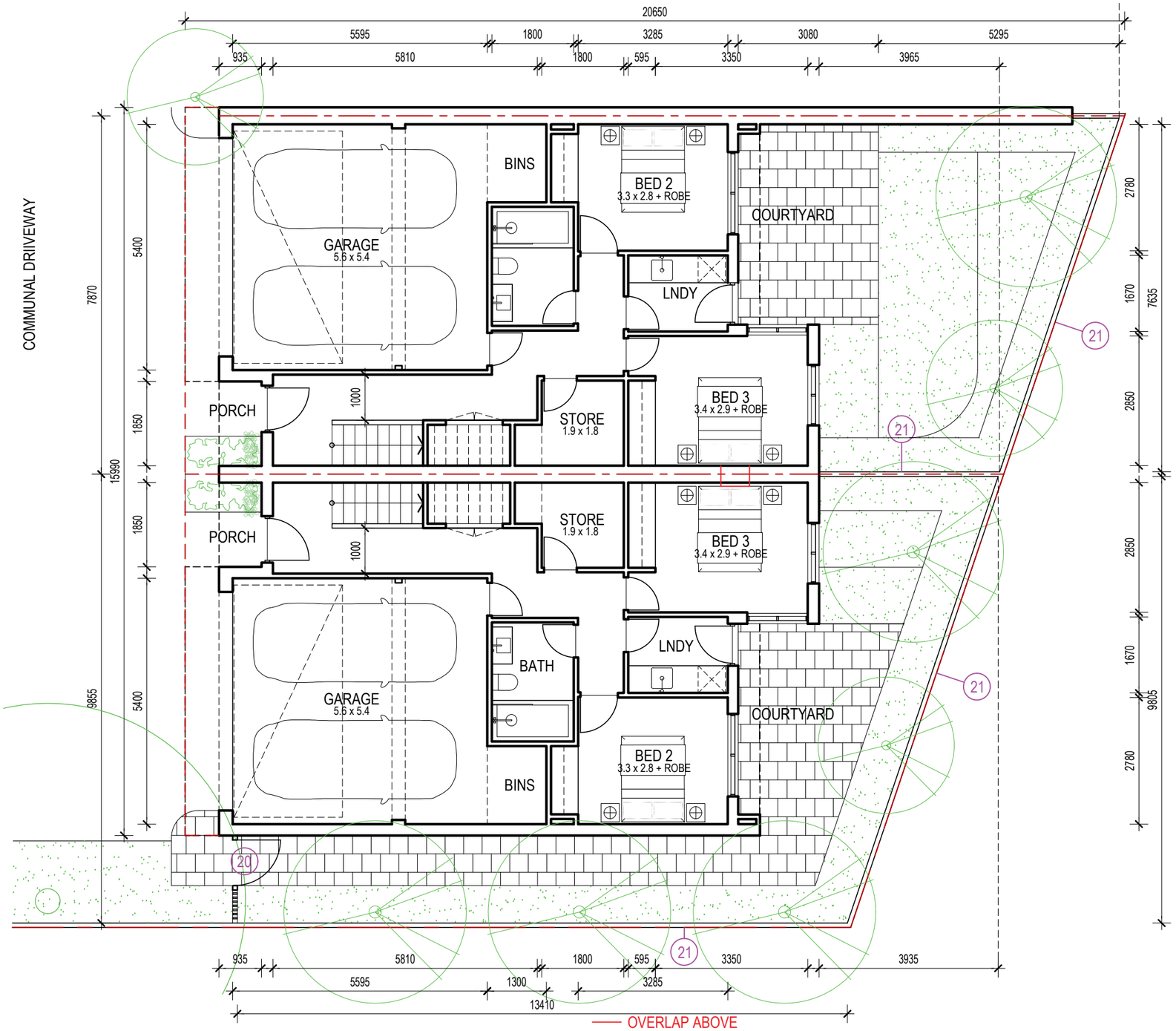
1. Face Brickwork. Colour: Red
2. Bagged Brickwork. Paint finish. Colour: White
3. Rendered Brickwork. Paint finish. Colour: White
4. Rendered Brickwork. Paint finish. Colour: Colorbond Southerly (or similar)
5. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: White
6. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: Black
7. Fascia board. Paint finish. Colour: White
8. Textured board. Paint finish. Colour: White
9. Soffit lining. Fibre cement sheet, paint finish Colour: Colorbond Southerly (or similar)
10. Awning windows: Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black.
11. Aluminium Sliding doors. Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black
12. Glazed Entry Door with fixed side panel. Aluminium framing. Finish: powdercoat paint. Colour: Black
13. Bespoke feature surround to glazing: Aluminium extrusions. Finish: Powdercoat paint. Colour: Black
14. Aluminium Routered Balustrade, 1000mm high, 40x40mm tubes. Powdercoat. Colour: Black
15. Vertical aluminium battens. Finish: Powdercoat paint. Colour: TBC
16. 100mm SHS. Finish: Powdercoat paint. Colour: TBC
17a. Sectional roller door. Finish: Colorbond Finish. Colour: Monument
17b. Sectional roller door. Finish: Colorbond Finish. Colour: Monument
18. Profiled Steel Sheet Roofing. Colorbond Finish. Colour: TBC
19. Metal cappings and flashings. Colorbond Finish. Colour: TBC
20. Aluminium Vertical Blade Gate and Fencing System. Powdercoat. Colour: Black
21. Boundary/ inter-unit dividing fencing. Colorbond Finish. Colour: Monument

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE C (UNIT17-22) ELEVATION E & W	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A3.03	B	23.11.23

0 1 2.5 5m

City of Stirling
24 Nov 2023
RECEIVED



TYPE D
(UNIT 12)

TYPE D(m)*
(UNIT 11)

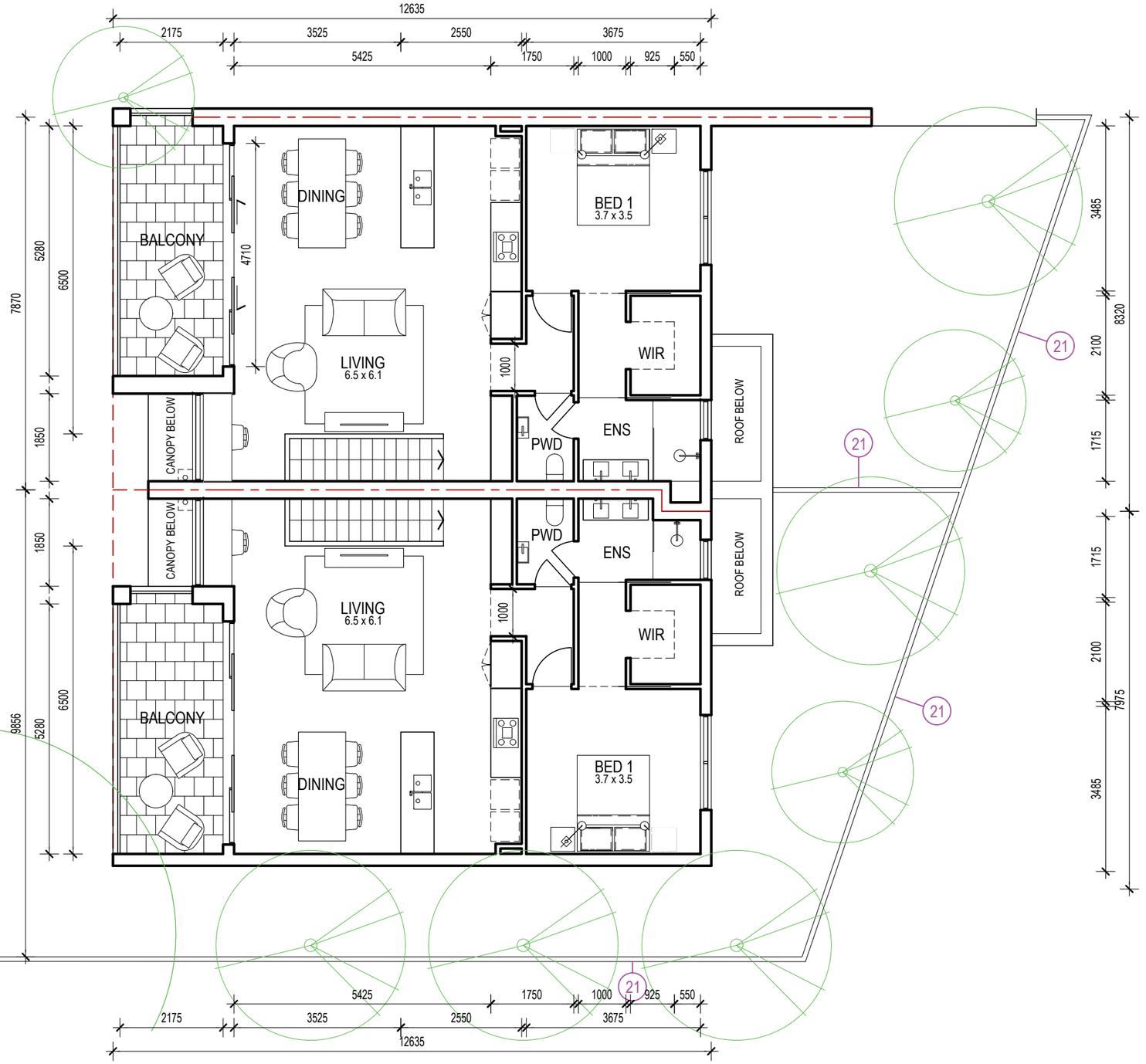
GROUND FLOOR

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE D (UNIT 11-12) GROUND FLOOR PLAN	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A4.01	A	14.11.23

PENNOCK ARCHITECTS

0 1 2.5 5m

City of Stirling
24 Nov 2023
RECEIVED



TYPE D
(UNIT 12)

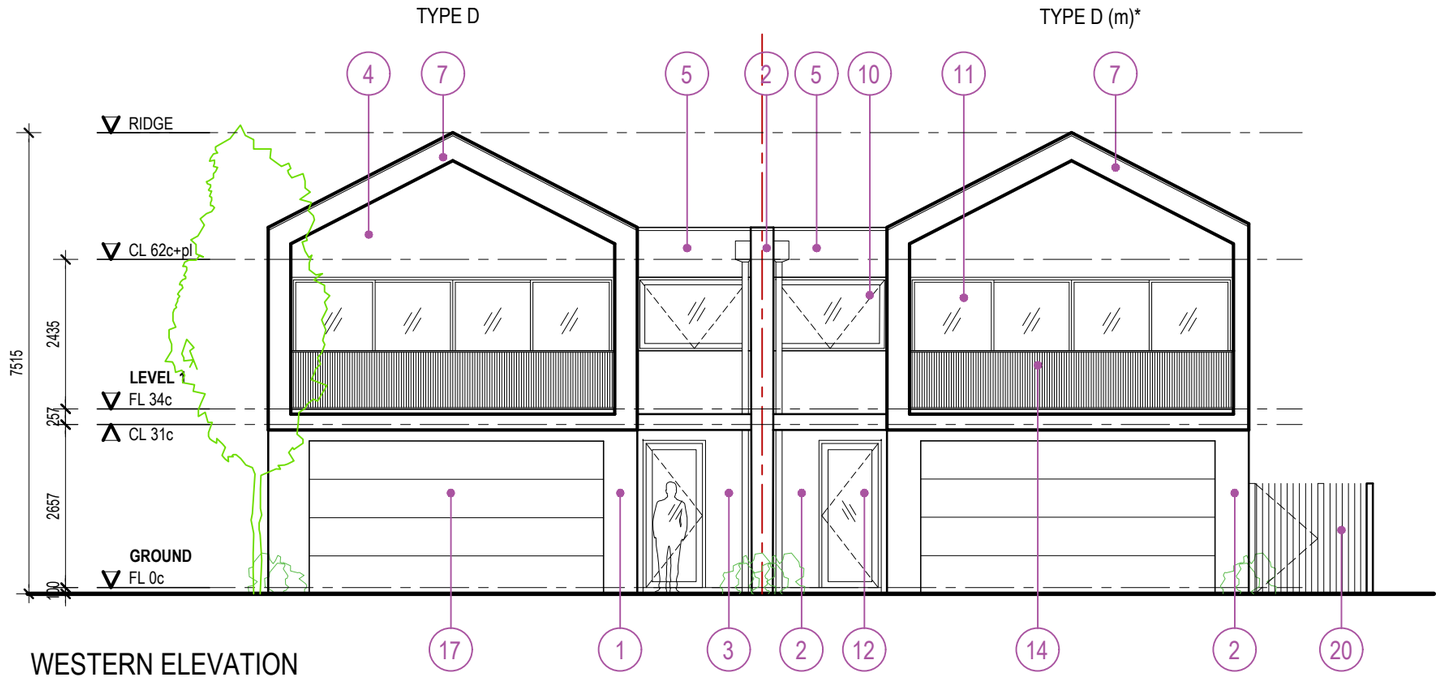
TYPE D(m)*
(UNIT 11)

FIRST FLOOR

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE D (UNIT 11-12) FIRST FLOOR PLANS	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A4.02	A	14.11.23

PENNOCK ARCHITECTS

0 1 2.5 5m



WESTERN ELEVATION

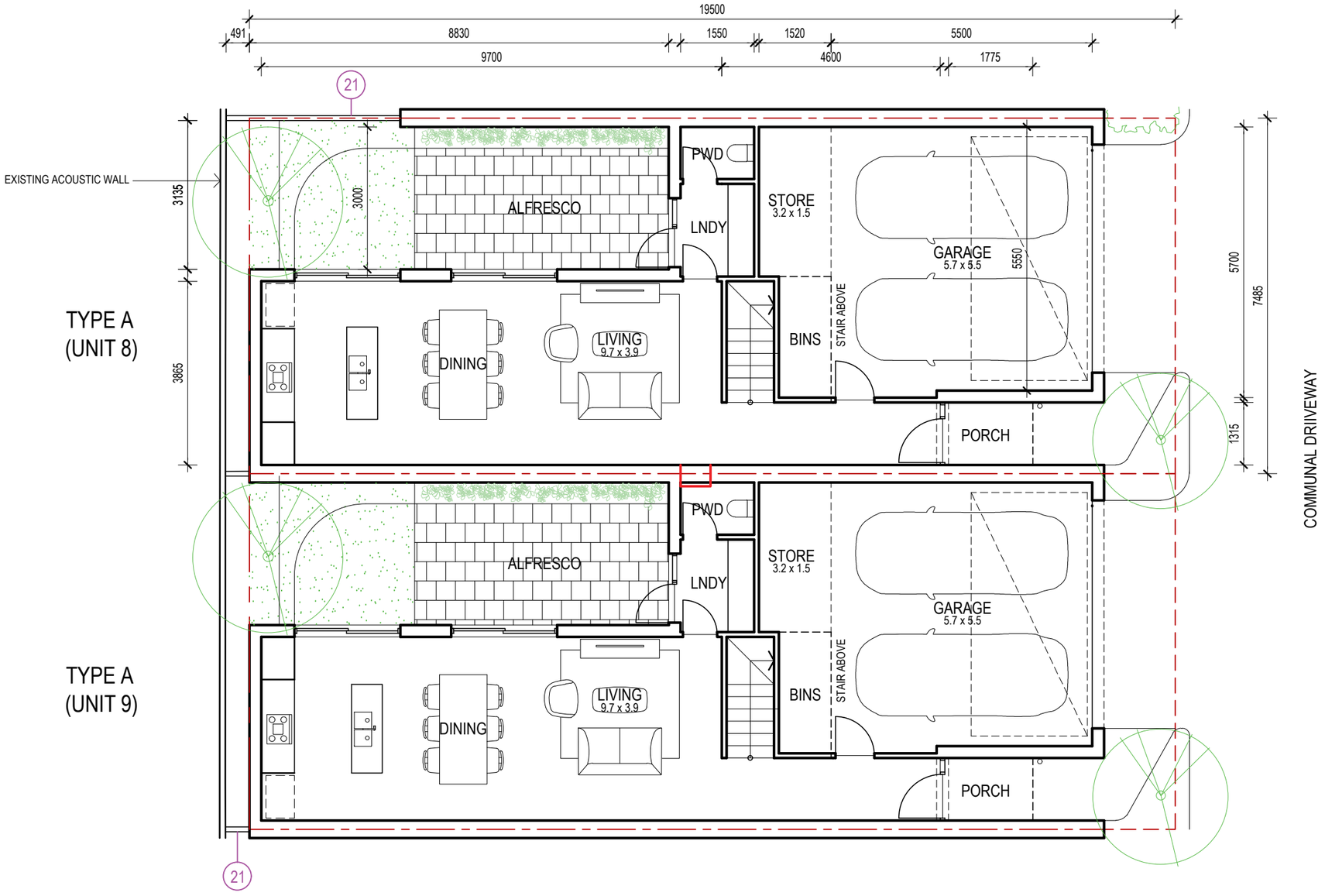
MATERIALS/ FINISHES

1. Face Brickwork. Colour: Red
2. Bagged Brickwork. Paint finish. Colour: White
3. Rendered Brickwork. Paint finish. Colour: White
4. Rendered Brickwork. Paint finish. Colour: Colorbond Southerly (or similar)
5. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: White
6. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: Black
7. Fascia board. Paint finish. Colour: White
8. Textured board. Paint finish. Colour: White
9. Soffit lining. Fibre cement sheet, paint finish Colour: Colorbond Southerly (or similar)
10. Awning windows: Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black.
11. Aluminium Sliding doors. Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black
12. Glazed Entry Door with fixed side panel. Aluminium framing. Finish: powdercoat paint. Colour: Black
13. Bespoke feature surround to glazing: Aluminium extrusions. Finish: Powdercoat paint. Colour: Black
14. Aluminium Routered Balustrade, 1000mm high, 40x40mm tubes. Powdercoat. Colour: Black
15. Vertical aluminium battens. Finish: Powdercoat paint. Colour: TBC
16. 100mm SHS. Finish: Powdercoat paint. Colour: TBC
17a. Sectional roller door. Finish: Colorbond Finish. Colour: Monument
17b. Sectional roller door. Finish: Colorbond Finish. Colour: Monument
18. Profiled Steel Sheet Roofing. Colorbond Finish. Colour: TBC
19. Metal cappings and flashings. Colorbond Finish. Colour: TBC
20. Aluminium Vertical Blade Gate and Fencing System. Powdercoat. Colour: Black
21. Boundary/ inter-unit dividing fencing. Colorbond Finish. Colour: Monument

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE D (UNIT 11-12) ELEVATION	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A4.03	B	23.11.23

0 1 2.5 5m



GROUND FLOOR

OVERLAP ABOVE

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & A (UNIT 8-10) GROUND FLOOR PLANS	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A5.01	A	14.11.23

PENNOCK ARCHITECTS

0 1 2.5 5m

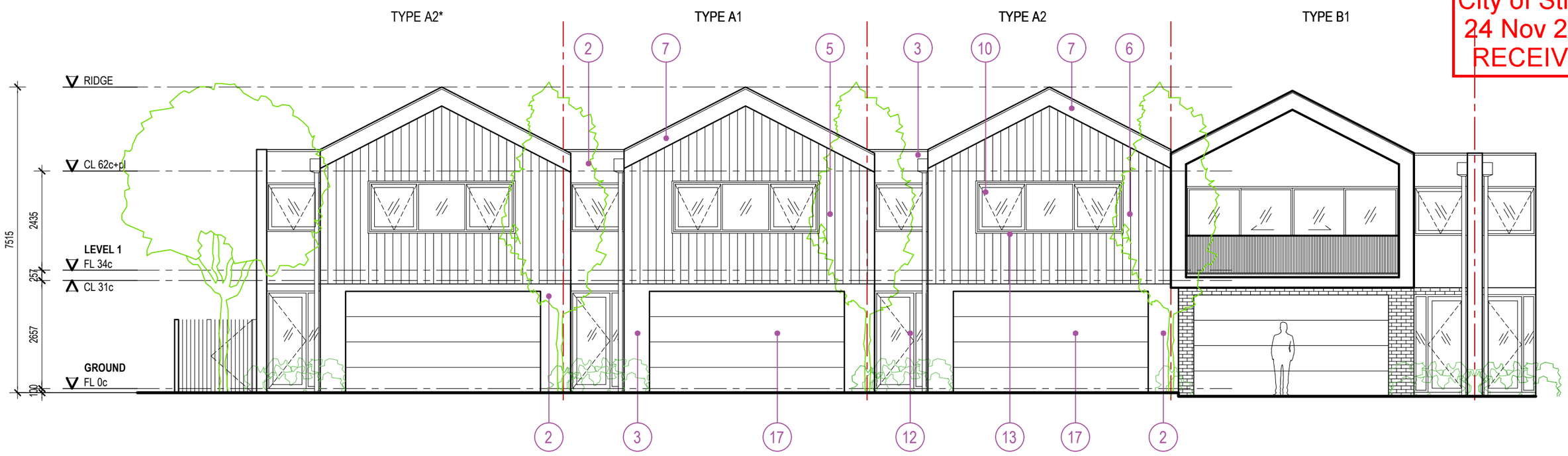
City of Stirling
24 Nov 2023
RECEIVED

FIRST FLOOR

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & A (UNIT 8-10) FIRST FLOOR PLANS	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A5.02	A	14.11.23

0 1 2.5 5m



EASTERN ELEVATION

MATERIALS/ FINISHES

1. Face Brickwork. Colour: Red
2. Bagged Brickwork. Paint finish. Colour: White
3. Rendered Brickwork. Paint finish. Colour: White
4. Rendered Brickwork. Paint finish. Colour: Colorbond Southerly (or similar)
5. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: White
6. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: Black
7. Fascia board. Paint finish. Colour: White
8. Textured board. Paint finish. Colour: White
9. Soffit lining. Fibre cement sheet, paint finish Colour: Colorbond Southerly (or similar)
10. Awning windows: Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black.
11. Aluminium Sliding doors. Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black
12. Glazed Entry Door with fixed side panel. Aluminium framing. Finish: powdercoat paint. Colour: Black
13. Bespoke feature surround to glazing: Aluminium extrusions. Finish: Powdercoat paint. Colour: Black
14. Aluminium Routered Balustrade, 1000mm high, 40x40mm tubes. Powdercoat. Colour: Black
15. Vertical aluminium battens. Finish: Powdercoat paint. Colour: TBC
16. 100mm SHS. Finish: Powdercoat paint. Colour: TBC
17a. Sectional roller door. Finish: Colorbond Finish. Colour: Monument
17b. Sectional roller door. Finish: Colorbond Finish. Colour: Dover White
18. Profiled Steel Sheet Roofing. Colorbond Finish. Colour: TBC
19. Metal cappings and flashings. Colorbond Finish. Colour: TBC
20. Aluminium Vertical Blade Gate and Fencing System. Powdercoat. Colour: Black
21. Boundary/ inter-unit dividing fencing. Colorbond Finish. Colour: Monument

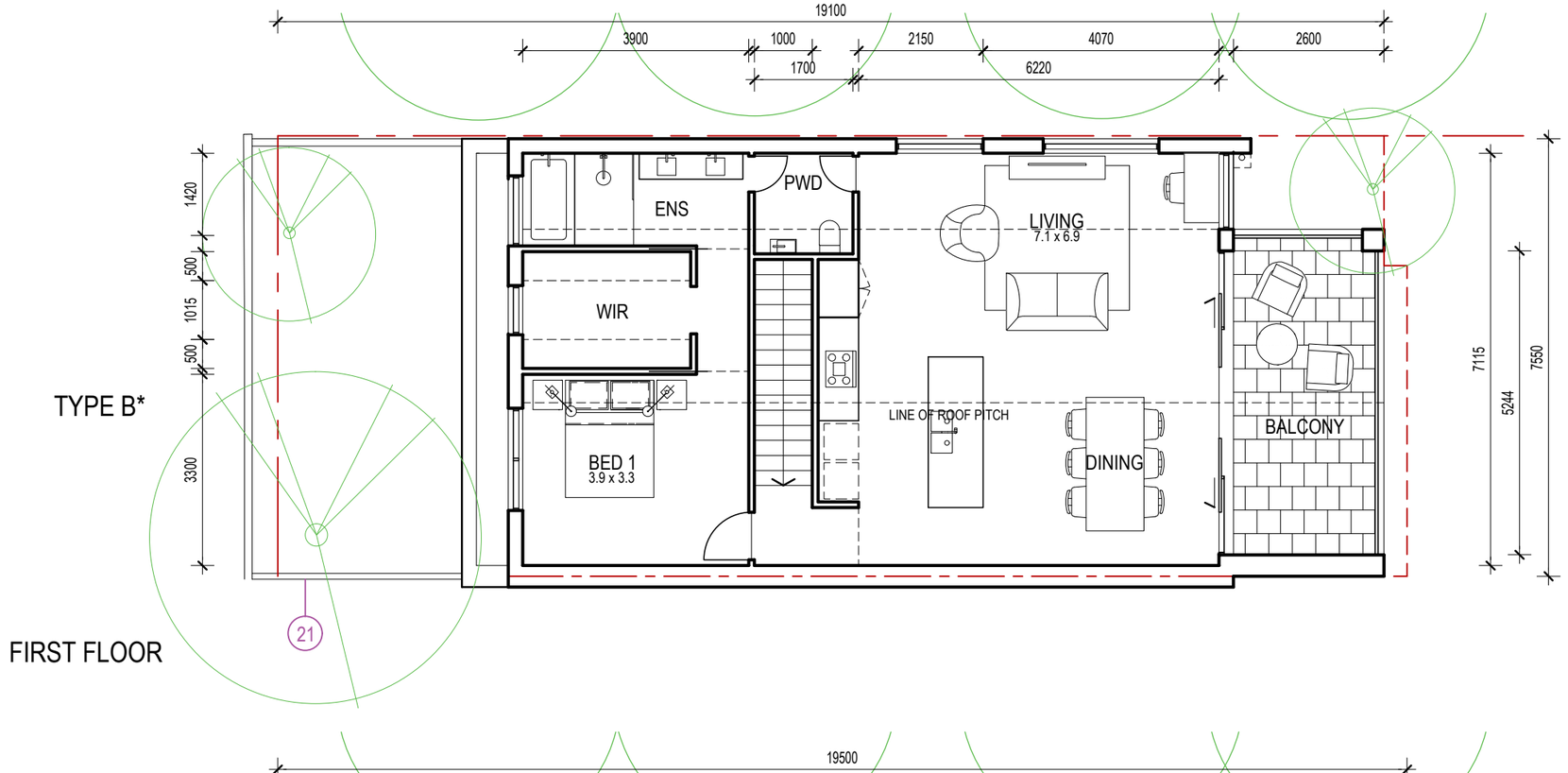
PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	UNIT TYPE A & A (UNIT 8-10) ELEVATION E	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A5.03	B	23.11.23

0 1 2.5 5m

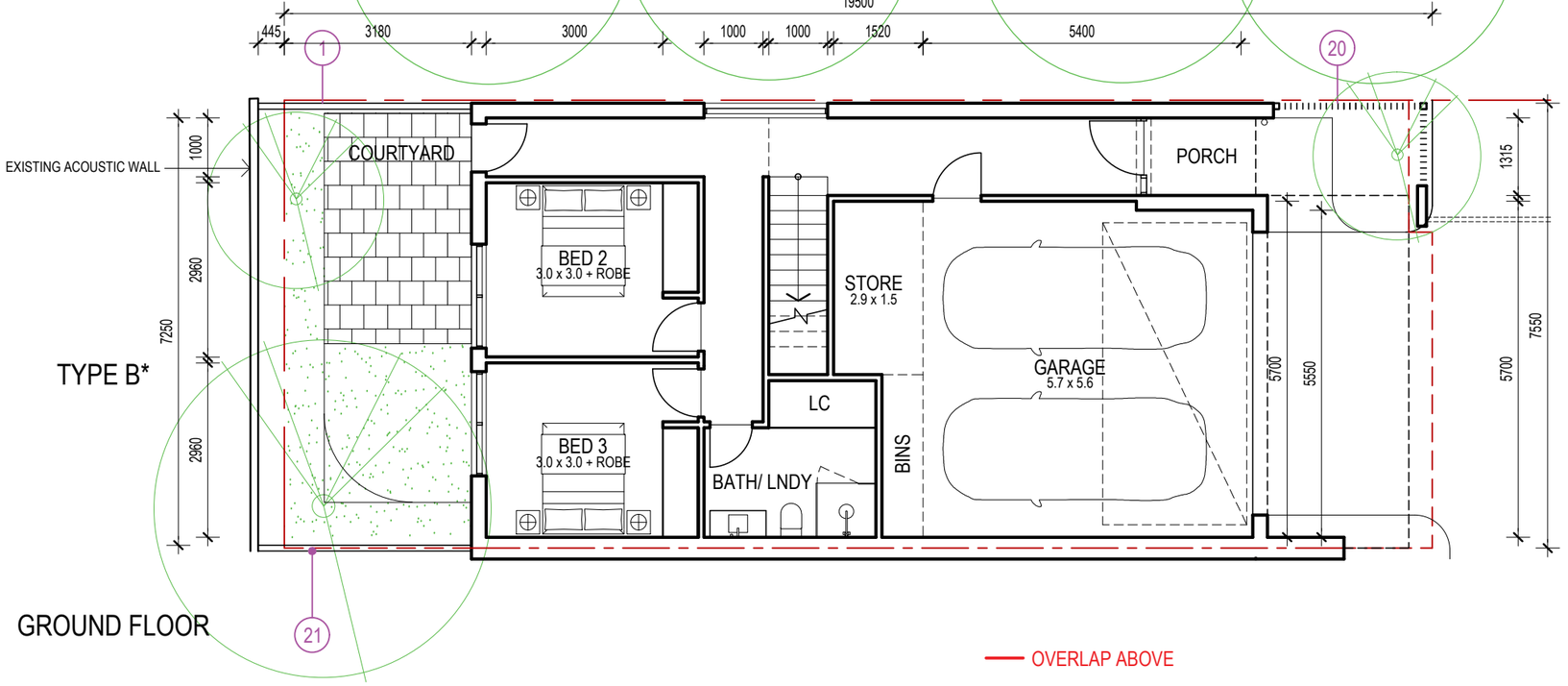
TYPE B*

FIRST FLOOR



TYPE B*

GROUND FLOOR



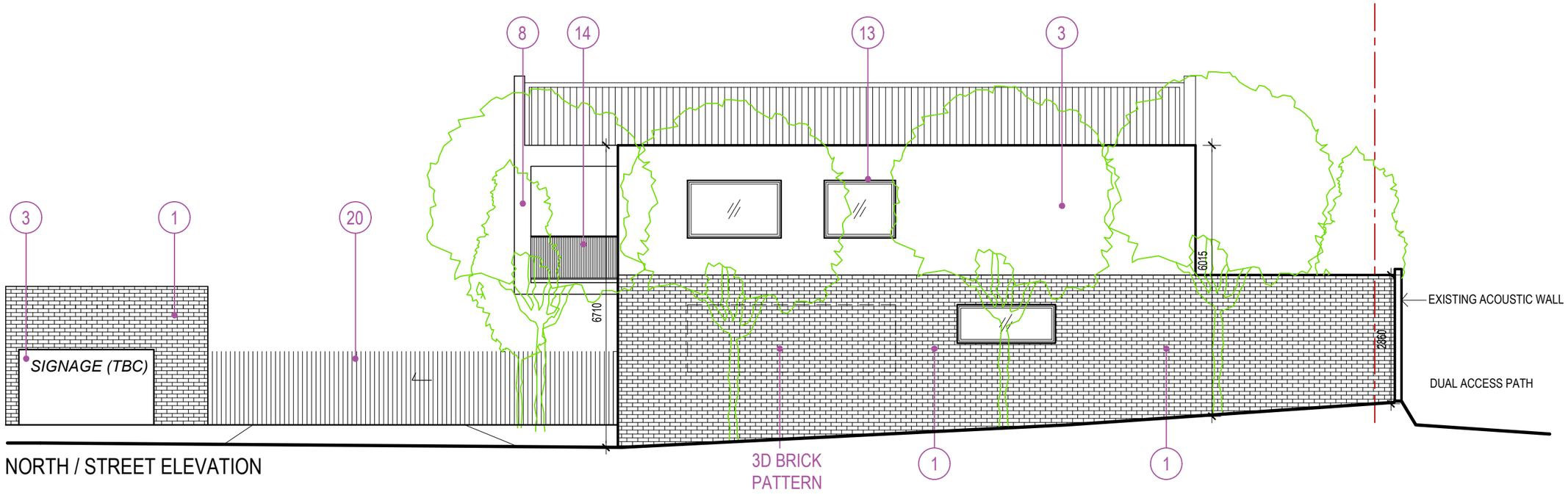
OVERLAP ABOVE

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE B* (UNIT 1) PLANS	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A6.01	A	14.11.23

PENNOCK ARCHITECTS

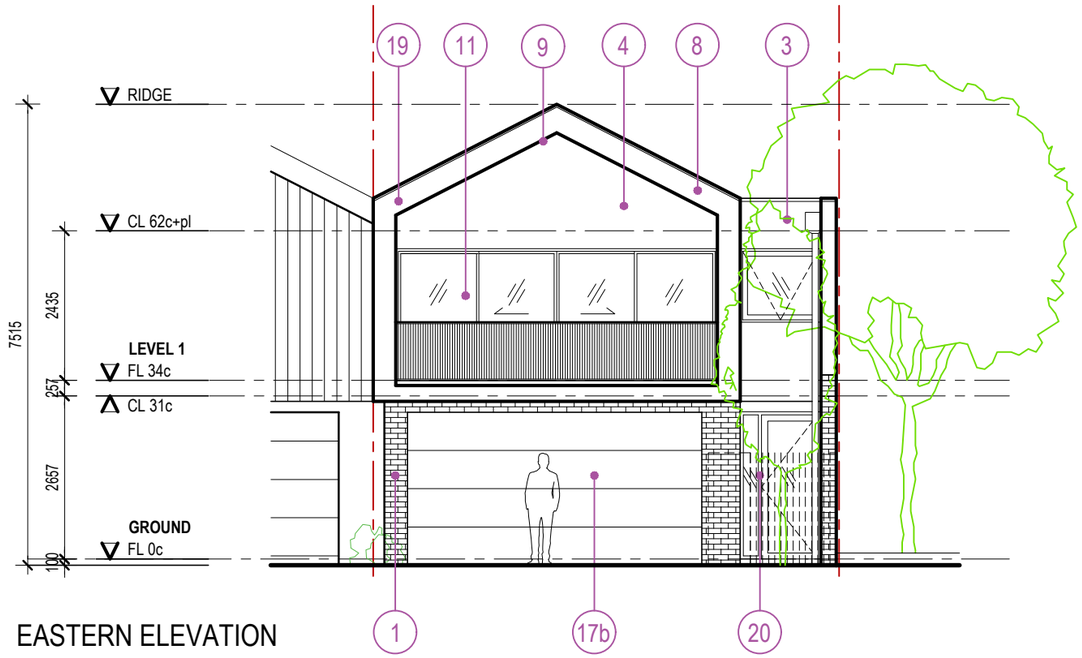
0 1 2.5 5m

City of Stirling
24 Nov 2023
RECEIVED



NORTH / STREET ELEVATION

TYPE B*



EASTERN ELEVATION

MATERIALS/ FINISHES

1. Face Brickwork. Colour: Red
2. Bagged Brickwork. Paint finish. Colour: White
3. Rendered Brickwork. Paint finish. Colour: White
4. Rendered Brickwork. Paint finish. Colour: Colorbond Southerly (or similar)
5. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: White
6. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: Black
7. Fascia board. Paint finish. Colour: White
8. Textured board. Paint finish. Colour: White
9. Soffit lining. Fibre cement sheet, paint finish Colour: Colorbond Southerly (or similar)
10. Awning windows: Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black.
11. Aluminium Sliding doors. Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black
12. Glazed Entry Door with fixed side panel. Aluminium framing. Finish: powdercoat paint. Colour: Black
13. Bespoke feature surround to glazing: Aluminium extrusions. Finish: Powdercoat paint. Colour: Black
14. Aluminium Routered Balustrade, 1000mm high, 40x40mm tubes. Powdercoat. Colour: Black
15. Vertical aluminium battens. Finish: Powdercoat paint. Colour: TBC
16. Steel Structure. Finish: Powdercoat paint. Colour: TBC
17a. Sectional roller door. Finish: Colorbond Finish. Colour: Monument
17b. Sectional roller door. Finish: Colorbond Finish. Colour: Dover White
18. Profiled Steel Sheet Roofing. Colorbond Finish. Colour: TBC
19. Metal cappings and flashings. Colorbond Finish. Colour: TBC
20. Aluminium Vertical Blade Gate and Fencing System. Powdercoat. Colour: Black
21. Boundary/ inter-unit dividing fencing. Colorbond Finish. Colour: Monument

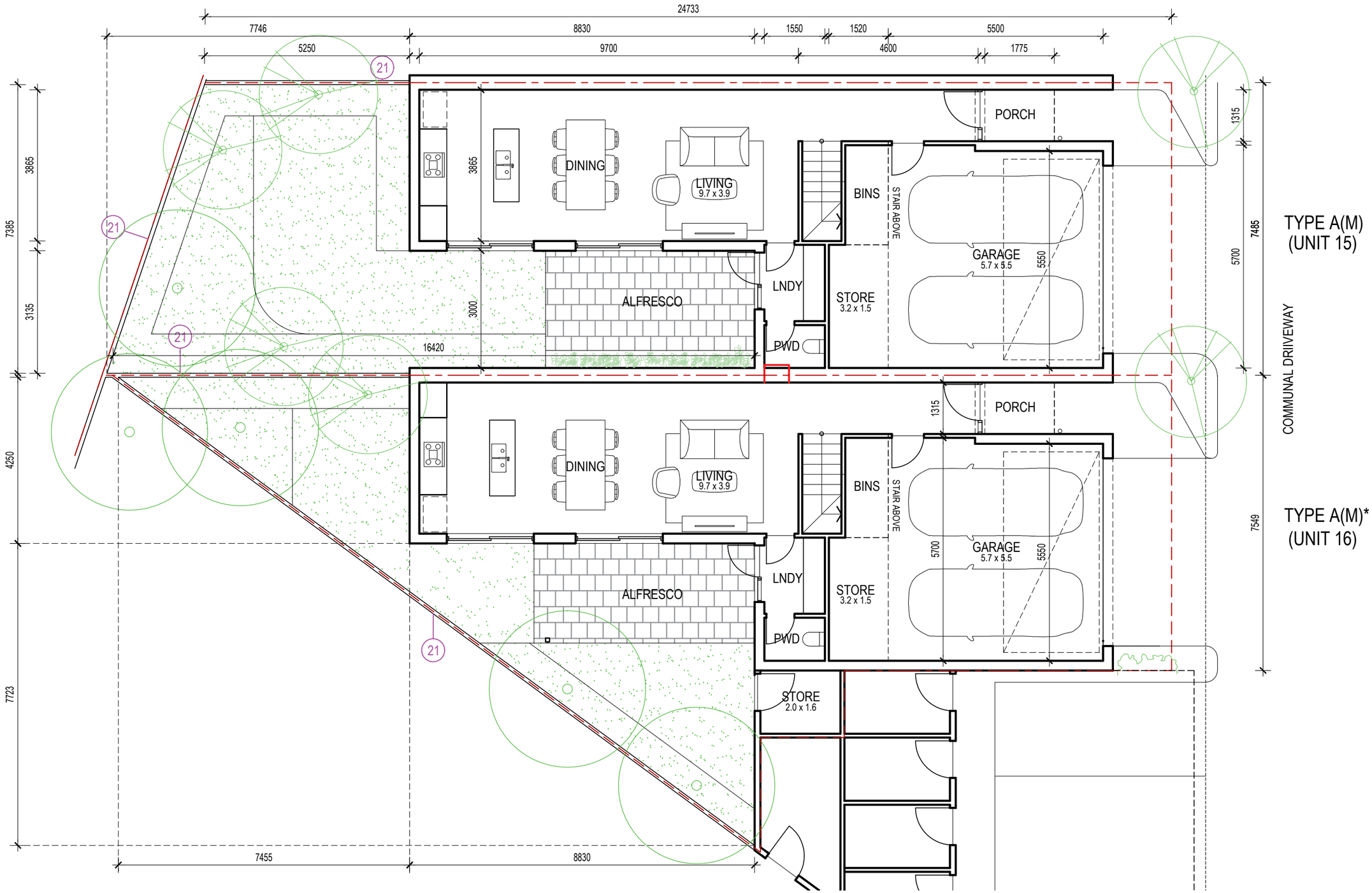
PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE B* (UNIT 1) ELEVATION E & W	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A6.02	B	23.11.23

0 1 2.5 5m

City of Stirling
24 Nov 2023
RECEIVED

OVERLAP ABOVE



TYPE A(M)
(UNIT 15)

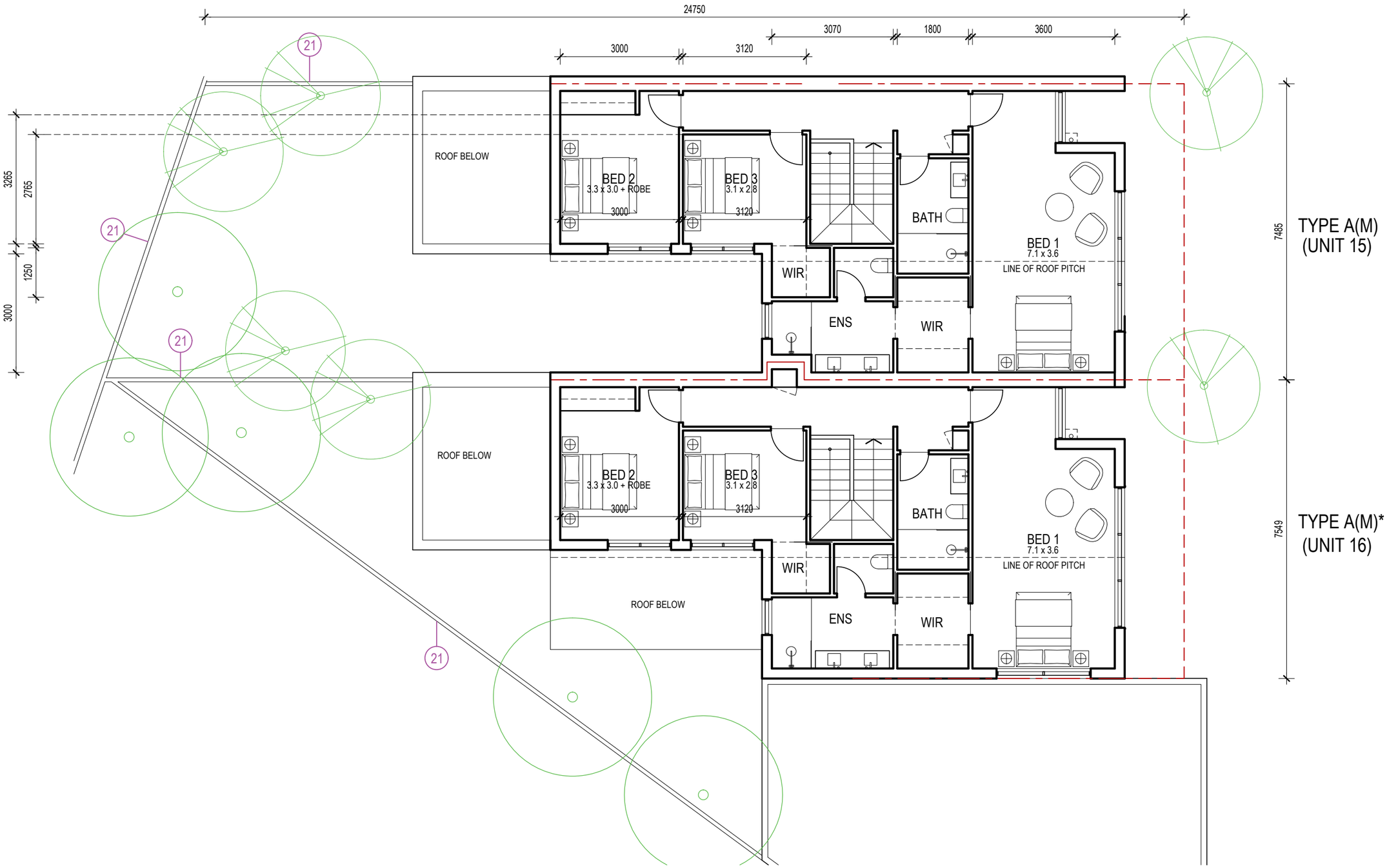
TYPE A(M)*
(UNIT 16)

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & A (MIRROR) (U 13-16) GROUND FLOOR PLANS	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A7.01	A	14.11.23

0 1 2.5 5m

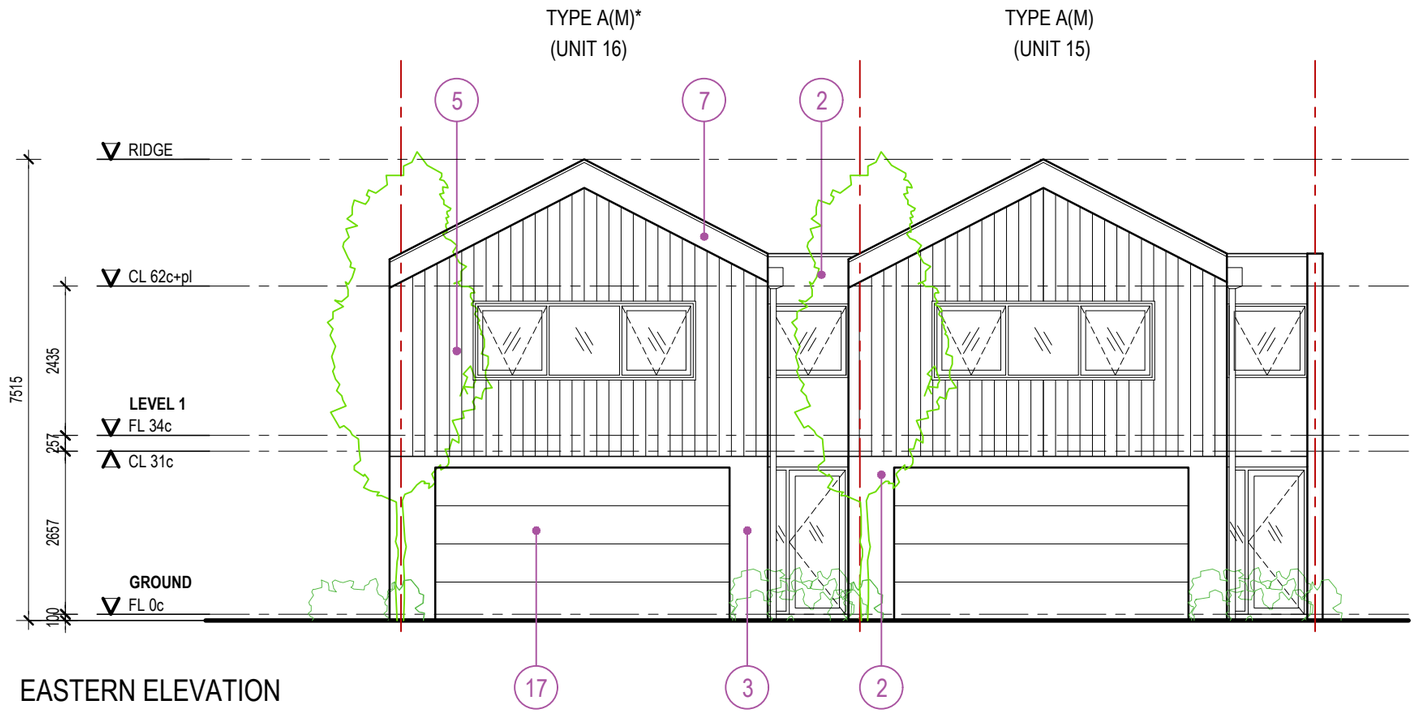
City of Stirling
24 Nov 2023
RECEIVED



PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & A (MIRROR) (U 13-16) FIRST FLOOR PLANS	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A7.02	A	14.11.23

0 1 2.5 5m



EASTERN ELEVATION

MATERIALS/ FINISHES

1. Face Brickwork. Colour: Red
2. Bagged Brickwork. Paint finish. Colour: White
3. Rendered Brickwork. Paint finish. Colour: White
4. Rendered Brickwork. Paint finish. Colour: Colorbond Southerly (or similar)
5. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: White
6. Vertical profile Fibre cement Cladding (Hardie Oblique Cladding 200mm boards or similar). Paint finish. Colour: Black
7. Fascia board. Paint finish. Colour: White
8. Textured board. Paint finish. Colour: White
9. Soffit lining. Fibre cement sheet, paint finish Colour: Colorbond Southerly (or similar)
10. Awning windows: Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black.
11. Aluminium Sliding doors. Aluminium framing with glazing. Hardware: TBC. Glass: Transparent. Aluminium finish: Powdercoat paint. Colour: Black
12. Glazed Entry Door with fixed side panel. Aluminium framing. Finish: powdercoat paint. Colour: Black
13. Bespoke feature surround to glazing: Aluminium extrusions. Finish: Powdercoat paint. Colour: Black
14. Aluminium Routered Balustrade, 1000mm high, 40x40mm tubes. Powdercoat. Colour: Black
15. Vertical aluminium battens. Finish: Powdercoat paint. Colour: TBC
16. Steel Structure. Finish: Powdercoat paint. Colour: TBC
17a. Sectional roller door. Finish: Colorbond Finish. Colour: Monument
17b. Sectional roller door. Finish: Colorbond Finish. Colour: Dover White
18. Profiled Steel Sheet Roofing. Colorbond Finish. Colour: TBC
19. Metal cappings and flashings. Colorbond Finish. Colour: TBC
20. Aluminium Vertical Blade Gate and Fencing System. Powdercoat. Colour: Black
21. Boundary/ inter-unit dividing fencing. Colorbond Finish. Colour: Monument

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & A (MIRROR) (U 13-16) ELEVATION E	DEVELOPMENT APPLICATION	1:100 @ A3	2305	A7.03	B	23.11.23

0 1 2.5 5m

GENERAL NOTES:
1. THIS IS A CONCEPT PLAN ONLY.
2. ALL STRUCTURES SUBJECT TO ENGINEERING AND COUNCIL APPROVAL.
3. ALL MEASUREMENTS TO BE CHECKED PRIOR TO CONSTRUCTION.

LANDSCAPE AREA CALCULATIONS

LANDSCAPE AREAS
Total Landscape areas (all levels) = 542.3m2 (14.6% of site)

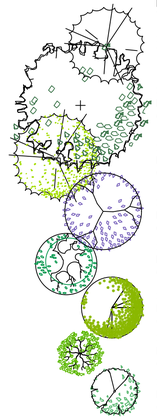
DEEP SOIL AREAS (DSA)
Total = 416.6m2 (11.2% of site)

CANOPY COVER
Proposed Large Trees (8m canopy) x 1 = 50.3m2
Proposed Medium Trees (6m canopy) x 5 = 141.5m2
Proposed Medium Trees (5m canopy) x 1 = 19.6m2
Proposed Small Trees (4m canopy) x 20 = 252m2
Proposed Small Trees (3m canopy) x 28 = 196m2
Total Canopy Cover = 659.4m2 (17.7% of site)

City of Stirling
14 Nov 2023
RECEIVED

LEGEND

TREES



SUGGESTED VERGE TREES TO COUNCIL SPECIFICATIONS

SELECTED LARGE TREES
EG. MARRI
CANOPY: 8m

SELECTED MEDIUM TREES
EG. CHINESE TALLOW
CANOPY: 6m

SELECTED SMALL TREES
EG. PINK MARRI
CANOPY: 5m

SELECTED SMALL TREES
EG. NATIVE FRANGIPANI
CANOPY: 4m

SELECTED SMALL TREES
EG. LITTLE GHOST GUM, TUCKEROO
CANOPY: 4m

SELECTED SMALL TREES
EG. CAPITAL PEAR
CANOPY: 3m

SELECTED SMALL TREES
EG. CITRUS, PIN CUSHION HAKEA
CANOPY: 3m

PLANTING

PLANTING TYPE 01
GROUNDCOVERS

PLANTING TYPE 02
SHRUBS

PLANTING TYPE 03
STRAPPY/MIXED

PLANTING TYPE 04
SHADE TOLERANT

SELECTED LAWN SPECIES
EG. SOFT LEAF BUFFALO

MISC

PAVEMENT TREATMENTS (TBC)

DEEP SOIL AREAS (DSA)

SELECTED CLIMBER ON TRELLIS OR STRUCTURE

SELECTED EDGE RESTRAINT
EG. MILD STEEL

PLANTING IMAGES

REV	DATE	DWN	APP	DESCRIPTION
C	27.07.23	AC	KD	UPDATED LANDSCAPE CONCEPT PLAN
D	04.08.23	AC	KD	UPDATED LANDSCAPE CONCEPT PLAN
E	08.08.23	KD	KD	UPDATED LANDSCAPE CONCEPT PLAN
F	31.10.23	AC	KD	UPDATED LANDSCAPE CONCEPT PLAN
G	02.11.23	AC	KD	UPDATED LANDSCAPE CONCEPT PLAN

NOTES

1. GENERAL

1.1 ALL SCALES ARE AS NOTED AND TO SUIT A1 PAPER SIZE
1.2 THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT SCHEDULES, REPORTS AND DRAWINGS AND PROJECT SPECIFICATIONS.
1.3 FOR ALL FINISHED LEVELS DRAINAGE DESIGN AND WATER CONNECTION POINTS REFER TO ASSOCIATED PROJECT DOCUMENTATION (BY OTHERS).
1.4 FOR ALL ASSOCIATED IRRIGATION DESIGN REFER TO IRRIGATION DOCUMENTATION AND SPECIFICATION.

2. SOIL PREPARATION

2.1 ALL AREAS ARE TO BE FINE GRADED EVENLY TO CONFORM TO KERB LEVELS AND SURROUNDING FINISHES.
2.2 SURFACES SHALL BE FREE FROM DEPRESSIONS, IRREGULARITIES AND NOTICEABLE CHANGES IN GRADE. GENERALLY, GRADES SHALL DEVIATE IN LEVEL NO GREATER THAN 20mm IN ONE LINEAR METRE.
2.3 PLANTED AREAS SHALL BE SPREAD WITH MIN. 50mm OF APPROVED STANDARD SOIL CONDITIONER THAT SHALL BE RIPPED INTO EXISTING SOIL TO A MIN. DEPTH OF 200mm.
2.4 ALL SITE AND IMPORTED SOILS, POTTING MIX, SOIL CONDITIONERS AND MULCHES TO BE IN ACCORDANCE TO RELEVANT AUSTRALIAN STANDARDS.

3.PLANTING

3.1 PLANTED AREAS SHALL BE MULCHED WITH AN ORGANIC MULCH UNLESS OTHERWISE STATED TO A MINIMUM DEPTH OF 75mm.
3.2 ADVANCED TREES SHALL BE STAKED W/ 50x50mm DIA HARDWOOD POSTS. POSTS SHALL BE PAINTED BLACK AND INSTALLED TO A MIN DEPTH OF 500mm. TREES SHALL BE SECURED TO POLES W/ RUBBER TIES IN FIGURE 8.
3.3 TREES PLANTED WITH IN 1000mm OF BOUNDARY WALLS AND/OR PARKING AREAS SHALL BE INSTALLED WITHIN 600mm DEPTH NYLEX ROOT BARRIER MEMBRANE. MEMBRANE SHALL BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
3.4 REFER TO PLANTING SCHEDULE FOR PROPOSED SPECIES, SPACING AND SIZES.
3.5 PLANTS TO BE SET OUT IN EVEN SPACING TO FILL THE DESIGNATED AREAS.
3.6 IN AREAS OF MIXED PLANTING, SPECIES TO BE SPREAD OUT AT RANDOM, IN GROUPINGS OF 2 OR 3.
3.7 PLANTS SHALL BE SUPPLIED FROM AN INDUSTRY ACCREDITED WHOLESALE NURSERY. PLANTS SHALL BE IN APPROPRIATE SIZE FOR THE LISTED POT SIZE AND IN GOOD HEALTH.
3.8 IF SPECIES ARE UNAVAILABLE (OR IN SIZES SPECIFIED), SUBSTITUTES MUST BE APPROVED BY SUPERINTENDENT BEFORE DELIVERY AND INSTALLATION.

4. IRRIGATION

4.1 PLANTING TO GROUND LEVEL TO BE IRRIGATED VIA A FULLY AUTOMATIC SYSTEM FROM MAINS.
4.2 WATER PRESSURE TO HAVE A MINIMUM FLOW RATE OF 30L/pm AT 300kPA FROM THE WATER CONNECTION POINT (OR AS STIPULATED).
4.3 CONTROLLER TO BE LOCATED IN BIN STORE AND INDIVIDUAL GARAGES (OR AS SHOWN ON IRRIGATION DETAILS).
4.4 SLEEVES BENEATH PAVED SURFACES AND TO RAISED PLANTING AREAS TO BE PROVIDED BY OTHERS.
4.5 IRRIGATION TO GARDEN BEDS TO BE NETAFIM TECHLINE, SUB SURFACE IRRIGATION. INSTALLED TO MANUFACTURERS SPECIFICATION. IRRIGATION TO TURF TO BE POP UP SPRINKLERS; MP ROTATORS OR SIMILAR. IRRIGATION TO TREES TO BE BE BUBBLERS; TORO FLOOD BUBBLERS OR SIMILAR.
4.6 ASCON DRAWINGS, MANUALS AND 12 MONTH WARRANTY SHALL BE SUPPLIED BY THE IRRIGATION CONTRACTOR TO THE CLIENT UPON PRACTICAL COMPLETION.
4.7 PLEASE REFER TO IRRIGATION DRAWING SET FOR FINAL LAYOUT AND SCHEDULE

PLANTING PALETTE

Symbol	Species	Common Name	Quantities	Size
Trees:				
CITlat	Citrus latifolia	Dwarf Persian Lime	As Shown	100L
CITlim	Citrus limon	Dwarf Eureka Lemon	As Shown	100L
CORcal	Corymbia calophylla	Marri Tree	As Shown	100L
CORcal	Corymbia calophylla grafted	Pink Marri Tree	As Shown	100L
CORfic	Corymbia ficifolia (grafted)	WA Red Flowering Gum	As Shown	100L
CUPana	Cupaniopsis anacardioides	Tuckeroo	As Shown	100L
EUCvic	Eucalyptus victrix	Little Ghost Gum	As Shown	100L
HAKlau	Hakea laurina	Pin Cushion Hakea	As Shown	100L
HYMfla	Hymenosporum flavum	Native Frangipani	As Shown	100L
SAPseb	Sapium sebifera	Chinese Tallow	As Shown	100L
Shrubs and Groundcovers:				
ANIgol	Anigozanthos 'Gold Velvet'	Kangaroo Paw	3/m2	200mm
DIAeme	Dianella tasmanica 'Emerald Arch'	Emerald Arch	3/m2	140mm
DIAbla	Dianella tasmanica 'Blaze'	Blaze	3/m2	140mm
DICrep	Dichondra repens	Kidney Weed	3/m2	140mm
EREblu	Eremophila 'Blue Horizon'	Blue Horizon	3/m2	140mm
GREgin	Grevillea 'Gin Gin Gem'	Gin Gin Gem	3/m2	140mm
HIBsca	Hibbertia scandens	Snake Vine	3/m2	140mm
LEUbro	Leucophyta brownii	Silver Cushion Bush	3/m2	140mm
LIRjus	Liriope 'Just Right'	Just Right	3/m2	140mm
LOMtan	Lomandra 'Tanika'	Tanika	3/m2	200mm
PIMfer	Pimelea ferruginea	Rice Flower	3/m2	200mm
PITmis	Pittosporum tobira 'Miss Muffet'	Miss Muffet	2/lm	200mm
MYOpar	Myoporum parvifolium 'Yareena'	Yareena	3/m2	140mm
RHAori	Rhapiolepsis 'Oriental Pearl'	Dwarf Indian Hawthorn	2/lm	200mm
SANtri	Sansevieria trifasciata laurentii	Mother-in-law's Tongue	3/m2	200mm
SCAhum	Scaevola humilis 'Purple Fusion'	Fan Flower	3/m2	140mm
TRAjas	Trachelospermum jasminoides	Star Jasmine	3/m2	140mm
WESgre	Westringia 'Grey Box'	Compact Coastal Rosemary	2/lm	200mm

kdla kelsie davies landscape architecture
Karrinyup WA 6018
mob: 0450 965 569
email: kelsie@kdla.com.au

DEVELOPMENT APPROVAL

JOB No. 0346 PAGE 101 REV G

0 1 2 4 6 10 20m
SCALE 1:200 @A1

OSBORNE PLACE DEVELOPMENT
LANDSCAPE CONCEPT PLAN

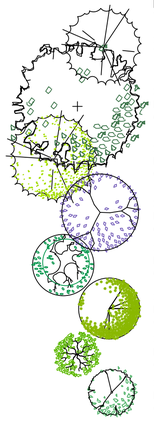
LOCUS DEVELOPMENT GROUP
8 OSBORNE PLACE, STIRLING

G:\Shared drives\KDLA Design\0346 Osborne Place_Locus Development\01. CAD Design\0346-OSB-LR_I.dwg

GENERAL NOTES:
1. THIS IS A CONCEPT PLAN ONLY.
2. ALL STRUCTURES SUBJECT TO ENGINEERING AND COUNCIL APPROVAL.
3. ALL MEASUREMENTS TO BE CHECKED PRIOR TO CONSTRUCTION.

City of Stirling
14 Nov 2023
RECEIVED

REV	DATE	DWN	APP	DESCRIPTION
C	27.07.23	AC	KD	UPDATED LANDSCAPE CONCEPT PLAN
D	04.08.23	AC	KD	UPDATED LANDSCAPE CONCEPT PLAN
E	08.08.23	KD	KD	UPDATED LANDSCAPE CONCEPT PLAN
F	31.10.23	AC	KD	UPDATED LANDSCAPE CONCEPT PLAN - UNITS ONLY
G	02.11.23	AC	KD	UPDATED LANDSCAPE CONCEPT PLAN - UNITS ONLY



LEGEND

TREES

SUGGESTED VERGE TREES
TO COUNCIL SPECIFICATIONS

SELECTED LARGE TREES
EG. MARRI
CANOPY: 8m

SELECTED MEDIUM TREES
EG. CHINESE TALLOW
CANOPY: 6m

SELECTED SMALL TREES
EG. PINK MARRI
CANOPY: 5m

SELECTED SMALL TREES
EG. NATIVE FRANGIPANI
CANOPY: 4m

SELECTED SMALL TREES
EG. LITTLE GHOST GUM, TUCKEROO
CANOPY: 4m

SELECTED SMALL TREES
EG. CAPITAL PEAR
CANOPY: 3m

SELECTED SMALL TREES
EG. CITRUS, PIN CUSHION HAKEA
CANOPY: 3m

PLANTING

PLANTING TYPE 01
GROUNDCOVERS

PLANTING TYPE 02
SHRUBS

PLANTING TYPE 03
STRAPPY/MIXED

PLANTING TYPE 04
SHADE TOLERANT

SELECTED LAWN SPECIES
EG. SOFT LEAF BUFFALO

MISC

PAVEMENT TREATMENTS (TBC)

DEEP SOIL AREAS (DSA)

SELECTED CLIMBER ON TRELLIS
OR STRUCTURE

SELECTED EDGE RESTRAINT
EG. MILD STEEL

PLANTING IMAGES

NOTES

1. GENERAL

1.1 ALL SCALES ARE AS NOTED AND TO SUIT A1 PAPER SIZE
1.2 THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT SCHEDULES, REPORTS AND DRAWINGS AND PROJECT SPECIFICATIONS.
1.3 FOR ALL FINISHED LEVELS DRAINAGE DESIGN AND WATER CONNECTION POINTS REFER TO ASSOCIATED PROJECT DOCUMENTATION (BY OTHERS).
1.4 FOR ALL ASSOCIATED IRRIGATION DESIGN REFER TO IRRIGATION DOCUMENTATION AND SPECIFICATION.

2. SOIL PREPARATION

2.1 ALL AREAS ARE TO BE FINE GRADED EVENLY TO CONFORM TO KERB LEVELS AND SURROUNDING FINISHES.
2.2 SURFACES SHALL BE FREE FROM DEPRESSIONS, IRREGULARITIES AND NOTICEABLE CHANGES IN GRADE. GENERALLY, GRADES SHALL DEVIATE IN LEVEL NO GREATER THAN 20mm IN ONE LINEAR METRE.
2.3 PLANTED AREAS SHALL BE SPREAD WITH MIN. 50mm OF APPROVED STANDARD SOIL CONDITIONER THAT SHALL BE RIPPED INTO EXISTING SOIL TO A MIN. DEPTH OF 200mm.
2.4 ALL SITE AND IMPORTED SOILS, POTTING MIX, SOIL CONDITIONERS AND MULCHES TO BE IN ACCORDANCE TO RELEVANT AUSTRALIAN STANDARDS.

3.PLANTING

3.1 PLANTED AREAS SHALL BE MULCHED WITH AN ORGANIC MULCH UNLESS OTHERWISE STATED TO A MINIMUM DEPTH OF 75mm.
3.2 ADVANCED TREES SHALL BE STAKED W/ 50x50mm DIA HARDWOOD POSTS. POSTS SHALL BE PAINTED BLACK AND INSTALLED TO A MIN DEPTH OF 500mm. TREES SHALL BE SECURED TO POLES W/ RUBBER TIES IN FIGURE 8.
3.3 TREES PLANTED WITH IN 1000mm OF BOUNDARY WALLS AND/OR PARKING AREAS SHALL BE INSTALLED WITHIN 600mm DEPTH NYLEX ROOT BARRIER MEMBRANE. MEMBRANE SHALL BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
3.4 REFER TO PLANTING SCHEDULE FOR PROPOSED SPECIES, SPACING AND SIZES.
3.5 PLANTS TO BE SET OUT IN EVEN SPACING TO FILL THE DESIGNATED AREAS.
3.6 IN AREAS OF MIXED PLANTING, SPECIES TO BE SPREAD OUT AT RANDOM, IN GROUPINGS OF 2 OR 3.
3.7 PLANTS SHALL BE SUPPLIED FROM AN INDUSTRY ACCREDITED WHOLESALE NURSERY. PLANTS SHALL BE IN APPROPRIATE SIZE FOR THE LISTED POT SIZE AND IN GOOD HEALTH.
3.8 IF SPECIES ARE UNAVAILABLE (OR IN SIZES SPECIFIED), SUBSTITUTES MUST BE APPROVED BY SUPERINTENDENT BEFORE DELIVERY AND INSTALLATION.

4. IRRIGATION

4.1 PLANTING TO GROUND LEVEL TO BE IRRIGATED VIA A FULLY AUTOMATIC SYSTEM FROM MAINS.
4.2 WATER PRESSURE TO HAVE A MINIMUM FLOW RATE OF 30L/pm AT 300kPA FROM THE WATER CONNECTION POINT (OR AS STIPULATED).
4.3 CONTROLLER TO BE LOCATED IN BIN STORE AND INDIVIDUAL GARAGES (OR AS SHOWN ON IRRIGATION DETAILS).
4.4 SLEEVES BENEATH PAVED SURFACES AND TO RAISED PLANTING AREAS TO BE PROVIDED BY OTHERS.
4.5 IRRIGATION TO GARDEN BEDS TO BE NETAFIM TECHLINE, SUB SURFACE IRRIGATION. INSTALLED TO MANUFACTURERS SPECIFICATION. IRRIGATION TO TURF TO BE POP UP SPRINKLERS; MP ROTATORS OR SIMILAR. IRRIGATION TO TREES TO BE BE BUBBLERS; TORO FLOOD BUBBLERS OR SIMILAR.
4.6 ASCON DRAWINGS, MANUALS AND 12 MONTH WARRANTY SHALL BE SUPPLIED BY THE IRRIGATION CONTRACTOR TO THE CLIENT UPON PRACTICAL COMPLETION.
4.7 PLEASE REFER TO IRRIGATION DRAWING SET FOR FINAL LAYOUT AND SCHEDULE

PLANTING PALETTE

Symbol	Species	Common Name	Quantities	Size
Trees:				
CITlat	Citrus latifolia	Dwarf Persian Lime	As Shown	100L
CITlim	Citrus limon	Dwarf Eureka Lemon	As Shown	100L
CORcal	Corymbia calophylla	Marri Tree	As Shown	100L
CORcal	Corymbia calophylla grafted	Pink Marri Tree	As Shown	100L
CORfic	Corymbia ficifolia (grafted)	WA Red Flowering Gum	As Shown	100L
CUPana	Cupaniopsis anacardioides	Tuckeroo	As Shown	100L
EUCvic	Eucalyptus victrix	Little Ghost Gum	As Shown	100L
HAKlau	Hakea laurina	Pin Cushion Hakea	As Shown	100L
HYMfla	Hymenosporum flavum	Native Frangipani	As Shown	100L
SAPseb	Sapium sebifera	Chinese Tallow	As Shown	100L
Shrubs and Groundcovers:				
ANIgol	Anigozanthos 'Gold Velvet'	Kangaroo Paw	3/m2	200mm
DIAeme	Dianella tasmanica 'Emerald Arch'	Emerald Arch	3/m2	140mm
DIAbla	Dianella tasmanica 'Blaze'	Blaze	3/m2	140mm
DICrep	Dichondra repens	Kidney Weed	3/m2	140mm
EREblu	Eremophila 'Blue Horizon'	Blue Horizon	3/m2	140mm
GREgin	Grevillea 'Gin Gin Gem'	Gin Gin Gem	3/m2	140mm
HIBsca	Hibbertia scandens	Snake Vine	3/m2	140mm
LEUbro	Leucophyta brownii	Silver Cushion Bush	3/m2	140mm
LIRjus	Liriope 'Just Right'	Just Right	3/m2	140mm
LOMtan	Lomandra 'Tanika'	Tanika	3/m2	200mm
PIMfer	Pimelea ferruginea	Rice Flower	3/m2	200mm
PITmis	Pittosporum tobira 'Miss Muffet'	Miss Muffet	2/lm	200mm
MYOpar	Myoporum parvifolium 'Yareena'	Yareena	3/m2	140mm
RHAori	Rhapiolepsis 'Oriental Pearl'	Dwarf Indian Hawthorn	2/lm	200mm
SANtri	Sansevieria trifasciata laurentii	Mother-in-law's Tongue	3/m2	200mm
SCAhum	Scaevola humilis 'Purple Fusion'	Fan Flower	3/m2	140mm
TRAjas	Trachelospermum jasminoides	Star Jasmine	3/m2	140mm
WESgre	Westringia 'Grey Box'	Compact Coastal Rosemary	2/lm	200mm

kdla kelsie davies landscape architecture
Karrinyup WA 6018
mob: 0450 965 569
email: kelsie@kdla.com.au

DEVELOPMENT APPROVAL

JOB No. 0346 PAGE 102 REV G

0 1 2 4 6 10 20m
SCALE 1:200 @A1

OSBORNE PLACE DEVELOPMENT
LANDSCAPE CONCEPT PLAN - UNITS ONLY

LOCUS DEVELOPMENT GROUP
8 OSBORNE PLACE, STIRLING

G:\Shared drives\KDLA Design\0346 Osborne Place_Locus Development\01. CAD Design\0346-OSB-LR_I.dwg


City of Stirling
14 Nov 2023
RECEIVED
CANVAS BLANKS
Disclaimer: All images and statements are based on information available to, and the intention of, Locus Development Group (LDGJ at the time of creation of this design and may change due to future circumstances. No image or statement amounts to a legally binding obligation on or warranty by LDG. LDG accepts no liability for any loss or damage arising as a result of any reliance on this plan,-brochure or its contents.

APPENDIX 3 – Traffic Impact Statement

DYNAMIC PLANNING AND DEVELOPMENTS

urbii
Sustainable Transport. Safe Solutions

8 Osborne Place, Stirling
Proposed Residential Development

TRANSPORT IMPACT STATEMENT

Prepared for:
Locus Development Group

November 2023

8 Osborne Place, Stirling

Prepared for: Locus Development Group
Prepared by: Paul Ghantous
Date: 8 November 2023
Project number: U23.116

Version control

Version No.	Date	Prepared by	Revision description	Issued to
U23.116.r01	21/10/23	PG	DRAFT	Dynamic Planning
U23.116.r01a	08/11/23	PG	FINAL	Dynamic Planning

Scan me

Urbii Consulting Pty Ltd
ABN 34 630 529 476
PO BOX 4315
BALDIVIS WA 6171
T: + 61 433 858 164
E: customer@urbii.com.au
W: www.urbii.com.au

Contents

Figures

Tables

Appendices

1 Introduction

This Transport Impact Statement has been prepared by Urbii on behalf of Locus Development Group with regards to the proposed residential development, located at 8 Osborne Place, Stirling.

The subject site is situated on the southern side of Osborne Place, at the end of a culdesac, as shown in Figure 1. The site is presently vacant and is surrounded by mostly residential land uses.

It is proposed to develop the site into a residential development, delivering 22 residential dwelling units.

The key issues that will be addressed in this report include the traffic generation and distribution of the proposed development, access and egress movement patterns, car parking and access to the site for alternative modes of transport.

Figure 1: Subject site

2 Scope of work

The WAPC *Transport Assessment Guidelines 2016* identifies the proposed development as being “Moderate Impact” (Figure 2). A Transport Impact Statement (TIS) has been prepared to support a robust Development Application and to assist the LGA with demonstration of traffic impact.

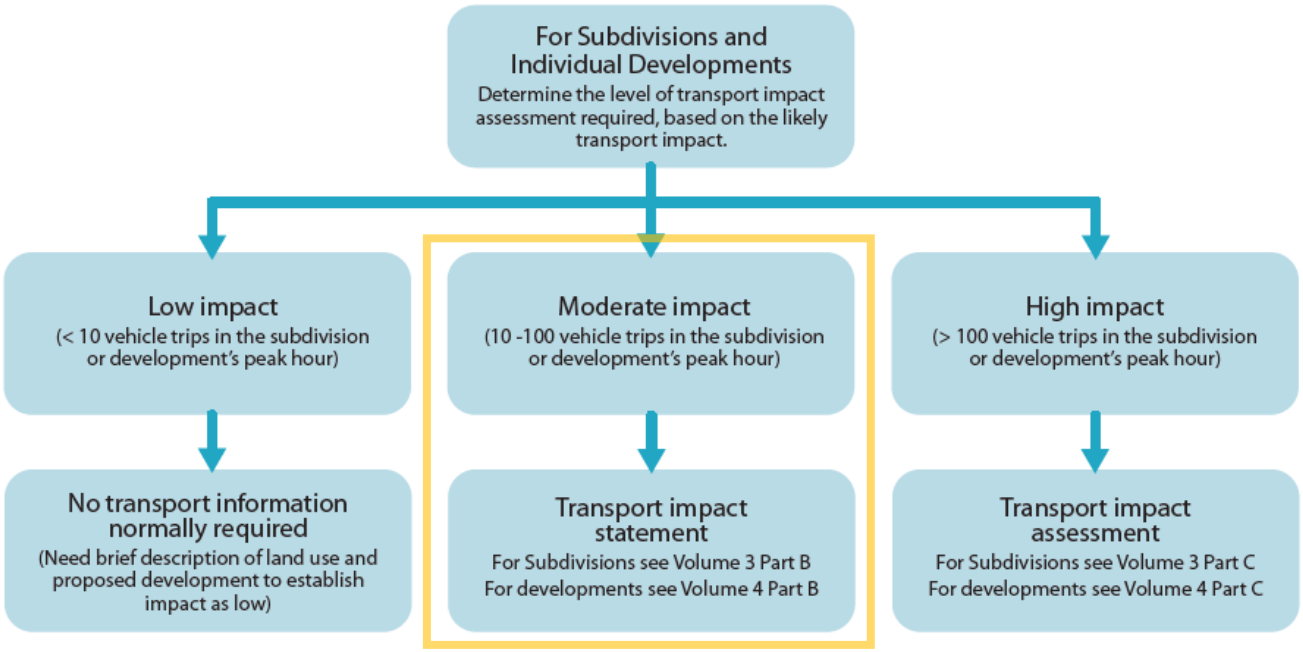


Figure 2: WAPC Transport Assessment Guidelines – reporting requirements

3 Proposed development

The proposal for the subject site is for a residential development, comprising:

- A total of 22 residential dwellings configured as townhouses;
- Car parking providing 1-2 bays per dwelling;
- Five visitor car parking bays provided in Osborne Place adjacent to the site;
- Internal shared zone for walking, cycling and driving; and,
- Communal bin store on the ground level located near the site entry.

Vehicle access to the site is proposed via a single crossover on Osborne Place. Bins will be wheeled out from the communal bin store for kerbside waste collection from the street.

People walking and cycling will access the development from the external path network abutting the site. The proposed development has been designed to accommodate a ‘shared space’ for residents who choose to walk, cycle or drive.

The proposed development plans are included for reference in Appendix A.

4 Vehicle access and parking

4.1 Vehicle access

The proposed vehicular access arrangements have been reviewed for efficient and safe traffic circulation.

The site is presently vacant with no existing vehicle access or parking. As detailed in the proposed development plans and in Figure 3, vehicle access for all dwellings will be via a single crossover on Osborne Place. The crossover is approximately 6m wide within the verge and a sliding access gate is provided at the property boundary to secure the site.

Internally, there is a street which is proposed to be shared for the movement of people choosing to drive, cycle or walk. There is a functional internal street width which ranges between 5.5m and 6.1m, which is sufficient for people driving in opposite directions to pass each other at low speed.

Parking garages are setback from the street to provide the required manoeuvring width for cars to enter or exit garages.

Figure 3: Proposed vehicle access

4.2 Movement and place analysis

The philosophy of movement and place recognises that streets perform multiple functions. Transport links not only move people from point A to B, but they can also function as key places. There is a natural tension between these two functions. As a movement corridor, every link aims to minimise travel time and keep people and goods moving. On the other hand, as a place, streets aim to increase visitor dwell time.

Not all streets can be popular destinations, just as not all streets can prioritise vehicle movement. It is important to recognise the roles of movement and place on our roads and streets. Finding an appropriate balance is key for integrated transport planning.

The movement and place framework, categorises roads and streets as a function of their role in moving people and being a place (Figure 4).

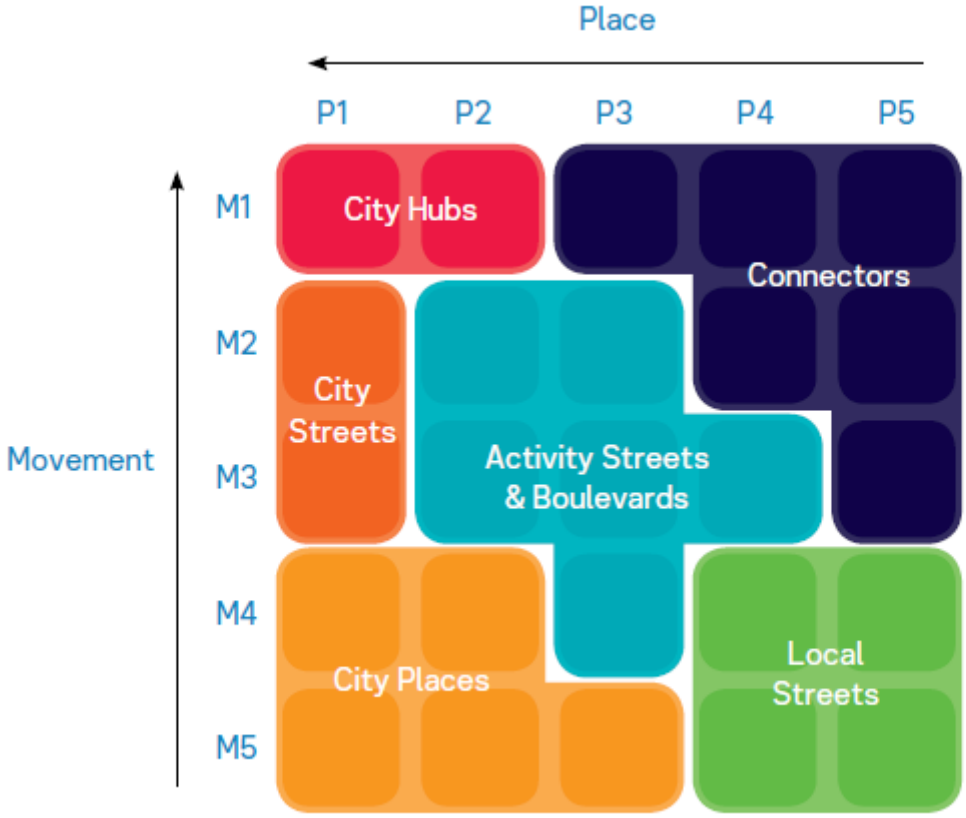


Figure 4: Movement and place – road and street categories

Source: *Movement and Place in Victoria*, Department of Transport Victoria, 2019

The proposed internal street meets the functional definition of 'M5' for movement. M5 links are for local movements. The internal street has no through connectivity, and its sole function is to facilitate movement for the proposed townhouses. The internal street meets the functional definition of 'P5' for place. P5 links are places of local significance. The internal street functions as a place for residents and visitors of the development.

Based on the movement and place categories, the proposed internal access street can be defined as a Local Street. Successful Local Streets should provide quiet, safe and desirable residential access for all ages and abilities that foster community spirit and local pride. They are part of the fabric of our neighbourhoods, where we live our lives and facilitate local community access.

The Main Roads WA *Speed Zoning - Policy and Application Guidelines - May 2021* recommends a speed limit of 10km/h in confined areas where movement of pedestrians and cyclists has priority over motor vehicles. Generally, the volume of traffic is very low. This definition is appropriate for the proposed development internal street.

To support the successful function of the proposed internal street, it is therefore recommended that a 10km/h speed limit apply internally. This speed limit applies equally for all modes of transport and can be reinforced through installation of shared zone signs.

The Australian Standard AS 1742.4-2008: *Manual of uniform traffic control devices - Speed controls*, provides guidance on the use of shared zones. Signs shall be used at the start and end of shared zones as specified in Clause 3.2.6 and shown in Figure 5. A typical shared zone treatment is shown in Appendix D.

SHARED ZONE (R4-4)

END SHARED ZONE (R4-5)

R4-4 R4-5

Figure 5: Signs for shared zones

Clause 3.2.6 Shared zones

"Shared zones are generally provided in areas where the competing demands of pedestrians, moving vehicles and parking require a form of control which allows complete pedestrian mobility and restricts vehicle speeds thereby enhancing pedestrian safety. A speed limit of 10 km/h is recommended.

In the design of a shared zone the environment needs to be altered to make it obviously different from other streets. This can be achieved by the use of different coloured and textured paving, by the use of full width paving between property lines and by judicial and aesthetic placement of planters and other landscaping. Perimeter (threshold) treatments in accordance with AS 1742.13 should also be considered. The signs SHARED ZONE (R4-4) and END SHARED ZONE (R4-5) (see Clause 3.1.5) shall be used at every entrance to and exit from the shared zone."

4.3 Car parking layout

Dimensions of car parking aisles and bays are compliant with AS2890.1. Parking garages are compliant with Australian Standard and there is sufficient manoeuvring apron width in front of garages.

Swept path analysis was undertaken for parking garages which confirms sufficient internal geometry. Refer to Appendix B for the swept path diagram.

Unit 10 & 11 which are at the end of the site may need 3-point turns to enter and/or exit parking spaces. AS2890.1 permits multi-point turns in low-speed, low-traffic car parks such as User Class 1A *Residential*.

4.4 Parking supply and demand

Units 1-16 are provided with a double garage to accommodate two parking spaces. Units 17-22 are allocated one car parking space each which is accessible within the internal access roadway. Five parallel car parking spaces are provided on Osborne Place adjacent to the site.

The proposed car parking supply will accommodate the needs of the development.

5 Provision for service vehicles

The proposed development is residential in nature and will not generate significant delivery and other service vehicle traffic. Bins will be wheeled out to Osborne Place from bin stores for kerbside waste collection on designated days.

6 Hours of operation

For most residential developments, the peak traffic hours typically coincide with the weekday AM and PM peak hours on the surrounding road network.

The weekday AM peak hour for the local road network occurs between 8am to 9am and the weekday PM peak hour occurs between 4pm to 5pm. The peak hours for the proposed development are anticipated to coincide at around these times.

7 Daily traffic volumes and vehicle types

7.1 Traffic generation

The traffic volume that will be generated by the proposed development has been estimated using trip generation rates derived with reference to the following sources:

- Roads and Traffic Authority of New South Wales *Guide to Traffic Generating Developments (2002);* and
- RTA TDT 2013/ 04a.

The trip generation rates adopted are detailed in Table 1.

Table 1: Adopted trip rates for traffic generation

Land use	Trip rate source	Daily rate	AM rate	PM rate	AM-in	AM-out	PM-in	PM-out
Residential	RTA NSW - Medium density residential building	5	0.5	0.5	25%	75%	65%	35%

The estimated traffic generation of the proposed development is detailed in Table 2. The proposed development is estimated to generate a total of 110 vehicles per day (vpd), with 11 vehicles per hour (vph) generated during the AM and PM peak hours, respectively.

These trips include both inbound and outbound vehicle movements. It is anticipated that most of the vehicle types would be passenger cars and SUVs.

Table 2: Traffic generation – Weekday AM and PM peak hours

Land use	Quantity	Daily Trips	AM Trips	PM Trips	AM Peak Trips		PM Peak Trips	
					IN	OUT	IN	OUT
Residential	22	110	11	11	3	8	7	4

7.2 Impact on surrounding roads

The WAPC Transport Impact Assessment Guidelines for Developments (2016) provides the following guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road but increases over 10 percent may. All sections of road with an increase greater than 10 percent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 percent of capacity. Therefore, any section of road where development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

The proposed development will not increase traffic flows on any roads adjacent to the site by the quoted WAPC threshold of +100vph to warrant further analysis. Therefore, the impact on the surrounding road network is acceptable.

8 Traffic management on the frontage roads

Information from online mapping services, Main Roads WA, Local Government, and/or site visits was collected to assess the existing traffic management on frontage roads.

8.1.1 Osborne Place

Osborne Place near the subject site is an approximately 10m wide, two-lane undivided road. A footpath is provided along the southern side of the road.

Osborne Place is classified as an *Access* road in the Main Roads WA road hierarchy (Figure 6) and operates under a built-up area speed limit of 50km/h (Figure 7). Access roads are the responsibility of Local Government and are typically for the provision of vehicle access to abutting properties (Figure 8).

The City of Stirling advised that no traffic data was available for Osborne Place at the time of preparation of this report. The proposed development is located at the end of a culdesac. Therefore, traffic volumes adjacent to the site will be minimal.

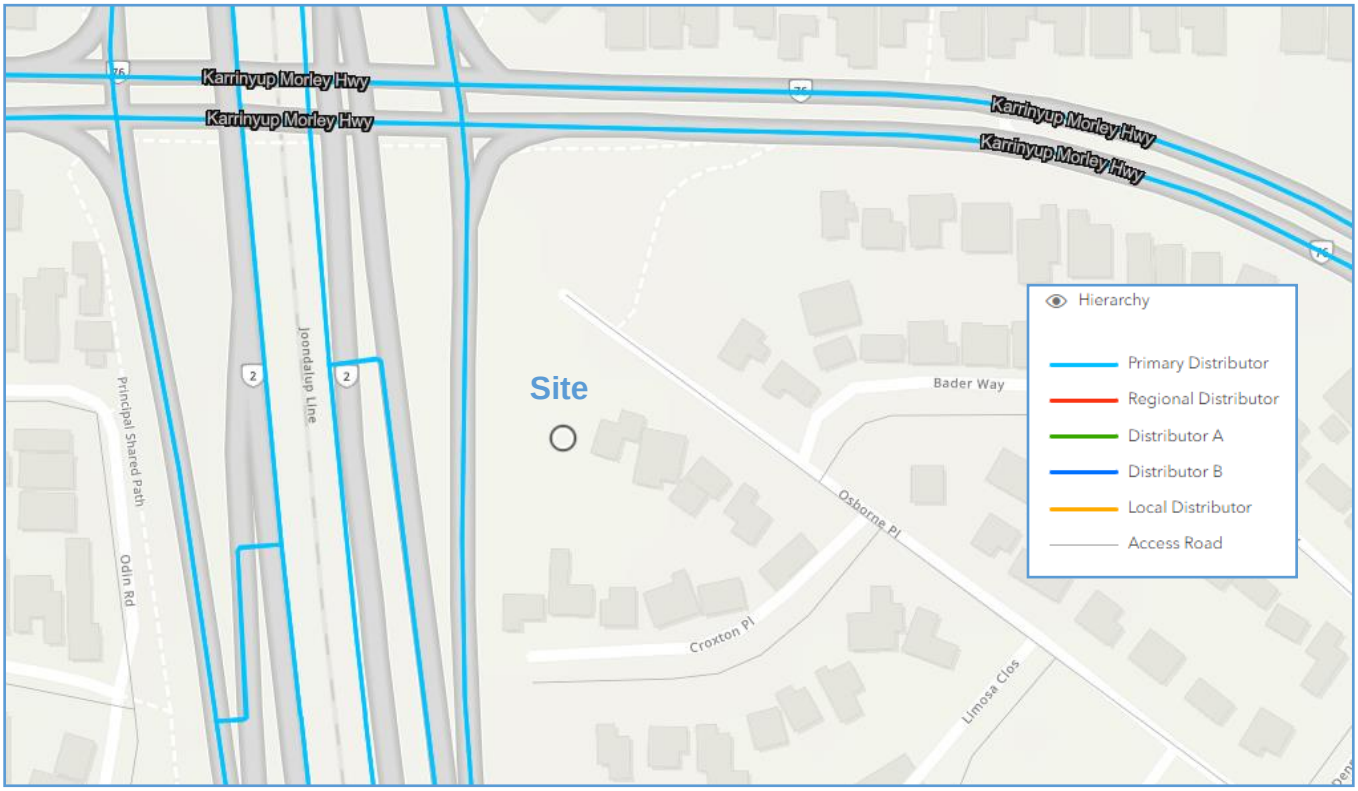


Figure 6: Main Roads WA road hierarchy plan

Source: Main Roads WA Road Information Mapping System (RIM)

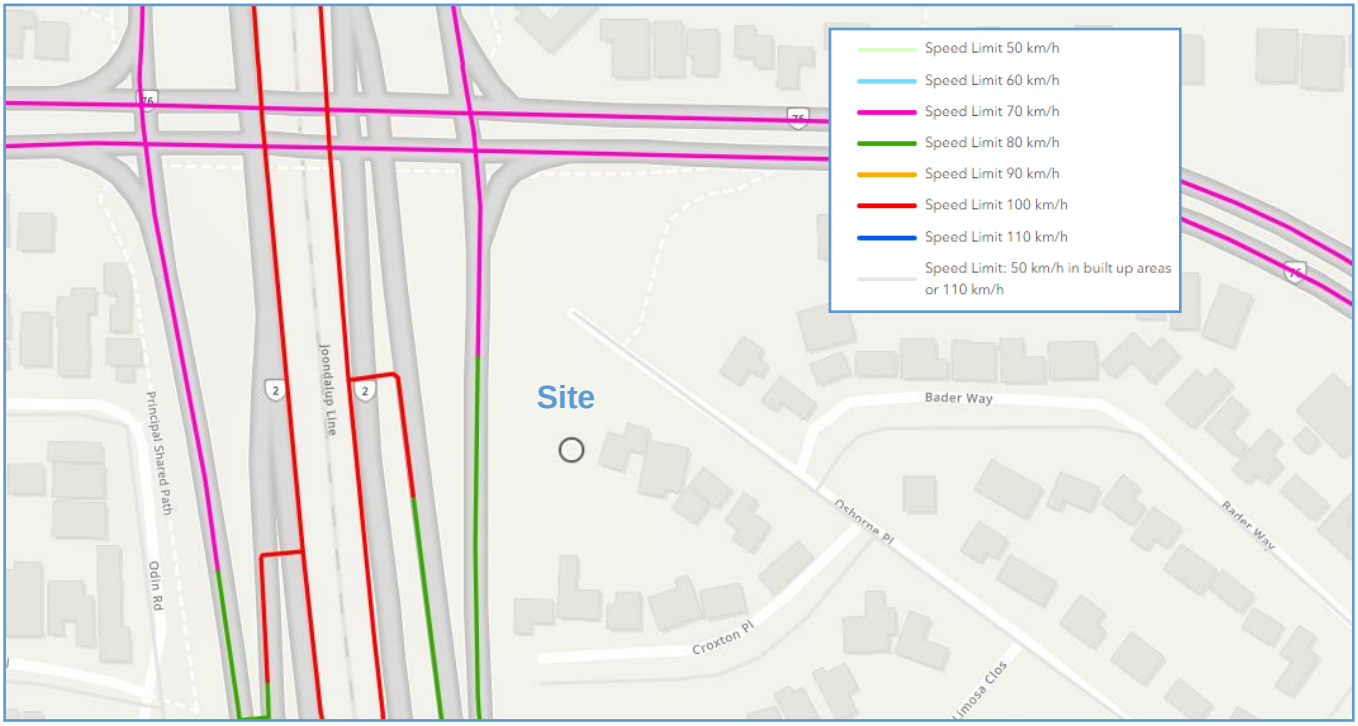


Figure 7: Main Roads WA road speed zoning plan

Source: Main Roads WA Road Information Mapping System (RIM)

ROAD HIERARCHY FOR WESTERN AUSTRALIA
ROAD TYPES AND CRITERIA (see Note 1)

CRITERIA	PRIMARY DISTRIBUTOR (PD) (see Note 2)	DISTRICT DISTRIBUTOR A (DA)	DISTRICT DISTRIBUTOR B (DB)	REGIONAL DISTRIBUTOR (RD)	LOCAL DISTRIBUTOR (LD)	ACCESS ROAD (A)
Primary Criteria						
1. Location (see Note 3)	All of WA incl. BUA	Only Built Up Area.	Only Built Up Area.	Only Non Built Up Area. (see Note 4)	All of WA incl. BUA	All of WA incl. BUA
2. Responsibility	Main Roads Western Australia.	Local Government.	Local Government.	Local Government.	Local Government.	Local Government.
3. Degree of Connectivity	High. Connects to other Primary and Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	Medium. Minor Network Role Connects to Distributors and Access Roads.	Low. Provides mainly for property access.
4. Predominant Purpose	Movement of inter regional and/or cross town/city traffic, e.g. freeways, highways and main roads.	High capacity traffic movements between industrial, commercial and residential areas.	Reduced capacity but high traffic volumes travelling between industrial, commercial and residential areas.	Roads linking significant destinations and designed for efficient movement of people and goods between and within regions.	Movement of traffic within local areas and connect access roads to higher order Distributors.	Provision of vehicle access to abutting properties
Secondary Criteria						
5. Indicative Traffic Volume (AADT)	In accordance with Classification Assessment Guidelines.	Above 8 000 vpd	Above 6 000 vpd.	Greater than 100 vpd	Built Up Area - Maximum desirable volume 6 000 vpd. Non Built Up Area – up to 100 vpd.	Built Up Area - Maximum desirable volume 3 000 vpd. Non Built Up Area – up to 75 vpd.
6. Recommended Operating Speed	60 – 110 km/h (depending on design characteristics).	60 – 80 km/h.	60 – 70 km/h.	50 – 110 km/h (depending on design characteristics).	Built Up Area 50 - 60 km/h (desired speed) Non Built Up Area 60 – 110 km/h (depending on design characteristics).	Built Up Area 50 km/h (desired speed). Non Built Up Area 50 – 110 km/h (depending on design characteristics).
7. Heavy Vehicles permitted	Yes.	Yes.	Yes.	Yes.	Yes, but preferably only to service properties.	Only to service properties.
8. Intersection treatments	Controlled with appropriate measures e.g. high speed traffic management, signing, line marking, grade separation.	Controlled with appropriate measures e.g. traffic signals.	Controlled with appropriate Local Area Traffic Management.	Controlled with measures such as signing and line marking of intersections.	Controlled with minor Local Area Traffic Management or measures such as signing.	Self controlling with minor measures.
9. Frontage Access	None on Controlled Access Roads. On other routes, preferably none, but limited access is acceptable to service individual properties.	Prefer not to have residential access. Limited commercial access, generally via service roads.	Residential and commercial access due to its historic status Prefer to limit when and where possible.	Prefer not to have property access. Limited commercial access, generally via lesser roads.	Yes, for property and commercial access due to its historic status. Prefer to limit whenever possible. Side entry is preferred.	Yes.
10. Pedestrians	Preferably none. Crossing should be controlled where possible.	With positive measures for control and safety e.g. pedestrian signals.	With appropriate measures for control and safety e.g. median/islands refuges.	Measures for control and safety such as careful siteing of school bus stops and rest areas.	Yes, with minor safety measures where necessary.	Yes.
11. Buses	Yes.	Yes.	Yes.	Yes.	Yes.	If necessary (see Note 5)
12. On-Road Parking	No (emergency parking on shoulders only).	Generally no. Clearways where necessary.	Not preferred. Clearways where necessary.	No – emergency parking on shoulders – encourage parking in off road rest areas where possible.	Built Up Area – yes, where sufficient width and sight distance allow safe passing. Non Built Up Area – no. Emergency parking on shoulders.	Yes, where sufficient width and sight distance allow safe passing.
13. Signs & Linemarking	Centrelines, speed signs, guide and service signs to highway standard.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs and guide signs.	Speed and guide signs.	Urban areas – generally not applicable. Rural areas - Guide signs.
14. Rest Areas/Parking Bays	In accordance with Main Roads' *Roadside Stopping Places Policy*.	Not Applicable.	Not Applicable.	Parking Bays/Rest Areas. Desired at 60km spacing.	Not Applicable.	Not Applicable.

Figure 8: Road types and criteria for Western Australia

Source: Main Roads Western Australia D10#10992

9 Public transport access

Information was collected from Transperth and the Public Transport Authority to assess the existing public transport access to and from the site.

The subject site has access to the following bus service within walking distance:

- Bus Route 424: Stirling Stn - Karrinyup Bus Stn via North Beach Rd & Gwelup.
- Bus Route 425: Stirling Stn - Warwick Stn via Karrinyup Bus Stn & Carine.
- Bus Route 427: Stirling Stn - Warwick Stn via North Beach Rd & Erindale Rd.

The closest bus stops are located on Karrinyup Road less than 500m walk to the north-east of the site (Figure 9). Bus services provide excellent coverage and connectivity to the rail network.

Public transport services provide a viable alternative mode of transport for residents and visitors of the proposed development.

The existing public transport network plans are shown in Figure 10 and Figure 11.

Figure 9: Closest bus stops serving the proposed development

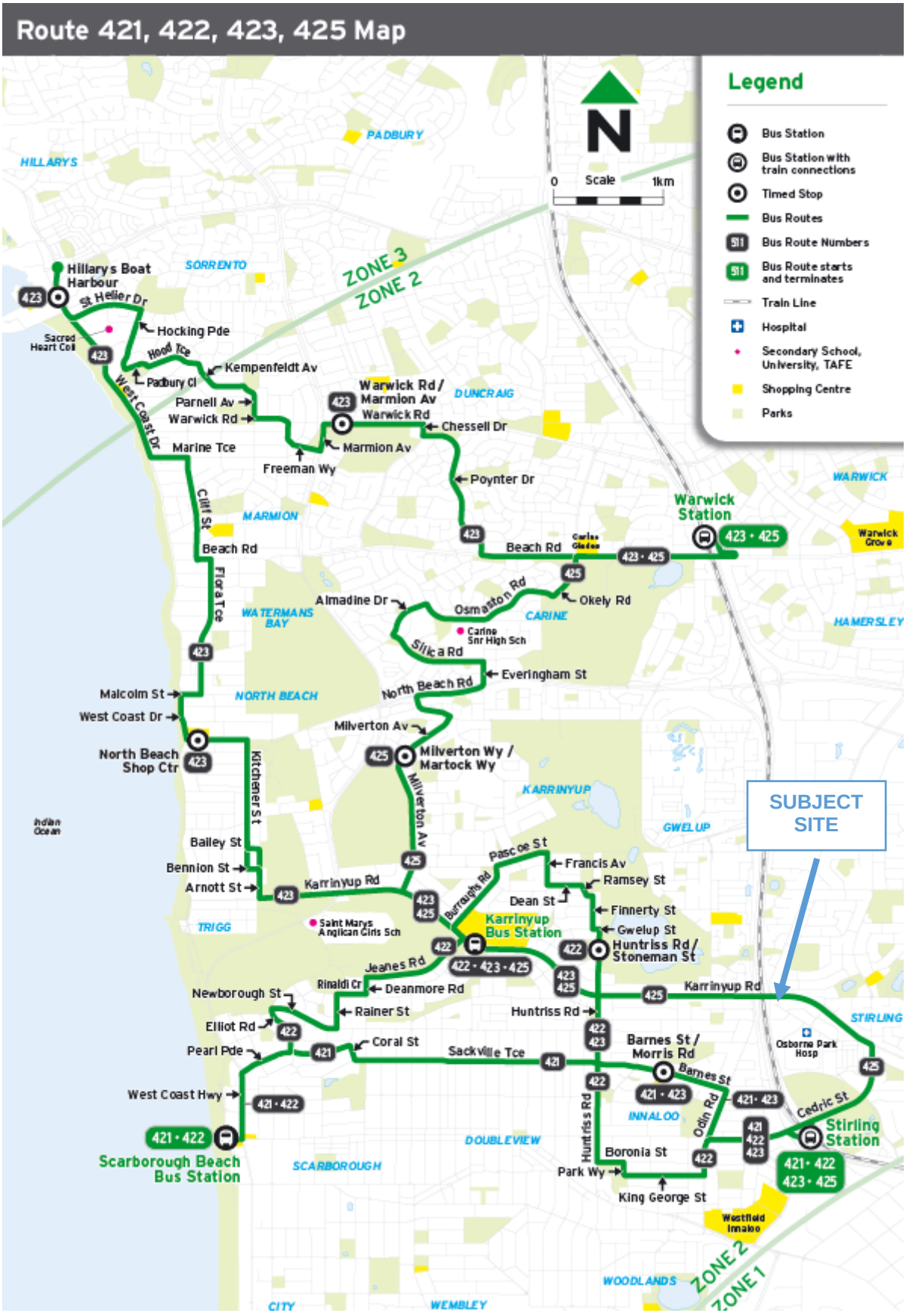


Figure 10: Transperth public transport plan (Route 425)

Source: Transperth

Route 424, 427, 428 Map

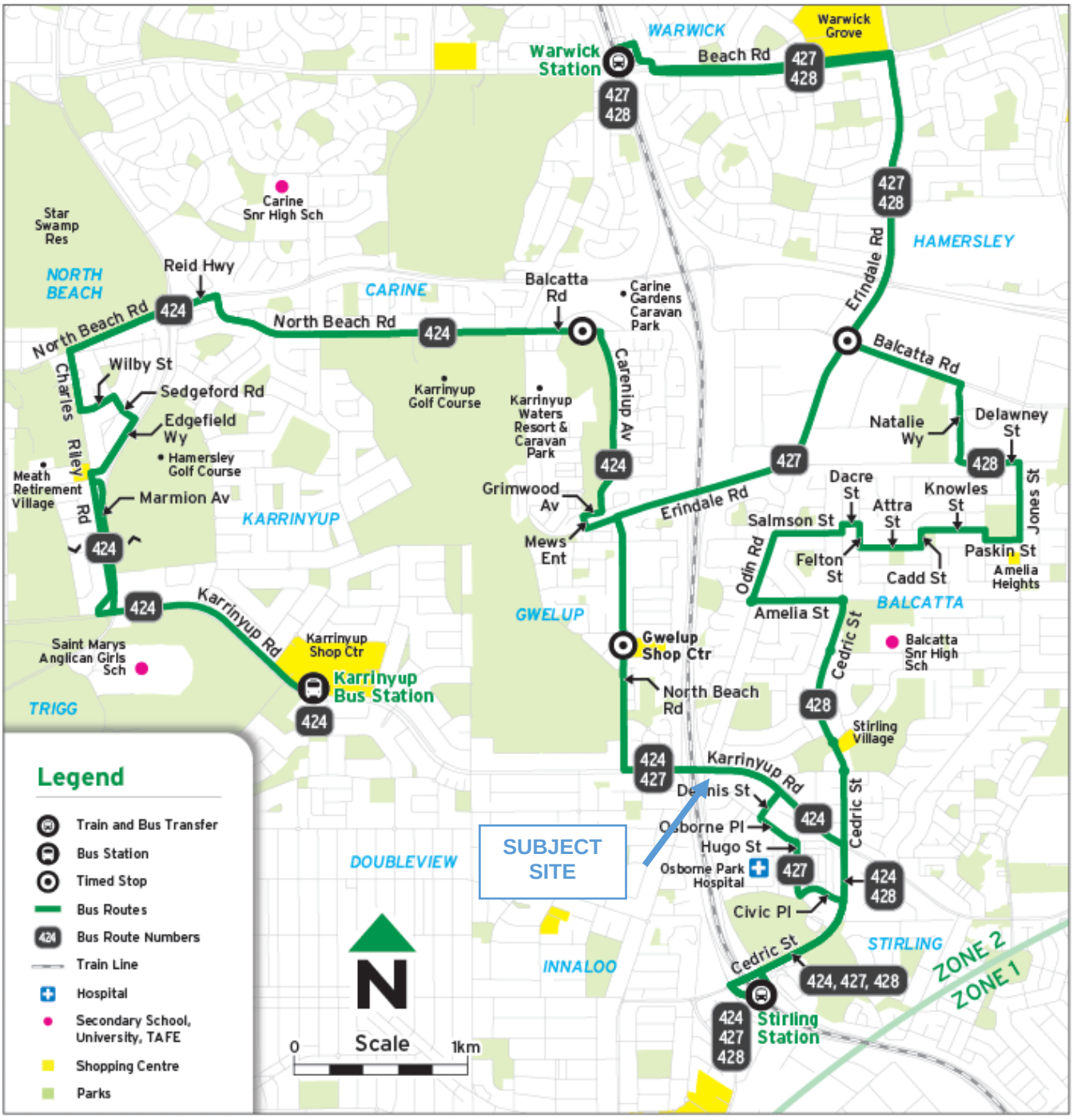


Figure 11: Transperth public transport plan (Route 424 & 427)

Source: Transperth

10 Pedestrian access

Information from online mapping services, Main Roads WA, Local Government, and site visits was collected to assess the pedestrian access for the proposed development.

10.1 Pedestrian facilities and level of service

A footpath is provided adjacent to the site on Osborne Place. A footpath extends through Karrinyup Osborne Reserve, which links to a path on Karrinyup Road. Pedestrian crossing facilities including kerb ramps are provided for crossing Osborne Place, which promotes improved access for bicycles, wheelchairs and prams.

The WAPC Transport Impact Assessment Guidelines for Developments (2016) provide warrants for installing pedestrian priority crossing facilities. This is based on the volume of traffic as the key factor determining if pedestrians can safely cross a road. The guidelines recommend pedestrian priority crossing facilities be considered once the peak hour traffic exceeds the volumes detailed in Table 3.

The traffic volumes in this table are based on a maximum delay of 45 seconds for pedestrians, equivalent to Level of Service E. Traffic volumes on the road network adjacent to the site are below the threshold for safe pedestrian crossing. Therefore, pedestrian crossing level of service is satisfactory on the adjacent road network.

Table 3: Traffic volume thresholds for pedestrian crossings

Road cross-section	Maximum traffic volumes providing safe pedestrian gap
2-lane undivided	1,100 vehicles per hour
2-lane divided (with refuge)	2,800 vehicles per hour
4-lane undivided*	700 vehicles per hour
4-lane divided (with refuge)*	1,600 vehicles per hour

10.2 Pedestrian sightline assessment

For small scale residential/mixed-use developments which generate low traffic volumes, reference was made to the Residential Design Codes.

As shown in the extract in Figure 12, this document specifies a required sightline truncation of 1.5mx1.5m for residential developments. The sightline truncation provided in the proposed development plan meets this minimum requirement and is therefore satisfactory. The access gate and surrounding infrastructure will be visually permeable, to maintain the required sightline truncation.

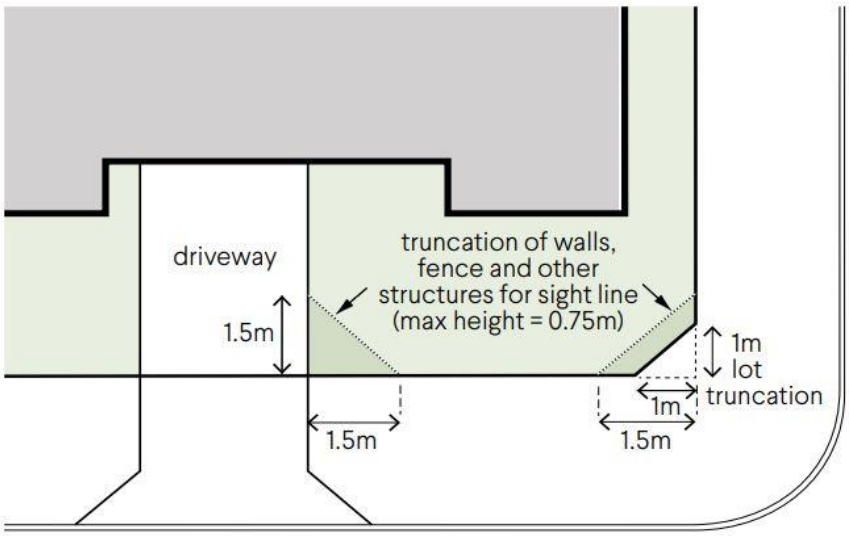


Figure 3.8a Truncation at street corner to provide sightlines (refer A3.8.7).

Figure 12: Design WA – Sightline truncations

10.3 Internal provision for walking and active transport

The proposed development internal street is designed to function as a “shared zone.” People driving must give way to people walking or cycling. As the street is designed to be a low-speed shared space, people can walk and cycle a sufficient distance away from garages to feel comfortable at the speed at which they are travelling.

The Cycling Aspects of Austroads Guides 2017 provides guidance on the separation of cyclists and motorists. Applying the thresholds detailed in Figure 13, internal motorised traffic volumes are “very low”. The 85th percentile target speed is well below 30km/h. Therefore, people can share the carriageway and cycle anywhere on the internal street, away from parking garage doors.

It is recommended that adequate outdoor lighting be provided for people cycling or walking along the internal street at night.

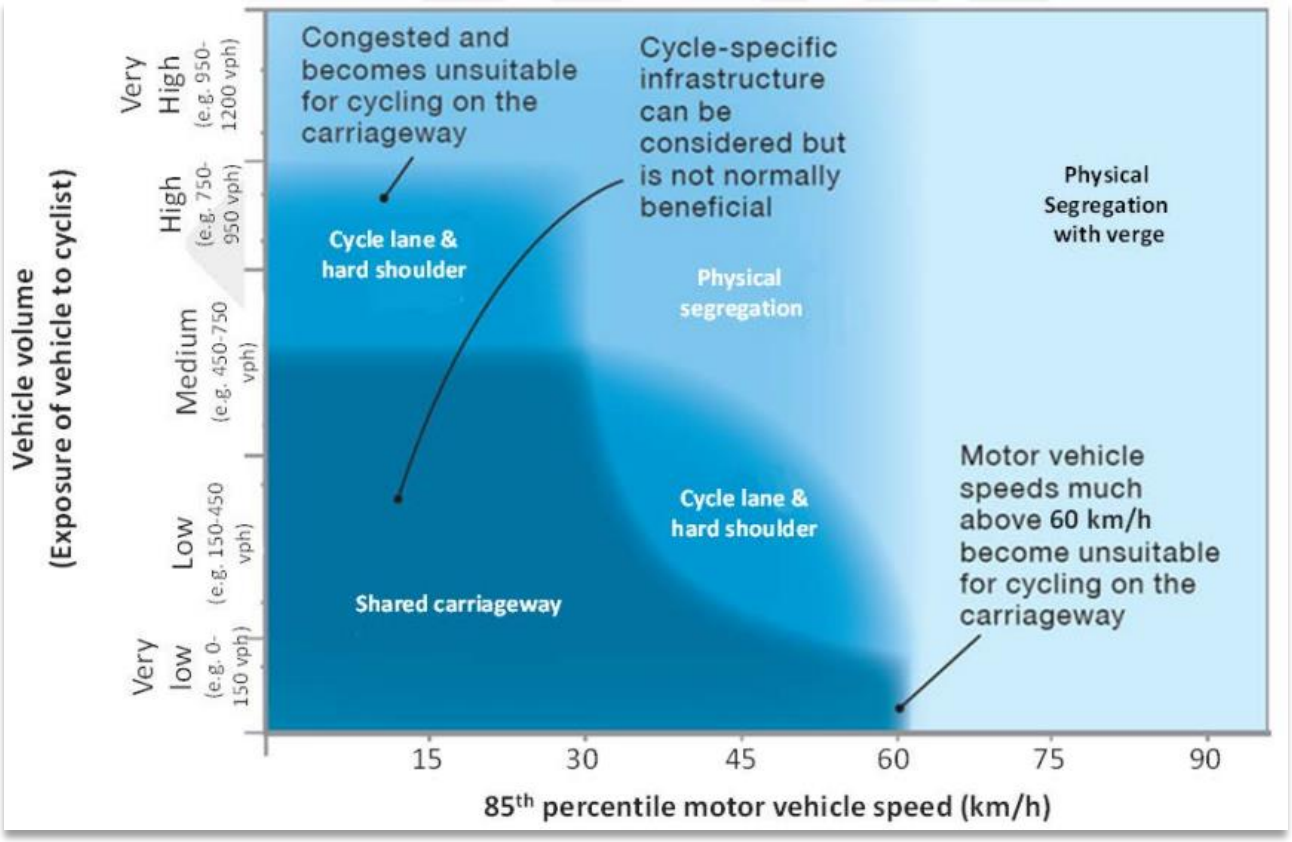


Figure 13: Guidance on the separation of cycling and driving

Source: Cycling Aspects of Austroads Guides, June 2017

11 Bicycle access

Information from online mapping services, Department of Transport, Local Government, and/or site visits was collected to assess bicycle access for the proposed development.

11.1 Bicycle network

The Department of Transport Bicycle Network Map (see Figure 14) shows the existing cycling connectivity to the subject site. Osborne Place is rated as a 'Good Road Riding Environment'. The freeway PSP is accessible nearby to the west. A new PSP has been recently constructed along the eastern side of the freeway, which connects to Civic Place.

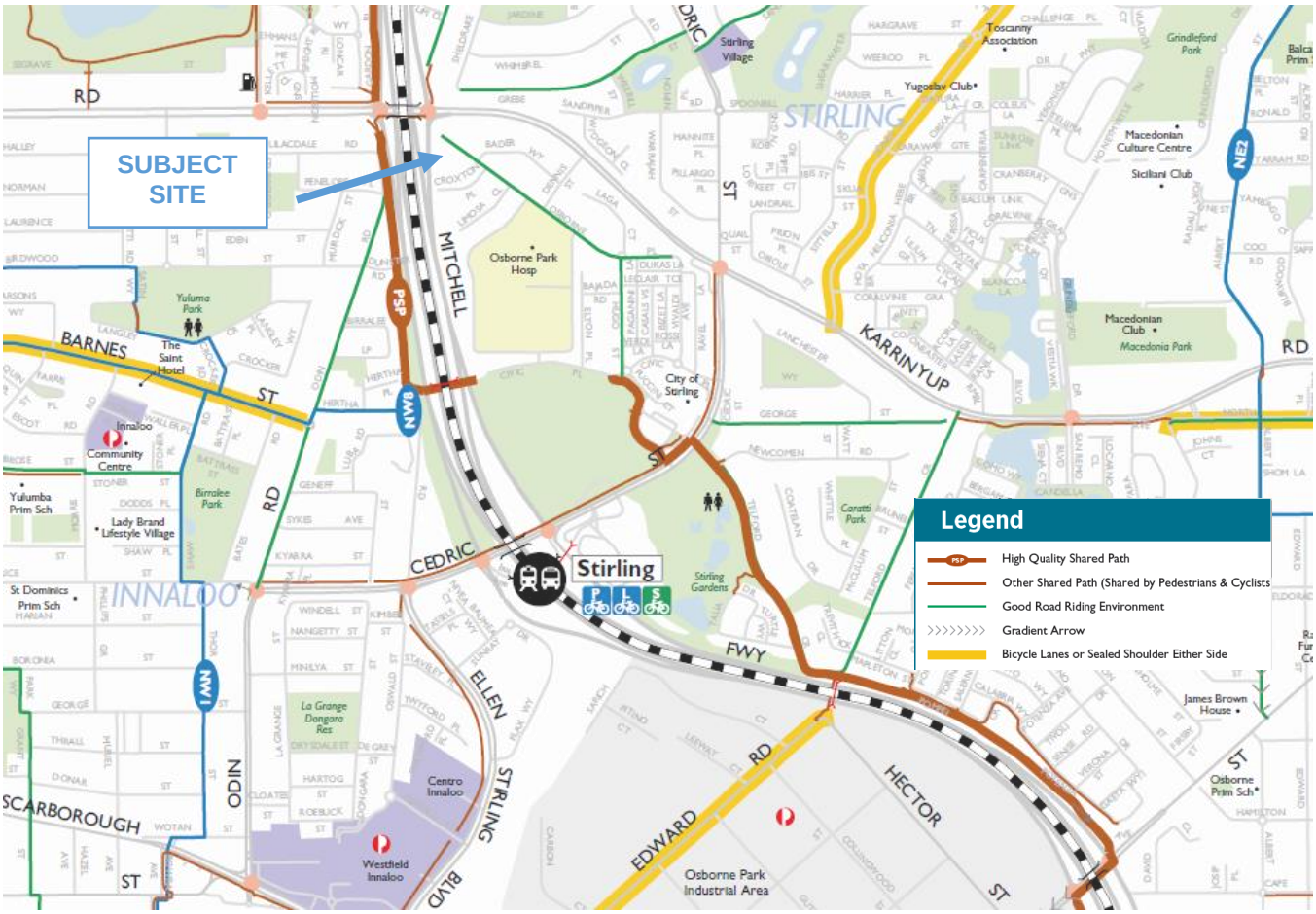


Figure 14: Perth bicycle network plan

The Strava cycling heatmap tool shows that Freeway PSP and Karrinyup Road are popular cycling routes in the area (Figure 15).

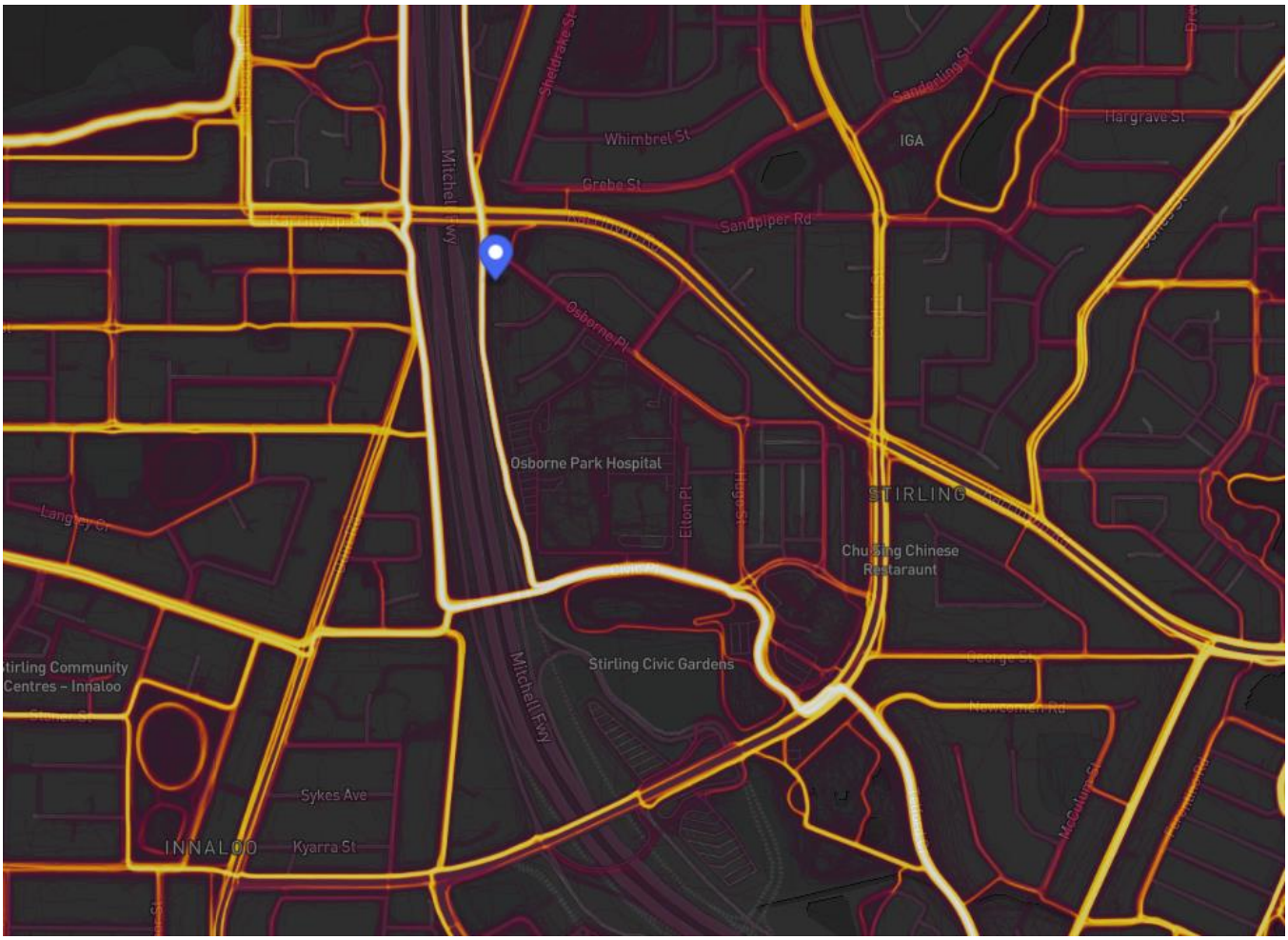


Figure 15: Strava cycling heatmap

11.2 Bicycle parking and end of trip facilities

The proposed development plans show that 3 x bicycle racks be installed for visitors within the site. This will provide parking for six bicycles.

12 Site specific issues

No additional site-specific issues were identified within the scope of this assessment.

13 Safety issues

The five-year crash history in the vicinity of the site was obtained from Main Roads WA. As detailed in Figure 16, no crashes were recorded in the immediate locality in the last five years.

The low traffic generation of the proposed development is unlikely to impact traffic safety in the area.

Figure 16: 5-year crash map in the locality (2018-2022)

Source: MRWA crash mapping tool

14 Conclusion

This Transport Impact Statement has been prepared by Urbii on behalf of Locus Development Group with regards to the proposed residential development, located at 8 Osborne Place, Stirling.

The subject site is situated on the southern side of Osborne Place, at the end of a culdesac. The site is presently vacant and is surrounded by mostly residential land uses.

It is proposed to develop the site into a residential development, delivering 22 residential dwelling units.

The site features good connectivity with the existing road, cycling and walking network. There is good public transport coverage through nearby bus services.

The car parking supply is sufficient to meet the needs of the proposed development.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is low (less than 100vph on any lane) and as such would have negligible impact on the surrounding road network.

It is concluded that the findings of this Transport Impact Statement are supportive of the proposed development.

15 Appendices

Appendix A: Proposed development plans

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	MASTER PLAN	REVIEW	1:250 @ A3	2305	A1.01	D	30.10.23

0 1 5m 10m

Appendix B: Swept path diagrams

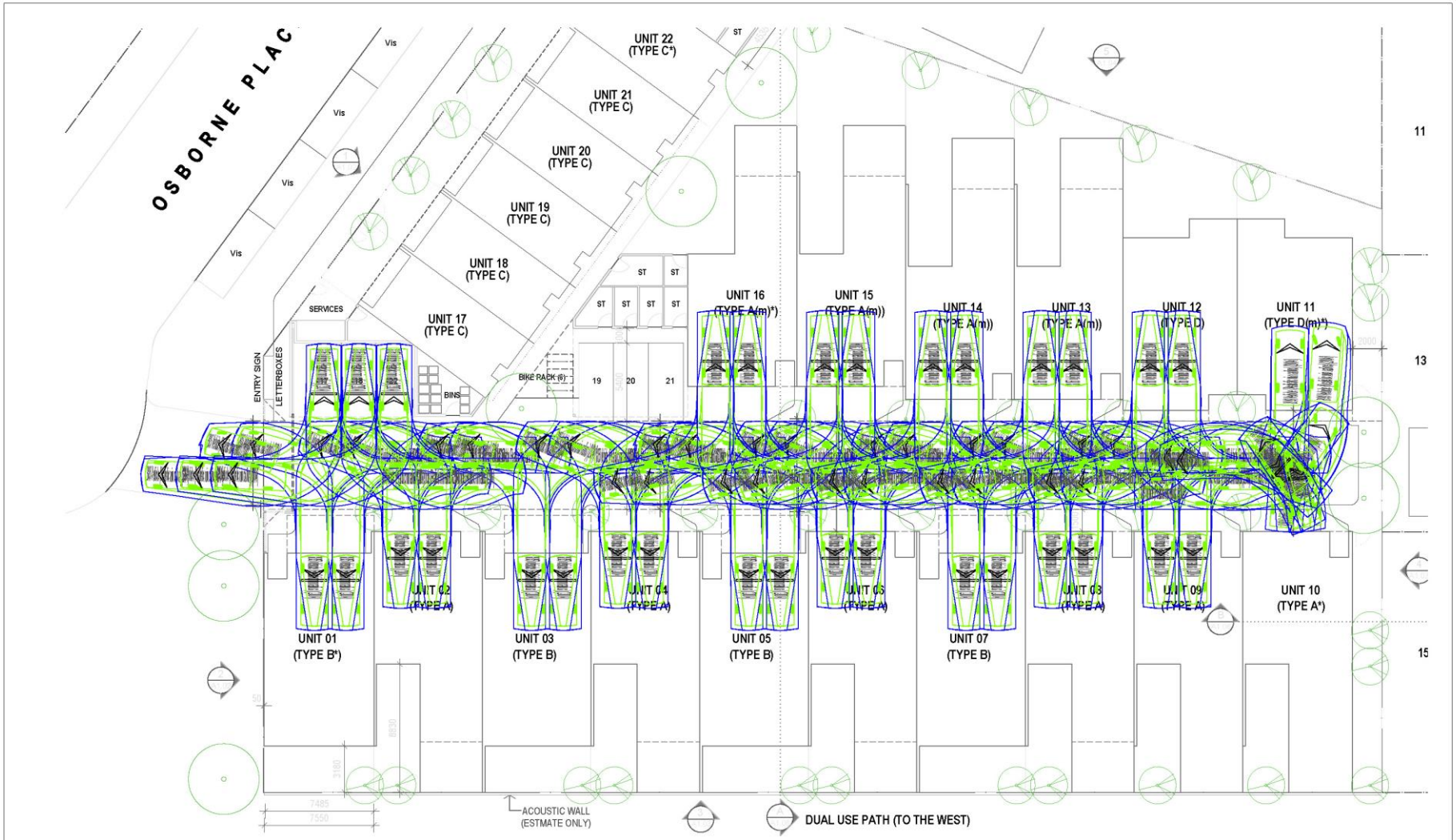
Swept path diagrams are included in this section of the report. Different coloured lines are employed to represent the various envelopes of the vehicle swept path, as described below:

Cyan represents the wheel path of the vehicle

Green represents the vehicle body envelope

Blue represents a 300mm / 500mm safety buffer line, offset from the vehicle swept path

The swept path diagrams are also provided separately in high-quality, A3 PDF format.



Revision notes:

Rev:	Date:	Notes:
1	27/10/2023	Dark blue swept path line represents a 300mm buffer

Drawn by:	Paul Ghantous
Client:	Locus Development Group
Project:	U23.116 - 8 Osborne Place, Stirling Proposed Residential Development
Drawing Title:	Swept path analysis AS2890.1 - B85 Car
Date:	01/11/2023
Scale @ A3:	1:250
Revision:	sk01a

urbii
Sustainable Transport. Safe Solutions

PO Box 4315, Baldivis WA 6171
customer@urbii.com.au
0433858164

Appendix C: Movement and place classifications

Source: *Movement and Place in Victoria*, Department of Transport Victoria, 2019

Movement classifications

Movement classifications represent the mix of transport links that are required to support the overall demand for movement across a network.

Movement classifications communicate the broad aspirational movement function of a transport link in relation to its place function. The classification of M1 to M5 is determined by examining the overall mix and function of different transport modes on the link.

Movement definitions

M1	Mass movement of people and/or goods on routes with a state or national-level movement function or provides primary access to state-level places.
M2	Significant movement of people and/or goods on routes connecting across multiple municipalities or provides primary access to regional-level places.
M3	Moderate movement of people and/or goods on routes connecting municipalities or provides primary access to municipal-level places.
M4	Movement of people and/or goods within a municipality.
M5	Local movement.

Mode classification types

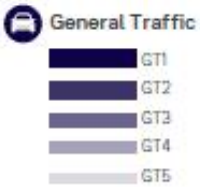
Victoria's multi-modal transport system is represented in a series of sub-movement types with a defined hierarchy within each.

- General Traffic
- Tourist
- Rail
- Interchange
- Tram
- Cycling
- Bus
- Walking
- Freight

Melbourne – Example of mapping available which shows the various movement classifications on the arterial road network.

Wangaratta

Shepparton



Place classifications

Place classifications are defined by State-level planning strategies such as the Plan Melbourne's activity centre hierarchy, State Planning Policy Framework, Planning Zones and regional growth plans.

Place classifications represent the future vision for a place. It is the first classification applied to a link and takes account of all place characteristics that have an impact on movement.

Place definitions

P1	Place of state or national significance.
P2	Place of regional significance.
P3	Place of municipal significance .
P4	Place of neighbourhood significance.
P5	Place of local significance.

Central Bendigo

Kew Junction

Places of Activity (PA)

- PA1
- PA2
- PA3
- PA4
- PA5

Place classification types

Place categories are currently being defined to identify three different types of places, and how they are experienced by users.

Places of activity

- Applies to areas with differing street-based activity such as areas with retail and commercial frontages and public uses.

Typical areas classified:

- Activity centres with strip shopping areas.
- Precincts with active ground floor frontages as part of their zoning requirements.
- Parks and public amenities.

Places of off-street activity

- Applies to areas often set-back from the street but still having an impact on the road & street network.

Typical areas classified:

- Shopping centres and land-uses set-back from the street
- Industrial areas
- Event spaces such as stadia and sports complexes

Places of landscape and culture

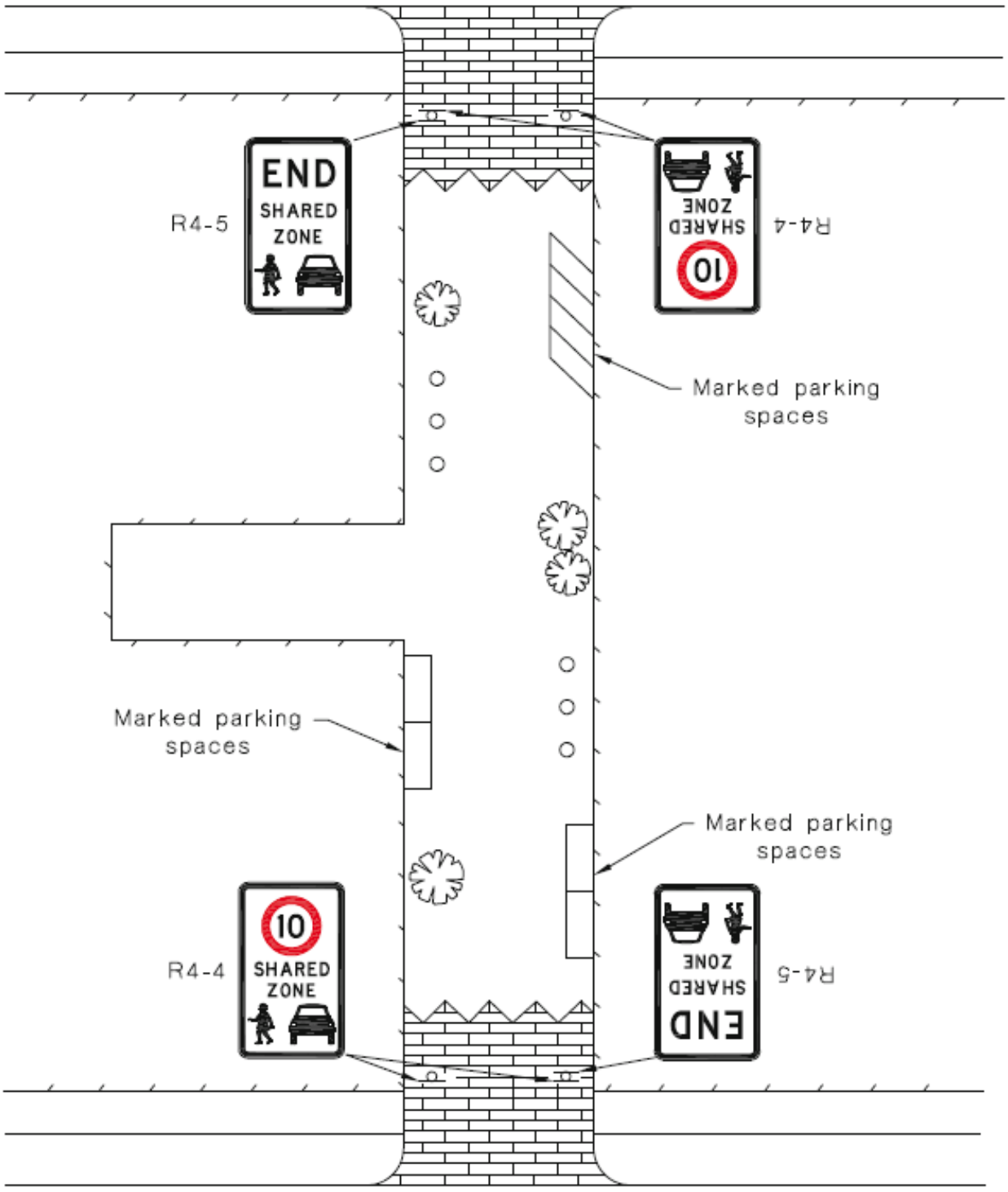
- Applies to open space zoning of places of landscape or cultural significance. Predominantly urban parks and in regional Victoria.

Typical areas classified:

- Rural and regional landscapes
- Farming zones
- National parks and world-heritage areas
- Urban open space.

Appendix D: Typical shared zone treatment

Source: AS 1742.4 – 2008



APPENDIX 4 – Acoustic Report

DYNAMIC PLANNING AND DEVELOPMENTS

HERRING STORER ACOUSTICS

LOCUS PROPERTY

8 OSBORNE PLACE
STIRLING

SPP 5.4 NOISE MANAGEMENT PLAN

NOVEMBER 2023

OUR REFERENCE: 31822-3-23335

Rochdale Holdings Pty Ltd A.B.N. 85 009 049 067 trading as:
HERRING STORER ACOUSTICS
P.O. Box 219, Como, W.A. 6952
(08) 9367 6200
hsa@hsacoustics.com.au

DOCUMENT CONTROL PAGE

SPP 5.4 NOISE MANAGEMENT PLAN
8 OSBORNE PLACE
STIRLING

Job No: 23335

Document Reference: 31822-3-23335

FOR

LOCUS PROPERTY

DOCUMENT INFORMATION			
Author:	Geoffrey Harris	**Checked By:**	Paul Daly
Date of Issue:	3 November 2023		

REVISION HISTORY

Revision	Description	Date	Author	Checked
1	Initial Issue	03/11/23	GH	PLD
2	Updated with noise contours	13/11/23	GH	PLD
3	Clarification to contours	14/11/23	GH	PLD

DOCUMENT DISTRIBUTION

Copy No.	Version No.	Destination	Hard Copy	Electronic Copy
1	1	Locus Property Attn: Sophie Colton Email: sophie@locusproperty.com.au		✓
1	2	Locus Property Attn: Sophie Colton Email: sophie@locusproperty.com.au		✓
1	3	Locus Property Attn: Sophie Colton Email: sophie@locusproperty.com.au		✓

CONTENTS

APPENDICES

1. INTRODUCTION

Herring Storer Acoustics were commissioned through Locus Property to carry out an acoustic study with regards to traffic related noise for the proposed residential development at 8 Osborne Place, Stirling.

The purpose of the study was to:

- Assess the noise that would be received within the development area from vehicles travelling on Mitchell Freeway and Karrinyup Road for future traffic volumes.
- Compare the results with accepted criteria and if exceedances exist, develop the framework for the management of noise.

A plan is attached in Appendix A.

It is noted that whilst this study references *State Planning Policy 5.4* as the criteria, some parts of the assessment have not been conducted under strict accordance with the policy, although a conservative approach where possible has been utilised. The intent of this preliminary assessment is to inform of general acoustic requirements as well as garner development approval.

A further report will be required with precise specifications once the detailed design stage of the project is commenced, in response to an anticipated development approval condition requesting a full assessment in accordance with *State Planning Policy 5.4*.

2. SUMMARY

The noise modelling indicates that noise received at the proposed development from vehicles travelling along Mitchell Freeway and Karrinyup Road in the future (2042) would exceed the Western Australian Planning Commission (WAPC) State Planning Policy (SPP) 5.4 “Road and Rail Transport Noise and Freight Considerations In Land Use Planning” “day time limit” criteria as the highest calculated noise level at a façade is 69 dB $L_{AEq(day)}$.

Herring Storer Acoustic recommends the development be conditioned as such to require a full assessment of the development in accordance with *State Planning Policy 5.4* once detailed designed is finalised to provide a more accurate assessment – this would include finalised window sizes, façade constructions and the like to be accounted for.

3. ACOUSTIC CRITERIA

3.1 NOISE

The Western Australian Planning Commission (WAPC) released on 6th September 2019 State Planning Policy 5.4 *“Road and Rail Noise”.* The requirements of State Planning Policy 5.4 are outlined below.

POLICY APPLICATION (Section 4)

When and where it applies (Section 4.1)

SPP 5.4 applies to the preparation and assessment of planning instruments, including region and local planning schemes; planning strategies, structure plans; subdivision and development proposals in Western Australia, where there is proposed:

a) *noise-sensitive land-use within the policy's trigger distance of a transport corridor as specified in **Table 1**.*
b) *New or major upgrades of roads as specified in **Table 1** and maps **(Schedule 1,2 and 3);** or*
c) *New railways or major upgrades of railways as specified in maps (**Schedule 1, 2 and 3);** or any other works that increase capacity for rail vehicle storage or movement and will result in an increased level of noise.*

Policy trigger distances (Section 4.1.2)

***Table 1** identifies the State's transport corridors and the trigger distances to which the policy applies.*

*The designation of land within the trigger distances outlined in **Table 1** should not be interpreted to imply that land is affected by noise and/or that areas outside the trigger distances are un-affected by noise.*

*Where any part of the lot is within the specified trigger distance, an assessment against the policy is required to determine the likely level of transport noise and management/ mitigation required. An initial screening assessment (**guidelines: Table 2: noise exposure forecast**) will determine if the lot is affected and to what extent."*

TABLE 1: TRANSPORT CORRIDOR CLASSIFICATION AND TRIGGER DISTANCES

Transport corridor classification	*Trigger distance*	*Distance measured from*
Roads		
Strategic freight and major traffic routes *Roads as defined by Perth and Peel Planning Frameworks and/or roads with either 500 or more Class 7 to 12 Austroads vehicles per day, and/or 50,000 per day traffic volume*	*300 metres*	*Road carriageway edge*
Other significant freight/traffic routes *These are generally any State administered road and/or local government road identified as being a future State administered road (red road) and other roads that meet the criteria of either >=23,000 daily traffic count (averaged equivalent to 25,000 vehicles passenger car units under region schemes)*	*200 metres*	*Road carriageway edge*
Passenger railways		
	100 metres	*Centreline of the closest track*
Freight railways		
	200 metres	*Centreline of the closest track*

Proponents are advised to consult with the decision making authority as site specific conditions (significant differences in ground levels, extreme noise levels) may influence the noise mitigation measures required, that may extend beyond the trigger distance.

POLICY MEASURES (Section 6)

The policy applies a performance-based approach to the management and mitigation of transport noise. The policy measures and resultant noise mitigation will be influenced by the function of the transport corridor and the type and intensity of the land-use proposed. Where there is risk of future land-use conflict in close proximity to strategic freight routes, a precautionary approach should be applied. Planning should also consider other broader planning policies. This is to ensure a balanced approach takes into consideration reasonable and practical considerations.

Noise Targets (Section 6.1)

***Table 2** sets out noise targets that are to be achieved by proposals under which the policy applies. Where exceeded, an assessment is required to determine the likely level of transport noise and management/mitigation required.*

In the application of the noise targets the objective is to achieve:

- *indoor noise levels as specified in **Table 2** in noise sensitive areas (for example, bedrooms and living rooms of houses, and school classrooms); and*
- *a reasonable degree of acoustic amenity for outdoor living areas on each residential lot. For non-residential noise-sensitive developments, for example schools and child care centres the design of outdoor areas should take into consideration the noise target.*

It is recognised that in some instances, it may not be reasonable and/or practicable to meet the outdoor noise targets. Where transport noise is above the noise targets, measures are expected to be implemented that balance reasonable and practicable considerations with the need to achieve acceptable noise protection outcomes.

TABLE 2: NOISE TARGETS

Proposals	***New/Upgrade***	***Noise Targets***		
		Outdoor		***Indoor***
		Day (L_{Aeq}(Day) dB) (6 am-10 pm)	***Night (L_{Aeq}(Night)dB) (10 pm-6 am)***	***(L_{Aeq} dB)***
Noise-sensitive land-use and/or development	*New noise sensitive land use and/or development within the trigger distance of an existing/proposed transport corridor*	*55*	*50*	*L_{Aeq} (Day) 40(Living and work areas) L_{Aeq} (Night) 35 (bedrooms)*
Roads	*New*	*55*	*50*	*N/A*
	Upgrade	*60*	*55*	*N/A*
Railways	*New*	*55*	*50*	*N/A*
	Upgrade	*60*	*55*	*N/A*

Notes:

- *The noise target is to be measured at one metre from the most exposed, habitable façade of the proposed building, which has the greatest exposure to the noise-source. A habitable room has the same meaning as defined in State Planning Policy 3.1 Residential Design Codes.*
- *For all noise-sensitive land-use and/or development, indoor noise targets for other room usages may be reasonably drawn from Table 1 of Australian Standard/New Zealand Standard AS/NZS 2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors (as amended) for each relevant time period.*
- *The 5dB difference in the criteria between new and upgrade infrastructure proposals acknowledges the challenges in achieving noise level reduction where existing infrastructure is surrounded by existing noise-sensitive development.*
- *Outdoor targets are to be met at all outdoor areas as far as is reasonable and practical to do so using the various noise mitigation measures outlined in the guidelines. For example, it is likely unreasonable for a transport infrastructure provider to achieve the outdoor targets at more than 1 or 2 floors of an adjacent development with direct line of sight to the traffic.*

Noise Exposure Forecast (Section 6.2)

*When it is determined that SPP 5.4 applies to a planning proposal as outlined in Section 4, proponents and/or decision makers are required to undertake a preliminary assessment using **Table 2**: noise exposure forecast in the guidelines. This will provide an estimate of the potential noise impacts on noise-sensitive land-use and/ or development within the trigger distance of a specified transport corridor. The outcomes of the initial assessment will determine whether:*

- *no further measures are required.*
- *noise-sensitive land-use and/or development is acceptable subject to deemed-to-comply mitigation measures; or*
- *noise-sensitive land-use and/or development is not recommended. Any noise-sensitive land-use and/ or development is subject to mitigation measures outlined in a noise management plan."*

4. ACOUSTIC ENVIRONMENT

The acoustic environment of the site was measured via the used of noise logger from 16 October until 20 October. Traffic volume details for this road section are included in Appendix D.

Noise measurements were conducted with two NSRT MK3 Noise Loggers, one located near the northern boundary of the lot to capture primarily Karrinyup Road, and one located between the noise wall and Mitchell Freeway. The Sound Level Meter was calibrated prior to and after use with a Bruel and Kjaer 4230 Calibrator. All equipment used is currently NATA laboratory calibrated. Calibration certificates are available on request.

TABLE 3: SUMMARY OF MEASURED NOISE LEVELS

Measurement Location	Measured/Calculated Noise Level, dB(A)		
	L_{A10}	$L_{Aeq,\ day\ (6am\ to\ 10pm)}$	$L_{Aeq,\ night\ (10pm\ to\ 6am)}$
Karrinyup Road	57.5	56.3	49.7
Mitchell Freeway	72.5	69.9	64.6

5. MODELLING

To determine the noise levels from traffic on Mitchell Freeway and Karrinyup Road, acoustic modelling was carried out using Sound Plan, using the Calculation of Road Traffic Noise (CoRTN)[1] algorithms.

The input data for the model included:

- Topographical and cadastral data supplied by client (Shown in Appendix A).
- Traffic data as per Table 4 (Obtained from MRWA ROM Department, Attached in Appendix D).
- Adjustments as listed in Table 5.

TABLE 4 - NOISE MODELLING INPUT DATA*

Parameter	Mitchell Freeway (Current) 2021	Mitchell Freeway (Future) 2043**	Karrinyup Road (Current) 2021	Karrinyup Road (Future) 2043**
Traffic Volumes	113,500	168,210	20,200	32,120
Percentage traffic 0600 – 2400 hours (Assumed)	94%	94%	94%	94%
Heavy Vehicles (%) (Assumed)	8%	8%	5.9%	5.9%
Speed (km/hr)	80 km/h**r	100 km/hr	70 km/hr	70 km/hr
Road Surface	Open Graded Asphalt	Open Graded Asphalt	Dense Graded Asphalt	Dense Graded Asphalt

*The above data is abridged as there is influence from the Freeway on ramps, full details of numbers used are available in Appendix D
** Due to the presence of roadworks on the current freeway, 80 km/hr speed limited was utilised.
*** Extrapolated to 2043 from 2041 data using same linear increase.

TABLE 5 – ADJUSTMENTS FOR NOISE MODELLING

Description	Value
Façade Reflection Adjustment	+2.5 dB
Conversion from $L_{A10\ (18\ hour)}$ to $L_{Aeq\ (16\ hour)}$ (Day)	-2.6 dB / -1.2 dB*

* Mitchell Freeway and Karrinyup Road respectively.

6. TRAFFIC NOISE ASSESSMENT

Using the data contained in Tables 3, 4 and 5, modelling was carried out under existing conditions for calibration. The Sound Plan model for the site has been set up for the 2043 scenario as defined in Table 4. The following assumptions have been made:

- 18 hour traffic count will be 94% of daily figures.
- Noise model calibrated to measured noise level as per Table 3.
- The same diurnal relationship will exist in the future between the $L_{A10\ (18\ hour)}$ and the L_{Aeq} parameters; and
- 2.5 dB(A) has been added to the results for façade reflection.

The noise requirements based on the above have been listed in Appendix B.

It is noted that these requirements pertain to acoustic requirements only, with regard to *State Planning Policy 5.4,* and may be superseded by other requirements (BAL, Thermal, etc).

1 *Calculation of Road Traffic Noise* UK Department of Transport 1987

7. CONCLUSION

In accordance with the WAPC Planning Policy 5.4, an assessment of the noise that would be received within the development 8 Osborne Place, Stirling, from vehicles travelling on Mitchell Freeway and Karrinyup Road has been undertaken.

In accordance with the Policy, the following would be the acoustic criteria applicable to this project:

External

Day	55 dB(A) L_{Aeq}
Night	50 dB(A) L_{Aeq}

Internal

Sleeping Areas	35 dB(A) $L_{Aeq(night)}$
Living Areas	40 dB(A) $L_{Aeq(day)}$

It is noted that walls of the development would be required to be constructed of either masonry or tilt up concrete panel. If a lightweight construction or similar is desirable, investigation into constructions that would meet the requirement of State Planning Policy 5.4 would have to be undertaken.

The results of the acoustic assessment indicate that noise received at the development from future traffic, exceed external noise level criteria. Therefore, noise amelioration in the form of quiet house design listed in Appendix B, as well as notifications on the title is required.

Herring Storer Acoustic recommends the development be conditioned as such to require a full assessment of the development in accordance with *State Planning Policy 5.4* once detailed designed is finalised to provide a more accurate assessment – this would include finalised window sizes, façade constructions and the like to be accounted for.

APPENDIX A

PLANS

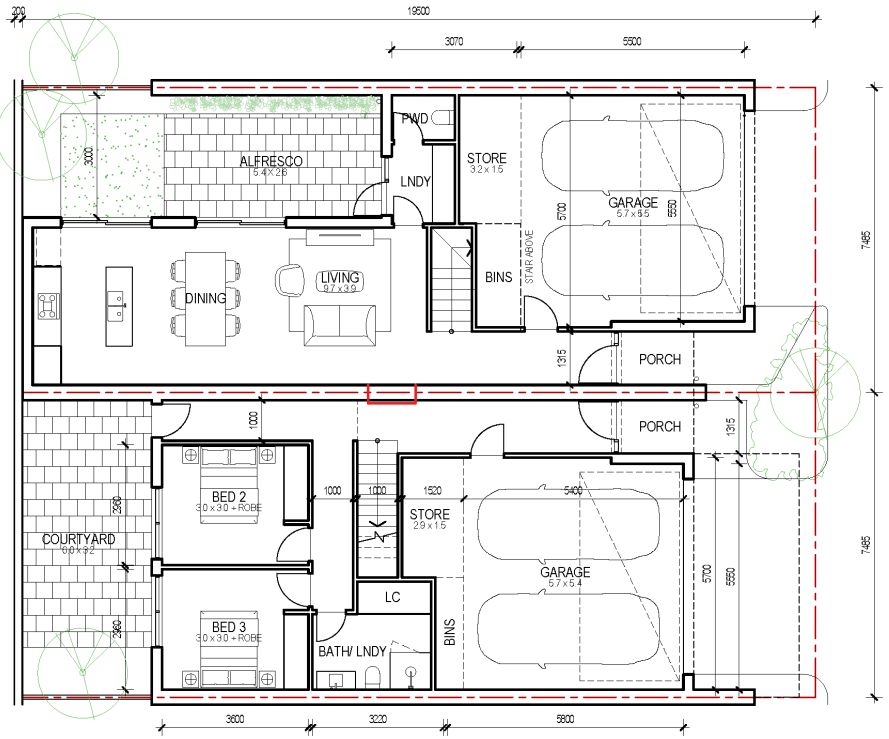
PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	MASTER PLAN	REVIEW	1:250 @ A3	2305	A1.01	D	30.10.23

PENNOCK ARCHITECTS

0 1 5m 10m

TYPE A

TYPE B



GROUND FLOOR

OVERLAP ABOVE

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & B GROUND FLOOR	REVIEW	1:100 @ A3	2305	A2.01	TBA	24.10.23

0 1 2.5 5m

TYPE A

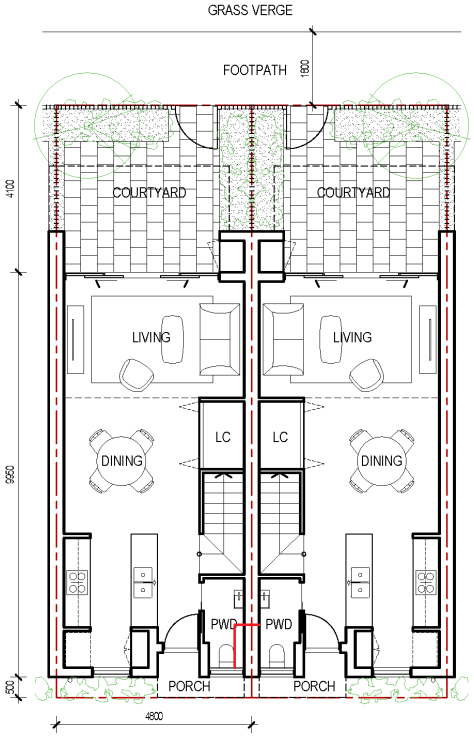
TYPE B

FIRST FLOOR

PENNOCK ARCHITECTS

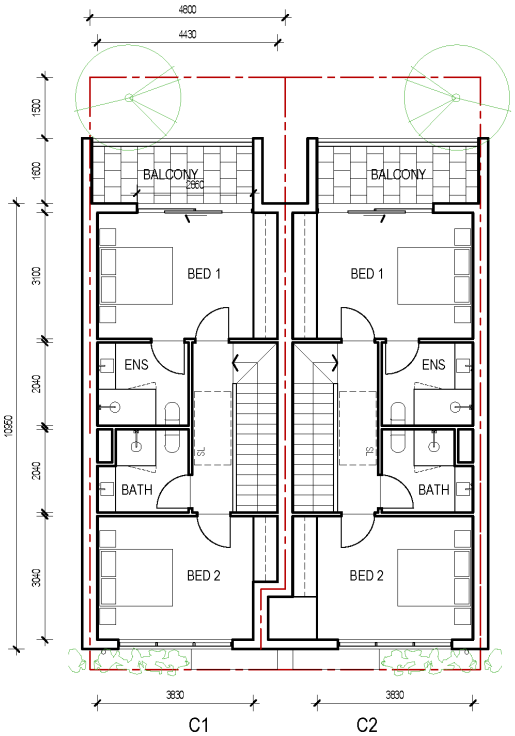
PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE A & B FIRST FLOOR	REVIEW	1:100 @ A3	2305	A2.02	TBA	24.10.23

0 1 2.5 5m



GROUND FLOOR

OVERLAP ABOVE

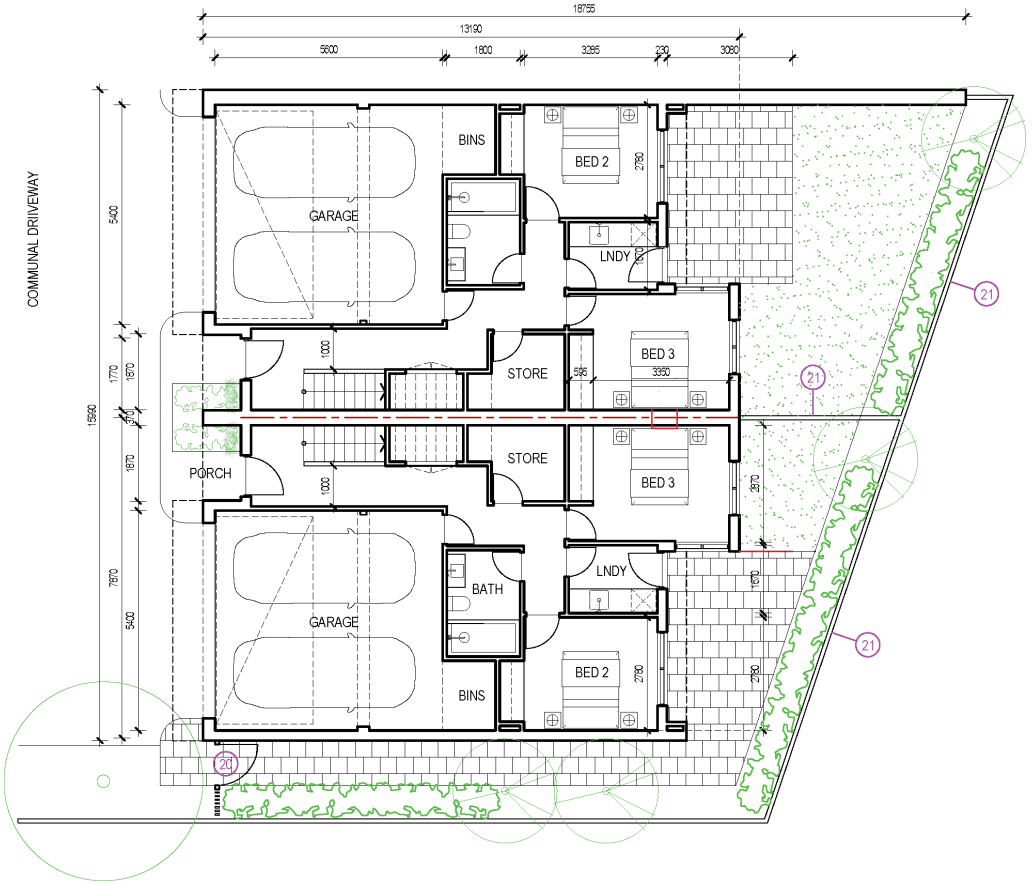


FIRST FLOOR

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE C PLANS GROUND & FIRST FLOOR	REVIEW	1:100 @ A3	2305	A3.01	TBA	23.10.23

PENNOCK ARCHITECTS

0 1 2.5 5m



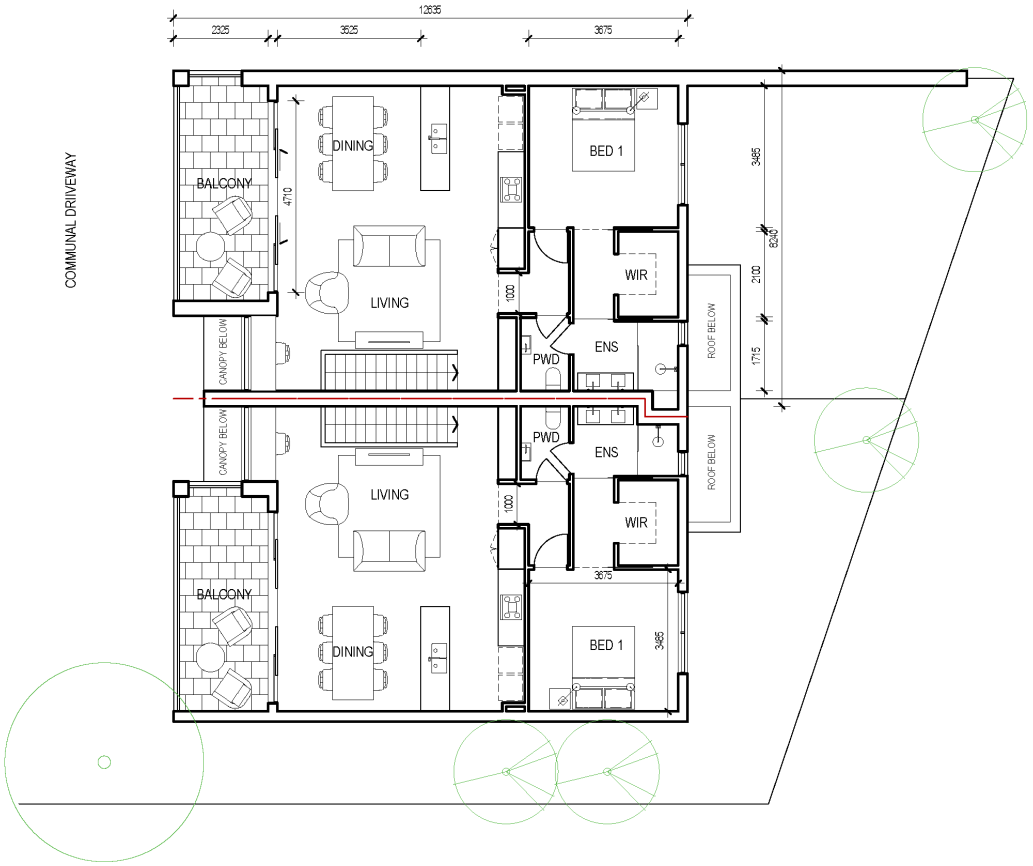
GROUND FLOOR

OVERLAP ABOVE

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE D GROUND FLOOR PLAN	REVIEW	1:100 @ A3	2305	A4.01	-	23.10.23

PENNOCK ARCHITECTS

0 1 2.5 5m



FIRST FLOOR

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	TYPE D FIRST FLOOR PLANS	REVIEW	1:100 @ A3	2305	A4.02	-	23.10.23

0 1 2.5 5m

APPENDIX B

BUILDING REQUIREMENTS

Calculated Noise Levels and Required R_w and C_{tr} Ratings for Glazing			
Unit	**Floor**	**Level dB $L_{Aeq(Day)}$**	**Required $R_w + C_{tr}$**
Unit 1	BED2	57	31
	BED3	57	31
	BED1	68	40
	ENSUITE	68	28
	WIR	68	28
	LIVING	54	23
	DINING	54	23
Unit 2	DINING	55	23
	LAUNDRY	55	26
	BED1	54	28
	BED2	65	39
	BED3	65	39
	ENSUITE	65	25
Unit 3	BED2	57	31
	BED3	57	31
	BED1	69	41
	ENSUITE	69	29
	WIR	69	29
	LIVING	54	23
	DINING	54	23
Unit 4	DINING	55	23
	LAUNDRY	55	26
	BED1	54	28
	BED2	65	39
	BED3	65	39
	ENSUITE	65	25
Unit 5	BED2	58	32
	BED3	58	32
	BED1	69	41
	ENSUITE	69	29
	WIR	69	29
	LIVING	55	23
	DINING	55	23
Unit 6	DINING	56	23
	LAUNDRY	56	27
	BED1	55	29
	BED2	66	40
	BED3	66	40
	ENSUITE	66	26
Unit 7	BED2	58	32
	BED3	58	32
	BED1	69	41
	ENSUITE	69	29
	WIR	69	29
	LIVING	55	23
	DINING	55	23
Unit 8	DINING	56	23
	LAUNDRY	56	27
	BED1	55	29
	BED2	65	39
	BED3	65	39
	ENSUITE	65	25

Calculated Noise Levels and Required R_w and C_{tr} Ratings for Glazing			
Unit	**Floor**	**Level dB $L_{Aeq(Day)}$**	**Required $R_w + C_{tr}$**
Unit 9	DINING	56	23
	LAUNDRY	56	27
	BED1	54	28
	BED2	65	39
	BED3	65	39
	ENSUITE	65	25
Unit 10	DINING	56	23
	LAUNDRY	56	27
	BED1	54	28
	BED2	66	40
	BED3	66	40
	ENSUITE	66	26
Unit 11	Living Dining	61	29
Unit 12	Living Dining	57	25
Unit 13	BED1	57	31
Unit 14	BED1	57	31
Unit 15	BED1	57	31
Unit 16	BED1	57	31
Unit 17	LIVING DINING	58	26
	BED1	57	33
Unit 18	LIVING DINING	58	26
	BED1	57	33
Unit 19	LIVING DINING	58	26
	BED1	57	33
Unit 20	LIVING DINING	57	25
	BED1	57	33
Unit 21	LIVING DINING	57	25
	BED1	57	33
Unit 22	LIVING DINING	57	25
	BED1	57	33

Notes: The required R_W rating can be reduced by reducing the area of glazing.
Requirements pertain to only acoustic advice in regard to *State Planning Policy 5.4* and may be superceded by other requirements (BAL, Thermal, etc).
Unlisted Elements would comply given standard construction.

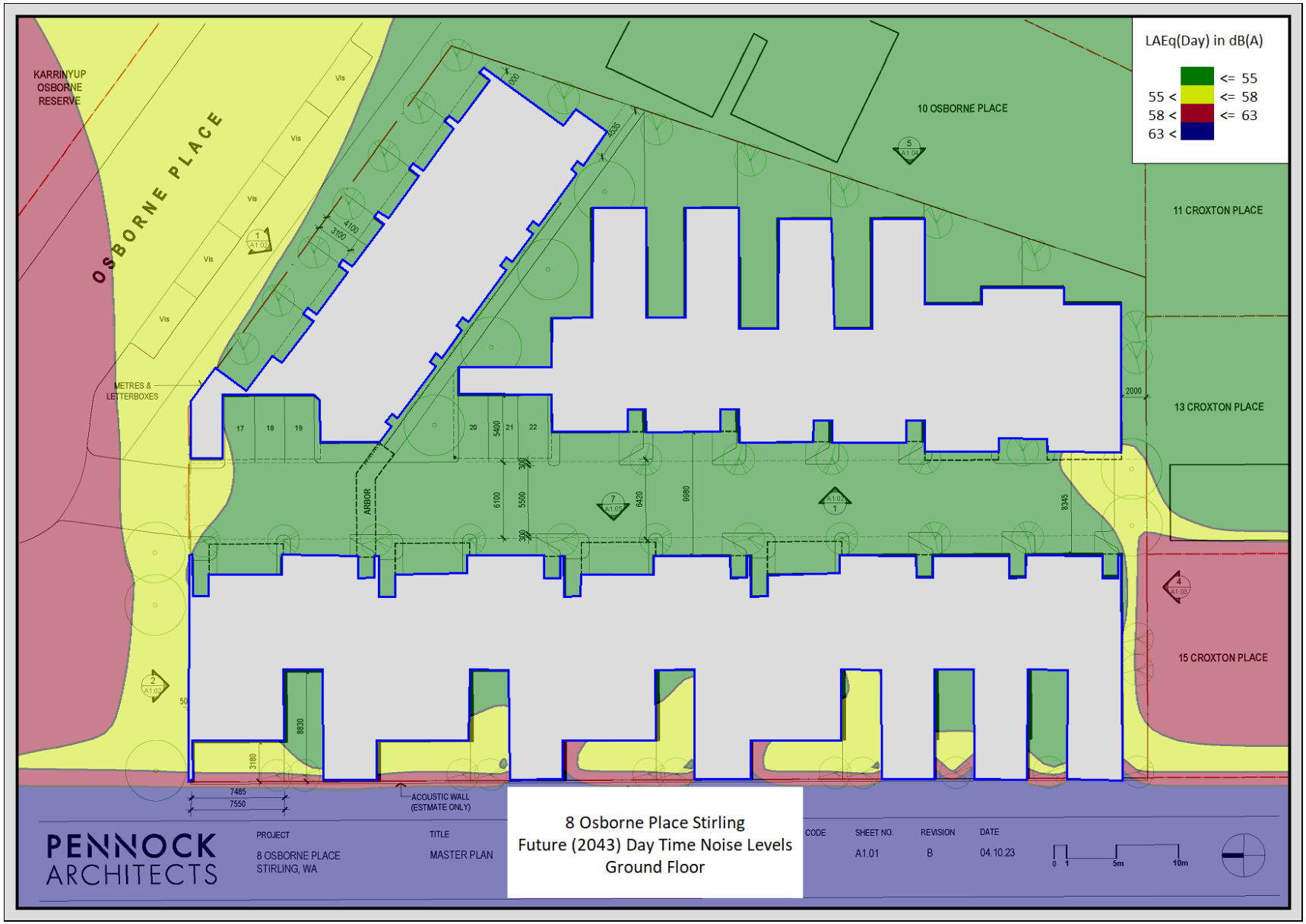
Calculated Noise Levels and Required R_w and C_{tr} Ratings for Walls and Windows			
Unit	**Element**	**Level dB $L_{Aeq(Day)}$**	**Required $R_w + C_{tr}$**
Unit 1-10 Ground Floor	Walls	55	45
Unit 1-10 Upper Floors	Walls	68	50
	Ceiling	68	40
Unit 11 Ground Floor	Walls	<55	N/A
Unit 11 Upper Floor	Walls	61	50
	Ceiling	61	35
Unit 12-22 Ground Floor	Walls	<55	N/A
Unit 12-22 Upper Floors	Walls	58	45
	Ceiling	58	35

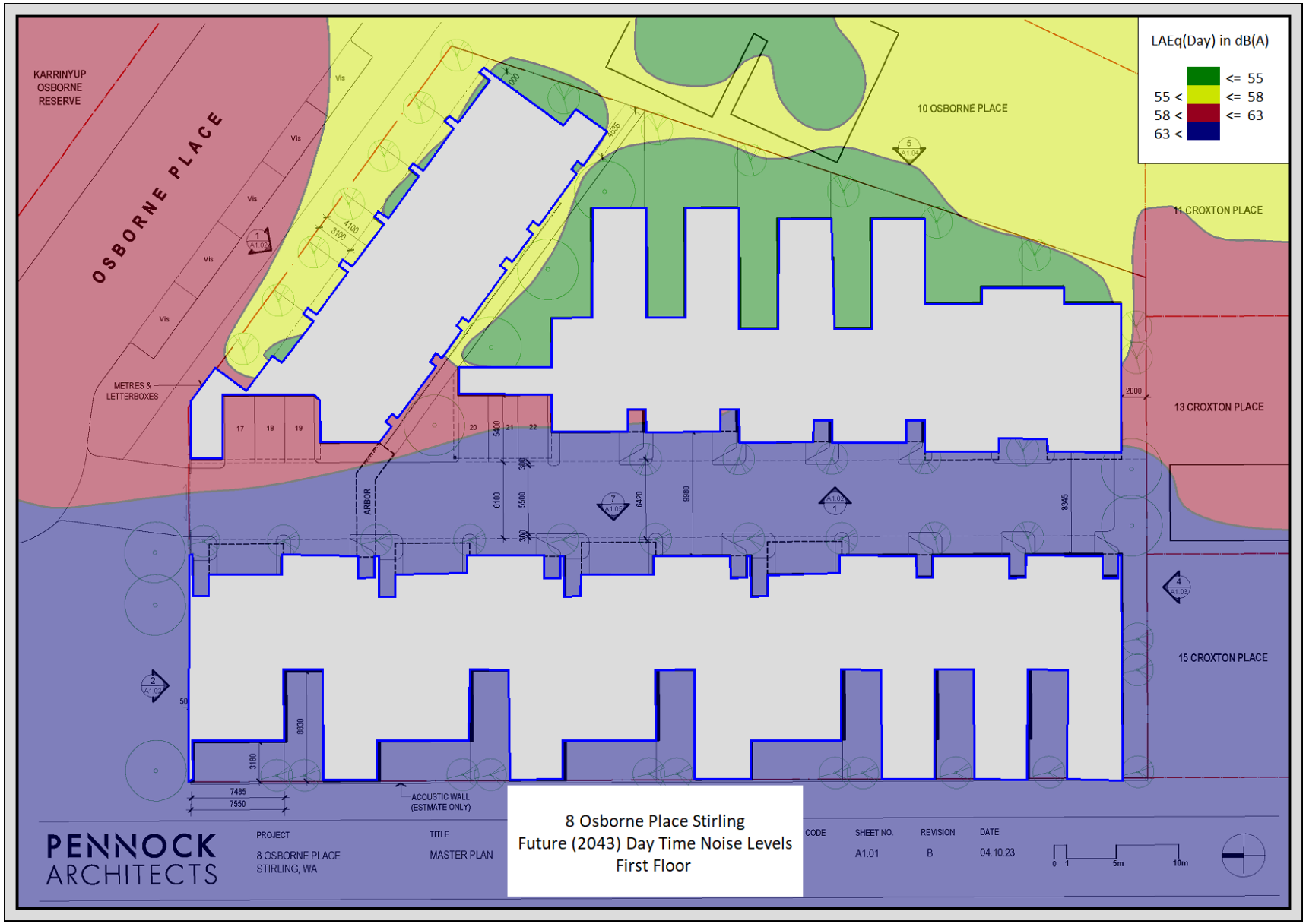
Calculated Noise Levels – Outdoor Living Area		
Unit	**Level dB $L_{Aeq(Day)}$**	
Unit 1	57	+2
Unit 2	55	Complies
Unit 3	57	+2
Unit 4	55	Complies
Unit 5	58	+3
Unit 6	56	+1
Unit 7	58	+3
Unit 8	56	+1
Unit 9	56	+1
Unit 10	56	+1
Unit 11	<55	Complies
Unit 12	<55	Complies
Unit 13	<55	Complies
Unit 14	<55	Complies
Unit 15	<55	Complies
Unit 16	<55	Complies
Unit 17	<55	Complies
Unit 18	<55	Complies
Unit 19	<55	Complies
Unit 20	<55	Complies
Unit 21	<55	Complies
Unit 22	<55	Complies

Note, whilst Units, 1, 3, 5-10 are in exceedance to the Outdoor Living Area criteria, there is a 3m barrier separating the development from Mitchell Freeway (the primary noise source), meeting the deem to comply criteria. Additional amelioration for these outdoor living areas would likely not be practicable.

APPENDIX C

NOISE CONTOURS


LAEq(Day) in dB(A)
<= 55
55 < <= 58
58 < <= 63
63 <
KARRINYUP OSBORNE RESERVE
OSBORNE PLACE
10 OSBORNE PLACE
11 CROXTON PLACE
13 CROXTON PLACE
15 CROXTON PLACE
METRES & LETTERBOXES
ARBOR
ACOUSTIC WALL (ESTMATE ONLY)
8 Osborne Place Stirling
Future (2043) Day Time Noise Levels
Ground Floor
PENNOCK ARCHITECTS
PROJECT
8 OSBORNE PLACE
STIRLING, WA
TITLE
MASTER PLAN
CODE
SHEET NO.
A1.01
REVISION
B
DATE
04.10.23
0 1 5m 10m


LAEq(Day) in dB(A)
<= 55
55 < <= 58
58 < <= 63
63 <
KARRINYUP OSBORNE RESERVE
OSBORNE PLACE
10 OSBORNE PLACE
11 CROXTON PLACE
13 CROXTON PLACE
15 CROXTON PLACE
METRES & LETTERBOXES
ARBOR
ACOUSTIC WALL (ESTMATE ONLY)
8 Osborne Place Stirling
Future (2043) Day Time Noise Levels
First Floor
PENNOCK ARCHITECTS
PROJECT
8 OSBORNE PLACE
STIRLING, WA
TITLE
MASTER PLAN
CODE
SHEET NO.
A1.01
REVISION
B
DATE
04.10.23
0 1 5m 10m

APPENDIX D

MRWA TRAFFIC FLOW DATA

2021 ROM24 Scenario - Link Volume Plot for Mitchell Fwy / Karrinyup Rd, Stirling Noise Assessment
All Day
Land Use Scenario: DAEDS Version 3.1

MODEL ASSUMPTIONS

NETWORK: 2021 ROM24 Network (20-Year Road Network Development Plan)
LAND USE: 2021 DAEDS V3.1 Land Use

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes (Factor X 100)

mainroads WESTERN AUSTRALIA
Transport Modelling Section
Enquiries Clare Yu 9323 4967
MRWA Reference Job #42734
Mon 23 Oct 2023
T:\VOYAGER\JOBS_V2023\42734\Reports\LVP\42734_All Day_LVP_Y21 DAEDS V31_Mitchell Fwy_Karrinyup Rd_Stirling.VPR

- 1 Lane Each Direction
- 2 Lanes Each Direction
- 3 Lanes Each Direction
- >=4 Lanes Each Direction
- Zone Connector

2041 ROM24 Scenario - Link Volume Plot for Mitchell Fwy / Karrinyup Rd, Stirling Noise Assessment
All Day
Land Use Scenario: DAEDS Version 3.1

MODEL ASSUMPTIONS

NETWORK: 2041 ROM24 Network (20-Year Road Network Development Plan)
LAND USE: 2041 DAEDS V3.1 Land Use

ROM24 Multi-Modal Model V4.40
24-Hour Traffic Volumes (Factor X 100)

mainroads WESTERN AUSTRALIA

Transport Modelling Section
Enquiries Clare Yu 9323 4967
MRWA Reference Job #42734
Mon 23 Oct 2023
T:\VOYAGER\JOBS_V2023\42734\Reports\LVP\42734_All Day_LVP_Y41 DAEDS V31_Mitchell Fwy_Karrinyup Rd_Stirling.VPR

- 1 Lane Each Direction
- 2 Lanes Each Direction
- 3 Lanes Each Direction
- >=4 Lanes Each Direction
- Zone Connector

MRWA ROM24 Base Network - Version 2014

cube

APPENDIX 5 – Waste Management Plan

DYNAMIC PLANNING AND DEVELOPMENTS

DYNAMIC PLANNING AND DEVELOPMENTS

WASTE MANAGEMENT PLAN

LOT 79 (NO. 8) OSBORNE PLACE, STIRLING
WASTE MANAGEMENT PLAN

OUR REF: 1802

INTRODUCTION

This waste management plan pertains to the following:

Development: Proposed 'Multiple Dwelling' development.

Address: Lot 79 (No. 8) Osborne Place, Stirling

This waste management plan is to address the operational phases of the development and has been developed having reference to the WALGA *Multiple Dwelling Waste Management Plan Guidelines.*

Once approved by the City, waste collection and disposal is to be undertaken in accordance with this Waste Management Plan, subject to any additional conditions of planning approval.

The development consists of:

☑ Residential

If yes, how many dwellings? **N/A**

☒ Non-Residential Tenancies

If yes, complete the table below:

Land Use	***No. of Dwellings***
Residential Dwellings (Unit 1-16)	16
Residential Dwellings (Unit 17-22)	6

WASTE AND RECYCLABLES CAPACITY

The applicable waste generation rates for the proposed development have been determined in consultation with the City of Stirling. The below table provides a summary of the expected waste to be generated by the proposed development:

Land Use	***General Waste***	***Recycle Waste***	***Green Organics***
Units 1-16	140L per dwelling p/w = 2240L p/w	120L per dwelling p/w = 1920L p/w	120L per dwelling p/w = 1920L p/w
Unit 17-22	140L per dwelling p/w = 840L p/w	120L per dwelling p/w = 720L p/w	120L per dwelling p/w = 720L p/w
Total	**3080L p/w**	**2640L p/w**	**2640L p/w**

BIN SELECTION

Type of bins to service the development:

Residential

Bin Capacity	**80L**	**120L**	**140L**	**240L**	**360L**
Height (mm)	870	940	1065	1080	1100
Depth (mm)	530	560	540	735	885
Width (mm)	450	485	500	580	600
Approx. footprint (m^2)	0.24	0.27	0.27	0.43	0.53

Total number of bins proposed:

Units 1-16: Each of these units will have:

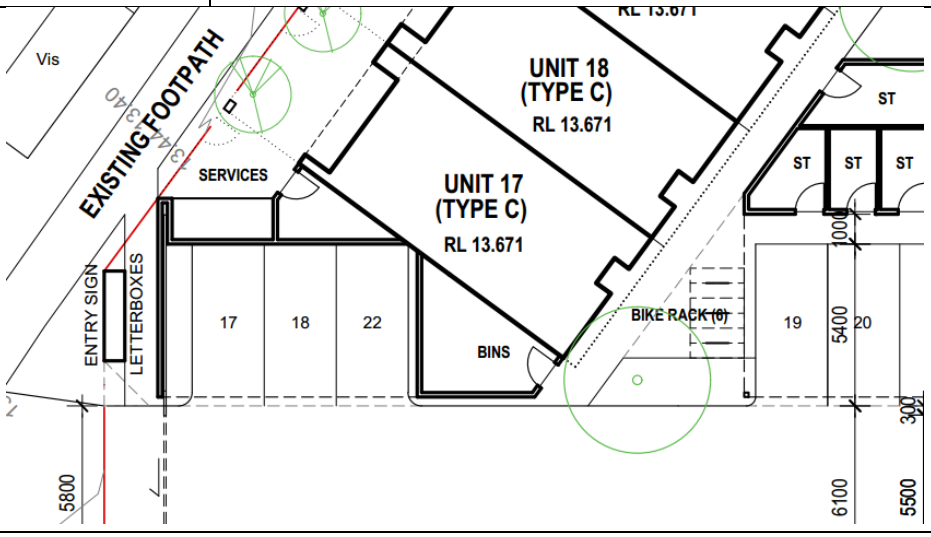
- 1 x 240L General Waste Bin
- 1 x 360L Recycle Waste Bin
- 1 x 240L Green Waste Bin

Units 17-22: These units will have a communal bin store with the following:

- 4 x 240L General Waste Bin
- 4 x 360L Recycle Waste Bin
- 6 x 240L Green Waste Bin

BIN STORE & COLLECTION ARRANGEMENT

Units 1-16	
Total Waste Generated	2,240L general waste per week 1,920L recycling waste per week 1,920L green waste per week
Storage and Capacity	1x 240L general waste per unit on a one a week pick up 1x 360L recycle waste per unit on a fortnightly week pick up 1x 240L green waste bin per unit on a fortnightly week pick up Total Capacity: 3840L General Waste per week 2880L Recycle Waste per week 1920L Green Waste per week
Units 17-22	
Total Waste Generated	840L general waste per week 720L recycling waste per week 720L green waste per week
Storage and Capacity	4x 240L general waste per unit on a one a week pick up 4x 360L recycle waste per unit on a fortnightly week pick up 6x 240L green waste bin per unit on a fortnightly week pick up Total Capacity: 960L General Waste per week 720L Recycle Waste per week 720L Green Waste per week
Bin Store Area Required	6.42sqm
Bin store area proposed	11.9sqm



Collection

- ☒ On-Site
- ☑ Street Collection

The City of Stirling will manage refuse collection and it is proposed to have this occur in accordance with the City's standard collection days. Residents of Units 1-16 will transfer their bins to the verge for collection with a strata manager or similar to transfer bins for Units 17-22 to the verge for collection.

Bin Compound Information

The location of the relevant bin storage area has been identified on the development plans – please refer **Attachment 1**.

OTHER CONSIDERATIONS

Other Waste Requirements

Liquid or hazardous waste generated on-site? **N/A**
If Yes, please detail collection arrangements:

_____

_____

Medical waste products controlled by the *Environmental Protection (Controlled Waste) Regulations 2004* generated on-site? **N/A**

If Yes, please detail collection arrangements:

_____

_____

Will processing, retail and/or wholesale of animal products occur on-site? **N/A**

If Yes, please detail collection arrangements:

_____

_____

ATTACHMENT 1
Proposed Development Plans

KARRINYUP OSBORNE RESERVE

OSBORNE PLACE

EXISTING VERGE TREES TO BE PROTECTED

PROPOSED NEW VISITOR BAYS TO CITY'S REQ.

REMOVED EXISTING CROSSOVER & MAKE GOOD

REMOVED EXISTING CROSSOVER & MAKE GOOD

PROPOSED NEW LANDSCAPE TREES - SEE LANDSCAPE PLAN

PROPOSED NEW LANDSCAPE TREES - SEE LANDSCAPE PLAN

EXISTING FOOTPATH

EXISTING FOOTPATH

PROPOSED CROSSOVER TO CITY'S REQ.

VISITOR

VISITOR

VISITOR

VISITOR

VISITOR

ENTRY SIGN

LETTERBOXES

SERVICES

BINS

BIKE RACK (6)

LIGHT (BOLLARD)

LIGHT (BOLLARD)

LIGHT (BOLLARD)

UNIT 22 (TYPE C*) (FFL @ 00c) RL 14.45

UNIT 21 (TYPE C) (FFL @ 00c) RL 14.45

UNIT 20 (TYPE C) (FFL @ 00c) RL 14.25

UNIT 19 (TYPE C) (FFL @ 00c) RL 14.25

UNIT 18 (TYPE C) (FFL @ 00c) RL 14.05

UNIT 17 (TYPE C) (FFL @ 00c) RL 14.05

UNIT 16 (TYPE A(m)*) (FFL @ 00c) RL 14.87

UNIT 15 (TYPE A(m)) (FFL @ 00c) RL 14.87

UNIT 14 (TYPE A(m)) (FFL @ 00c) RL 14.96

UNIT 13 (TYPE A(m)) (FFL @ 00c) RL 14.96

UNIT 12 (TYPE D) (FFL @ 00c) RL 14.87

UNIT 11 (TYPE D(m)*) (FFL @ 00c) RL 14.87

COURT (FFL @ -100mm) RL 14.77

COURT (FFL @ -100mm) RL 14.77

COURT (FFL @ -100mm) RL 14.86

COURT (FFL @ -100mm) RL 14.86

COURT (FFL @ -100mm) RL 14.77

COURT (FFL @ -100mm) RL 14.77

GARAGE (FFL @ -100mm) RL 14.77

GARAGE (FFL @ -100mm) RL 14.77

GARAGE (FFL @ -100mm) RL 14.86

GARAGE (FFL @ -100mm) RL 14.86

GARAGE (FFL @ -100mm) RL 14.77

GARAGE (FFL @ -100mm) RL 14.77

COVERED CAR BAYS 17 18 22

COVERED CAR BAYS 19 20 21

UNIT 01 (TYPE B*) (FFL @ 00c) RL 14.33

UNIT 02 (TYPE A) (FFL @ 00c) RL 14.33

UNIT 03 (TYPE B) (FFL @ 00c) RL 14.33

UNIT 04 (TYPE A) (FFL @ 00c) RL 14.69

UNIT 05 (TYPE B) (FFL @ 00c) RL 14.69

UNIT 06 (TYPE A) (FFL @ 00c) RL 14.87

UNIT 07 (TYPE B) (FFL @ 00c) RL 14.87

UNIT 08 (TYPE A) (FFL @ 00c) RL 14.96

UNIT 09 (TYPE A) (FFL @ 00c) RL 14.96

UNIT 10 (TYPE A*) (FFL @ 00c) RL 14.96

GARAGE (FFL @ -100mm) RL 14.23

GARAGE (FFL @ -100mm) RL 14.23

GARAGE (FFL @ -100mm) RL 14.23

GARAGE (FFL @ -100mm) RL 14.59

GARAGE (FFL @ -100mm) RL 14.59

GARAGE (FFL @ -100mm) RL 14.77

GARAGE (FFL @ -100mm) RL 14.77

GARAGE (FFL @ -100mm) RL 14.86

GARAGE (FFL @ -100mm) RL 14.86

GARAGE (FFL @ -100mm) RL 14.86

COMMUNAL DRIVEWAY

EXISTING ACOUSTIC WALL

EXISTING DUAL USE PATH

10 OSBORNE PLACE

11 CROXTON PLACE

13 CROXTON PLACE

15 CROXTON PLACE

Ridgeline RL 19.08

Ridgeline RL 16.78

Ridgeline RL 17.79

EXTENT OF OVERSHADOWING (WINTER SOLSTICE AT 12PM)

EXTENT OF OVERSHADOWING (WINTER SOLSTICE AT 12PM)

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	MASTER PLAN	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.01	A	14.11.23

PENNOCK ARCHITECTS

0 1 5m 10m

KARRINYUP
OSBORNE
RESERVE

OSBORNE PLACE

10 OSBORNE PLACE

11 CROXTON PLACE

13 CROXTON PLACE

15 CROXTON PLACE

EXISTING FOOTPATH

EXISTING ACOUSTIC WALL

EXISTING DUAL USE PATH

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	GROUND FLOOR MASTER PLAN	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.07	A	14.11.23

0 1 5m 10m

KARRINYUP
OSBORNE
RESERVE

OSBORNE PLACE

10 OSBORNE PLACE

11 CROXTON PLACE

13 CROXTON PLACE

15 CROXTON PLACE

HIGH LEVEL WINDOWS

3000

3000

3000

6000

6000

3000

3000

3000

PENNOCK ARCHITECTS

PROJECT	TITLE	DRAWING STATUS	SCALE	PROJECT CODE	SHEET NO.	REVISION	DATE
8 OSBORNE PLACE STIRLING, WA	FIRST FLOOR MASTER PLAN	DEVELOPMENT APPLICATION	1:250 @ A3	2305	A1.08	A	14.11.23

0 1 5m 10m