



PART D – CITY OF NEDLANDS

1. Declarations of Due Consideration

2. Disclosure of Interests

3. Form 1 DAP Applications

- 3.1 Lot No 348 (111) Waratah Avenue, Dalkeith - 5 Grouped Dwelling
Development – DAP/24/02799

4. Form 2 DAP Applications

Nil.

5. Section 31 SAT Reconsiderations

Nil.

Part D – Item 3.1 - LOT NO. 348 (111) WARATAH AVENUE, DALKEITH – FIVE GROUPED DWELLING DEVELOPMENT

Form 1 – Responsible Authority Report (Regulation 12)

DAP Name:	Metro Inner Development Assessment Panel
Local Government Area:	City of Nedlands
Applicant:	Urbanista Town Planning
Owner:	Dalkeith Properties Pty Ltd
Value of Development:	\$5.05 million
Responsible Authority:	City of Nedlands
Authorising Officer:	Bruce Thompson, Director Planning & Development
LG Reference:	DA24-99438
DAP File No:	DAP/24/02799
Application Received Date:	15/11/2024
Report Due Date:	18 March 2025
Application Statutory Process Timeframe:	90 Days (with an additional 35 days agreed)
Attachment(s):	1. Location Plan 2. Amended Development Plans received 31 January 2025 3. Schedule of Submissions 4. Design Review Panel Minutes 5. Applicants Planning Report received 15 November 2024 6. Landscaping Plan dated 16 September 2024 7. Arboricultural Impact Assessment dated 28 August 2024

Responsible Authority Recommendation

It is recommended that the Metro Inner Development Assessment Panel resolves to:

1. Refuse DAP Application reference DAP/24/02799 and accompanying plans (**Attachment 2**) in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the City of Nedlands Planning Scheme No. 3, for the following reasons:

Reasons

- a. The proposed development does not comply with Clause 67(2)(m) of Schedule 2 of the *Planning and Development (Local Planning Schemes) Regulations 2015* as the development is not considered to be compatible with its setting,

including the desired future character of its setting and the relationship development to development on adjoining land and land in the locality.

- b. The proposed development does not meet the design principles of Clause 3.3 – Street setbacks of State Planning Policy 7.3 – Residential Design Codes (Volume 1) as the development is not consistent with the existing or desired streetscape character as outlined in LPP Precincts 5.14 in relation to primary street setbacks to Waratah Avenue and Shrike Lane and right-of-way setbacks to Gerygone Lane.
- c. The proposed development does not meet the design principles of Clause 5.1 – Open space - Special transitional provision of State planning Policy 7.3 – Residential Design Codes (Volume 1) as the development does not reflect the existing or desired streetscape character, increases the appearance of building bulk and exceeds the expectations of the R40 code.
- d. The proposed development does not meet the design principles of Clause 3.4 – Lot boundary setbacks of State Planning Policy 7.3 – Residential Design Codes (Volume 1) as the reduced western upper floor setbacks present as bulky to the adjoining neighbour and do not provide a transition between sites with varying intensification of development.
- e. The proposed development does not meet the design principles of Clause 3.10 – Visual Privacy of State Planning Policy 7.3 – Residential Design Codes (Volume 1) as there is direct and indirect overlooking of major openings and private open spaces on adjoining properties to the west, north and east.
- f. The proposed development does not meet the design principles of Clause 2.1 – Size and layout of dwellings of State Planning Policy 7.3 – Residential Design Codes (Volume 1) as there is insufficient storage areas for large bulky items.

Reasons for Responsible Authority Recommendation

The application for five grouped dwellings has not been adequately resolved to ensure that the development does not unduly impact on the streetscape or adjoining properties. Many elements of the proposal are inconsistent with the R-Codes and the City's planning framework, particularly LPP 5.14 Precincts. Thereby is recommended that the development application be refused.

Details: outline of development application

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Urban
Local Planning Scheme	Local Planning Scheme No. 3
Local Planning Scheme - Zone	Residential (R40)
Structure Plan/Precinct Plan	N/A
Use Class and permissibility:	'P' Permitted
Lot Size:	1164m ²

	Lot 1: 244m ² Lot 2: 225m ² Lot 3: 225m ² Lot 4: 225m ² Lot 5: 244m ²
Existing Land Use:	Residential – Single House
State Heritage Register	No
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☐ N/A ☒ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	No
Swan River Trust Area	No
Region Scheme	Metropolitan Region Scheme

Proposal:

Proposed Land Use	Residential (Grouped Dwellings)
Proposed No. Storeys	Two
Proposed No. Dwellings	Five

Assessment of the proposal is based on:

- Amended Development Plans received 31 January 2025 (**Attachment 2**)
- Landscaping Plan dated 16 September 2024 (**Attachment 6**)
- Arboricultural Impact Assessment dated 28 August 2024 (**Attachment 7**)

Background:Site Context

The development is located at 111 Waratah Avenue, Dalkeith. The parent lot has a total lot area of 1,164m² and is located on the street block bound by Waratah Avenue to the south, Shrike Lane to the east and Gerygone Lane to the north (**Attachment 1**). The lot is regular in shape with a 20m frontage to Waratah Avenue. The lot is relatively flat, with a 0.5m slope down from the rear of the site to the street frontage. The site currently vacant.

The site is zoned Residential with a density code of R40. The dwellings to the east of Shrike Lane are also coded R40 whereas the dwellings to the north of Gerygone Lane are coded R10. The site received conditional subdivision approval for 5 green title lots on 27 August 2024 (WAPC ref 200280). As the lots have not been formally created, the development has been assessed as 'Grouped Dwellings' and assessed against Part C of the R-Codes Volume 1.

Streetscape Character

The locality is experiencing a transition to a higher density and scale of development. The Residential zoned properties within the Waratah Avenue street block between Robert Street (west) and Alexander Road (east) was up-coded upon the gazettal of Local Planning Scheme No. 3 (LPS3), transitioning from R10 to R40. As a result, the streetscape features a mix of single residential houses reflective of the previous R10 coding under Town Planning Scheme No. 2 and newly constructed two-storey grouped dwelling developments. Within the street block, there are three recently completed four two-storey grouped dwellings at 116 Waratah Avenue and 130 Waratah Avenue, and a three-storey four grouped dwelling development 117 Waratah Avenue was approved by the City in 2024.

In response to the emerging development context, the City has prepared Local Planning Policy 5.14 Precincts (LPP 5.14) to guide future development. The policy contains built form controls to ensure that new development contributes to the desired future character of the wider Waratah Precinct as a medium density area.

Legislation and Policy:

Legislation

- *Planning and Development Act 2005*
- *Planning and Development (Local Planning Schemes) Regulations 2015* (LPS Regulations)
- *Planning and Development (Development Assessment Panels) Regulations 2011*
- *Metropolitan Region Scheme*
- City of Nedlands Local Planning Scheme No.3 (LPS 3)

State Government Policies

- State Planning Policy 7.0 – Design of the Built Environment (SPP 7.0)

Planning Codes

- Residential Design Codes Volume 1 (R-Codes Vol. 1)

Local Policies

- Local Planning Policy 1.1 Residential Development (LPP 1.1)
- Local Planning Policy 1.3 Sustainable Design (LPP 1.3)
- Local Planning Policy 5.14 Precincts (LPP 5.14)
- Local Planning Policy 7.2 Design Review Panel (LPP 7.2)
- Local Planning Policy 7.3 Consultation of Planning Proposals (LPP 7.3)

Strategies

- City of Nedlands Local Planning Strategy

Consultation:

Public Consultation

In accordance with the City's Local Planning Policy 7.3 Consultation of Planning Proposals, the development was advertised for a period of 14 days, from 29 November 2024 to 13 December 2024 to 46 owners and occupiers.

At the close of the advertising period, the City received 14 submissions, 13 objecting and one requesting further information on the proposal. A full schedule of submissions can be found at **Attachment 3**. A summary of the objections is provided in **Table 1** below. All submissions on this proposal have been given due regard in this assessment in accordance with Clause 67(y) of the *Planning and Development (Local Planning Schemes Regulations) 2015*.

Issue Raised	Officer comments
Bulk and scale (raised by 4 submissions)	The proposed bulk and scale is not supported. The combination of reduced primary and secondary street setbacks, reduced open space and lot boundary setbacks all combine to negatively impact bulk and scale. Bulk and scale is a reason for the recommendation for refusal.
Reduced primary street setback (raised by 10 submissions)	The proposed primary street setback to Waratah Avenue is not supported. This does not align with the existing or desired future character of the area or streetscape as outlined in Precincts 5.14 LPP. The primary street setback is a reason for the recommendation for refusal.
Reduced secondary street setback (raised by 10 submissions)	The proposed secondary street/right-of-way setback is not supported. This does not align with the existing or desired future character of the area or streetscape as outlined in Precincts 5.14 LPP. The secondary street/right-of-way setback is a reason for the recommendation for refusal.
Lack of parking (raised by 9 submissions)	Officers support the proposed car parking provision. Refer to discussion on <i>Parking</i> within this RAR.
Visual Privacy (west, north, east) (raised by 9 submissions)	Visual privacy is not supported to the western, northern and eastern properties which do not achieve the deemed-to-comply provisions. Refer to discussion on <i>Visual Privacy</i> within this RAR.
Lack of open Space (raised by 9 submissions)	The lack of open space is not supported as it adds to the perception of bulk and scale and does not align with the existing or desired future character of the area as outlined in Precincts 5.14 LPP. Open space is a reason for the recommendation for refusal.
Western lot boundary setbacks and boundary walls (raised by 7 submissions)	Amended plans were received on 31 January 2025 which reduced the western boundary walls to a maximum of 3.5m in height, this now achieves the deemed-to-comply requirements. The western upper floor balconies were setback 1.0m, in lieu of the deemed-to-comply 1.5m. This setback is not supported as its adds to the perception of building bulk to the western neighbour and does not provide a transition between intensification of development. Refer to discussion on <i>Lot boundary setbacks</i> within this RAR.

Removal of trees (raised by 1 submissions)	Prior to the demolition of the single house, there were 6 trees located within the site boundaries of 111 Waratah Avenue, Dalkeith. The City does not currently have any Local Planning Policies that are applicable to this site in relation to tree retention. The trees have already been removed, except the Lemon Scented Gum (20-30m in height) along the western boundary as indicated in the Arborist Report, refer to Attachment 7.
Waste management (raised by 4 submissions)	The waste generated on site is managed independently by each dwelling. The dwellings have the provision to store 3 bins (as per City requirements). These will be located internally to the garages. Bin collection will be undertaken via Shrike Lane in accordance with the WAPC subdivision approval and discussions between the City's Technical Service and Waste Collection department and the applicant.
Concerns with construction (raised by 5 submissions)	Should the DAP choose to approve this development, a recommended condition of approval will be placed requiring a Construction Management Plan be prepared and approved by the City, to the satisfaction of the City.
Safety of laneways (raised by 7 submissions)	A condition of subdivision approval was placed by the WAPC which requires the upgrade of Shrike Lane to its full width (5m) from the subject site down to the intersection of Waratah Avenue. Vehicle access from the lowest order road possible is generally accepted as best planning.

Amended plans for the proposal were submitted to the City on 31 January 2025 which included the following changes:

- Reduction of western boundary walls (Lot 1-5) from a maximum of 5.0m to a maximum of 3.5m in height.
- Increase of upper floor western balcony walls setback (Lots 1-5) from nil to 1.0m to the western boundary.

The amendments are minor in nature and do not trigger the need for formal re-advertising of the proposal.

The amended plans received by the applicant addressed the boundary wall concerns raised by the City. No other changes were made in response to the City's recommendations.

Design Review Panel Advice

The development was reviewed by the City's Design Review Panel on two occasions, with a final review by the Chair of the DRP, based on 31 January 2025 plans. Full DRP

Minutes are provided at **Attachment 4**. A summary of the Panel and Chair's evaluation of the proposal at each stage of the review process is provided in **Table 2** below.

Table 2: DRP Design Quality Evaluation			
	Supported		
	Further Information Required		
	Not supported		
SPP 7.0 Principles	1 July 2024	2 December 2024	Chair Review 5 February 2025
1. Context and Character			
2. Landscape Quality			
3. Built Form and Scale			
4. Functionality and Built Quality			
5. Sustainability			
6. Amenity			
7. Legibility			
8. Safety			
9. Community			
10. Aesthetics			

The areas that are not supported by the DRP include the following:

Built Form and Scale

Comments:

- The rear setback generates an abrupt interface to the laneway.
- The boundary walls have been reduced in height to 3.0m – 3.5m. The western interface has improved by pulling back the terraces by 1.0m. The retention of an existing boundary wall requested by the neighbours is shown on the drawings.
- Visual compliance from the west side terraces have improved by pulling the terraces back 1.0m from the boundary.

Suggested amendments/improvements:

- Consider increasing the setback on the laneway interface and liaise with the City in terms of their requirements in relation to this.

Sustainability

Comments:

- The ESD Report only responds to Section J requirements which is a low bar.

Suggested amendments/improvements:

- The ESD report notes PV solar panels however the applicant is encouraged to consider integrating further ESD initiatives such as EV charging, double glazing, water capture, heat pump HWS's, all electric development (no gas) etc.

Should the DAP choose to approve the development, a condition of approval would be recommended which requires an updated ESD Report to be provided in accordance with LPP 1.3.

Planning Assessment:

The proposal has been assessed against all relevant legislative requirements of LPS 3, and State and Local Planning Policies as outlined above. The matters below have been identified as key considerations for the determination of this application.

Local Planning Policy 1.3 Sustainable Design – Residential

Local Planning Policy 1.3 Sustainable Design – Residential (LPP 1.3) applies additional sustainability requirements for new grouped dwellings to improve environmentally design. The Policy provides the following objectives relating to this proposal:

- Reduce the urban heat island effect by enforcing maximum solar absorptance ratings in relation to roof colourings.
- Each new dwelling to be provided with a minimum 3kw photovoltaic solar panel system.
- All water fittings to be within 1 star of the maximum Water Efficiency Labelling Standard (WELS)
- Landscaping plans to include irrigation efficiency as outlined in the Policy.
- An Environmentally Sustainable Design (ESD) Report is to be prepared demonstrating how the development achieves Design Principle 5: Sustainability from State Planning Policy 7.0.

Should the DAP choose to approve the development, conditions of approval are recommended to enforce the above-mentioned objectives. Additionally, a recommended condition of approval will be imposed to require an Environmentally Sustainable Design (ESD) Report be prepared prior to the issue of a building permit.

Residential Design Codes Volume 1 (R-Codes Volume 1)

The R-Codes Volume 1 provide controls applicable to grouped dwelling residential development in the form of deemed-to-comply development standards and design principles.

The R-Codes Volume 1 (Part C) are the development standards that apply to grouped dwellings in residential areas coded R30 and above in the form of deemed-to-comply development standards and design principles. Where an element of the proposal does not meet the deemed-to-comply provisions of the R-Codes it requires consideration against the Design Principles.

The below elements of the proposal do not meet the deemed-to-comply provisions, however, are considered to adequately satisfy the Design Principles.

- Private Open Space
- Trees and Landscaping
- Parking
- Streetscape

The below elements of the proposal do not meet the deemed-to-comply provisions and are not considered to achieve the Design Principles. It is for these reasons refusal is recommended.

- Size and Layout of Dwellings

- Open Space
- Street Setback
- Lot Boundary Setbacks
- Visual Privacy

The design principles relevant to the above are discussed below.

Assessment Against Design Principles:

The below elements of the proposal do not meet the deemed-to-comply provisions, however, are considered to adequately satisfy the Design Principles.

Private Open Space (Clause 1.1)

The development proposes private open space located in the primary street setback area (Unit 1). The design principles for private open space consider the functionality of private open space to allow for entertaining and leisure as well as access to northern sun and soft landscaping. The proposed private open space is considered to meet the design principles for the following reasons:

- Each dwelling has access to a private open space on both the ground and upper floors. The ground floor private open space is directly accessible from the primary living area, functional and sufficient in size.
- All private open spaces on the site are orientated for occupant amenity. All dwellings feature a private open space that has access to northern natural sunlight and ventilation.
- All private open spaces allow for sufficient uncovered area to permit winter sun and facilitate the addition of soft landscaping and tree planting areas.
- There is no communal open space proposed.

Trees and Landscaping (Clause 1.2)

Unit 1 proposes 13.9% soft landscaping in lieu of 15% and proposes two trees in lieu of four. The design principles for trees and landscaping consider the retention of existing trees, the provision of new trees and high-quality landscaping and sufficient deep soil area to sustain healthy tree and plant growth. The proposed trees and landscaping are considered to meet the design principles for the following reasons:

- One existing Lemon Scented Gum to the rear of the site on the proposed Unit 5 has been retained with all other vegetation being removed during demolition. The Arborist Report as outlined in **Attachment 7** recommended the retention of this tree as it is in excellent health and has good structure (category A tree quality). This tree is 20-30m in height and is visible from the street and surrounding properties. The retention of this tree is significant for local fauna and to aid the development to achieve the desired future character of the area as outlined in LPP Precincts 5.14.
- As viewed from the street, the soft landscaping and tree planting provided within Unit 1 aids in enhancing the built form and streetscape and pedestrian amenity. Should the DAP choose to approve the development, a recommended condition of approval will be placed requiring the additional planting of a verge tree along Waratah Avenue to aid in the positive contribution to the streetscape.
- The location of soft landscaping on site has been positioned within the private open space on the ground and upper floor balconies. This aids in enhancing

the visual appeal and amenity for future residents by providing an appealing outlook.

Parking (Clause 2.3)

The development proposes no visitor parking bays in lieu of one. The design principles for parking consider the availability of on-street parking and the proximity of the site to public transport. The proposed parking is considered to meet the design principles for the following reasons:

- The WAPC has conditionally approved a subdivision plan on 27 August 2024 for the creation of five lots as proposed, without the requirement of a visitor bay.
- The site is located approximately 15m from a bus stop on Waratah Avenue, which is serviced by bus route 24. Bus route 24 provides transit to key destinations including Perth City, QEII Medical Centre, Claremont Train Station, Nicholson Road and Kings Park. In the evening, between 5pm – 7pm, there is an average frequency of a bus servicing the nearest bus stop every 10 minutes. In the morning, between 7am – 9am, there is an average frequency of a bus servicing the nearest bus stop at an average of 15 minutes.
- Each dwelling is provided with two resident car bays, which exceeds the minimum deemed-to-comply criteria of one bay. The second resident bay is capable of accommodating visitor vehicles on the site if required. As the site is within 15m of a high frequency bus route, the provision of 15 parking bays (inclusive of two visitor bays) is the deemed-to-comply outcome. The development provides a total of 24 car parking bays, a technical 'oversupply' of parking.
- Within 200m of the site there are 11 on-street car parking bays.
- In terms of transport options, the development provides two car parking bays per dwelling, has sufficient availability of on-street parking and proximity to relatively high frequency public transport. The combination of these factors results in sufficient on-site car parking for the proposal.

Streetscape (Clause 3.6) and Residential Development 1.1

The development proposes solid fencing up to 1.8m in height within the primary street setback area in lieu of a maximum 1.2m. The design principles for street fencing consider if the design is complimentary to the streetscape, permits passive surveillance whilst balancing the need for privacy for residents. The proposed fencing are considered to meet the design principles for the following reasons:

- The existing streetscape along Waratah Avenue has several solid fences within the primary street setback area. These can be seen at 112, 114, 120B, 122, 124, 128 Waratah Avenue, Nedlands
- The solid fencing is proposed to provide increased privacy to the residents of Unit 1 given the location of their private open space.
- The proposed primary street fencing permits passive surveillance between Unit 1 and the street by utilising visually permeable portions. The solid portions of the fence along the southern elevation contributes to total of 28% (5.8m) of the lot frontage (20.1m). This allows for 72% of the lot frontage to consist of visually permeable fencing. This aid in permitting surveillance between the dwelling and the street and demonstrates a balanced approach.
- The fencing will have no impact on vehicle safety with all fencing within the truncation and sight lines achieving the deemed-to-comply provisions.

The below elements of the proposal do not meet the deemed-to-comply provisions and are not considered to achieve the Design Principles. It is for these reasons refusal is recommended.

Size and Layout of Dwellings (Clause 2.1)

Units 1 to 5 do not achieve the recommended size and dimensions for storage areas. The design principles for size and layout of dwellings consider access to adequately size and conveniently located storage for the residents. The proposed storage areas are not considered to meet the design principles for the following reasons:

- All dwellings feature storage rooms ranging from 1.1m² to 2.4m², with some featuring a 0.5m dimension. The space provided is inadequate to permit the storage of large bulky items.
- The storage space provided is not proportionate to the size of the dwellings. The internal floor area of the dwellings ranges from 205m² to 215m², each with 4 bedrooms capable of 8 residents.
- Although the dwellings feature multiple walk in robes, this space is not appropriate for storage of bulky items such as bikes, lawn care equipment etc and should be used for its intended purpose (i.e. clothes/linen storage).

Street Setback (Clause 3.3) and Precincts 5.14

The development proposes the following street setbacks:

- Unit 1 is setback 2.0m on the ground floor and 1.5m on the upper floor from the primary street without adequate compensation in lieu of 4m as outlined in Precincts LPP 5.14.
- Unit 1 is setback 1.0m on the ground and upper floor from the secondary street in lieu of 2.0m.
- Units 2 to 5 are setback 1.0m on the ground and upper floors to the right-of-way (west) in lieu of 2.0m.
- Unit 5 has a nil setback on the ground and upper floor to the right-of-way (north) in lieu of 0.5m.

The design principles for street setbacks consider ensuring consistency with existing and future streetscape and character, building articulation. The proposed street setbacks are not considered to meet the design principles for the following reasons:

Waratah Avenue

- The Desired Future Character statement as outlined in LPP 5.14 Waratah Precinct states: *"new development within the residential sub-precincts shall reflect the established generous street setbacks"*.
- The proposed primary street setback from Unit 1 to Waratah Avenue (2.0m on ground and 1.5m on upper) is not consistent with the existing of desired future streetscape. Of the 19 other residential properties fronting Waratah Avenue between Alexander Road and Robert street, the average primary street setback is 6.4m. The existing streetscape, as discussed above, is a mixture of existing inter-war houses which generally have a large setback (7m+ without carports) and new grouped dwelling developments (130, 116 and 114 Waratah Avenue) which feature setbacks ranging from 2.0m-6.5m. The Precincts LPP

5.14 was created to guide the streetscapes of the Waratah Precinct to reflect and respect the existing character of the area, including street setbacks.

- Although Precincts LPP 5.14 allows for street setback reductions to 2m, it requires that this building encroachment be compensated for by open space (of which 50% to be soft landscaping) behind the street setback line. This development proposes encroachment of 76m² on both floors of which only 5m² (7%) is compensated for. This demonstrates that the development is pushing boundaries and increasing building bulk, without providing the necessary open space (and soft landscaping) to contribute positively to the streetscape and existing and desired future local character.
- The reduced setback of Unit 1 means that the private open space for the dwelling is located entirely within the primary street setback area and causes the requirement of solid fencing to provide residents privacy.
- The building mass of the development is architecturally designed. The southern elevation provides for an attractive setting for residents and the design contributes positively to the streetscape. The southern elevation features multiple articulations and varying materiality including screening, planters, pergolas and porches.
- As viewed from Waratah Avenue, the façade does not consist of building services such as vehicle entries, parking supply or serving infrastructure.

Shrike Lane/Gerygone Lane

- The street of Shrike Lane is an emerging laneway and is currently mainly used for rear vehicle access for dwellings along Alexander Road. This development will be the first to have direct pedestrian and vehicle frontage onto Shrike Lane. Having a reduced primary street setback on both ground and upper floors of all five dwellings increases the bulkiness of the building on the laneway and surrounding properties and users of the laneway.
- The reduced setback does not permit for sufficient landscaping or tree planting within the provided setback area. This can negatively impact the streetscape and the potential for residents of the development and surrounding residents to interact with the laneway.
- The reduced setback does not impact the proposed vehicle manoeuvrability.
- The ground and upper floor walls of Unit 5 propose a nil setback to the north Gerygone Lane. This will comprise privacy and noise for the residents of Unit 5 as there are major openings and walls to habitable rooms located on or adjacent to the laneway with a nil setback.

Lot boundary Setbacks (Clause 3.4)

Units 1 to 5 upper floor balcony setback along the western elevation is setback 1.0m from the western boundary in lieu of 1.5m. The design principles for lot boundary setbacks consider the locations streetscape character, transition between sites with varying land uses or intensity of development and to provide adequate solar access and natural ventilation and impact on privacy. The proposed western lot boundary setbacks are not considered to meet the design principles for the following reasons:

- The proposed lot boundary setbacks from the upper floor balconies do not reinforce the desired streetscape character. The proposed setbacks are not consistent with existing or desired built form local character which features ample separation between dwellings and lot boundaries, specifically on upper levels.

- The setback from the upper floor balconies does not provide a transition to the western property which has a different intensity of development. The western property features an inter-war single storey dwelling. The length of the balcony walls along the western boundary is combined to total 30m in length with heights ranging from 4.6m to 5.0m. The reduced setback of these second storey walls are not commiserative of the adjoining site which is of a lower intensity of development. Although the coding permits five grouped dwellings, the intensity of development on the subject site has increased from a single storey dwelling to five double storey grouped dwellings. This is a stark change and is exasperated by reduced second floor setbacks along the western boundary.
- The proposed setbacks are sufficient to provide adequate solar access and natural ventilation to the subject site and the adjoining western property.

Visual Privacy (Clause 3.10)

The development proposes the following visual privacy variations:

- Overlooking from the western balconies of Units 2, 3 and 4 onto the western property at 113 Waratah Avenue.
- Overlooking from the balcony of Unit 5 onto the northern properties at 34 and 36 Philip Road
- Overlooking from eastern balconies of Unit 1 and 2 to 107 Waratah Avenue along the eastern elevation
- Internal overlooking from Unit 4 western balcony along the northern elevation to Unit 5
- Internal overlooking from Unit 5 bed 4 along the western elevation to Unit 4

The design principles for visual privacy consider overlooking of major openings and active habitable spaces, the reduction of overlooking through various design elements and screening devices. The proposed visual privacy intrusions are not considered to meet the design principles for the following reasons:

- Indirect overlooking from the western balconies of Units 2, 3 and 4 to the western property at 113 Waratah Avenue. The overlooking falls onto major openings of the dwelling including the dining room and the main private open space for the dwelling. The source of overlooking is from the upper floor balconies which are likely to be used frequently and for extended periods of time. The reduced lot boundary setbacks worsens the impact of overlooking.
- Direct overlooking occurs from the western balcony of Unit 5 along the northern elevation to the properties at 34 and 36 Philip Road. The cone of vision falls directly onto private open space of both properties such as garden spaces and patio entertaining spaces.
- Direct overlooking occurs from the eastern balconies of Unit 1 and 2 along the eastern elevation to 107 Waratah Avenue. The cone of vision falls directly onto the private outdoor space of the property with direct view of the pool area.
- Should the DAP decide to approve the development, conditions of approval have been recommended to provide visual privacy screening to achieve the design principles of the above.

Open Space (Clause 5.1)

Units 1 to 5 range from 24.8% to 33.6% open space in lieu of 45% open space. The design principles for open space consider the impact of building bulk, provision of adequate sun and ventilation and ability to use external spaces for outdoor pursuits and recreation. The proposed open space is not considered to achieve the design principles for the following reasons:

- The proposed open space does not reflect the existing or desired streetscape character of Waratah Avenue and the surrounding locality. The existing streetscape is mainly characterised by single houses with large front and rear gardens and ample amount of open space.
- The open space provided for the lots does not seek to reduce the perception of building bulk. When looking at the impact that a lack of open space has on the appearance of building bulk, the amount of site cover should be investigated. All lots feature between 66% and 75% of site cover. The parent lot features on average 73% site cover (27% open space). When comparing this against the recommended site cover for the density coding (R40 55% site cover), the proposal exceeds this by double. The proposals open space and site cover is more commiserative of an R80 coded site (30% open space recommended). The open space on the site is not consistent with the expectations of the applicable density code. The open space proposed, combined with reduced street setbacks and lot boundary setbacks as discussed below, combines to allow for the presentation of building bulk.
- The parent lot is orientated north south, which given the layout of the proposed lots (being east-west) could prove challenging to provide each dwelling with sufficient access to sunlight. However, all dwellings feature major openings to primary living areas facing between north-west and east to permit sufficient winter sun into the dwellings. Furthermore, all dwellings feature private open space (ground or upper floors) which obtain northern sun.
- The dwellings feature ample opportunities for residents to pursue outdoor pursuits either on the ground or upper floors. All dwellings feature primary garden areas which achieve the size as required by C1.1.1/C1.1.2. Furthermore, all dwellings feature an additional private open space located on the upper floor balcony which is accessed from the rumpus room. The combination of private open spaces on the ground and upper floor allows for the residents to undertake a range of outdoor activities.
- Utilities and essential facilities are generally not located within the private open spaces of the units (except for clothes drying areas on the upper floor balcony's). This allows for the residents to utilise the private open space in its entirety without essential facilities compromising the functionality of the spaces.

Local Planning Policy 5.14 Precincts

Local Planning Policy 5.14 Precincts (LPP 5.14) applies to land coded R40 to R-AC3 within the Waratah Precinct. LPP 5.14 has been developed ensure new development enhances streetscapes, respectfully responds to the context and character of the area, promotes sustainable building design and effectively manages transition between high and medium densities.

LPP 5.14 replaces or augments several deemed-to-comply provisions of the R-Codes Vol. 1, and these have been addressed above where applicable. The policy also includes the objective to 'define the desired future character of the Precincts in context of their zoning and density code' and provides a desired future character statement for the Waratah sub-precinct. The proposed development in its current form does not

satisfy the desired future character statement or objectives of the Policy due to the following reasons:

- The development does not maintain an appropriate setback from Waratah Avenue. This built form outcome does not balance the existing streetscape character with the emerging context as a medium density area as recommend in this Policy. The desired future character of the Waratah Precinct outlines the need to reflect the established generous street setbacks.
- The street block bound by Alexander Road and Robert Street is coded R40, however there is currently varying intensity of development along the street. The proposal does not provide the appropriate built form transitions between adjoining dwellings with lower intensity developments. The proposal seeks to push boundaries and the buildings present as bulky as observed from neighbouring properties and the public realm.
- The development contributes to the dwelling stock available in the locality via the addition of five new two storey dwellings, featuring 4 bedrooms and 3 bathrooms.
- The architectural style of the development is of high-quality and provides a high level of amenity for its residents. The City's Design Review Panel considers the building façade materials and design to be attractive and add to the streetscape appeal.

Conclusion:

The application has been assessed against the parts of the planning framework relevant to the site. In instances where the proposal does not satisfy a deemed-to-comply development standard, the development has been considered in the context of the relevant R-Codes Volume 1 design principles and policy objectives. The proposal five grouped dwellings is not consistent with the R-Codes or the City's planning framework, particularly LPP 5.14 Precincts. It is recommended that the development application be refused.

ADJ	ADJACENT
CAB	CABINETRY.
COL	COLUMN TO S.E. DWGS
C.O.S	CHECK ON SITE
CL	CLOTHES LINE AS SPEC.
DP	DOWNPIPE AS SPEC.
EX	EXISTING
FFL	FINISHED FLOOR LEVEL
FW	FLOOR WASTE
FSL	FINISHED SLAB LEVEL
FFL	FINISHED FLOOR LEVEL
GP	GAS POINT AS SPEC.
HC	HOSE COOK AS SPEC.
MV	MECHANICAL VENT
NBN	NATIONAL BROADBAND NETWORK
PO	OVERFLOW PIPE AS SPEC.
PD	POWER DOME
PCD	PREMISES CONNECTION DEVICE
RL	REDUCED LEVEL
S.L	SOFT LANDSCAPING
TBC	TO BE CONFIRMED
TOW	TOP OF WALL
TVA	TELEVISION ANTENNA
U.N.O	UNLESS NOTED OTHERWISE

- TILE SET-OUT POINT(S)
- FLOOR WASTE (REFER TO INTERNAL LAYOUT DWGS)
- LETTERBOX
- KERBING (TYPE X)
- POWER DOME. REFER ELECTRICAL DWG
- ELEC. METER BOARD REFER ELECTRICAL DWG
- ELEC. SUB-METER BOARD REFER ELECTRICAL DWG
- HOT WATER UNIT REFER ELECTRICAL DWG
- GAS METER REFER ELECTRICAL DWG
- AC CONDENSOR
- WATER METER
- HOSE COCK AS SPEC.
- BOX GUTTER SUMP
- DOWNPIPE & UNI PIT
- SOAKWELL AS SPEC.

1. ALL TILE SET-OUTS TO BE CONFIRMED ON-SITE BY ARCHITECT.
2. SLAB SET-OUT TO S.E. DWGS. ENSURE ALL FLOOR TRANSITIONS ARE FLUSH U.N.O.
3. ALL MATERIAL CHANGES (I.E. CARPET TO TILE) OCCUR DIRECTLY UNDER THE CENTRE OF THE DOOR PANEL.
4. ALL EXTERNAL PAVING/TILES TO FALL AWAY FROM BUILDING.
5. LANDSCAPING. REFER TO PROVISIONAL SUMS.

COD E	OVERALL	DESCRIPTION
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CONC-1	100	CONC. WAREHOUSE FINISH
CONC-2	100	CONC. EXPOSED AGGREGATE
G1	100	GREY PEBBLE
PV-1	100	SANDSTONE PAVER
PV-2	100	PERMEABLE PAVER
TL-1	1	TILE
TM-1	100	TIMBER FLOORBOARDS
TM-2	50	TIMBER DECK

CODE	DESCRIPTION
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DP-1 COLORBOND DOWNPIPE 100Ø SURFMIST AS
SPEC

OPENSACE	108 m ²	44%
PRIMARY GARDEN	41 m ²	
SOFT LANDSCAPING	40 m ²	16%
TOTAL	244 m ²	
LOT 2		
OPENSACE	86 m ²	36%
PRIMARY GARDEN	40 m ²	
SOFT LANDSCAPING	30 m ²	12%
TOTAL	225 m ²	
LOT 3		
OPENSACE	86 m ²	36%
PRIMARY GARDEN	40 m ²	
SOFT LANDSCAPING	30 m ²	12%
TOTAL	225 m ²	
LOT 4		
OPENSACE	86 m ²	36%
PRIMARY GARDEN	40 m ²	
SOFT LANDSCAPING	30 m ²	12%
TOTAL	225 m ²	
LOT 5		
OPENSACE	103 m ²	42%
PRIMARY GARDEN	40 m ²	
SOFT LANDSCAPING	37 m ²	15%
TOTAL	244 m ²	

1 : 100

8. CHECK ALL DIMENSIONS ON SITE & COORDINATE BETWEEN TRADES BEFORE COMMENCING WORK OR PREPARING SHOP DRAWINGS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION.
2. DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION w/ ALL RELEVANT DOCUMENTATION.
4. LOOSE FURNITURE SHOWN FOR CLARITY ONLY. NOT IN CONTRACT U.S.
5. REFER TO INTERIOR SCHEDULE FOR ALL FURNITURE, SEATING, TIE SEATING, FLOOR WASTE LOCATIONS & CLOSET/ENTRY DETAILS.

ADDRESS: 111 Waratah Ave, Dalkeith

STAGE: DEVELOPMENT APPLICATION [DRAFT]

SCALE: 1:100 @A1

DWG

A1-02

ISSUE

ABBREVIATIONS

ADJ	ADJACENT
CAB	CABINETY.
COL	COLUMN TO S.E. DWGS
C.O.S	CHECK ON SITE
CL	CLOTHES LINE AS SPEC.
DP	DOWNPIPE AS SPEC.
EX	EXISTING
FFL	FINISHED FLOOR LEVEL
FW	FLOOR WASTE
FSL	FINISHED SLAB LEVEL
FFL	FINISHED FLOOR LEVEL
GP	GAS POINT AS SPEC.
HC	HOSE COCK AS SPEC.
MV	MECHANICAL VENT
NBN	NATIONAL BROADBAND NETWORK
POP	OVERFLOW PIPE AS SPEC.
PD	POWER DOME
PCD	PREMISES CONNECTION DEVICE
RL	REDUCED LEVEL
S.L	SOFT LANDSCAPING
TBC	TO BE CONFIRMED
TOW	TOP OF WALL
TVA	TELEVISION ANTENNA
U.N.O	UNLESS NOTED OTHERWISE

SYMBOLS & CODES

(GENERAL)

○	POINT(S)
○	TILE SET-OUT POINT(S)
○	FLOOR WASTE (REFER INTERNAL LAYOUT DWGS)
LB	LETTERBOX
KER	KERBING (TYPE X)
MB	POWER DOME, REFER ELECTRICAL DWG
ESM	ELEC. METER BOARD REFER ELECTRICAL DWG
HWO	ELEC. SUB-METER BOARD REFER ELECTRICAL DWG
GM	HOT WATER UNIT REFER ELECTRICAL DWG
AC	GAS METER REFER ELECTRICAL DWG
WMT	AC CONDENSOR
+	WATER METER
○	HOSE COCK AS SPEC.
○	BOX GUTTER SUMP
S	DOWNPIPE & UNI PIT
W	SOAKWELL AS SPEC.

FLOOR PLAN NOTES

- ALL TILE SET-OUTS TO BE CONFIRMED ON-SITE w/ ARCHITECT
- SLAB SETDOWN TO S.E. DWGS. ENSURE ALL FLOOR TRANSITIONS ARE FLUSH U.N.O.
- ALL MATERIAL CHANGES (I.E. CARPET TO TILE) OCCUR DIRECTLY UNDER THE CENTRE OF THE DOOR PANEL
- ALL EXTERNAL PAVING/TILES TO FALL AWAY FROM BUILDING U.N.O.
- LANDSCAPING, REFER TO PROVISIONAL

FLOOR SCHEDULE

COD OVER E LL DESCRIPTION

CONC-1	100	CONC. WAREHOUSE FINISH
CONC-2	100	CONC. EXPOSED AGGREGATE
G1	100	GREY PEBBLE
PV-1	100	SANDSTONE PAVER
PV-2	100	PERMEABLE PAVER
TL-1	1	TILE
TM-1	100	TIMBER FLOORBOARDS
TM-2	50	TIMBER DECK

DOWNPIPE SCHEDULE

CODE DESCRIPTION

DP-1	COLORBOND DOWNPIPE 1000 SURFMIST AS SPEC.
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WALL NOTES

1. HIGHLY MOISTURE RESISTANT PLASTERBOARD TO BE USED IN ALL WET AREAS.

90mm UTILITY BRICKWORK

90mm TIMBER STUDWORK

230mm DOUBLE BRICKWORK

SITE CALCULATIONS

LOT 1		
OPENSACE	108 m ²	44%
PRIMARY GARDEN	41 m ²	
SOFT LANDSCAPING	40 m ²	16%
TOTAL	244 m ²	
LOT 2		
OPENSACE	86 m ²	36%
PRIMARY GARDEN	40 m ²	
SOFT LANDSCAPING	30 m ²	12%
TOTAL	225 m ²	
LOT 3		
OPENSACE	86 m ²	36%
PRIMARY GARDEN	40 m ²	
SOFT LANDSCAPING	30 m ²	12%
TOTAL	225 m ²	
LOT 4		
OPENSACE	86 m ²	36%
PRIMARY GARDEN	40 m ²	
SOFT LANDSCAPING	30 m ²	12%
TOTAL	225 m ²	
LOT 5		
OPENSACE	103 m ²	42%
PRIMARY GARDEN	40 m ²	
SOFT LANDSCAPING	37 m ²	15%
TOTAL	244 m ²	

GROUND FLOOR PLAN

1 : 100

ISSUE NUMBER	DATE	DESCRIPTION
A	21/06/24	SD: DRP PRESENTATION
B	12/07/24	SD: DRP AMENDMENTS & SD REV 2
C	22/07/24	SD: COMPLETION PACKAGE
D	01/10/24	DA: DEVELOPMENT APPLICATION
E	05/11/24	DA: LOT 1 FACADE AMENDMENT
F	15/01/25	DA: EXISTING BOUNDARY WALL

GENERAL NOTES

- CHECK ALL DIMENSIONS ON SITE & COORDINATE WITH TRADES BEFORE COMMENCING WORK. COORDINATE WITH ALL TRADES, ANY DISCREPANCIES WILL BE RECTIFIED BY THE ARCHITECT.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION.
- WORK SHOWN IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION.
- REFER TO INTERIOR DWGS FOR ALL FINISHES, DETAILS, TILE SET-OUTS, DOWNPIPE LOCATIONS & CANNISTER DETAILS.

PROJECT: Waratah Ave

CLIENT: FOUND Developments

ADDRESS: 111 Waratah Ave, Dalkeith

DWG: GROUND FLOOR PLAN

STAGE: DEVELOPMENT APPLICATION (DRAFT)

SCALE: 1:100 @A1

JOB #:

2403

NORTH

DWG:

A1-03

ISSUE

F

ABBREVIATIONS

ADJ	ADJACENT
CAB	CABINETY.
COL	COLUMN TO S.E. DWGS
C.O.S	CHECK ON SITE
CL	CLOTHES LINE AS SPEC.
DP	DOWNPIPE AS SPEC.
EX	EXISTING
FFL	FINISHED FLOOR LEVEL
FW	FLOOR WASTE
FSL	FINISHED SLAB LEVEL
FFL	FINISHED FLOOR LEVEL
GP	GAS POINT AS SPEC.
HC	HOSE COCK AS SPEC.
MV	MECHANICAL VENT
NBN	NATIONAL BROADBAND NETWORK
POP	OVERFLOW PIPE AS SPEC.
PD	POWER DOME
PCD	PREMISES CONNECTION DEVICE
RL	REDUCED LEVEL
S.L	SOFT LANDSCAPING
TBC	TO BE CONFIRMED
TOW	TOP OF WALL
TVA	TELEVISION ANTENNA
U.N.O	UNLESS NOTED OTHERWISE

SYMBOLS & CODES

(GENERAL)

POINT(S)	POINT(S)
TILE SET-OUT POINT(S)	TILE SET-OUT POINT(S)
FLOOR WASTE (REFER INTERNAL LAYOUT DWGS)	FLOOR WASTE (REFER INTERNAL LAYOUT DWGS)
LETTERBOX	LETTERBOX
KERBING (TYPE X)	KERBING (TYPE X)
POWER DOME. REFER ELECTRICAL DWG	POWER DOME. REFER ELECTRICAL DWG
ELEC. METER BOARD. REFER ELECTRICAL DWG	ELEC. METER BOARD. REFER ELECTRICAL DWG
ELEC. SUB-METER BOARD. REFER ELECTRICAL DWG	ELEC. SUB-METER BOARD. REFER ELECTRICAL DWG
HOT WATER UNIT. REFER ELECTRICAL DWG	HOT WATER UNIT. REFER ELECTRICAL DWG
GAS METER. REFER ELECTRICAL DWG	GAS METER. REFER ELECTRICAL DWG
AC CONDENSOR	AC CONDENSOR
WATER METER	WATER METER
HOSE COCK AS SPEC.	HOSE COCK AS SPEC.
BOX GUTTER SUMP	BOX GUTTER SUMP
DOWNPIPE & UNI FIT	DOWNPIPE & UNI FIT
SOAKWELL AS SPEC.	SOAKWELL AS SPEC.

FLOOR PLAN NOTES

- ALL TILE SET-OUTS TO BE CONFIRMED ON-SITE w/ ARCHITECT.
- SLAB SETDOWN TO S.E. DWGS. ENSURE ALL FLOOR TRANSITIONS ARE FLUSH U.N.O.
- ALL MATERIAL CHANGES (I.E. CARPET TO TILE) OCCUR DIRECTLY UNDER THE CENTRE OF THE DOOR PANEL.
- ALL EXTERNAL PAVING/TILES TO FALL AWAY FROM BUILDING U.N.O.
- LANDSCAPING. REFER TO PROVISIONAL

FLOOR SCHEDULE

COD	OVERA	DESCRIPTION
E	LL	
CONC-1	100	CONC. WAREHOUSE FINISH
CONC-2	100	CONC. EXPOSED AGGREGATE
G1	100	GREY PEBBLE
PV-1	100	SANDSTONE PAVER
PV-2	100	PERMEABLE PAVER
TL-1	1	TILE
TM-1	100	TIMBER FLOORBOARDS
TM-2	100	TIMBER DECK

DOWNPIPE SCHEDULE

CODE DESCRIPTION

DP-1	COLORBOND DOWNPIPE 1000 SURFMIST AS SPEC.
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WALL NOTES

- HIGHLY MOISTURE RESISTANT PLASTERBOARD TO BE USED IN ALL WET AREAS.

90mm UTILITY BRICKWORK
90mm TIMBER STUDWORK
230mm DOUBLE BRICKWORK

SITE CALCULATIONS

LOT	OPENSACE	108 m ²	44%
LOT 1	PRIMARY GARDEN	41 m ²	
	SOFT LANDSCAPING	40 m ²	16%
	TOTAL	244 m ²	
LOT 2	OPENSACE	86 m ²	36%
LOT 2	PRIMARY GARDEN	40 m ²	
	SOFT LANDSCAPING	30 m ²	12%
	TOTAL	225 m ²	
LOT 3	OPENSACE	86 m ²	36%
LOT 3	PRIMARY GARDEN	40 m ²	
	SOFT LANDSCAPING	30 m ²	12%
	TOTAL	225 m ²	
LOT 4	OPENSACE	86 m ²	36%
LOT 4	PRIMARY GARDEN	40 m ²	
	SOFT LANDSCAPING	30 m ²	12%
	TOTAL	225 m ²	
LOT 5	OPENSACE	103 m ²	42%
LOT 5	PRIMARY GARDEN	40 m ²	
	SOFT LANDSCAPING	37 m ²	15%
	TOTAL	244 m ²	

FIRST FLOOR PLAN

1 : 100

ISSUE NUMBER	DATE	DESCRIPTION
A	21/06/24	SD: DRP PRESENTATION
B	12/07/24	SD: DRP AMENDMENTS & SD REV 2
C	22/07/24	SD: COMPLETION PACKAGE
D	01/10/24	DA: DEVELOPMENT APPLICATION
E	08/11/24	DA: LOT 1 FACADE AMENDMENT
F	15/01/25	DA: EXISTING BOUNDARY WALL
G	29/01/25	DA: SCREEN WALLS

GENERAL NOTES

- CHECK ALL DIMENSIONS ON SITE & COORDINATE BETWEEN TRADES BEFORE COMMENCING WORK. CO-ORDINATE WITH NEIGHBOURS. ANY DISCREPANCIES WILL BE RECTIFIED BY THE ARCHITECT PRIOR TO THE ARCHITECT'S SIGNATURE.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION.
- WORK SHOWN IS TO BE COMPLETED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLUMBING DETAILS, THE SET-OUTS, DRAINAGE, WATER, GAS, & ELECTRICAL DETAILS.

PROJECT: Waratah Ave

CLIENT: FOUND Developments

ADDRESS: 111 Waratah Ave, Dalkeith

DWG: FIRST FLOOR PLAN

STAGE: DEVELOPMENT APPLICATION (DRAFT)

SCALE: 1:100

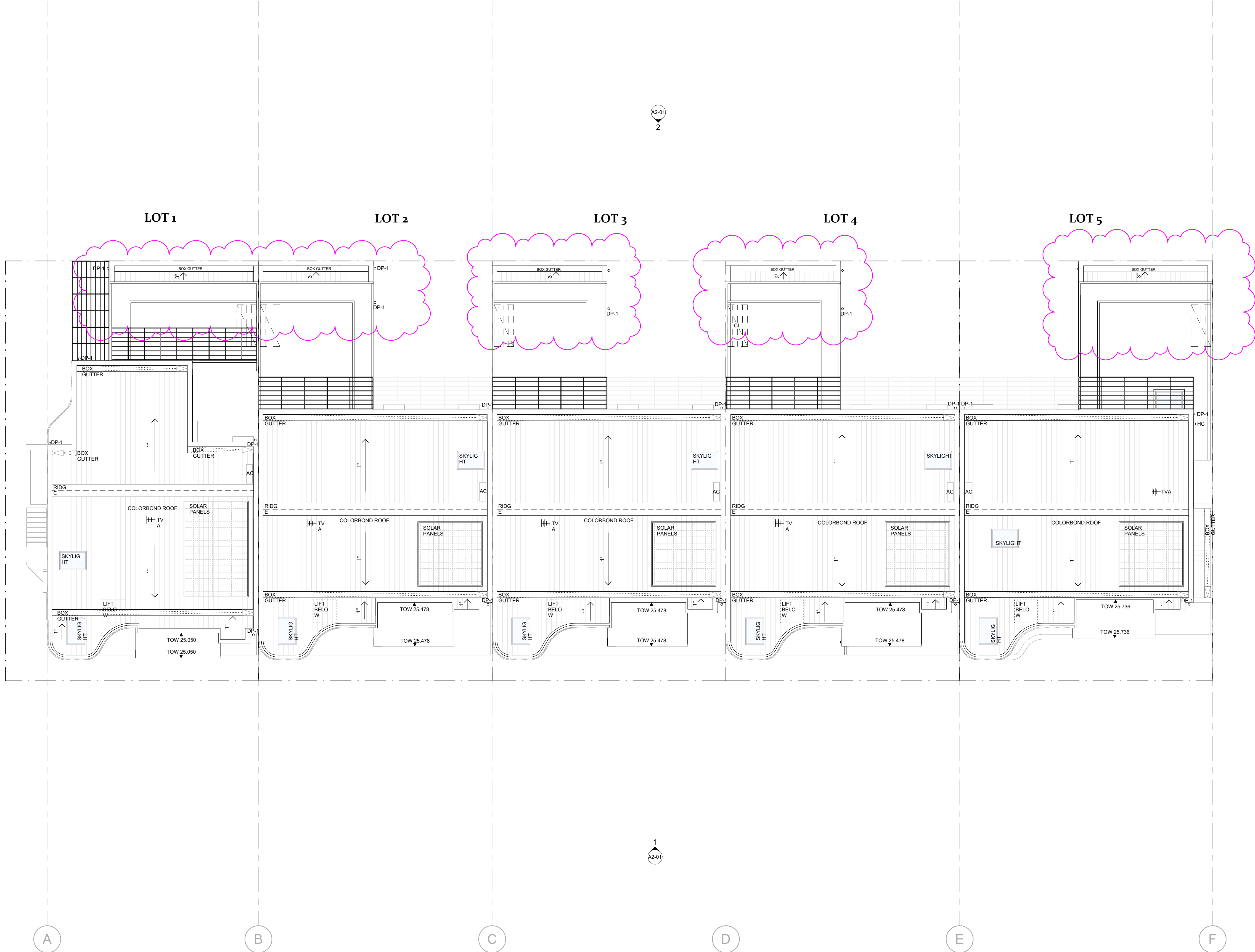
2403

NORTH

DWG: A1-04

ISSUE

G



ABBREVIATIONS

ADJ	ADJACENT
CAB	CABINETY.
COL	COLUMN TO S.E. DWGS
C.O.S	CHECK ON SITE
CL	CLOTHES LINE AS SPEC.
DP	DOWNPIPE AS SPEC.
EX	EXISTING
FFL	FINISHED FLOOR LEVEL
FW	FLOOR WASTE
FSL	FINISHED SLAB LEVEL
FFL	FINISHED FLOOR LEVEL
GP	GAS POINT AS SPEC.
HC	HOSE COCK AS SPEC.
MV	MECHANICAL VENT
NBN	NATIONAL BROADBAND NETWORK
POP	OVERFLOW PIPE AS SPEC.
PD	POWER DOME
PCD	PREMISES CONNECTION DEVICE
RL	REDUCED LEVEL
S.L	SOFT LANDSCAPING
TBC	TO BE CONFIRMED
TOW	TOP OF WALL
TVA	TELEVISION ANTENNA
U.N.O	UNLESS NOTED OTHERWISE

SYMBOLS & CODES (GENERAL)

	PROJECT SET-OUT POINT(S)
	TILE SET-OUT POINT(S)
	FLOOR WASTE (REFER INTERNAL LAYOUT DWGS)
	LETTERBOX
	KERBING (TYPE X)
	POWER DOME. REFER ELECTRICAL DWG
	ELEC. METER BOARD REFER ELECTRICAL DWG
	ELEC. SUB-METER BOARD REFER ELECTRICAL DWG
	HOT WATER UNIT REFER ELECTRICAL DWG
	GAS METER REFER ELECTRICAL DWG
	AC CONDENSOR
	WATER METER
	HOSE COCK AS SPEC.
	BOX GUTTER SUMP
	DOWNPIPE & UNI PIT
	SOAKWELL AS SPEC.

FLOOR PLAN NOTES

- ALL TILE SET-OUTS TO BE CONFIRMED ON-SITE w/ ARCHITECT.
- SLAB SETDOWN TO S.E. DWGS. ENSURE ALL FLOOR TRANSITIONS ARE FLUSH U.N.O.
- ALL MATERIAL CHANGES (I.E. CARPET TO TILE) OCCUR DIRECTLY UNDER THE CENTRE OF THE DOOR PANEL.
- ALL EXTERNAL PAVING/TILES TO FALL AWAY FROM BUILDING U.N.O.
- LANDSCAPING. REFER TO PROVISIONAL.

FLOOR SCHEDULE

COD	OVER	DESCRIPTION
E	LL	
CONC-1	100	CONC. WAREHOUSE FINISH
CONC-2	100	CONC. EXPOSED AGGREGATE
G1	100	GREY PEBBLE
PV-1	100	SANDSTONE PAVER
PV-2	100	PERMEABLE PAVER
TL-1	1	TILE
TM-1	100	TIMBER FLOORBOARDS
TM-2	50	TIMBER DECK

DOWNPIPE SCHEDULE

CODE	DESCRIPTION
DP-1	COLORBOND DOWNPIPE 1000 SURFMIST AS SPEC

WALL NOTES

- HIGHLY MOISTURE RESISTANT PLASTERBOARD TO BE USED IN ALL WET AREAS.

	90mm UTILITY BRICKWORK
	90mm TIMBER STUDWORK
	230mm DOUBLE BRICKWORK

ROOF SCHEDULE

CODE	DESCRIPTION
RT-1	COLORBOND SHEETING (LIGHT) SURFMIST OR SIMILAR

PRIMARY GARDEN

1 : 100

ISSUE NUMBER	DATE	DESCRIPTION
A	21/06/24	SD: DRP PRESENTATION
B	12/07/24	SD: DRP AMENDMENTS & SD REV 2
C	22/07/24	SD: COMPLETION PACKAGE
D	01/10/24	DA: DEVELOPMENT APPLICATION
E	09/11/24	DA: LOT 1 FACADE AMENDMENT
F	15/01/25	DA: EXISTING BOUNDARY WALL
G	29/01/25	DA: SCREEN WALLS

GENERAL NOTES

- CHECK ALL DIMENSIONS ON SITE & COORDINATE BETWEEN TRADES BEFORE COMMENCING WORK. EXISTING WORK MUST BE MAINTAINED AND NOT REMOVED UNLESS REQUIRED BY THE ARCHITECT FOR CLARIFICATION.
- DO NOT SCALE DIMENSIONS. USE PROVIDED DIMENSIONS ONLY.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION.
- WORKER RESPONSIBILITY: WORKER TO CLARIFY ANY WORK REQUIREMENTS TO THE ARCHITECT.
- REFER TO INTERIOR DWGS FOR ALL PLUMBING DETAILS, TILE SET-OUTS, DOOR/WALL LOCATIONS & CABINET DETAILS.

PROJECT: Waratah Ave

CLIENT: FOUND Developments

ADDRESS: 111 Waratah Ave, Dalkeith

DWG: ROOF PLAN

STAGE: DEVELOPMENT APPLICATION [DRAFT]

SCALE: 1:100 @A1

JOB #: 2403

DWG:

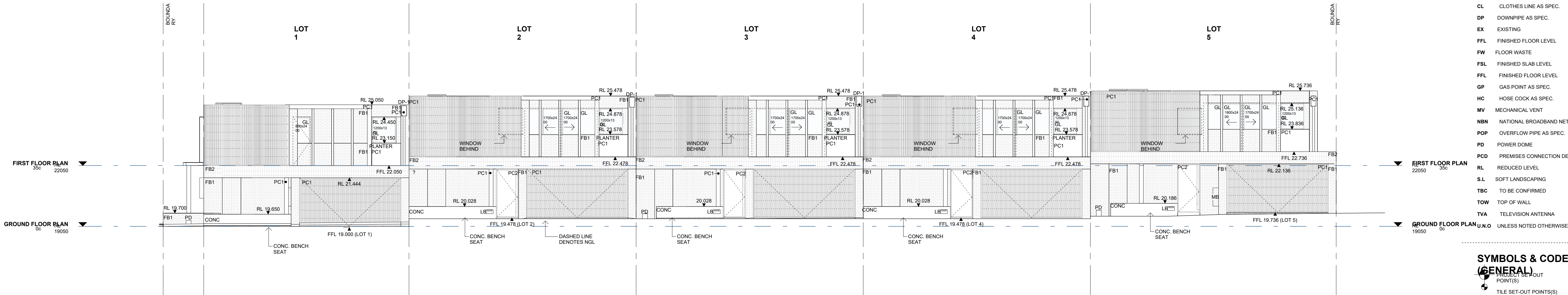
A1-05

ISSUE G



NORTH

City of Nedlands
Amended Plans Received
31 January 2025



EASTERN ELEVATION
1 : 100

ABBREVIATIONS

- ADJ ADJACENT
CAB CABINETRY.
COL COLUMN TO S.E. DWGS
C.O.S CHECK ON SITE
CL CLOTHES LINE AS SPEC.
DP DOWNPIPE AS SPEC.
EX EXISTING
FFL FINISHED FLOOR LEVEL
FW FLOOR WASTE
FSL FINISHED SLAB LEVEL
FFL FINISHED FLOOR LEVEL
GP GAS POINT AS SPEC.
HC HOSE COCK AS SPEC.
MV MECHANICAL VENT
NBN NATIONAL BROADBAND NETWORK
POP OVERFLOW PIPE AS SPEC.
PD POWER DOME
PCD PREMISES CONNECTION DEVICE
RL REDUCED LEVEL
S.L SOFT LANDSCAPING
TBC TO BE CONFIRMED
TOW TOP OF WALL
TVA TELEVISION ANTENNA
U.N.O UNLESS NOTED OTHERWISE

SYMBOLS & CODES

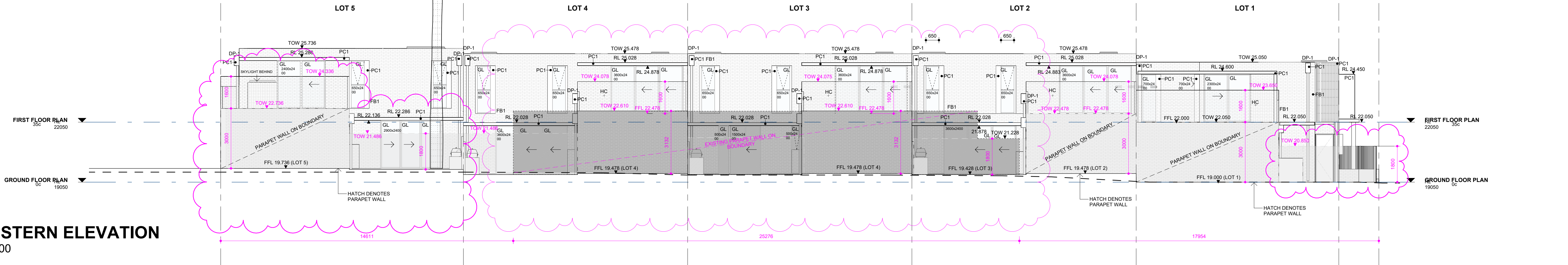
(GENERAL)

- PROJECT SET-OUT POINT(S)
TILE SET-OUT POINT(S)
FLOOR WASTE (REFER INTERNAL LAYOUT DWGS)
LETTERBOX
KERBING (TYPE X)
POWER DOME, REFER ELECTRICAL DWG
ELEC. METER BOARD
ELEC. SUB-METER BOARD
HOT WATER UNIT
GAS METER
AC CONDENSOR
WATER METER
HOSE COCK AS SPEC.
BOX GUTTER SUMP
DOWNPIPE & UNI PIT
SOAKWELL AS SPEC.

MATERIAL SCHEDULE

CODE DESCRIPTION

- CONC CONCRETE
FB1 FACEBRICK RUNNING BOND(LIGHT)
FB2 FACEBRICK VERTALLY BOND (LIGHT)
GL GLASS
PC1 POWDERCOAT SURFMIST OR SIMILAR
PC2 POWDERCOAT NATURAL BRONZE
TR1 RENDERED MASONRY, TROWEL-ON ACRYLIC TEXTURE COAT.



WESTERN ELEVATION
1 : 100

GENERAL NOTES

1. CHECK ALL DIMENSIONS ON SITE & COORDINATE WITH OTHER TRADES
2. BEFORE COMMENCING WORKS, OBTAIN ALL NECESSARY PERMITS, APPROVALS, AND
3. ARCHITECT FOR CLARIFICATION.
4. DO NOT SCALE DIMENSIONS OR FINISHES FROM THIS DRAWING.
5. THIS DRAWING IS TO BE USED IN CONSTRUCTION - ALL RELEVANT
DOCUMENTATION
6. FOR MORE INFORMATION, REFER TO THE CONTRACT DOCUMENTS.
7. REFER TO THE CONTRACT DOCUMENTS FOR ALL FINISHES, DETAILS, TIE SET-OUTS,
8. FLOOR WASTE LOCATIONS & CABINETRY DETAILS.

PROJECT: Waratah Ave

CLIENT: FOUND Developments

ADDRESS: 111 Waratah Ave, Dalkeith

DWG: ELEVATIONS - EAST & WEST

STAGE: DEVELOPMENT APPLICATION (DRAFT)

SCALE: 1:100 @A1

JOB #: 2403

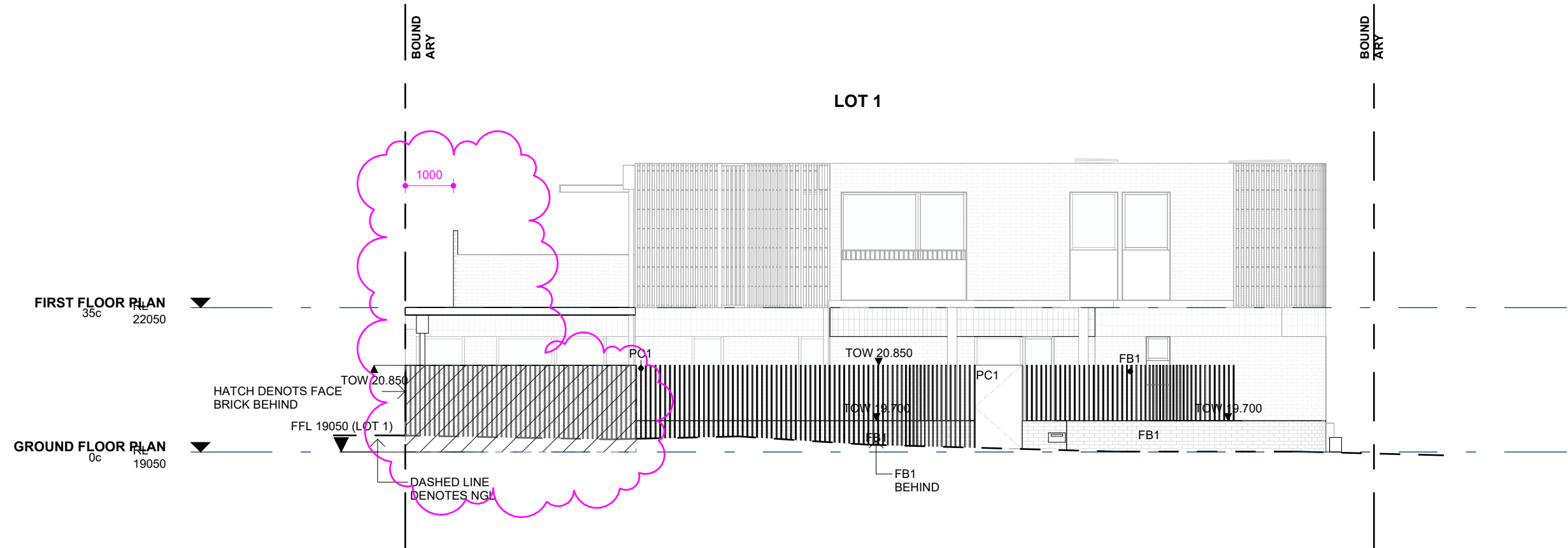
DWG:

A2-01

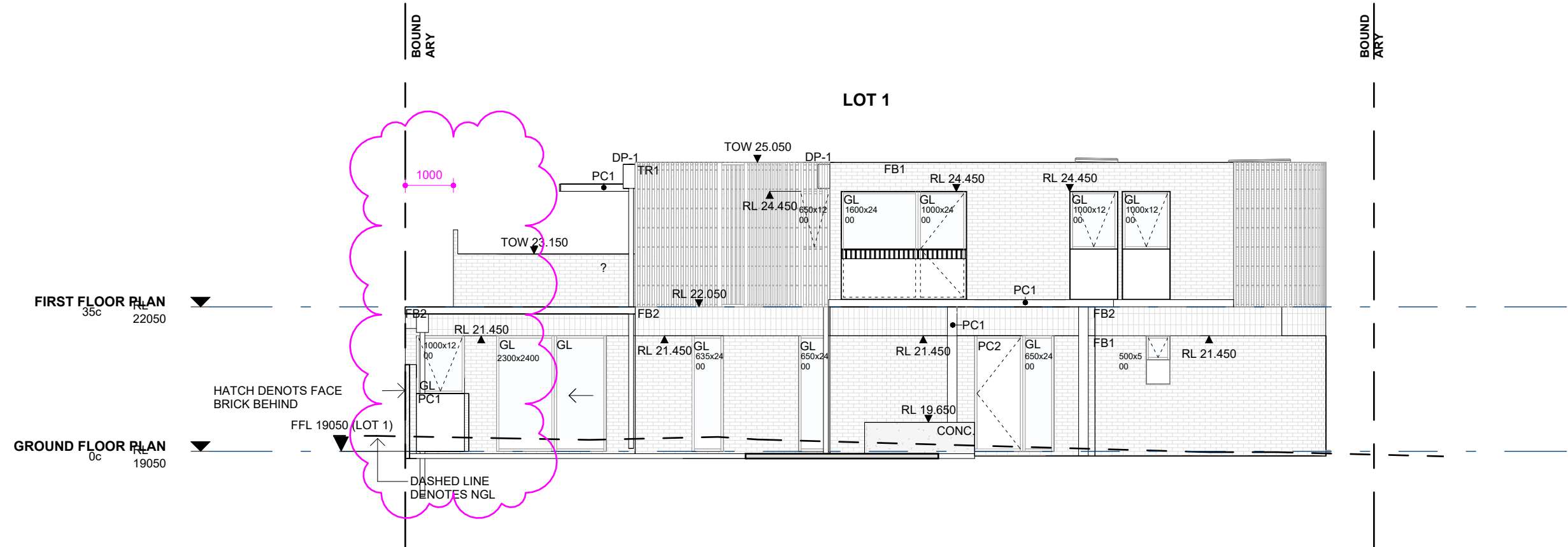
ISSUE

G

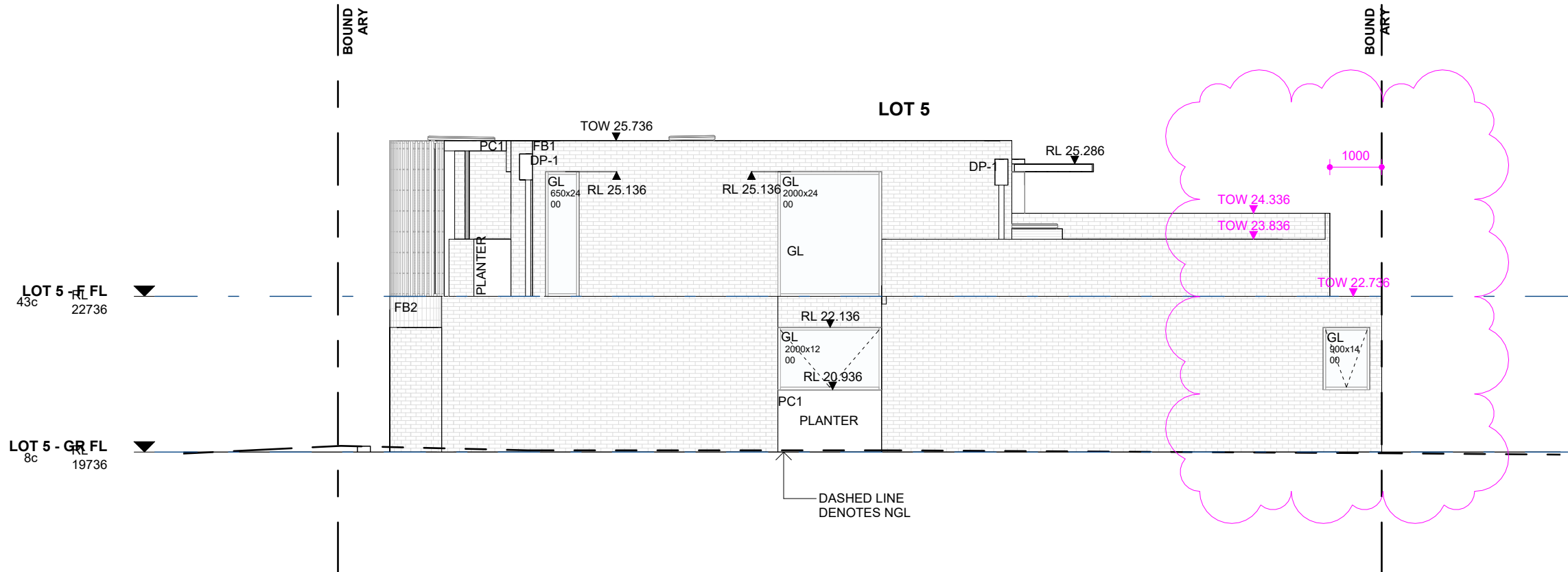
ISSUE NUMBER	DATE	DESCRIPTION
A	21/04/24	SD: DRP PRESENTATION
B	12/07/24	SD: DRP AMENDMENTS & SD REV 2
C	22/07/24	SD: COMPLETION PACKAGE
D	01/10/24	DA: DEVELOPMENT APPLICATION
E	03/11/24	DA: LOT 1 FACADE AMENDMENT
F	15/01/25	DA: EXISTING BOUNDARY WALL
G	29/01/25	DA: SCREEN WALLS



WARATAH AVENUE ELEVATION
1 : 100



SOUTHERN ELEVATION
1 : 100



NORTHERN ELEVATION
1 : 100

ABBREVIATIONS

ADJ	ADJACENT
CAB	CABINETY.
COL	COLUMN TO S.E. DWGS
C.O.S	CHECK ON SITE
CL	CLOTHES LINE AS SPEC.
DP	DOWNPIPE AS SPEC.
EX	EXISTING
FFL	FINISHED FLOOR LEVEL
FW	FLOOR WASTE
FSL	FINISHED SLAB LEVEL
FFL	FINISHED FLOOR LEVEL
GP	GAS POINT AS SPEC.
HC	HOSE COCK AS SPEC.
MV	MECHANICAL VENT
NBN	NATIONAL BROADBAND NETWORK
POP	OVERFLOW PIPE AS SPEC.
PD	POWER DOME
PCD	PREMISES CONNECTION DEVICE
RL	REDUCED LEVEL
S.L	SOFT LANDSCAPING
TBC	TO BE CONFIRMED
TOW	TOP OF WALL
TVA	TELEVISION ANTENNA
U.N.O	UNLESS NOTED OTHERWISE

SYMBOLS & CODES

(GENERAL)

	POINT(S)
	TILE SET-OUT POINT(S)
	FLOOR WASTE (REFER INTERNAL LAYOUT DWGS)
	KERBING (TYPE X)
	POWER DOME. REFER ELECTRICAL DWG
	ELEC. METER BOARD REFER ELECTRICAL DWG
	ELEC. SUB-METER BOARD REFER ELECTRICAL DWG
	HOT WATER UNIT REFER ELECTRICAL DWG
	GAS METER REFER ELECTRICAL DWG
	AC CONDENSOR
	WATER METER
	HOSE COCK AS SPEC.
	BOX GUTTER SUMP
	DOWNPIPE & UNI PIT
	SOAKWELL AS SPEC.

MATERIAL SCHEDULE

CODE DESCRIPTION

CONC	CONCRETE
FB1	FACEBRICK RUNNING BOND(LIGHT)
FB2	FACEBRICK VERTALLY BOND (LIGHT)
GL	GLASS
PC1	POWDERCOAT SURFMIST OR SIMILAR
PC2	POWDERCOAT NATURAL BRONZE
TR1	RENDERED MASONRY. TROWEL-ON ACRYLIC TEXTURE COAT.

ISSUE NUMBER	DATE	DESCRIPTION
A	21/06/24	SD: DRP PRESENTATION
B	12/07/24	SD: DRP AMENDMENTS & SD REV 2
C	22/07/24	SD: COMPLETION PACKAGE
D	01/10/24	DA: DEVELOPMENT APPLICATION
E	08/11/24	DA: LOT 1 FACADE AMENDMENT
F	15/01/25	DA: EXISTING BOUNDARY WALL
G	29/01/25	DA: SCREEN WALLS

GENERAL NOTES

- CHECK ALL DIMENSIONS ON SITE & COORDINATE BETWEEN TRADES BEFORE COMMENCING WORK. CO-ORDINATE WITH ALL NEIGHBOURS AND ADJACENT PROPERTIES TO ENSURE NO INTERFERENCE.
- DO NOT SCALE DIMENSIONS. USE DIMENSIONS ONLY.
- THIS DRAWING IS TO BE USED IN CONSTRUCTION - ALL RELEVANT DOCUMENTATION MUST BE READ IN CONJUNCTION WITH THIS DRAWING.
- REFER TO INTERIOR DWGS FOR ALL PLUMBING DETAILS, TILE SET-OUTS, FLOOR WASTE LOCATIONS & CABINETRY DETAILS.

PROJECT: Waratah Ave

CLIENT: FOUND Developments

ADDRESS: 111 Waratah Ave, Dalkeith

DWG: ELEVATIONS - NORTH & SOUTH

STAGE: DEVELOPMENT APPLICATION [DRAFT]

SCALE: 1:100 @A1

JOB #: 2403

DWG:

A2-02

ISSUE

G

Schedule of Submissions
111 Waratah Avenue, Dalkeith



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Submission No.	Object	Applicant Response
1	I wish to oppose the proposed Five Grouped Dwellings (DA24-99438) at 111 Waratah Avenue Dalkeith, for the following reasons: 1. The bulk and scale is excessive and setbacks not compliant. 2. Primary street setback - should be 3 meters as per R-codes state at R40 zoning primary street setback. The setback should be in keeping with the other properties, and ensure the safety of pedestrians and traffic - and have a 8m setback. 3. Secondary street setback - does not comply and is inadequate. Needs to be 2 m as per R- codes. Setbacks to Shrike Lane and Gerygone Lane are inadequate. The R-codes dictate 2m setback. 4. Unsafe entry to Lots 2, 3, 4, 5. 5. Parking - Section C3.2 of the R-codes state that multiple dwellings of 5-8 dwellings, must have a minimum of 1 visitor parking bay. The proposed development has no visitor parking bays. Bins will be an issue. 6. Visual privacy - The development is noncompliant in regards to visual privacy, Windows to the lane on the east and north also impact visual privacy. 7. Open space - not compliant with the R-codes state at R40 zoning maximum site coverage is 65%, 40-48% open space per unit. However, there is less than 10% soft landscaping, which is inadequate for outdoor space for landscaping, trees and deep soil areas. 8. Site works - There is very little space for a lay down area, trucks to manoeuvre, and contractors to park. This is likely to pose problems for other residents in the area during construction. In summary, I strongly oppose the proposed development as it is incompatible with the existing and/or desired streetscape and local character of the street, lane and area. The bulk and scale is excessive, and does not meet R-codes. Non-compliant setbacks pose serious safety risks to pedestrians, vehicles, and homes themselves. The visual privacy of neighbours is a concern, and the lack of setbacks to neighbours will have	

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	ns for noise. I urge the council and planners to reject the proposed ment. Many thanks for the opportunity to comment.	
2	llands Planning Team, I am writing to comment on the proposed plans for construction at 111 Waratah Avenue listed on yourvoice Nedlands as: 111 Waratah Avenue, Dalkeith - Five Grouped Dwellings (DA24-99438) As the immediate neighbours of this block I am deeply concerned about the substantial negative effect the proposed plans would have on the amenity and privacy of our home and the lack of consideration of these concerns shown in the proposed design. My family's immediate concerns are: Setbacks: The proposed plan shows all of the dwellings built up to the western boundary with no setback of any kind. This includes major structural walls for bedrooms, bathrooms, and living rooms with balconies above, and walls extending over 4.5m in height. This lack of setback will substantially negatively affect the amenity of our home and we request a revision of the design to include an appropriate setback for this major construction. The "deemed to comply" standard of 1.5m suggested in the Residential Design Code for a wall of this height would seem a reasonable minimum. Privacy Concerns: The proposed plan will substantially compromise the privacy of my family's home with major windows and balconies directly overlooking our home and garden. Lots 1-5 all have balcony areas on the western side overlooking our garden and home including the dining room and patio area. Lots 2-5 feature two windows each from bedrooms and bathrooms directly overlooking our home and garden including the dining room and patio area. Lots 2-5 feature courtyard areas against our boundary with a 1600mm high wall. Our preference would be for the dwellings to be redesigned such that the balconies, courtyards, and windows are on the Eastern side where they would face the laneway. Failing this, then alterations to preserve our privacy could include removal or raising of the relevant windows and increasing the wall height to obstruct the view of our home and garden from these windows, balconies, and courtyards. Garden Space and Heat Effect: Each of the dwellings occupies a substantial majority of the total lot area with minimal open areas or garden space. This will dramatically increase local heating effects from insolation and increase local temperatures. A redesign to include a substantially larger open garden area would substantially mitigate	

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	increase the amenity of both the local area and these particular dwellings as providing vital habitat for wildlife. As an example our home features several trees in an open garden comprising more than 65% of the block area and provides habitat for more than 40 bird species. Thank you for your consideration of our concerns, we look forward to any actions that may be taken to mitigate our concerns.	
3	We are deeply saddened by the large mature tree that sat on the boundary of that property and Gerygone Lane being cut down to make way for a 5th dwelling on the property. That was wholly unnecessary if in fact there was a setback from the laneway but the plans seem to come without setbacks that are consistent with R Codes ... isn't it supposed to be 0.5m? For the 29 years we have lived in our home the Council has shown no appetite to seal , drain nor make safe Shrike and Gerygone Lanes and now you have allowed the war zone that is relentless treeless infill that is of your making to roll in upon us . What are you going to do for us to reduce the existing dustbowl of a summer lane now you are going to pack it with another 10 vehicles coming and going? Where are visitors to these properties going to park and how are you going to ensure that our ability to enjoy the quiet amenity of access to our property can be maintained? What are they/you doing to mitigate the risk of turning out of Gerygone lane into Shrike lane? It is a ROW, not a driveway nor a parking lot. It took about 5 minutes for the developer to put their temporary fence 1m or so inside the laneway making access to our property challenging. Emails/phone calls showed some difficulty on the part of Council to understand the issue and after a couple of inspections the problem dawned, and it was fixed. Time and effort on everyone's part holding a developer to account. Point being unless this development strictly meets the rules, not those guideline things that don't seem to matter when a developer gets going, we are at a loss to understand why you would volunteer approval given you don't obviously have the resources to protect residents from all the adverse events that are visiting them. Council should prepare for a relentless stream of contact because there is not a world where this development is not consistently going to block the laneways preventing residents from going about their daily business. And isn't it going to be fun once you have explained to the developer that in proposing to build to all extremities of 111 Waratah it does not	

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em to block the laneways and then having the building process out on Waratah next to a bus stop used by children, the elderly and the disabled. We get quite with the expectation on the part of Council that as residents we should have to simply absorb the epic amount of access disruption that all this building is creating. You have turned Philip Road into a 1 lane street. Regularly the footpaths are blocked and for residents such as my wife who is a blind ratepayer moving around what should be safe footpaths has taken on new risks. We are aware of other residents eloquently describing the developments shortcomings .We also strongly oppose the proposed development on the basis that the bulk and scale is excessive, it does not appear to meet the R-Codes, the safety aspects of allowing 10 vehicles with 1m setbacks (is this compliant) in a lane (Shrike) where 2 oncoming vehicles cannot pass present as unsolvable and will be exacerbated when strewn with another 10 rubbish bins on a Friday. By our dead reckoning you will likely add another 20 vehicles on top of this into Shrike lane with other development's so here is your chance to get ahead of the game and fix the laneway that you are turning into a street. The proposition that a living room will have a 60cm brick wall between it and Gerygone Lane is preposterous and a 2m setback from Waratah Ave is simply ridiculous if you subscribe to the proposition that all this is supposed to enhance the community. 4 town houses with proper setbacks like other development's down Waratah Ave seems appropriate. Other residents are now required to setback from the lane on new builds (2m in the R-Codes) and this developer should be providing enough land back to the community for 2 vehicles to safely pass in Shrike laneway. So 1m added to the laneway and then a 2m setback! We are not anti-development but are anti bad and/or non-compliant/greedy development and it is appropriate that Council support residents by making decisions that allow for their safety and welfare. There is nothing safe about this proposal and as we use Shrike/Gerygone lane c 10 times a day will be put at increased personal risk by the decisions you make. We remain ever hopeful that Council will consider existing residents. Please find a photo dated this morning 16/12 showing neighbours quietly and pleasantly using the 1 vehicle wide Shrike laneway. Lived experience. So is Council really going to support a 1m set back to the right of that vehicle so as to introduce 10 more garage spaces backing /driving into this narrow lane? In what world

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	icles fit don and pass on this lane? The intersection to the right of picture is a now as evidenced by Councils tilted bollards which have failed to attract attention and the obviousness of the danger the bulk of the proposal presents is clear to all that stand observantly at the intersection. If the developer provided a driveway the length of the block like 117 Waratah chances are the safety risks will be largely mitigated but in turn it becomes a 4 dwelling development if R Codes are implemented. Council will in approving this development own the risks and therefore the responsibility of turning Shrike lane into a street. Out of interest what street in the shire is an unpaved, non drained, not lite and presents as a pot holed goat track? We note that the development approved for the health care complex at the corner of Roberts and Waratah will - again based on lived experience rather than observation of satellite images and manuals - materially increase the traffic on Gerygone lane that hurtles down to a shuddering halt at Shrike lane where visual obstruction escalates the risks to safety. As you can summarise, we have strong views about unsafe development that is negatively affecting our amenity and quiet enjoyment of our property as long term rate payers. For better or worse we live here and believe that we are entitled to continue living safely and pleasantly in our home and not adversely affected by generosity towards developers pushing boundaries and limits.	
4	The submitter would like to object to the plans for 111 Waratah Ave on the grounds of: Not meeting setback requirements Excessive congestion of traffic in Shrike & Gerygone lanes Excessive bulk & scale of construction	
5	I object to this development plan as submitted. 1. Adequate consideration to the visual impact on the local area and its amenity does not appear to have been given. 2. Despite the requirements of the R Codes, open space appears to be extremely limited. 3. It appears that there will be a negative impact upon the visual privacy of the property to the west. 4. There is an absence of visitor parking. 5. Boundary setbacks do not comply with the R Codes.	

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6	it may concern, I are writing to OPPOSE the proposed Five Grouped Dwellings (DA24-99438) at 111 Waratah Avenue Dalkeith, as the following are NOT COMPLIANT with the R-CODES: 1. Lot boundary setbacks: NON-COMPLIANT 2. Primary street setback: NON-COMPLIANT 3. Secondary street setback (Shrike Lane and Gerygone Lane: NON-COMPLIANT 4. Unsafe entry to Lots 2, 3, 4, 5: NON-COMPLIANT 5. Parking: NON-COMPLIANT 6. Waste Storage & Disposal: NON-COMPLIANT 7. Visual privacy: NON-COMPLIANT 8. Open space: NON-COMPLIANT 9. Site works: NON-COMPLIANT. In summary, we strongly oppose the proposed development as it is incompatible with the existing and/or desired streetscape and local character of the street, lane and area. The bulk and scale is excessive, and does not meet R-codes. Non-compliant setbacks pose serious safety risks to pedestrians, vehicles, and homes themselves. The visual privacy of neighbours is a concern, and the lack of setbacks to neighbours will have implications for noise. We urge the council and planners to REJECT the proposed development, and request the applicant do the following as a minimum: 1. Reduce site coverage to R40 AO of 65%. 2. Reduce bulk and scale of the combined apartments. 3. Setback should match the street - 8m setback on Waratah Ave, and 2m setbacks along Shrike Lane and Gerygone Lane. Thank you for the opportunity to comment	
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and privacy of neighbours, nor safety for vehicles. There is a lack of any secondary setback to the neighbour on the west.

Primary street setback - The R-codes state at R40 zoning primary street setback should be a minimum of 3m. However, the proposed development only shows 2m. Being set so far forward will be a traffic hazard for vehicles turning from Shrike Lane onto Waratah Ave, due to issues with line of sight. This setback is out of character and context with the rest of the properties in the vicinity - including recently constructed homes and a church. The setback should be in keeping with the other properties, and ensure the safety of pedestrians and traffic - and have a 8m setback.

3. Secondary street setback - Setbacks to Shrike Lane and Gerygone Lane are inadequate. The R-codes dictate 2m setback from Shrike Lane, but the design only has a 1m setback. Shrike Lane will be the primary right of way for all vehicles entering and exiting the garages of the 5 proposed properties, and insufficient setbacks will be a traffic hazard for vehicles exiting the garages and turning onto Shrike Lane. The R-codes dictate 0.5m setback along the adjoining laneway (Gerygone Lane), and the proposal shows no setback at all, this is a safety hazard for the dwelling at Lot 5, as there is no boundary fence between vehicles traversing the lane and the structure of the dwelling. If the proposed development goes ahead, as well as other increased development along Waratah Ave and Alexander Rd properties that abut Shrike Lane, there will be significantly increased traffic using both Shrike Lane and Gerygone Lane, and thus it is absolutely essential for the safety of pedestrians, drivers, and homeowners, that minimum setbacks are strictly adhered to, or even greater setbacks are encouraged.
4. Parking - Section C3.2 of the R-codes state that multiple dwellings of 5-8 dwellings, must have a minimum of 1 visitor parking bay. The proposed development has no visitor parking bays. There is no parking available on Waratah Avenue in front of the property, nor available in the lane, thus lack of parking on site is likely to lead to parking congestion in the area. At minimum there should be 1 visitor parking bay to comply with the R-codes, but it would be a much better design for each dwelling to have a dedicated visitor parking bay.

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	Storing the bins in the garage is a health hazard, and will likely smell. This probably lead to the bins being kept or stored along Shrike Lane, which further exacerbates the setback and line of sight issues along the lane, as well as being an eyesore. Also, the proposed plans illustrate 3 bins per lot, however, more often than not people require 4 bins, and the current plans would not have space for additional bins. 6. Visual privacy - The development is noncompliant in regards to visual privacy, with windows and balcony overlooking the neighbouring property to the west. Windows to the lane on the east and north also impact visual privacy. 7. Open space - The R-codes state at R40 zoning maximum site coverage is 65%, and the drawings claim there is 40-48% open space per unit. However, there is less than 10% soft landscaping, which is inadequate. The design codes state that there must be sufficient outdoor space for landscaping, trees and deep soil areas. 8. Site works - we are concerned how site works will be conducted, given that there is very little space for a lay down area, trucks to manoeuvre, and contractors to park. This is likely to pose problems for other residents in the area during construction. In summary, we strongly oppose the proposed development as it is incompatible with the existing and/or desired streetscape and local character of the street, lane and area. The bulk and scale is excessive, and does not meet R-codes. Non-compliant setbacks pose serious safety risks to pedestrians, vehicles, and homes themselves. The visual privacy of neighbours is a concern, and the lack of setbacks to neighbours will have implications for noise. We urge the council and planners to reject the proposed development, and request the applicant do the following as a minimum: 1. Reduce site coverage to R40 AO of 65%. 2. Reduce bulk and scale of the combined apartments. 3. Setback should match the street - 8m setback on Waratah Ave, and 2m setbacks along Shrike Lane and Gerygone Lane.	
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 4. Unsafe entry to Lots 2, 3, 4, 5 - The proposed development positions the front doors to Lots 2, 3, 4, and 5 off Shrike Lane. Considering the lack of adequate setbacks, this will be a serious hazard to pedestrians, and vehicles. Not only that but the lane is very narrow at 5m wide, unsealed, and is primarily gravel or dirt, with pot holes!



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6. Bins - Storing the bins in the garage is a health hazard, and will likely smell. This will probably lead to the bins being kept or stored along Shrike Lane, which further exacerbates the setback and line of sight issues along the lane, as well as being an eyesore. Also, the proposed plans illustrate 3 bins per lot, however, more often than not people require 4 bins, and the current plans would not have space for additional bins.
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- In summary, we strongly oppose the proposed development as it is incompatible with the existing and/or desired streetscape and local character of the street, lane and area. The bulk and scale is excessive, and does not meet R-codes. Non-compliant setbacks pose serious safety risks to pedestrians, vehicles, and homes themselves. The visual privacy of neighbours is a concern, and the lack of setbacks to neighbours will have implications for noise. We urge the council and planners to reject the proposed development, and request the applicant do the following as a minimum:
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10	We are writing to oppose the proposed Five Grouped Dwellings (DA24-99438) at 111 Waratah Avenue Dalkeith, for the following reasons: 1. Lot boundary setbacks - The proposed developments' setbacks to all streets, lanes and the neighbouring property are non-compliant. There is no separation between any of the lots, this will be a noise and privacy issue. The bulk and scale of the proposed development is excessive and doesn't take into account the need for space and privacy of neighbours, nor safety for vehicles. There is a lack of any boundary setback to the neighbour on the west. 2. Primary street setback - The R-codes state at R40 zoning primary street setback should be a minimum of 3m. However, the proposed development only shows 2m. Being set so far forward will be a traffic hazard for vehicles turning from Shrike Lane onto Waratah Ave, due to issues with line of sight. This setback is out of character and context with the rest of the properties in the vicinity - including recently constructed homes and a church. The setback should be in keeping with the other properties, and ensure the safety of pedestrians and traffic - and have a 8m setback. 3. Secondary street setback - Setbacks to Shrike Lane and Gerygone Lane are inadequate. The R-codes dictate 2m setback from Shrike Lane, but the design only has a 1m setback. Shrike Lane will be the primary right of way for all vehicles entering and exiting the garages of the 5 proposed properties, and insufficient	



cks will be a traffic hazard for vehicles exiting the garages and turning onto the Lane. The R-codes dictate 0.5m setback along the adjoining laneway (Gerygone Lane), and the proposal shows no setback at all, this is a safety hazard for the dwelling at Lot 5, as there is no boundary fence between vehicles traversing the lane and the structure of the dwelling. If the proposed development goes ahead, as well as other increased development along Waratah Ave and Alexander Rd properties that abut Shrike Lane, there will be significantly increased traffic using both Shrike Lane and Gerygone Lane, and thus it is absolutely essential for the safety of pedestrians, drivers, and homeowners, that minimum setbacks are strictly adhered to, or even greater setbacks are encouraged.

4. Unsafe entry to Lots 2, 3, 4, 5 - The proposed development positions the front doors to Lots 2, 3, 4, and 5 off Shrike Lane. Considering the lack of adequate setbacks, this will be a serious hazard to pedestrians, and vehicles. Not only that but the lane is very narrow at 5m wide, unsealed, and is primarily gravel or dirt, with pot holes!
5. Parking - Section C3.2 of the R-codes state that multiple dwellings of 5-8 dwellings, must have a minimum of 1 visitor parking bay. The proposed development has no visitor parking bays. There is no parking available on Waratah Avenue in front of the property, nor available in the lane, thus lack of parking on site is likely to lead to parking congestion in the area. At minimum there should be 1 visitor parking bay to comply with the R-codes, but it would be a much better design for each dwelling to have a dedicated visitor parking bay.
6. Bins - Storing the bins in the garage is a health hazard, and will likely smell. This will probably lead to the bins being kept or stored along Shrike Lane, which further exacerbates the setback and line of sight issues along the lane, as well as being an eyesore. Also, the proposed plans illustrate 3 bins per lot, however, more often than not people require 4 bins, and the current plans would not have space for additional bins.
7. Visual privacy - The development is noncompliant in regards to visual privacy, with windows and balcony overlooking the neighbouring property to the west. Windows to the lane on the east and north also impact visual privacy.

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	space - The R-codes state at R40 zoning maximum site coverage is 65%, the drawings claim there is 40-48% open space per unit. However, there is less than 10% soft landscaping, which is inadequate. The design codes state that there must be sufficient outdoor space for landscaping, trees and deep soil areas. 9. Site works - we are concerned how site works will be conducted, given that there is very little space for a lay down area, trucks to manoeuvre, and contractors to park. This is likely to pose problems for other residents in the area during construction. In summary, we strongly oppose the proposed development as it is incompatible with the existing and/or desired streetscape and local character of the street, lane and area. The bulk and scale is excessive, and does not meet R-codes. Non-compliant setbacks pose serious safety risks to pedestrians, vehicles, and homes themselves. The visual privacy of neighbours is a concern, and the lack of setbacks to neighbours will have implications for noise. We urge the council and planners to reject the proposed development, and request the applicant do the following as a minimum: 1. Reduce site coverage to R40 AO of 65%. 2. Reduce bulk and scale of the combined apartments. 3. Setback should match the street - 8m setback on Waratah Ave, and 2m setbacks along Shrike Lane and Gerygone Lane.	
11	See attached pdf	
Comments only		Applicant Response
12	I submit the following questions / comments regarding the development propopsal for; residential - 5 grouped dwellings at 111 Waratah Ave Dalkeith. I am concerned with the loss of tree canopy in particular in Nedlands, where a lot of development is occuring. I wish to clarify that the development will not clear a large gum tree on the corner of the site, adjacent to Gerygone lane? The plans look to include this tree remaining,(I think it is T7 on the plans), but I would like confirmation of this please. This tree is subject to much bird activity in the area. I also see that green space has been allowed for in the plans, which is good. Is there any planning guidelines for the minimum green space for each site? I note that I live in a group of 3 units on a similar sized land area to the	

Schedule of Submissions
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	development. Albeit these proposed dwellings are 2 storey, whereas our 3 single level. Also It appears that the dwellings will use access via Shrike Lane Philip or Waratah, is this correct? Given the number of multi unit developments finishing or being completed in Waratah, has there been any traffic studies done to assess the impact of this increase in traffic along Waratah Avenue? If so what actions have been taken to mitigate such impacts, in particular, in relation to parking and street access? I look forward to your responses to my questions / comments.	
Late Submission		Applicant Response
13	We refer to your letter dated 29th November 2024 inviting comment on the proposed development at 111 Waratah Avenue. Thank you for letting us make comment on new density infill development. We hope that although the period for comment finished on 13 December you will accept these comments. Council's letter, states that the proposal is being advertised because it requires an assessment of merit on several items. We have concern regarding the following • Lot boundary setbacks East R-code requirement for Adjoining laneway or right of way where it is the primary street to the dwelling (Lot 2,3,4 and 5) is 2m. The proposal is for a setback of 1m to garages and only a little more for the stairwell. The lane is frequently used by nearby owners and residents. It will become a street for the proposed development and there is no justification for reducing that setback, particularly when two- way traffic and pedestrian usage will inevitably increase. The reduced setback leaves also very little opportunity for planting. • Lot boundary setbacks South The revised coding for the street to R40 significantly reduces the street setback from the previous 9m to 3m. We cannot see any justification for the proposal further reducing the setback from the minimum deemed to comply requirement. • Boundary walls west	



Maximum boundary wall height for R40 is 3.5m. The heights proposed are more than 3.5m. These provisions are to protect adjoining owners from excessive building heights. This is a significant additional imposition on the neighbour.

- **Visual privacy**

The requirement for setbacks from the outdoor living areas is 7.5m.

The proposed Balconies are screened on the west but not on the north so that the cone of vision from those balconies on lot 2,3,4 and 5 extend significantly into the active habitable space rear garden of 113 Waratah Avenue. This is an undue imposition on their privacy.

OTHER ISSUES OF CONCERN

On further examination of the submitted plans, however, we have a number of queries and concerns that do impact on the neighbours, both directly and indirectly.

Visitor Parking

There is no visitor parking provided on the site.

The R-codes C3.2 requires a minimum of 1 visitor bay for a development of 5 group dwellings. There is no high frequency bus route that would warrant a reduction in that requirement. The laneway which will serve as the street for the development has no opportunity for parking or for any delivery vehicles to stand without disrupting traffic flow.

Parking is heavily restricted on Waratah Avenue and the little that is available is likely to be put under further pressure by the numerous medium density developments currently under construction and future commercial and residential developments in the vicinity. Each of the proposed units is a large 3 bedroom, 2 bathroom dwelling and their occupation will certainly increase traffic and parking pressure on the immediate neighbourhood.

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	its are provided with lifts, which suggests the development is aimed at the ers and the 'aging in place' cohort. Where will aged care service providers ere will cleaners park? The increased demand for deliveries of online shopping, meals and taxi/rideshare are not catered for- where will they park? We think it essential that the minimum requirement of 1 visitor bay be provided on the site. Access during construction The proposal clearly requires all access to be via the laneway. This would likely result in the developer wanting closure of the lane during construction- an unreasonable burden on the rest of the community. For years Broadway has been blighted by building sites extending not only over the footpath and street verge, but also over parts of the road. In allowing the developers of such projects to have access for long periods of time over public land, Council is not looking after the residents who have to put up with the inconvenience.	
14	We are writing to express our concern re the proposed development ay 111 Waratah Av, with garages on Shrike Lane. We live at Alexander Rd, with our garage also opening onto Shrike Lane. We already have a dust problem from the unsealed Lane, so believe the proposed development will substantially increase the problem. Also, street parking is already a problem, which will only be further exacerbated by this development. Furthermore, the extra traffic on Shrike Lane will also be a problem for those with garages opening onto the Lane. At the very least, Council should consider upgrading Shrike Lane, if allowing this (and other proposed developments) to proceed.	

111 Waratah Avenue, Dalkeith - Five Grouped Dwellings (DA24-99438)

Comments by:

[REDACTED]

[REDACTED]

[REDACTED]

12 December 2024

The land at 111 Warratah is zoned R-40



Problem: The drawings claim 40-48% “open space” per unit, however a basic visual inspection of the drawings indicates less than 10% of the block area is soft landscape (aka garden) area. How did the draftsman quantify that nearly half of each block is open space when it’s clearly much more than the 65% AO in the R-codes?

3.1 Site cover

DESIGN PRINCIPLES

Development demonstrates compliance with the following design principles (P)

- P3.1.1** The site cover of the development is suitable for its context to:
- i. achieve appropriate building bulk on the site, consistent with the intent of the applicable density code and/or as outlined in the local planning framework;
 - ii. ensure sufficient outdoor space for landscaping including trees and deep soil areas;
 - iii. ensure adequate solar access and natural ventilation into the dwelling;
 - iv. provide opportunities for residents to use space external to the dwelling for outdoor pursuits and access within and around the site;
 - v. provide space for utilities and essential facilities; and
 - vi. be compatible with the existing and/or desired streetscape and local character.

DEEMED-TO-COMPLY

Development satisfies the following deemed-to-comply requirements (C)

- C3.1.1** Development on each site does not exceed the maximum site cover percentages of Table 3.1a.

Table 3.1a Maximum site cover requirements

R30	R35	R40	R50	R60	R80
60%	60%	65%	65%	70%	70%

R80 Code standards apply to single houses and grouped dwellings in areas coded R100, R160 and R-AC.

How does the lawnmower access the soft landscaping areas?

Solution:

1. Reduce site coverage to R40 AO of 65%
2. Reduce bulk and scale of the combined apartments
3. Setback should match the street – i.e. 8m setback on Waratah ave, and 2m setbacks along Shrike Lane and Gerygone Lane.

Setbacks on Shrike Lane, and Gerygone Lane, also don't meet R-code AO.

Shrike Lane setback is only 1m, should be 2m

Gerygon Lane setback is only 0m, should be 0.5m

Street type	R30	R35	R40	R50	R60	R80
Primary street	4m	4m	3m	2m	2m	2m
Secondary street	1.5m	1.5m	1m	1m	1m	1m
Adjoining communal street	0.5m					
Adjoining laneway or right-of way where it is the primary street to the dwelling ¹	2m					
Adjoining laneway or right-of way	0.5m					

R80 Code standards apply to **single houses** and **grouped dwellings** in areas coded R40, R160 and RAC.

Where road widening is required, **street setbacks** are to be calculated from the adjusted **street boundary**.

¹ Does not apply to **ancillary dwellings**.

Problems:

1. Setback out of character with the street.
2. The non-compliant setback on Warratah Ave *is a traffic hazard* to the many vehicles turning from Shrike Lane onto Warratah Ave.



- All adjacent houses (except
- The 2.0m setback at is at odds with:
 - houses in the affected streetscape...
 - ...including 2 houses, and 1 church, of “...relatively recent construction, quality and value...”.
 - Community safety (traffic hazard)
- Solution: Setback should match the street – i.e. 8m on Waratah ave, and 2m on Shrike Lane and 0.5m on Gerygone Lane.

This 5-dwelling development doesn't have any visitor parking.

It must have 1 visitor parking bay to meet R-code AO.

DEEMED-TO-COMPLY

Development satisfies the following deemed-to-comply requirements (C)

C3.1 The following minimum number of on-site car parking spaces is to be provided for each **single house, grouped dwelling and special purpose dwelling** comprising the following number of bedrooms:

Type of dwelling	Car parking spaces	
	Location A	Location B
1 bedroom	1	1
2+ bedroom dwelling	1	2
Aged persons' dwelling	1	1
Ancillary dwelling	Nil	1

C3.2 On-site visitors' car parking spaces for **grouped and multiple dwelling developments** provided at a rate of one space for each four **dwelling**s, or part thereof in excess of four dwellings, served by a common access.

Dwellings	Visitor bays
0-4	Nil
5-8	1
9-12	2
13-16	3
17+	1 additional bay for every 4 dwellings or part thereof

- **Problem:** There is a health-hazard locating the bins within the garages.
 - Realistically, those bins are EXTREMELY UNLIKELY to be stored within the garages due to the stink.
 - Also only 3 bins are illustrated, but everyone in this neighbourhood has 4 bins per residence.
 - Most or all of those 20 bins will be kept outside along Shrike Lane.
 - Also even if the bins were stored inside garages, the bins must be put out on collection day and render Shrike Lane unnavigable as the bins would be obstructing it. Also obstructions in the lane prevent Alexander Rd residents turning into and out of their garages.
 - Element 3.4 Communal Open Space:
 - A 3.4.5 “Communal open space is separated or screened from adverse amenity impacts such as bins...”
 - A 3.4.7 “Communal open space is designed and oriented to minimise the impacts of noise, odour, lightspill and overlooking on the habitable rooms and private open spaces within the site and of neighbouring properties.”
 - DG 3.4.2 “The siting of communal open space influences its amenity value. Consider climate and aspect including solar access, wind effects, noise and odours.”
 - Element 4.14 Mixed Use – Specifically O4.14.2 “A safe and secure living environment for residents is maintained through the design and management of the impacts of non-residential uses such as noise, light, odour, traffic and waste.”
 - “Amenity - as defined under the Planning and Development (Local Planning Schemes) Regulations 2015 and includes the ‘liveability’, comfort or quality of a place which makes it pleasant and agreeable to be in for individuals and the community. Amenity is important in the public, communal and private domains and includes the enjoyment of sunlight, views, privacy and quiet. It also includes protection from pollution and odours.”
- **Alteration:** Redesign site coverage to R40 AO of 65%, allowing more space to store bins without obstructing Shrike lane, and without stinking out the garages.

Architectural Design Review Assessment City of Nedlands Design Review Panel		
Design quality evaluation		Date: 01 July 2024
Application: 111 Waratah Avenue, Dalkeith		
Review No.: 1		Time: 3:15pm
Panel: • Simon Venturi – A/Chair • Tony Casella • Dominic Snellgrove • Walter Van Der Loo City of Nedlands Representatives: • Nathan Blumenthal – A/Manager Urban Planning • Aviva Micevski- Coordinator Statutory Planning • Chantel Weerasekera – Senior Urban Planner (Statutory)		
Apply the applicable rating to each Design Principle		<i>Supported</i>
		<i>Further information required</i>
		<i>Not supported</i>
		<i>Yet to be addressed</i>
Summary	<u>Site Context</u> The subject site is zoned 'Urban' by the Metropolitan Region Scheme and 'Residential' by the City of Nedlands Local Planning Scheme No.3 and has a density coding of R40. The site is 1,164m ² in area and has a frontage to Waratah Avenue, Shrike Lane and Gerygone Lane. <u>Application History</u> The application proposes a residential development comprising 5 grouped dwellings. The application is in pre-lodgment stage. This is the first time this proposal has been presented to the DRP.	
Strengths of the proposal	• The applicant has engaged with the DRP at an early stage which is appreciated and commended. • The applicant submitted a comprehensive presentation addressing the 10 Design Principles and including contextual analysis. • The inclusion of lifts and ground floor master bedrooms supports aging in place and multi-generational living. • The aesthetic, external articulation and subtle materiality is of a high quality and represents a sophisticated design response to the surrounding context as well as specific character of Dalkeith. • The development's Shrike Lane façade generates a high level of interactivity with and passive surveillance of the laneway public realm. • The internal dwelling planning for Lots 2, 3 and 4 are efficient, generous and functional. • The orientation of the block generates no overshadowing of adjoining properties. • A landscape architect has been engaged early and a Landscape Plan incorporating native species across the development has been provided. • Three existing mature trees are proposed to be retained. The intention is supported. • The dwelling floor levels respond to the natural ground levels of the site.	

	• All dwellings have north facing courtyards and upper level balconies. • The dwellings will generally receive good cross ventilation.
Principle 1 - Context and character	<i>Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.</i> <u>1a. Comments</u> • The proposed front fence interface to Waratah Avenue doesn't acknowledge this is a primary streetscape and currently appears as a continuous solid (side or rear) boundary fence interface. • The non-compliant front setback does not respond to the prevailing condition on the streetscape and makes it difficult to contribute to the area's open feel leafy green streetscape character which plays an important role within the areas unique sense of place. • The interface to Shrike Lane will determine the success of the development. To create a successful Mews like space, it must present as being pedestrian oriented which will be difficult to achieve with the current gravel laneway finish or if asphalt is selected to upgrade the laneway. <u>1b. Suggested amendments/improvements</u> • Introduce further visual permeability, interactivity and visual interest to the front streetscape fence. • Consider increasing the front setback on Waratah Avenue significantly to generate greater separation between the front dwelling and street as well as offering an opportunity for generous landscaping in the front setback area which will contribute positively to the streetscape and local community. • Consider committing to upgrading the laneway ground surface as part of the development with a high quality paving indicative of a pedestrian orientated space.
Principle 2 - Landscape quality	<i>Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.</i> <u>2a. Comments</u> • The intention to retain the 3 off large mature trees is appreciated but an arborist's report is required to confirm the viability of doing so. The dwellings appear to be too close to the trees. The Panel are sceptical they can be retained based on the information provided. • As noted above in the Context & Character Principle increasing the front setback would generate an opportunity to provide additional generous landscaping including new trees on the Waratah Avenue streetscape interface. • The permeable paving areas in-front of the lift and stairs on the Shrike Lane side appear as opportunities for additional planting areas. • Some areas of the upper level on-structure planting look like they will be difficult to access for maintenance. <u>2b. Suggested amendments/improvements</u> • An arborist report should be presented to the DRP identifying the state of each tree proposed for retention, the potential for the trees to be retained and the building clearances that would be required to retain the trees.

		• Provide additional generous landscaping in the Waratah Avenue front setback area. • Replace the laneway permeable paving areas in-front of the lift and stairs with landscaping and explore the potential for small trees in these areas. • Consider and illustrate how the upper level planting will be maintained to ensure these areas are viable long term.
Principle 3 - Built form and scale		<i>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</i>
		<u>3a. Comments</u> • The non-compliant front and rear setbacks are tight. • The front and rear unit courtyards appear small and awkward in shape. This in combination with the minimal front and rear setbacks potentially indicate the site is being overdeveloped. One solution discussed in the meeting could be to flip the courtyard to Lot 1 to face Waratah Avenue, increasing the 'effective' outdoor space by amalgamating both courtyards and also increasing the front setback distance for a portion of the front façade. Although this would result in one south facing courtyard and living area on balance this approach would likely be supported. Another option to free up the ground plane would be reducing the dwellings on the site or some 4 bed dwellings being reduced to three bed dwellings. <u>3b. Suggested amendments/improvements</u> • Investigate re-configurations to increase the front and rear setbacks on the site. • Investigate options to increase the size and improve the proportions of the courtyards to the front and rear dwellings.
Principle 4 - Functionality and build quality		<i>Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life cycle.</i>
		<u>4a. Comments</u> • Limited storage is provided within the dwellings. • There are a number of items that require liaison with the City's Planning and Engineering / Technical Services Departments that may impact significantly on the general built form arrangement on the site • Some upper levels don't currently have a WC. • AC external units are not currently shown on the drawings. <u>4b. Suggested amendments/improvements</u> • Liaise with the City in relation to; - o Visitor parking requirements - o Bin collection location (currently residents would need to take the bins through the laneway if bins are collected from Waratah Ave) - o Post delivery - o Turning circle for vehicles (the current layout appears to require vehicles to use the adjacent neighbour's property to provide compliant turning circles into the garages). - o Requirements in relation to upgrading the laneway (which is currently gravel)

		- o Truncations on the front and rear lots for vehicle turning visibility - o Retention of the rear tree in terms of its impact on the laneway Confirm the requirements in relation to the above items with the City and integrate any resulting impacts into the proposal • Undertake a close analysis and fine tuning of the plans for issues such as no upstairs WC's, undersized master bedroom, lack of built in robes etc. • Show the AC external units on the drawings in a location that does not impact of resident amenity (ideally positioned and screened on the roof).
Principle 5 - Sustainability		<i>Good design optimises the sustainability of the built environment, delivering positive environmental, social, and economic outcomes.</i>
		<u>5a. Comments</u> • The applicant has provided insufficient information for this Principle to be assessed due to the early nature of the design process. <u>5b. Suggested amendments/improvements</u> • Engage an ESD professional to develop a comprehensive ESD report for the project. • Develop an ESD narrative for the project and consider integrating ESD initiatives such as PV solar panels, water capture / re-use, EV charging, heat pump hot water systems, double glazing, light colour roofs etc.
Principle 6 - Amenity		<i>Good design optimises internal and external amenity for occupants, visitors, and neighbours, providing environments that are comfortable, productive and healthy.</i>
		<u>6a. Comments</u> • The Lot 1 living area will receive limited natural light due to the solid wall facing the courtyard. • The Lot 2, 3 and 4 living spaces and master bedrooms could be swapped so the living area receives more north light access. • The proposal includes a number of internal bathrooms without windows. • The rumpus rooms will receive limited natural light access. • All units have north facing upper terraces which is supported however these are currently non-compliant in relation to visual privacy. These spaces are having to work hard to generate resident amenity as the ground level courtyards are relatively small. • The upper and lower level west facing openings have no roof overhang or passive shading. <u>6b. Suggested amendments/improvements</u> • Look at options to improve natural light access to the Lot 1 living area. • Consider flipping the ground floor master bedrooms and living spaces to create northern oriented living spaces. • At upper level behind the curved batons consider placing a window to allow more light to access the rumpus room or install operable Velux roof skylights in these rooms. • Include skylights to internal bathrooms. • Consider a roof overhang or passive shading to all west facing openings for sun as well as weather protection as well as to the upper level terraces to increase the potential use of this space throughout the year.

		Consider additional north facing glazing to the upper level of Lot 5.
Principle 7 - Legibility		<i>Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.</i>
		<u>7a. Comments</u> - Nil. <u>7b. Suggested amendments/improvements</u> - Supported.
Principle 8 - Safety		<i>Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.</i>
		<u>8a. Comments</u> - The current requirement for movement of bins in a vehicle access laneway may present a safety concern. - The current proposal may rely on vehicles crossing over adjacent properties to comply with turning circle requirements into the garages. <u>8b. Suggested amendments/improvements</u> - Liaise with the City in relation to these items and integrate any requirements into the proposal.
Principle 9 - Community		<i>Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.</i>
		<u>9a. Comments</u> - Additional work is required to develop a narrative on what the development will provide to the surrounding community beyond the retention of existing mature trees. <u>9b. Suggested amendments/improvements</u> - Improve the Waratah Avenue front fence interface and consider upgrading the laneway ground surface as noted in the Context & Character Principle. - Increase the front setback and provide generous landscaping within the front setback area to contribute positively to the streetscape and surrounding local community.
Principle 10 Aesthetics		<i>Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.</i>
		<u>10a. Comments</u> - Nil. <u>10b. Suggested amendments/improvements</u> - Supported.
SUMMARY		The proposal's external aesthetic and materiality will contribute positively to the surrounding local community and context. The level of resident amenity generated within Lots 2, 3 and 4 is working towards an outcome that is supportable by the Panel however the front a rear setbacks as well as the level of amenity generated in Lots 1 and 5 are indicative of over-development. Further information is also required in relation to an ESD narrative / ESD initiatives to be integrated into the proposal and an arborist's report should be provided to support the retention of the existing mature trees on the site.

OVERALL RECOMMENDATION	Further attention required. Not yet supported.
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Design Review progress			
	<i>Supported</i>		
	<i>Further information required</i>		
	<i>Not yet supported</i>		
	<i>Yet to be addressed</i>		
	<i>DR1</i>	<i>DR2</i>	<i>DR3</i>
Principle 1 - Context and character			
Principle 2 - Landscape quality			
Principle 3 - Built form and scale			
Principle 4 - Functionality and build quality			
Principle 5 - Sustainability			
Principle 6 - Amenity			
Principle 7 - Legibility			
Principle 8 - Safety			
Principle 9 - Community			
Principle 10 - Aesthetics			

Architectural Design Review Assessment City of Nedlands Design Review Panel																								
Design quality evaluation		Date: 2/12/24																						
Application: 111 Waratah Avenue – Five Grouped Dwellings																								
Review No.: 2		Time: 3:20pm																						
Panel: • Simon Venturi – Acting Chair • Dominic Snellgrove • Tony Blackwell																								
City of Nedlands Representatives: • Tony Free - Director Planning and Development • Kirsty Klimcke – A/Senior Urban Planner																								
Apply the applicable rating to each Design Principle		<i>Supported</i>																						
		<i>Further information required</i>																						
		<i>Not supported</i>																						
		<i>Yet to be addressed</i>																						
Summary	<u>Site Context</u> Lodged at DAP. This is the second time this proposal has been presented to the DRP. A subdivision for 5 green title lots has been conditionally approved by the WAPC. As such, the proposal is now to be assessed against Part B of the R-Codes Volume 1 as per Table 1.4a Assessment will be done in accordance with: • Clause 32.4: Additional site and development requirements, and the objectives of the zone under the Scheme; • SPP 7.0 & 7.3; • Local Planning Policy Precincts 5.14 • Consideration of the application under clause 67 of the <i>Planning and Development – Local Planning Schemes (Regulations)</i>. • <i>Residential Design Codes Volume 1 2024 – Part B</i>																							
	<u>Application History</u> This is the second time this application has been presented to DRP. The scoring from the 1 July 2024 DRP meeting is as below:																							
	<table><tr><th>Design Element</th><th>DR1</th></tr><tr><td>Principle 1 - Context and character</td><td></td></tr><tr><td>Principle 2 - Landscape quality</td><td></td></tr><tr><td>Principle 3 - Built form and scale</td><td></td></tr><tr><td>Principle 4 - Functionality and build quality</td><td></td></tr><tr><td>Principle 5 - Sustainability</td><td></td></tr><tr><td>Principle 6 - Amenity</td><td></td></tr><tr><td>Principle 7 - Legibility</td><td></td></tr><tr><td>Principle 8 - Safety</td><td></td></tr><tr><td>Principle 9 - Community</td><td></td></tr><tr><td>Principle 10 - Aesthetics</td><td></td></tr></table>		Design Element	DR1	Principle 1 - Context and character		Principle 2 - Landscape quality		Principle 3 - Built form and scale		Principle 4 - Functionality and build quality		Principle 5 - Sustainability		Principle 6 - Amenity		Principle 7 - Legibility		Principle 8 - Safety		Principle 9 - Community		Principle 10 - Aesthetics	
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Principle 4 - Functionality and build quality																								
Principle 5 - Sustainability																								
Principle 6 - Amenity																								
Principle 7 - Legibility																								
Principle 8 - Safety																								
Principle 9 - Community																								
Principle 10 - Aesthetics																								

Strengths of the proposal	• The presentation focused on the previous DRP comments which is appreciated • Permeability and visual interest of the front streetscape interface has improved • Front setback has increased a small amount • A Landscape Architect has been engaged and a Landscape Plan has been provided • Soft landscaping has been added in the front setback which contributes to the streetscape and local community in a positive way • An Arborist's Report has been added which confirms the existing mature Gum tree can be retained which is supported • AC condenser units have now been shown on the roof • Additional WC's on the upper levels of the units improve amenity for residents • Increased potential for north light to middle unit living areas has been provided by including an option showing the living areas facing north • Ground level outdoor private space supplemented by terraces above • Skylights have been added to upper level bathrooms • Pergola's have been added to shade upper level openings • Provision of lifts supports ageing in place • Additional permeable paving has been added • Contemporary architectural language is strong
Principle 1 - Context and character	<i>Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.</i> <u>1a. Comments</u> • No comments. Supported. <u>1b. Suggested amendments/improvements</u> • Nil.
Principle 2 - Landscape quality	<i>Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.</i> <u>2a. Comments</u> • Dwarf Olive species are included on the shot-hole borer list. <u>2b. Suggested amendments/improvements</u> • Review planting species selections to remove species included on the shot-hole borer list.
Principle 3 - Built form and scale	<i>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</i>

		<u>3a. Comments</u> • The rear setback generates an abrupt interface to the laneway. • The length and heights of boundary walls on the west boundary may not be supportable in terms of the impact generated on the adjoining property. No information has been provided in relation to the adjacent west side property on the drawings. The retention of an existing boundary wall requested by the neighbours was discussed in the meeting however this is not shown on the drawings. • Visual compliance from the west side terraces in relation to the adjoining west property is not clear. <u>3b. Suggested amendments/improvements</u> • Consider increasing the setback on the laneway interface and liaise with the City in terms of their requirements in relation to this. • Provide further information in relation to the adjoining west side property which may build a justification for the extent of boundary walls. • Further illustrate how visual privacy compliance is being achieved on the west interface.
Principle 4 - Functionality and build quality		<i>Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life cycle.</i>
		<u>4a. Comments</u> • No comments. Supported. <u>4b. Suggested amendments/improvements</u> • Nil.
Principle 5 - Sustainability		<i>Good design optimises the sustainability of the built environment, delivering positive environmental, social, and economic outcomes.</i>
		<u>5a. Comments</u> • The ESD Report only responds to Section J requirements which is a very low bar. <u>5b. Suggested amendments/improvements</u> • The ESD report notes PV solar panels however the applicant is encouraged to consider integrating further ESD initiatives such as EV charging, double glazing, water capture, heat pump HWS's, all electric development (no gas) etc.
Principle 6 - Amenity		<i>Good design optimises internal and external amenity for occupants, visitors, and neighbours, providing environments that are comfortable, productive and healthy.</i>
		<u>6a. Comments</u> • The Lot 5 living areas have the potential to receive more north light and outlook to the courtyards by swapping the lounge and kitchen / dining areas. <u>6b. Suggested amendments/improvements</u> • Consider swapping the lounge and kitchen / dining areas in Lot 5.
Principle 7 -		<i>Good design results in buildings and places that are legible, with clear</i>

Legibility		<i>connections and easily identifiable elements to help people find their way around.</i>
		<u>7a. Comments</u> - No comments. Supported. <u>7b. Suggested amendments/improvements</u> - Nil.
Principle 8 - Safety		<i>Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.</i>
		<u>8a. Comments</u> - No comments. Supported. <u>8b. Suggested amendments/improvements</u> - Nil.
Principle 9 - Community		<i>Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.</i>
		<u>9a. Comments</u> - No Comments. Supported. <u>9b. Suggested amendments/improvements</u> - Nil.
Principle 10 Aesthetics		<i>Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.</i>
		<u>10a. Comments</u> - No comments. Supported. <u>10b. Suggested amendments/improvements</u> - Nil.
SUMMARY		The proposal has responded to the majority of previous comments from the DRP and generally presents a high-quality outcome including the architectural language and level of amenity for occupants. The retention of the existing mature tree is also supported and commended. The applicant is encouraged to address items noted in the Built Form & Scale and Sustainability Principles in order to achieve full DRP support for the proposal. In particular the rear setback, extent and height of west side boundary wall and west side visual privacy compliance require attention.
OVERALL RECOMMENDATION		Requires Further Attention

Design Review progress			
	Supported		
	Further information required		
	Not yet supported		
	Yet to be addressed		
	DR1	DR2	DR3
Principle 1 - Context and character			

Principle 2 - Landscape quality			
Principle 3 - Built form and scale			
Principle 4 - Functionality and build quality			
Principle 5 - Sustainability			
Principle 6 - Amenity			
Principle 7 - Legibility			
Principle 8 - Safety			
Principle 9 - Community			
Principle 10 - Aesthetics			

From: [Simon Venturi](#)
To: [Kirsty Klimcke](#)
Subject: RE: 111 Waratah Avenue - 5 Grouped Dwellings - Request for Chair Review
Date: Wednesday, 5 February 2025 9:15:08 AM
Attachments: [image010.png](#)
[image009.png](#)
[image012.png](#)
[image014.png](#)
[image016.png](#)

Hi Kirsty,

I've reviewed the applicants amended drawings and provide the following updated comments relating to the Principles that were not already green;

Strengths (based on changes from previous version)

- The western boundary walls for all units have been reduced in height to 3m - 3.5m
- Upper floor terraces have been set back 1.0m from the western boundary
- The existing wall on the west boundary has been shown on the drawings. The applicant has indicated the west property neighbour specifically requested this wall be retained as part of the consultation process

Principle 3 - Built form and scale

3a. Comments

- The rear setback generates an abrupt interface to the laneway. *Previous comment still relevant.*
- The length and heights of boundary walls on the west boundary may not be supportable in terms of the impact generated on the adjoining property. No information has been provided in relation to the adjacent west side property on the drawings. The retention of an existing boundary wall requested by the neighbours was discussed in the meeting however this is not shown on the drawings. *This wall has now been shown on the drawings and the west interface has been improved by pulling back the terraces 1m.*
- Visual compliance from the west side terraces in relation to the adjoining west property is not clear. *This has improved due to pulling the terraces back 1m from the boundary.*

3b. Suggested amendments/improvements

- Consider increasing the setback on the laneway interface and liaise with the City in terms of their requirements in relation to this. *Not addressed. Not addressed. The applicant is still encouraged to consider this amendment.*
- Provide further information in relation to the adjoining west side property which may build a justification for the extent of boundary walls. *Addressed - The existing wall has been shown on the drawings and pulling back the upper level terraces 1m from the boundary reduces boundary wall heights and generally improves the interface with the west neighbour.*
- Further illustrate how visual privacy compliance is being achieved on the west interface. *Addressed - This has improved due to pulling the upper level terraces back 1m from the boundary.*

Principle 5 -Sustainability

-

5a. Comments

- The ESD Report only responds to Section J requirements which is a very low bar. *Previous comment still relevant.*

-

5b. Suggested amendments/improvements

- The ESD report notes PV solar panels however the applicant is encouraged to consider integrating further ESD initiatives such as EV charging, double glazing, water capture, heat pump HWS's, all electric development (no gas) etc. *Not addressed. No additional information has been provided in relation to ESD initiatives for the project.*

DRP Design Quality Evaluation			
	Supported		
	Further Information Required		
	Not supported		
SPP 7.0 Principles	1 July 2024 DRP 1	2 December 2024 DRP 2	Revision 3 - Chair Review 5/2/25
Context and Character			
Landscape Quality			
Built Form and Scale			
Functionality and Built Quality			
Sustainability			
Amenity			
Legibility			
Safety			

Community			
Aesthetics			

If you have any queries in relation to the above or require further comment on any specific items let me know.

Regards

Simon Venturi

NOMA* Pty Ltd > Director + Architect > RAIA + ABWA



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From: Kirsty Klimcke [<mailto:kklimcke@nedlands.wa.gov.au>]
Sent: Tuesday, February 04, 2025 11:45 AM
To: Simon Venturi <simon.venturi@nomastudio.com.au>
Subject: 111 Waratah Avenue - 5 Grouped Dwellings - Request for Chair Review

Hi Simon,

Revised plans for the above application, dated 31 January 2025, have been submitted to the City for consideration (available to download here [111 Waratah Avenue - Chair Review Request](#))

Please see below list of changes from the applicant:

- Western boundary walls for all units have been reduced to maximum 3.5m in height
- Upper floor terraces have been set back 1.0m from the western boundary.

No other changes have been made.

The table below is a summary of the DRP scoring from the previous meetings (I have attached the previous minutes from 2 December 2024). Can you please provide an update to the table to indicate your review, and any additional comments and/or recommendations.

This item is set to go to February Council Meeting and reports are due next week, I would appreciate if you could get a response to us as soon as practicable. **Can you please provide this via return email by 10th February 2025.**

DRP Design Quality Evaluation			
	Supported		
	Further Information Required		
	Not supported		
SPP 7.0 Principles	1 July 2024 DRP 1	2 December 2024 DRP 2	Revision 3 (pending Chair Review)
Context and Character			
Landscape Quality			
Built Form and Scale			
Functionality and Built Quality			
Sustainability			
Amenity			
Legibility			
Safety			
Community			
Aesthetics			

Kind regards,

Kirsty Klimcke

Acting Senior Urban Planner



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NO. 111 WARATAH AVENUE, DALKEITH

PROPOSED RESIDENTIAL DEVELOPMENT

November 2024

This report has been prepared by Urbanista Town Planning on behalf of the landowners for the proposed development at 111 Waratah Avenue, Dalkeith.

Rev	Author	Date	Reviewed	Date
A – Draft V1	PM	08/08/2024	MS	09/10/2024
B – Draft V2	MS	23/10/2024	PM	28/10/2024
C – Draft V3	MS	31/10/2024	DM	31/10/2024
D – DA lodgement	MS	07/11/2024		

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2 INTRODUCTION

Urbanista Town Planning have been engaged to prepare and submit a Joint Development Assessment Panel (JDAP) application comprising of five (5) two storey, single houses at No. 111 Waratah Avenue, Dalkeith.

This report has been prepared to provide an overview of the subject site and the proposed development, as well as a detailed assessment against relevant planning requirements and an examination of the planning merits of the proposal.

This report is also accompanied by a detailed architectural package, as well as supporting technical reports prepared by the following consultants:

Document	Prepared by	Date
Architectural Drawings	State of Kin	05/11/2024
Arboricultural Impact Assessment	CIVICA	28/08/2024
Civil Drawings	EMP Consulting	01/09/2024
Energy Efficiency Reports	Energy Advance	28/08/2024
Landscape Plans	KDLA Landscape Architects	16/09/2024



Figure 1: Proposed streetscape view from Waratah Avenue

3 DEVELOPMENT CONTEXT

The subject development site is located at No. 111 Waratah Avenue, Dalkeith on the corner of Shrike Lane to the east and Greygone Lane to the north. The site has a total land area of 1163sqm, with a 20.12m frontage to Waratah Avenue and a 57.84m frontage to Shrike Lane.

The existing single house is due to be demolished to facilitate the development of the proposal as it has a recent August 2024 subdivision approval (WAPC 200280) for the five green title lots at the development site.

The Waratah Avenue verge (footpath) includes one mature tree, a stormwater drain and school zone signs. Waratah Avenue adjoins the nearest intersecting street, Shrike Lane (right of way) the north-east. The right of way contains a rough sealed road with no other notable structures.

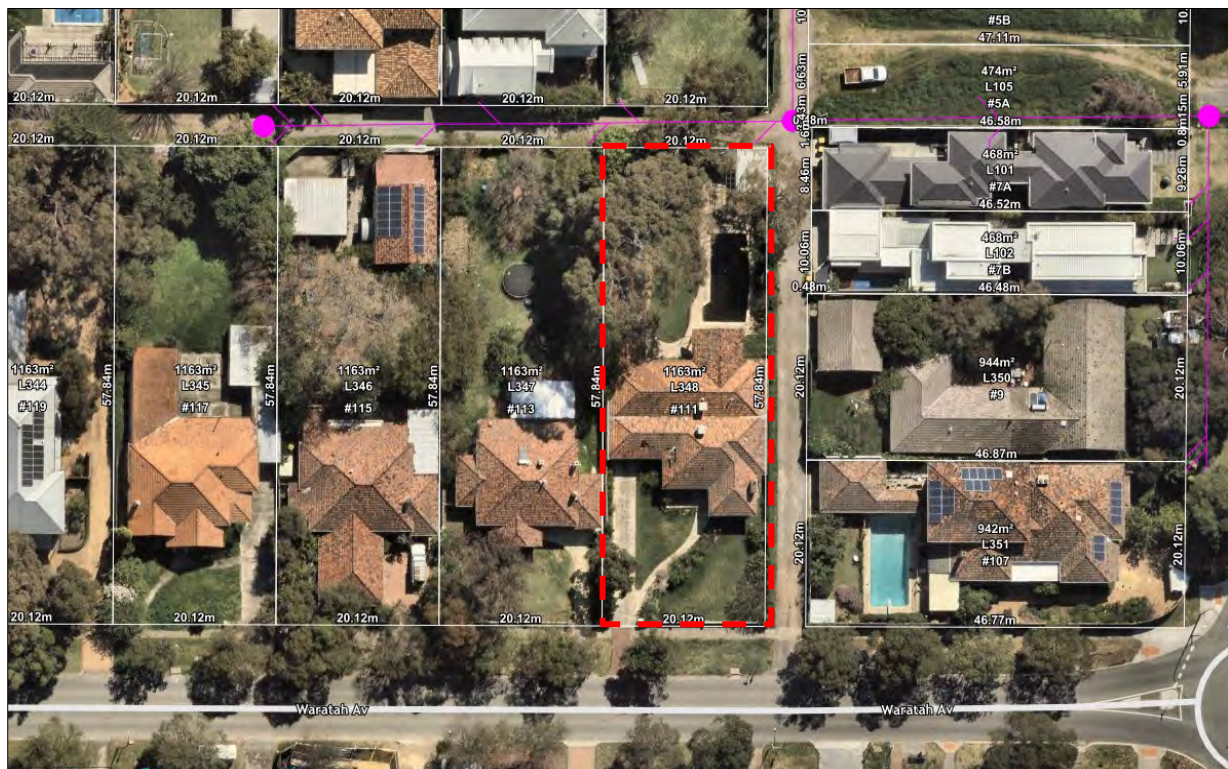


Figure 2: Aerial image of subject site and surrounds.

4 THE PROPOSAL

The development application proposes five (5) single houses on five independent lots. Lot 1 derives access via Waratah Avenue (primary street) and Shirke Lane (secondary street). Lots 2 – 5 derive sole access via Shirke Lane (primary street). Greystone Lane is considered as the northern lot boundary for Lot 5.

The dwellings will be finished in a matching aesthetic and includes trees within the front and rear outdoor areas surrounding the dwellings. The design elements of the proposal achieve a high-quality design that is responsive to the site's context, solar access and shading needs.

All 5 dwellings are provided with a similar layout including the following:

Lot	Composition
Lot 1	• Two outdoor living areas • 3 bedrooms and ancillary rooms • Open plan primary living space • Double garage, storage area and lift • Juliette balcony and alfresco entertainment
Lot 2, 3, 4 & 5	• Outdoor living areas • 3 bedrooms and ancillary rooms • Open plan primary living space • Master bedroom and ensuite • Double garage, storage area and lift • Balcony and alfresco entertainment



Figure 3: Proposed streetscape view from Shirke Lane

5 DESIGN REVIEW PANEL

The proposal was presented to the city's design review panel on 1 July 2024, where it received generally positive feedback. The DRP highlighted the strengths of the proposal, as well as areas for improvement. The plans have since been amended in response to the DRP's feedback and are assessed in accordance with the City's Planning Framework in this report.

The applicant and architect will continue to work with the DRP and intend to present the updated the plans to the Panel for further review after lodgement.

The strengths of the proposal are listed below. The DRP minutes and architectural response are provided as an attachment to this report.

- The applicant has engaged with the DRP at an early stage which is appreciated and commended.
- The applicant submitted a comprehensive presentation addressing the 10 Design Principles and including contextual analysis.
- The inclusion of lifts and ground floor master bedrooms supports aging in place and multi-generational living.
- The aesthetic, external articulation and subtle materiality is of a high quality and represents a sophisticated design response to the surrounding context as well as specific character of Dalkeith.
- The development's Shrike Lane façade generates a high level of interactivity with and passive surveillance of the laneway public realm.
- The internal dwelling planning for Lots 2, 3 and 4 are efficient, generous and functional.
- The orientation of the block generates no overshadowing of adjoining properties.
- A landscape architect has been engaged early and a Landscape Plan incorporating native species across the development has been provided.
- Three existing mature trees are proposed to be retained. The intention is supported.
- The dwelling floor levels respond to the natural ground levels of the site.
- All dwellings have north facing courtyards and upper level balconies.
- The dwellings will generally receive good cross ventilation.

7 PLANNING ASSESSMENT AND JUSTIFICATION

An assessment of the proposed development's performance against the relevant provisions of the planning framework is detailed in this section of the report.

Local Planning Policy 1.1 – Residential Development: Single and Grouped Dwellings

LPP 1.1 includes a number of modifications and augmentations for the R-Codes assessment of residential development within Nedlands. Relevant elements of the R-Codes affected by the policy include:

- *Street setback*
- *Building height*
- *Street walls and fences*
- *Sight lines*
- *Vehicular access*

These changes have been incorporated into the R-Codes assessment above. Any variations have been considered against the relevant R-Codes design principles and any additional housing objectives of this policy.

Local Planning Policy 5.14 – Precincts (Waratah Sub-Precinct)

The purpose of the policy is to provide built form requirements which respond to the context of each precinct area and to promote high level design quality of new development, in specific, the Waratah sub-precinct residential area south of the Stirling Highway.

“The Waratah sub-precinct shall provide for a diversity of dwelling types and configurations that provide for a range of household types...”

The policy modifies requirements of the following R-Codes elements which specifically relates to Residential R40 development located within Waratah Avenue:

- *Street setback (primary and secondary street)*
- *Lot boundary setbacks (boundary walls)*

These changes have been incorporated into the R-Codes assessment above. Any variations have been considered against the relevant R-Codes design principles and any additional housing objectives of this policy.

State Planning Policy 7.3 – Residential Design Codes (Volume 1)

State Planning Policy 7.3 Volume 1 is the primary planning control document for single houses, grouped dwellings and low-density multiple dwellings in Western Australia. As outlined in State Planning Policy 7.3 R-Codes Volume 1, each design element includes design principles. Where a proposed development does not satisfy the deemed-to-comply requirement it must demonstrate that it satisfies the design principles of each respective element.

A design must also demonstrate that it meets the statement of intent or objectives of respective Local Planning Policies which are applicable to the proposed development. Planning approval applications will be assessed in context of the entire development design to ensure the objectives are achieved

SUMMARY OF SPP7.3 VOLUME 1 DEEMED-TO-COMPLY ASSESSMENT

5.1 CONTEXT		
5.1.2	Street setback*	☒
5.1.3	Lot boundary setback*	☒
5.1.4	Open space	☒
5.1.5	Communal open space	N/A
5.1.6	Building height*	☑
5.2 STREETScape		
5.2.1	Setback of garages and carports*	☒
5.2.2	Garage width	☑
5.2.3	Street surveillance	☑
5.2.4	Street walls and fences*	☑
5.2.5	Sight lines*	☑
5.2.6	Appearance of retained dwellings	N/A
5.3 SITE PLANNING AND DESIGN		
5.3.1	Outdoor living areas	☑
5.3.2	Landscaping	☑
5.3.3	Parking	☑
5.3.4	Design of car parking spaces	☑
5.3.5	Vehicular access*	☑
5.3.6	Pedestrian access	N/A
5.3.7	Site works	☑
5.3.9	Stormwater management	☑
5.4 BUILDING DESIGN		
5.4.1	Visual privacy	☒
5.4.2	Solar access for adjoining sites	☑
5.4.3	Outbuildings	N/A
5.4.4	External fixtures, utilities and facilities	☑
5.5 SPECIAL PURPOSE DWELLING		
5.5.1	Ancillary dwellings	N/A
5.5.2	Aged or dependent person's dwellings	N/A
5.5.3	Single bedroom dwellings	N/A
5.5.4	Accessible Dwellings	N/A
5.5.5	Small Dwellings	N/A
R-CODES VOL. 1 PART D – LAND		
1.0	LAND	
1.1	Site area	☑

*Indicates a requirement which has been modified or supplemented by a local planning policy.

Design elements which have not satisfied the deemed-to-comply requirements are demonstrated compliance with the associated design principles below.

5.1.2 Street Setback

Required	Proposed Variation
- LPP 5.14 – 9.3 Primary Controls prevails. Primary Street – 4.0m - LPP 5.14 – 9.3 Primary Controls prevails. Secondary Street – 2.0m	- Lot 1: 2.0m (Waratah Av) - Lot 2, 3, 4 & 5: 1.0m (Shrike Ln) - Lot 1: 1.0m (Waratah Av)

Design Principles

- P2.1** *Buildings set back from street boundaries an appropriate distance to ensure they:*
- contribute to, and are consistent with, an established streetscape;*
 - provide adequate privacy and open space for dwellings;*
 - accommodate site planning requirements such as parking, landscape and utilities; and*
 - allow safety clearances for easements for essential service corridors.*
- P2.2** *Buildings mass and form that:*
- uses design features to affect the size and scale of the building;*
 - uses appropriate minor projections that do not detract from the character of the streetscape;*
 - minimises the proportion of the façade at ground level taken up by building services, vehicle entries and walls, servicing infrastructure parking supply, blank access and meters and the like; and*
 - positively contributes to the prevailing or future development context and streetscape as outlined in the local planning framework.*

Planning Justification

Lot 1 (as indicated in Figure 5)

The primary street setback within the Waratah sub-precinct prescribes a 4 metre front setback. Lot 1 seeks to vary the requirement by 2 metres across a 20 metre frontage. The closest point which intersects into the streetscape is the first floor *Juliette* balcony attached to Bed 4 has a width of 800mm and is setback 1.2 metres from the primary street. Given the ancillary nature of the structure, it could be considered a minor projection.

The bulk of the dwelling is situated within the right of way to reduce impacts to the property abutting the western boundary and to maintain their respective views of the front setback area.

The design includes an abundance of streetscape landscaping and an open aspect façade of Waratah Avenue to minimise potential loss amenity and maintain the intent of residential development in the Waratah precinct.

The secondary street setback (Shrike Lane) is setback 1 metre in lieu of 2 metres. The proposed setback is in line with Lots 2 – 5 primary street setbacks. The bulk of the dwelling is situated along the right of way, as it is the most suitable location for building bulk in this context. Right of ways are considered ancillary in nature due to its heavy reliance on secondary access. The setback variation will not impact on the amenity of the right of way or the neighbouring properties.

Lots 2 – 4 (as indicated in Figure 5)

The primary street setback for Lots 2 – 4 is 1 metre in lieu of 4 metres as Shrike Lane is considered the primary street.

Lots fronting Shrike Lane rely on sole access to the double garages. To reduce to potential dominance of bulk, the garages all have a permeable doors and permeable balcony screening above. The choice of colours and materials soften the appearance of bulk.

Lots 2 – 5 continue the primary setback landscaping theme, with raised planters within the ground and first floor and permeable paving within the driveway, creating an overwhelming sense of greenery in an area commonly bitumen.

The reduced setback to Shrike Lane does not result in loss of privacy as there is adequate separation between the proposed dwellings and the abutting eastern properties which is due to the laneway setback of over 5 metres. Lots 1 and 2 – 5 will enhance the frontages abutting the laneway and will result in an activated streetscape that is not commonly provided for laneways.

- The single houses provide passive surveillance of the street setback area, especially important in rights of way's due to the lack of frequent pedestrian and vehicle activity.
- There are no easements of structures within Waratah Avenue, Shrike Lane or Greygone Lane that are impacted by the setback variations and is therefore considered acceptable.
- The dwellings façade has been kept simplistic without invasive projections which is consistent with the design context of the locality. The design is intended to contrast and compliment the residential zone.
- Lots 2 – 5 street setback area is open in nature with no street walls or fences dominating the area. Lot 1 proposes a low lying permeable front fence which allows for views into the front setback area.

The modernistic design will set a positive precedence for the Waratah precinct. The white and cream colour tones contrast against the landscaping areas and planters within the upper floors help contribute to the prevailing context of the area. The dwellings offer a refreshed sense of place and laneway activation for Shrike and Greygone Lane.

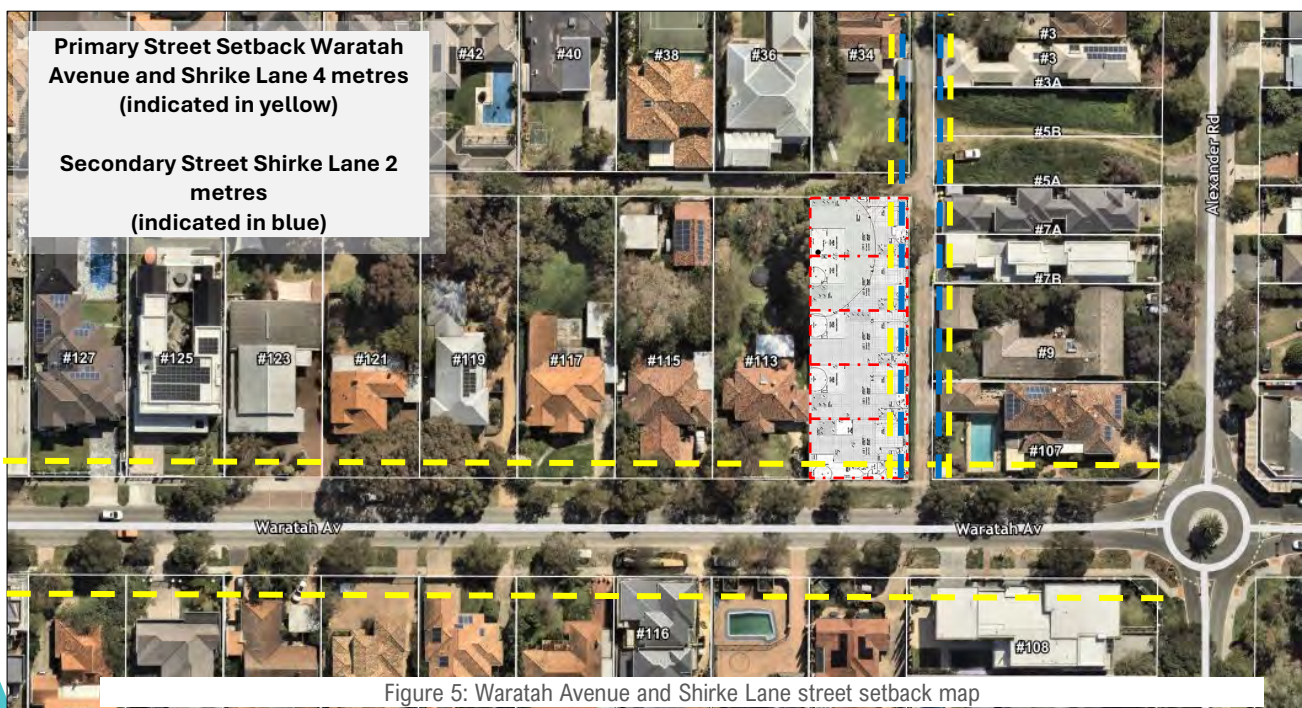


Figure 5: Waratah Avenue and Shirke Lane street setback map

5.2.1 Setback of Carport and Garages

Required	Proposed Variation
- Garages are required to be set back 4.5m from the primary street. - Garages and carports set back 1.5m from a secondary street.	- Lot 2, 3 & 4: 1.0m setback - Lot 5: 2.0m setback - Lot 1: 1.0m setback

Design Principles

P1.1 Carports and garages set back to maintain clear sightlines along the street, to not obstruct views of dwellings from the street and vice versa and designed to contribute positively to streetscapes and to the appearance of dwellings.

P1.2 Garages and/or carports set back to ensure any vehicle parking on a driveway does not impede on any existing or planned adjoining pedestrian, cycle or dual-use path.

Planning Justification

- Lot 1 proposes a setback of 1 metre in lieu of 1.5 metres for the secondary street setback.
- Lots 2 – 4 propose 1 metre setbacks in lieu of 4.5 metres
- Lot 5 proposes 2 metres in lieu of 4.5 metres.

All variations proposed have been adequately justified as the garages are effectively in alignment with each other, providing consistency with the Shrike Lane streetscape.

The proposed garages maintain clear sightlines along the Shrike Lane as the garages are setback between 1 – 2 metres and are not within the truncated areas.

The reduced setbacks do not prevent safe vehicle ingress and egress into the double garages. Majority of the adjacent properties have garages setback nil to the right of way and therefore the proposed is consistent with the existing streetscape.

The garages do not obstruct views for pedestrian accessing the right of way. Vehicles accessing their garage or using the right of way for access.

Lot 1 setback does not prevent views of Waratah Avenue where the streetscape vista is of greater importance.

The garages do not detract from the streetscape and are considered to be discrete due to proximity to the dwelling's alignment, the colours and material proposed will contribute positively to streetscapes and to the appearance of dwellings.

As a condition of subdivision approval, the landowner is required to adequately pave and drain the right of way. The choice of paving is currently being contemplated as it is the landowner's preference to provide a pedestrian-friendly material which will encourage passive activity within the laneway.

As indicated in Figure 6, there is a strong prevailing context of garages both established and recent, being constructed within the 4.5 metre deemed-to-comply setback.



Figure 6: Examples of Garages within Shrike Lane

5.1.3 Boundary Walls

Required

- Boundary walls up to one storey in height.

Proposed Variation

- Lots 1, 2, 3, 4 & 5: boundary wall height greater than one storey (4.6m to 4.9m).

Design Principles

- P3.1** Buildings set back from lot boundaries or adjacent buildings on the same lot so as to:
- reduce impacts of building bulk on adjoining properties;
 - provide adequate sunlight and ventilation to the building and open spaces on the site and adjoining properties; and
 - minimise the extent of overlooking and resultant loss of privacy on adjoining properties.
- P3.2** Buildings built up to boundaries (other than the street boundary) where this:
- makes more effective use of space for enhanced privacy for the occupant/s or outdoor living areas;
 - does not compromise the design principle contained in clause 5.1.3 P3.1;
 - does not have any adverse impact on the amenity of the adjoining property;
 - ensures sunlight to major openings to habitable rooms and outdoor living areas for adjoining properties is not restricted; and
 - positively contributes to the prevailing or future development context and streetscape as outlined in the local planning framework.

Planning Justification

Lots 1 – 5 propose boundary walls with heights greater than 1 storey within the western lot boundary. The boundary walls are approximately half the length of the proposed lot boundary and does impact on primary outdoor garden/living areas.

As the boundary walls only make up half of the respective lot boundary, there is still adequate sunlight for outdoor garden/living areas. This ensures that the abutting property is not dominated by building bulk and there is a sense of articulation.

The purpose of the boundary walls is to provide privacy for the upper floor balcony which face west. The walls provide a screening mechanism which prevents overlooking of the western property.

The proposed boundary walls achieve deemed-to-comply overshadowing outcomes and does not preclude the provision of outdoor living areas to the front and rear of each dwelling, including provision of trees.

5.1.4 Open Space

Required

- 45% open space required.

Proposed Variation

- Lot 2, 3 & 4: 40%

Design Principles

P4

Development incorporates suitable open space for its context to:

- reflect the existing and/or desired streetscape character or as outlined under the local planning framework;
- provide access to sunlight for the dwelling;
- reduce building bulk on the site, consistent with the expectations of the applicable density code and/or as outlined in the local planning framework;
- provide an attractive setting for the buildings, landscape, vegetation and streetscape;
- provide opportunities for residents to use space external to the dwelling for outdoor pursuits and access within/around the site; and
- provide space for utilities and essential facilities.
-

Planning Justification

In the context of each development site, the proposed 40% open space is equal to 90sqm of open space. There is sufficient open space provided that ultimately enables the occupant of the dwelling to utilise the dwelling for domestic pursuits.

The proposed single houses have been designed to abut each other. This design allows for the maximisation of space which is considered positive outcome for this type of development. With lots abutting each other in this arrangement, there is open space continuity throughout the lots which is accessible and usable space. The proposed open space allows for opportunities for the landscaping and trees to grow in significant deep soli areas.

The proposed dwellings function in a townhouse style, where internal areas provide preference to outdoor living, notwithstanding, Lot 2 – 4 contain 40sqm of primary outdoor living area and 31sqm of soft landscaping, combined total of 71sqm of each lot.

The primary outdoor living areas not screened by boundary walls which provides sufficient solar and ventilation into the dwelling. Solar access is provided through the setbacks which is provided to the northern ground and first floor.

The proposed balconies and alfresco areas on the upper floor are generous in size (38sqm), sufficiently landscaped with planters and will provide opportunities for occupants to use the space for outdoor pursuits.

There are several standard trees proposed across the entire site to aid in the green coverage of the development.

The proposed dwellings are consistent with existing two-storey development commonly seen in the Waratah Avenue locality where higher density development is prominent.

Although open space has a minor departure, the proposed is considered to be a better outcome for these lots and compatible with the desired streetscape.

5.4.1 Visual Privacy

Required	Proposed Variation
7.5 metre cone of vision	- Lot 1, 2, 3 & 4: 1F Balcony (east) – balcony partially overlooks the eastern adjoining dwellings side setback area. - Lot 5: 1F Balcony (north) – balcony partially overlooks the northern adjoining dwellings rear setback area.

Design Principles

- P1.1** *Minimal direct overlooking of active habitable spaces and outdoor living areas of adjacent dwellings achieved through:*
- building layout and location;*
 - design of major openings;*
 - landscape screening of outdoor active habitable spaces; and/or*
 - location of screening devices.*
 -
- P1.2** *Maximum visual privacy to side and rear boundaries through measures such as:*
- offsetting the location of ground and first floor windows so that viewing is oblique rather than direct;*
 - building to the boundary where appropriate;*
 - setting back the first floor from the side boundary;*
 - providing higher or opaque and fixed windows; and/or*
 - screen devices (including landscaping, fencing, obscure glazing, timber screens, external blinds, window hoods and shutters).*
 -

Planning Justification

The eastern setback for Lots 1 – 5 abuts Shrike Lane and partially overlooks properties that border the eastern boundary. The separation distance of Shrike Lane and the proposed dwellings is the 5 metres. Although a sufficient setback is provided through the right of way, overlooking departures are identified for Lots 1 – 4, and in addition, Lot 5 abutting Greystone Lane.

Lot 1 & 2 (as indicated in Figure 7)

- The rear balcony partially overlooks a side setback area inclusive of established landscaping and rear garage. The landscaping sits above the boundary fence and provides a natural screen to buffer between the dwelling and right of way. The visual privacy impact is considered minor as the overlooking does not extend into the entirety of the setback area.
- The balcony provides passive surveillance of the streetscape (Shrike Lane) and utilises views to an area that is ancillary in nature.

Lot 2 & 3 (as indicated in Figure 7)

- Partially overlooks side setback area inclusive of a rear garden setting and low to medium trees along the boundary fence and a rear garage. The visual privacy impact is considered minor as the overlooking does not extend into the entirety of the setback area.
- The balcony provides passive surveillance of the streetscape (Shrike Lane) and utilises views to an area that is ancillary in nature.

Lot 4 (as indicated in Figure 7)

- Partially overlooks a small rear bin store area and a rear garage. Due to the high-density dwelling nature of this property, there is little to no open space or areas which are sensitive to overlook.
- The balcony provides passive surveillance of the streetscape (Shrike Lane) and utilises views to an area that is ancillary in nature.

Lot 5 (as indicated in Figure 7)

- Partially overlooks the rear setback area inclusive of a rear garden setting and low to medium trees along the boundary fence. This area appears to not be utilised by the landowner for outdoor pursuits as the primary outdoor living area is closer to the dwellings alfresco area. The large established tree at Lot 5 will provide dense natural screening to the northern elevation.
- The balcony provides passive surveillance of the streetscape (Greygone Lane) and utilises views to an area that is ancillary in nature.

The minor overlooking variations are considered acceptable. Notwithstanding, if the determining authority requires a suitable screening device to be implemented, then this could be accommodated as a condition of approval.



Figure 7: Extent of overlooking on adjoining properties

8 CONCLUSION

The development has been designed to provide a high-quality outcome for the Dalkeith locality. The expectation of bespoke residential design is believed to be delivered as part of this proposal.

We request the City consider the benefits of the proposal, which will include a high resident amenity, and minimal impact on adjacent properties.

We look forward to working with the City towards the redevelopment of the site

ATTACHMENT 1: DRP MINUTES AND ARCHITECTURAL RESPONSE

29 October 2024

01/07/2024	DR1
Principle 1 - Context and character	
Principle 2 - Landscape quality	
Principle 3 - Built form and scale	
Principle 4 - Functionality and build quality	
Principle 5 - Sustainability	
Principle 6 - Amenity	
Principle 7 - Legibility	
Principle 8 - Safety	
Principle 9 - Community	
Principle 10 - Aesthetics	

DESIGN REVIEW PANEL MEETING MINUTES AND RESPONSES

Principle 1 – Context and character

Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.

1a. Comments	Applicant's Response
The proposed front fence interface to Waratah Avenue doesn't acknowledge this is a primary streetscape and currently appears as a continuous solid (side or rear) boundary fence interface.	Added articulation to the front fence interface to Waratah Avenue, incorporating varied elements to align with the primary streetscape design.
The non-compliant front setback does not respond to the prevailing condition on the streetscape and makes it difficult to contribute to the area's open feel leafy green streetscape character which plays an important role within the areas unique sense of place.	Adjusted the front setback to better align with the prevailing streetscape conditions, enhancing the open, leafy green character that defines the area's unique sense of place.
The interface to Shrike Lane will determine the success of the development. To create a successful Mews like space, it must present as being pedestrian oriented which will be difficult to achieve with the current gravel laneway finish or if asphalt is selected to upgrade the laneway.	Permeable paving and landscaping outside each lot, including bench seats and a path, to create a pedestrian-oriented, Mews-like space that enhances the interface with Shrike Lane.
1b. Suggested amendments/improvements	Applicant's Response
Introduce further visual permeability, interactivity and visual interest to the front streetscape fence.	Landscaping elements, permeable garage doors, and a well-articulated design that enhances visual permeability, interactivity, and interest, while being conscious of the location.
Consider increasing the front setback on Waratah Avenue significantly to generate greater separation between the front dwelling and street as well as offering an opportunity for	To best achieve the minimum lot requirements, we have increased the front setback to the greatest extent possible within the design constraints.

1 OF 7

DESIGN REVIEW PANEL MEETING MINUTES AND RESPONSES

	<i>generous landscaping in the front setback area which will contribute positively to the streetscape and local community.</i>	
	<i>Consider committing to upgrading the laneway ground surface as part of the development with a high quality paving indicative of a pedestrian orientated space.</i>	Shrike Lane has been documented to be repaved to create a pedestrian-oriented space.

Principle 2 – Landscape quality

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.

2a Comments	Applicant's Response
<i>The intention to retain the 3 off large mature trees is appreciated but an arborist's report is required to confirm the viability of doing so. The dwellings appear to be too close to the trees. The Panel are sceptical they can be retained based on the information provided.</i>	An arborist's report has identified which trees can be retained. We have complied with the report and documented the trees that will be preserved.
<i>As noted above in the Context & Character Principle increasing the front setback would generate an opportunity to provide additional generous landscaping including new trees on the Waratah Avenue streetscape interface.</i>	The design has incorporated locations within the setback where the landscape architect has provided generous landscaping, including up to three additional medium trees, to enhance the Waratah Avenue streetscape interface.
<i>The permeable paving areas in-front of the lift and stairs on the Shrike Lane side appear as opportunities for additional planting areas.</i>	We have implemented additional planting areas in the permeable paving zones in front of the lift and stairs on Shrike Lane.
<i>Some areas of the upper level on-structure planting look like they will be difficult to access for maintenance.</i>	Noted.
2b. Suggested amendments/improvements	Applicant's Response
<i>An arborist report should be presented to the DRP identifying the state of each tree proposed for retention, the potential for the trees to be retained and the building clearances that would be required to retain the trees.</i>	An arborist report has been undertaken and its findings have been implemented into the design.
<i>Provide additional generous landscaping in the Waratah Avenue front setback area.</i>	Additional planting has been provided in the Waratah Avenue front setback area.
<i>Replace the laneway permeable paving areas in-front of the lift and stairs with landscaping and explore the potential for small trees in these areas.</i>	These areas are designed to increase pedestrian access and create a Mews-like space, which is why permeable paving has been prioritized over additional landscaping. Soft landscaping has been maximised in these locations.

DESIGN REVIEW PANEL MEETING MINUTES AND RESPONSES

	<i>Consider and illustrate how the upper level planting will be maintained to ensure these areas are viable long term.</i>	Access and maintenance have been considered within the current design.
Principle 3 – Built form and scale		<i>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</i>
	3a. Comments	Applicant's Response
	<i>The non-compliant front and rear setbacks are tight.</i> <i>The front and rear unit courtyards appear small and awkward in shape. This in combination with the minimal front and rear setbacks potentially indicate the site is being overdeveloped. One solution discussed in the meeting could be to flip the courtyard to Lot 1 to face Waratah Avenue, increasing the 'effective' outdoor space by amalgamating both courtyards and also increasing the front setback distance for a portion of the front façade. Although this would result in one south facing courtyard and living area on balance this approach would likely be supported. Another option to free up the ground plane would be reducing the dwellings on the site or some 4 bed dwellings being reduced to three bed dwellings.</i>	We have adapted the feedback by redesigning Lot 1 to include two courtyards, thereby creating valuable open space and improving the overall layout.
	3b. Suggested amendments/improvements	Applicant's Response
	<i>Investigate re-configurations to increase the front and rear setbacks on the site.</i>	We have reconfigured Lots 1 and 5 to increase the front and rear setbacks, enhancing the overall layout and providing more valuable open space
	<i>Investigate options to increase the size and improve the proportions of the courtyards to the front and rear dwellings.</i>	Feedback has been adopted.
Principle 4 – Functionality and build quality		<i>Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.</i>
	4a. Comments	Applicant's Response
	<i>Limited storage is provided within the dwellings.</i>	Each lot has been designed to include storage space.
	<i>There are a number of items that require liaison with the City's Planning and Engineering / Technical Services Departments that may impact significantly on the general built form arrangement on the site.</i>	The design has incorporated feedback from: Planners Arborist Civil Engineer Landscape architect
	<i>Some upper levels don't currently have a WC.</i>	All upper levels have been designed to include a WC.

DESIGN REVIEW PANEL MEETING MINUTES AND RESPONSES

	<i>AC external units are not currently shown on the drawings.</i>	All A/C units are shown
	4b. Suggested amendments/improvements	Applicant's Response
	<i>Liaise with the City in relation to;</i> <i>Visitor parking requirements</i> <i>Bin collection location (currently residents would need to take the bins through the laneway if bins are collected from Waratah Ave)</i> <i>Post delivery</i> <i>Turning circle for vehicles (the current layout appears to require vehicles to use the adjacent neighbour's property to provide compliant turning circles into the garages).</i> <i>Requirements in relation to upgrading the laneway (which is currently gravel)</i> <i>Truncations on the front and rear lots for vehicle turning visibility</i> <i>Retention of the rear tree in terms of its impact on the laneway</i> <i>Confirm the requirements in relation to the above items with the City and integrate any resulting impacts into the proposal</i>	Items have been addressed
	<i>Undertake a close analysis and fine tuning of the plans for issues such as no upstairs WC's, undersized master bedroom, lack of built in robes etc.</i>	We have adopted the feedback into the drawings, addressing issues such as the inclusion of upstairs WCs, resizing the master bedroom, and adding built-in robes.
	<i>Show the AC external units on the drawings in a location that does not impact of resident amenity (ideally positioned and screened on the roof).</i>	All A/C units are shown

Principle 5 – Sustainability

Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.

	5a. Comments	Applicant's Response
	<i>The applicant has provided insufficient information for this Principle to be assessed due to the early nature of the design process.</i>	Energy efficiency consultant has been engaged to provide reports ensuring compliance
	5b. Suggested amendments/improvements	Applicant's Response
	<i>Engage an ESD professional to develop a comprehensive ESD report for the project.</i>	

DESIGN REVIEW PANEL MEETING MINUTES AND RESPONSES

Develop an ESD narrative for the project and consider integrating ESD initiatives such as PV solar panels, water capture / re-use, EV charging, heat pump hot water systems, double glazing, light colour roofs etc.	An energy efficiency assessment has been undertaken for all lots. The results are as follows: Lot 1: 6-star rating Lots 2-4: 7-star rating Lot 5: 6-star rating
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Principle 6 – Amenity

Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.

6a. Comments	Applicant's Response
The Lot 1 living area will receive limited natural light due to the solid wall facing the courtyard.	The new design for Lot 1 addresses the issue of limited natural light in the living area.
The Lot 2, 3 and 4 living spaces and master bedrooms could be swapped so the living area receives more north light access.	The design has incorporated this feedback, providing options for the living space orientation in Lots 2, 3, and 4 to enhance north light access.
The proposal includes a number of internal bathrooms without windows.	Where a window cannot be provided, a skylight has been used.
The rumpus rooms will receive limited natural light access.	The rumpus rooms have been redesigned to incorporate natural light.
All units have north facing upper terraces which is supported however these are currently non-compliant in relation to visual privacy. These spaces are having to work hard to generate resident amenity as the ground level courtyards are relatively small.	Feedback has been incorporated, and screens have been used where necessary.
The upper and lower level west facing openings have no roof overhang or passive shading.	Shading and fairings have been incorporated into the design.
6b. Suggested amendments/improvements	Applicant's Response
Look at options to improve natural light access to the Lot 1 living area.	An internal courtyard has been incorporated into the design to improve natural light access to the Lot 1 living area.
Consider flipping the ground floor master bedrooms and living spaces to create northern oriented living spaces.	An option has been provided that incorporates the design change.
At upper level behind the curved batons consider placing a window to allow more light to access the rumpus room or install operable Velux roof skylights in these rooms.	Adopted.
Include skylights to internal bathrooms.	Adopted.

DESIGN REVIEW PANEL MEETING MINUTES AND RESPONSES

	<i>Consider a roof overhang or passive shading to all west facing openings for sun as well as weather protection as well as to the upper level terraces to increase the potential use of this space throughout the year.</i>	Adopted.
	<i>Consider additional north facing glazing to the upper level of Lot 5.</i>	Adopted.

Principle 7 – Legibility

Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.

7a. Comments	Applicant's Response
<i>Nil.</i>	Noted.
7b. Suggested amendments/improvements	Applicant's Response
<i>Supported.</i>	Noted.

Principle 8 – Safety

Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.

8a. Comments	Applicant's Response
<i>The current requirement for movement of bins in a vehicle access laneway may present a safety concern.</i>	Bins have been considered and are in keeping with requirements and the status quo within the laneway.
<i>The current proposal may rely on vehicles crossing over adjacent properties to comply with turning circle requirements into the garages.</i>	The required turning circle requirements have been provided and comply with the necessary standards.
8b. Suggested amendments/improvements	Applicant's Response
<i>Liaise with the City in relation to these items and integrate any requirements into the proposal.</i>	Considered.

Principle 9 – Community

Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.

9a. Comments	Applicant's Response
<i>Additional work is required to develop a narrative on what the development will provide to the surrounding community beyond the retention of existing mature trees.</i>	The development will activate a laneway currently in disrepair and is designed to be in keeping with the design language of Dalkeith.
9b. Suggested amendments/improvements	Applicant's Response
<i>Improve the Waratah Avenue front fence interface and consider upgrading the laneway ground surface as noted in the Context & Character Principle.</i>	Incorporated into design.

DESIGN REVIEW PANEL MEETING MINUTES AND RESPONSES

	<i>Increase the front setback and provide generous landscaping within the front setback area to contribute positively to the streetscape and surrounding local community.</i>	Landscaping has been incorporated.
Principle 10 – Aesthetics		<i>Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.</i>
10a. Comments	Applicant's Response	
<i>Nil.</i>	Noted.	
10b. Suggested amendments/improvements	Applicant's Response	
<i>Supported.</i>	Noted.	

PLANTING IMAGES - TREES



EUCtor



EUCvic



LAGtus



OLEur



ANIfa



ZAMfur

FEATURE

GROUND COVERS AND CASCADING



ADEcun



CAScou



CORfir



DICsil



EREblu



GRÉgin



HIBsca



ROSpro



SCAhum

STRAPPY



CONcan



DIAeme



DIAbla



FICnod



LOMTan



LOMnya

SHRUBS



LEUbro



PIMfer



PITmis



RHAori



SYZora



WESaus



WESgre

SHADE PLANTS



CLImin



CORdus



DICrep



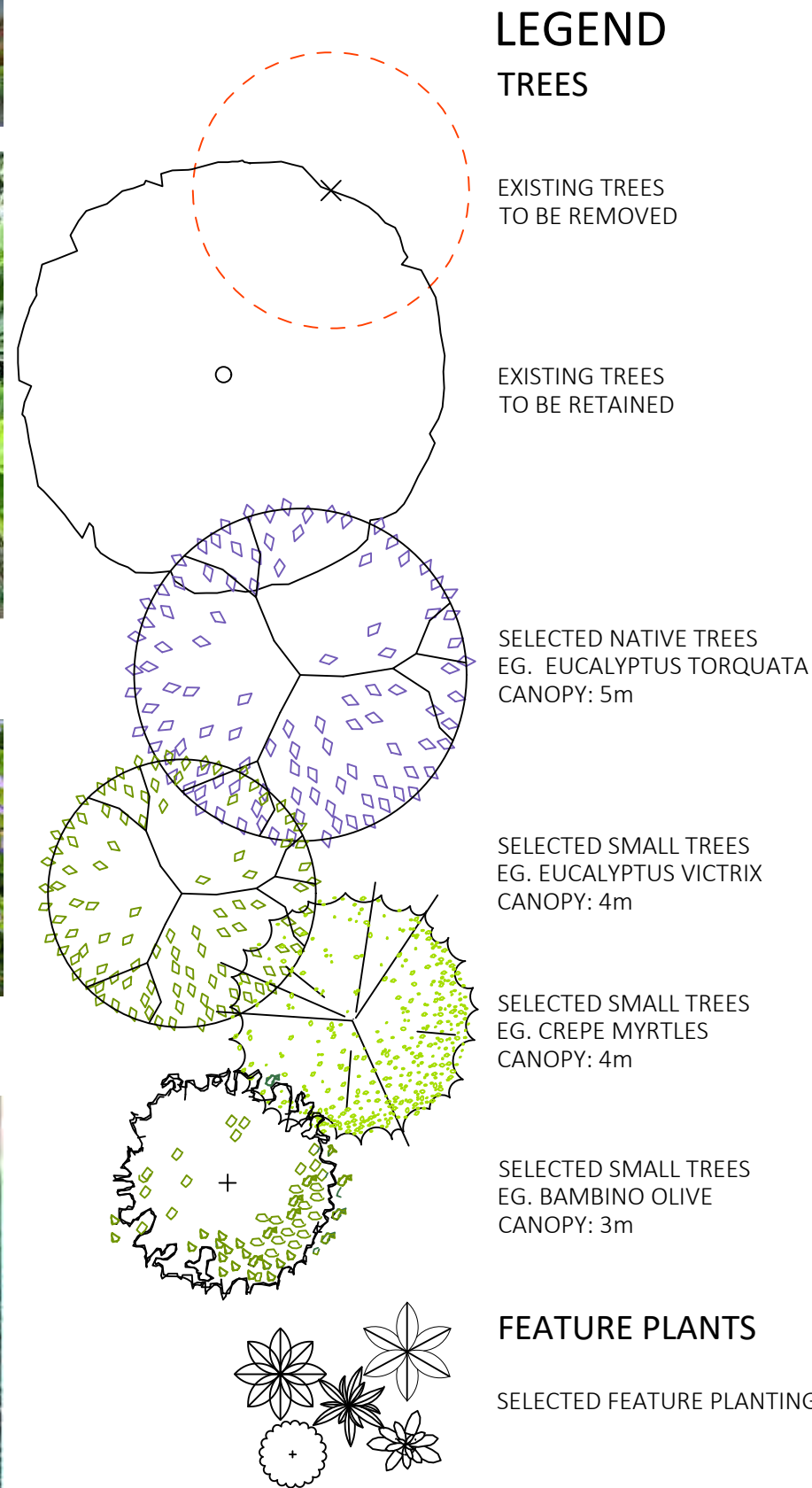
LIRjus



PHIXan



SANtri



LEGEND

TREES

EXISTING TREES
TO BE REMOVED

EXISTING TREES
TO BE RETAINED

SELECTED NATIVE TREES
EG. EUCALYPTUS TORQUATA
CANOPY: 5m

SELECTED SMALL TREES
EG. EUCALYPTUS VICTRIX
CANOPY: 4m

SELECTED SMALL TREES
EG. CREPE MYRTLES
CANOPY: 4m

SELECTED SMALL TREES
EG. BAMBINO OLIVE
CANOPY: 3m

FEATURE PLANTS

SELECTED FEATURE PLANTING

PLANTING

VERGE PLANTING
LOW NATIVE GROUNDCOVERS

PLANTING TYPE 01
GROUNDCOVERS

PLANTING TYPE 02
SHRUBS

PLANTING TYPE 03
STRAPPY/MIXED

PLANTING TYPE 04
SHADE PLANTING

SELECTED LAWN SPECIES
WINTERGREEN COUCH

PERMEABLE PAVING
TRAFFICABLE TURF CELLS

MISC

DEEP SOIL AREAS (DSA)

DEEP SOIL AREAS ON STRUCTURE
(CALCULATED AT 50%)

FEATURE BOULDERS
EG. MOSS ROCKS

REV	DATE	DWN	APP	DESCRIPTION
A	28.06.24	KD	KD	PLANTING PALETTE
B	16.09.24	KD	KD	PLANTING PALETTE - UPDATE

PLANTING PALETTE

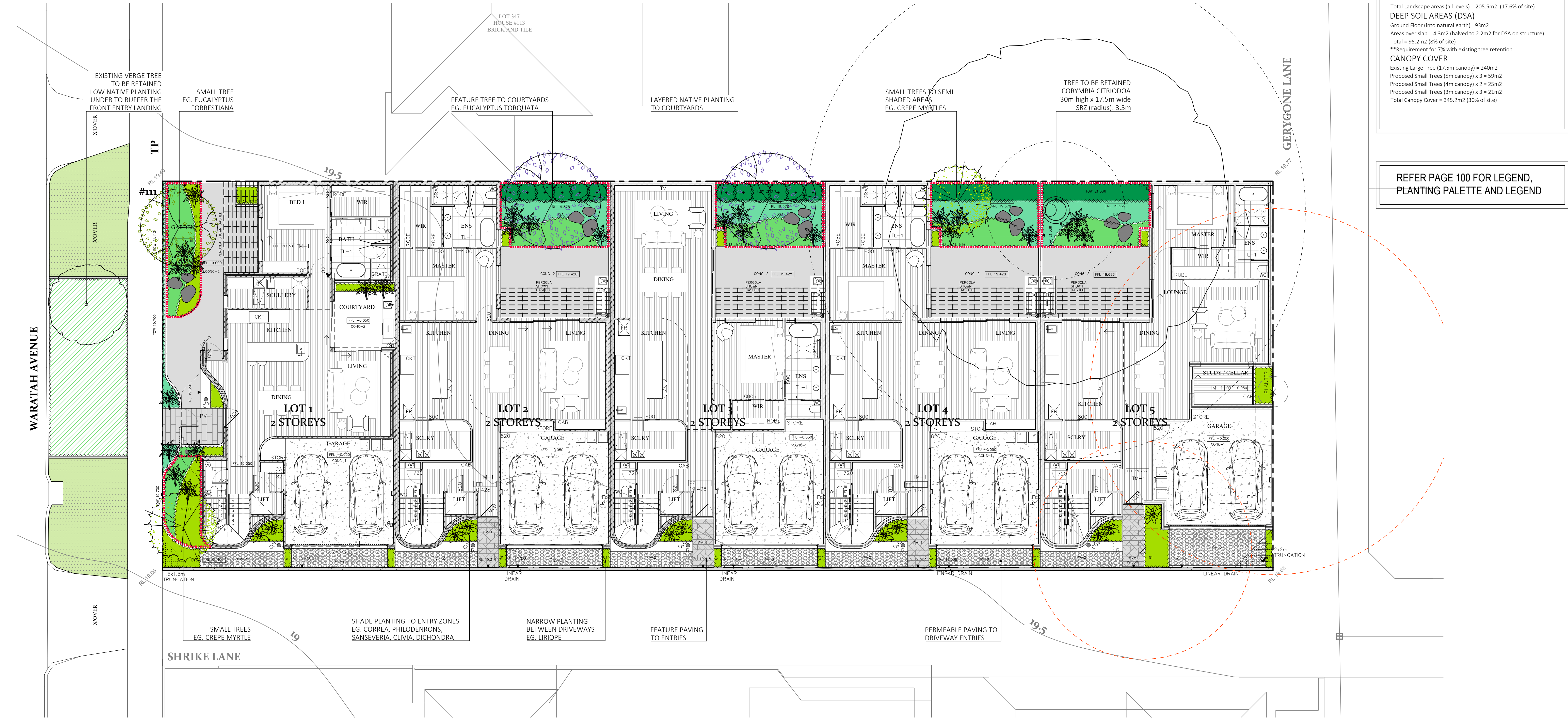
Symbol	Species	Common Name	Quantities	Size
Trees:				
EUCor	Eucalyptus forrestiana	Fushia Gum	As Shown	100L
EUCor	Eucalyptus torquata	Coral Gum	As Shown	100L
EUCvic	Eucalyptus victrix	Little Ghost Gum	As Shown	100L
HAKlau	Hakea laurina	Pin Cushion Hakea	As Shown	100L
LAGind	Lagerstroemia indica	White Crepe Myrtle	As Shown	100L
LAClus	Lagerstroemia tuscadora	Pink Crepe Myrtle	As Shown	100L
OLEaur	Olea europaea	Bambino Olive	As Shown	100L
Groundcovers and Cascading:				
ADEcun	Adenanthos cuneatus	Coral Carpet	2/m2	140mm
CAScou	Casuarina glauca 'Cousin It'	Cousin It	2/m2	140mm
CORfir	Correa 'Fire Bells'	Fire Bells	2/m2	140mm
DICsil	Dichondra 'Silver Falls'	Silver Falls	2/m2	140mm
ECHimb	Echeveria imbricata	Blue Rose	2/m2	140mm
EREBlu	Eremophila 'Blue Horizon'	Blue Horizon	2/m2	140mm
FICpum	Ficus pumila	Creeping Fig	2/m2	140mm
GRÉgin	Grevillea 'Gin Gin Gem'	Gin Gin Gem	2/m2	140mm
HIBsca	Hibbertia scandens	Snake Vine	2/m2	140mm
MYOpar	Myoporum parvifolium 'Yareena'	Yareena	2/m2	140mm
ROSOff	Rosmarinus officinalis 'Prostratus'	Creeping Rosemary	2/m2	140mm
SCAhum	Scaevola humilis 'Purple Fusion'	Fan Flower	2/m2	140mm
Strappy:				
CONcan	Conostylis candelans	Grey Cottonheads	3/m2	140mm
DIAeme	Dianella tasmanica 'Emerald Arch'	Emerald Arch	3/m2	140mm
DIAbla	Dianella tasmanica 'Blaze'	Blaze	3/m2	140mm
FICnod	Fionia nodosa	Knobby Club Rush	3/m2	140mm
LOMTan	Lomandra 'Tanika'	Tanika	3/m2	200mm
LOMnya	Lomandra 'Nyalla'	Nyalla	3/m2	200mm
Shrubs:				
LEUbro	Leucophyta brownii	Silver Cushion Bush	3/m2	140mm
OLEaxi	Olearia axillaris	Coastal Daisy	3/m2	200mm
PIMEle	Pimelea ferruginea	Rice Flower	3/m2	200mm
PITmis	Pittosporum tobira 'Miss Muffet'	Miss Muffet	3/m2	200mm
RHAori	Rhapicopsis 'Oriental Pearl'	Dwarf Indian Hawthorn	2/m2	200mm
SYZora	Syzygium 'Orange Twist'	Lilly Pilly	2/m2	200mm
WESaus	Westringia 'Aussie Box'	Aussie Box	3/m2	200mm
WESgre	Westringia 'Grey Box'	Grey Box	3/m2	200mm
Shade Planting				
ALJrep	Agave reptans	Bungle weed	3/m2	140mm
CLImin	Clivia miniata	Bush Lily	3/m2	200mm
CORdus	Correa 'Dusky Bells'	Dusky Bells	3/m2	140mm
DICrep	Dicondra repens	Kidney plant	3/m2	140mm
LIRjus	Liriope 'Just Right'	Just Right	3/m2	140mm
PHIXan	Philodendron Xanadu	Xanadu	3/m2	200mm
SANtri	Sansevieria trifasciata laurentii	Mother-in-law's Tongue	3/m2	200mm
Feature Plants:				
AGAatt	Agave attenuata	Foxtail	2/m2	12L
ALOTop	Aloe hybrid	Topaz	2/m2	12L
ANIfa	Anigozanthos flavidus	Kangaroo Paw	2/m2	12L
ZAMfur	Zamia furfuracea	Cardboard Palm	2/m2	12L

NOTES

- GENERAL
 - DRAINAGE FROM THE RAISED PLANTER AREAS AND POTS TO BE PROVIDED BY BUILDER
 - ALL SCALES ARE AS NOTED AND TO SUIT A1 PAPER SIZE
 - THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION UNLESS REVISED 'O' ISSUED FOR CONSTRUCTION AND SIGNED AND APPROVED BY PROJECT MANAGER/SUPERINTENDENT
 - PLANTING: SETOUT SHOULD BE CHECKED BY SUPERINTENDENT BEFORE INSTALLATION BEGINS.
- SOIL PREPARATION
 - ALL AREAS ARE TO BE FINE GRADED EVENLY TO CONFORM TO KERB LEVELS AND SURROUNDING FINISHES.
 - 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.
 - 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.
 - RAISED PLANTER AREAS AND POTS SHALL BE INSTALLED WITH APPROPRIATE DRAINAGE CELL, AGGREGATE AND GEOTEXTILE MEMBRANE BELOW SOIL.
 - FILL SOIL TO RAISED PLANTER AREAS AND POTS TO BE APPROVED LIGHTWEIGHT LANDSCAPE MIX.
 - ALL SITE AND IMPORTED SOILS, POTTING MIX, SOIL CONDITIONERS AND MULCHES TO BE IN ACCORDANCE TO RELEVANT AUSTRALIAN STANDARDS.
- PLANTING
 - PLANTED AREAS SHALL BE MULCHED WITH AN ORGANIC (WOODCHIP) MULCH UNLESS OTHERWISE STATED TO A MINIMUM DEPTH OF 75mm.
 - 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.
 - 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.
 - FINAL PLANTING SHALL BE SELECTED FROM PLANTING PALETTE SCHEDULE.
 - PLANTS TO BE SET OUT AT EVEN SPACING TO FILL THE DESIGNATED AREAS.
 - IN AREAS OF MIXED PLANTING, SPECIES TO BE SPREAD OUT AT RANDOM, IN GROUPINGS OF 2 OR 3.
 - 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.
- IRRIGATION
 - PLANTING TO GROUND LEVEL TO BE IRRIGATED VIA A FULLY AUTOMATIC SYSTEM FROM MAINS.
 - WATER PRESSURE TO HAVE A MINIMUM FLOW RATE OF 30L/pm AT 300kPA FROM THE WATER CONNECTION POINT (OR AS STIPULATED).
 - PLANTING TO COURTYARDS TO BE IRRIGATED VIA DIGITAL TAP TIMER (INDIVIDUAL CONNECTION POINTS TO BE PROVIDED).
 - PLANTING ON ALL UPPER LEVELS TO BE IRRIGATED VIA BATTERY OPERATED VALVE (CONNECTION POINTS TO BE PROVIDED TO EACH LEVEL).
 - CONTROLLER TO BE LOCATED IN SERVICE ROOM (OR AS SHOWN ON IRRIGATION DETAILS).
 - SLEEVES BENEATH PAVED SURFACES AND TO RAISED PLANTING AREAS TO BE PROVIDED BY OTHERS.
 - 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 BUBBLERS; TORO FLOOD BUBBLERS OR SIMILAR.
 - ASCON DRAWINGS, MANUALS AND 12 MONTH WARRANTY SHALL BE SUPPLIED BY THE IRRIGATION CONTRACTOR TO THE CLIENT UPON PRACTICAL COMPLETION.
 - PLEASE REFER TO IRRIGATION DRAWING SET FOR FINAL LAYOUT AND SCHEDULE (TO FUTURE DETAIL).

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.

REV	DATE	DWN	APP	DESCRIPTION
A	28.06.24	KD	KD	LANDSCAPE CONCEPT PLAN
B	16.09.24	KD	KD	LANDSCAPE CONCEPT PLAN – UPDATED



LANDSCAPE AREA CALCULATIONS
SITE AREA
Total site areas = 1164m ²
LANDSCAPE AREAS
Total Landscape areas (all levels) = 205.5m ² (17.6% of site)
DEEP SOIL AREAS (DSA)
Ground Floor (into natural earth)= 93m ²
Areas over slab = 4.3m ² (halved to 2.2m ² for DSA on structure)
Total = 95.2m ² (8% of site)
**Requirement for 7% with existing tree retention
CANOPY COVER
Existing Large Tree (17.5m canopy) = 240m ²
Proposed Small Trees (5m canopy) x 3 = 59m ²
Proposed Small Trees (4m canopy) x 2 = 25m ²
Proposed Small Trees (3m canopy) x 3 = 21m ²
Total Canopy Cover = 345.2m ² (30% of site)

REFER PAGE 100 FOR LEGEND,
PLANTING PALETTE AND LEGEND



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landscape architecture

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email: kelsie@kdla.com.au

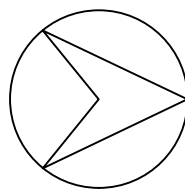
JOB No. 0449

DEVELOPMENT APPROVAL

PAGE 101

REV B

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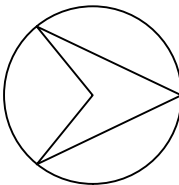
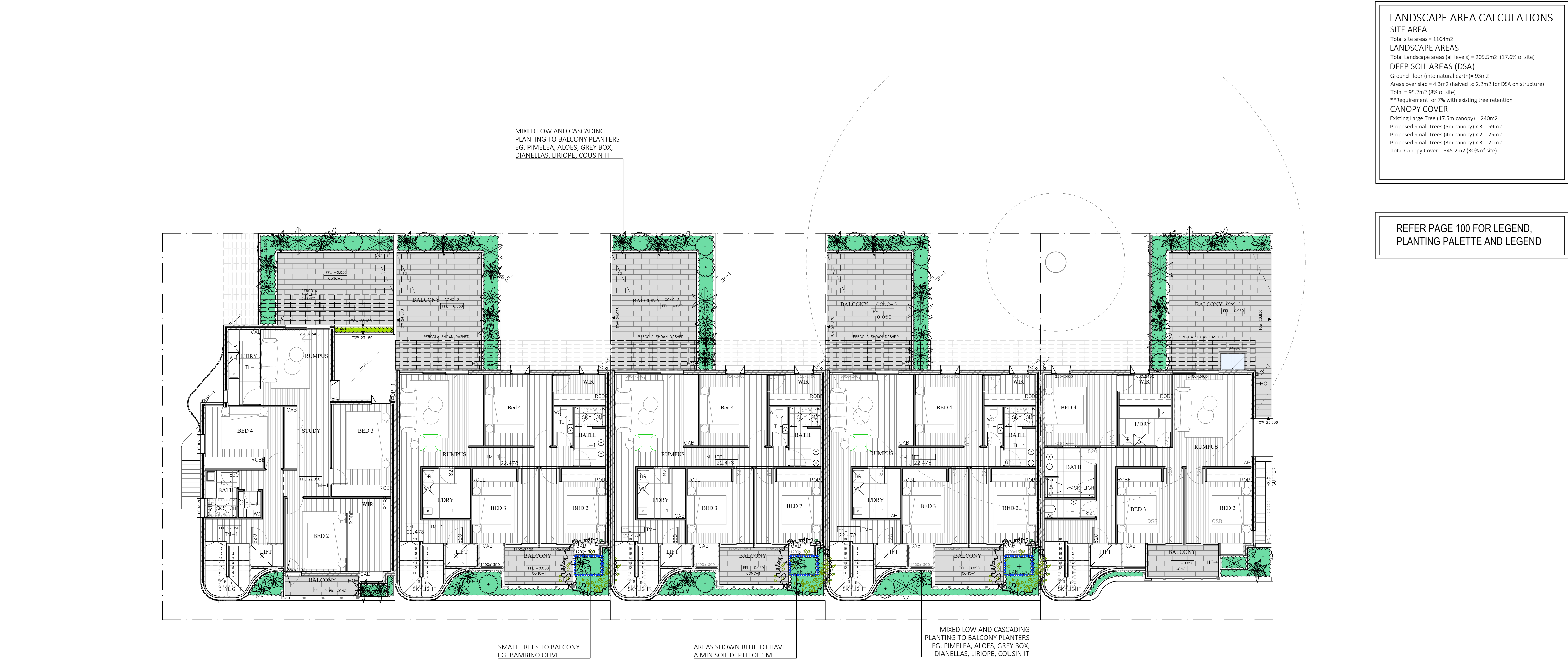


WARATAH AVE RESIDENTIAL
LANDSCAPE CONCEPT PLAN_GROUND FLOOR

FOUND DEVELOPMENTS
111 WARATAH AVE, DALKEITH

GENERAL NOTES:
1. THIS IS A CONCEPT PLAN ONLY.
2. ALL STRUCTURES SUBJECT TO ENGINEERING
AND COUNCIL APPROVAL.
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REV	DATE	DWN	APP	DESCRIPTION
A	28.06.24	KD	KD	LANDSCAPE CONCEPT PLAN
B	16.09.24	KD	KD	LANDSCAPE CONCEPT PLAN – UPDATED





Arboricultural Impact Assessment

State of Kin
111 Waratah Avenue
Dalkeith WA

28 August 2024

Assessment and report by:

Nick Arnold

Dip. Arb., BSC Biology, MSC Soil Management, NZQF (equiv. AQF) Level 5

28 August 2024

Ara Salomone
State of Kin
70 Churchill Avenue
Subiaco WA 6008

Arboricultural Impact Assessment report regarding eight trees located within the vicinity of a proposed development at 111 Waratah Avenue, Dalkeith WA

Dear Ara,

We are pleased to provide the following Arboricultural Impact Assessment report for eight trees within the grounds of 111 Waratah Avenue, Dalkeith.

Complete use of this report is authorised under the conditions limiting its use as stated in Appendix A Item 7 of "Arboricultural Reporting Assumptions and Limiting Conditions".

Should you have any queries relating to this report, its recommendations, or the options considered please do not hesitate to contact us on 1300 272 671.

Regards,



Nick Arnold

Consulting Arborist
Dip. Arb., BSC Biology, MSC Soil Management, NZQF (equiv. AQF) Level 5

1 Introduction

- 1.1 Civica ArborSafe was engaged by Ara Solomone on behalf of State of Kin (the Client) to complete an Arboricultural Impact Assessment (report) on eight trees located within or adjacent to 111 Waratah Avenue, Dalkeith (Perth).
- 1.2 This report has been requested as part of a Development Application (DA) that involves the demolition of an existing residential building and the sub-division/construction of multiple new dwellings within a similar location.
- 1.3 The report was intended to provide information on site trees and how they may be impacted upon by the proposed development. Report findings and subsequent recommendations are based upon guidance provided within Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.
- 1.4 Observations and recommendations provided within this report are based upon information provided by the Client and an arborist site visit.

2 Scope

- 2.1 Carry out a visual examination of trees nominated by the Client.
- 2.2 Inspect nominated trees and their growing environment in the context of the proposed development.
- 2.3 Provide an objective appraisal of the subject trees in relation to their species, estimated age, health, structural condition and viability within the landscape.
- 2.4 Based on the findings of this investigation, provide independent recommendations on the retention value of the trees.
- 2.5 Nominate subject trees that can be retained or require removal to facilitate the proposed development.
- 2.6 Review the proposed development in the context of City of Nedlands Policy 3.3: Tree Retention (City Of Nedlands, 2019).
- 2.7 Identify and reduce potential conflicts between subject trees and site development by providing accurate information on the area required for tree retention and methods/techniques suitable for tree protection during construction.
- 2.8 Provide information on restricted activities within the area nominated for tree protection, as well as suitable construction methods to be adopted during construction.

3 Methodology

3.1 Data Collection

- 3.1.1 Nick Arnold of Civica ArborSafe carried out a site inspection of the subject trees on 23 August 2024.
- 3.1.2 Trees that are the subject of this report were identified during discussions with the Client.
- 3.1.3 The subject trees were inspected from ground level. No foliage or soil samples were taken. No aerial or internal investigations were undertaken.
- 3.1.4 Tree height and crown width were estimated and have been provided to the nearest whole metre. Trunk Diameter at Breast Height (DBH) was measured with a diameter tape and provided to the nearest centimetre.
- 3.1.5 Data collected on site was analysed by Nick Arnold, collated into report format, and relevant recommendations were formulated.

3.2 Tree Protection Zones

- 3.2.1 The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) methods have been derived from the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.
- 3.2.2 The TPZ is defined as a specified area above and below ground and at a given distance measured radially away from the centre of the tree's trunk and which is set aside for the protection of its roots and crown. It is the area required to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. The radius of the TPZ is calculated by multiplying its DBH by 12. TPZ radius = DBH × 12. (Note "Breast Height" is nominally measured as 1.4m from ground level).
- 3.2.3 The SRZ is the area around the base of a tree required for the tree's stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres. SRZ radius = $(D \times 50)^{0.42 \times 0.64}$.
- 3.2.4 Retention values are determined based upon the British Standard BS 5837–2012: *Trees in Relation to Design, Demolition and Construction*. This standard categorises tree retention value based upon assessment of the tree's quality (health and structure), and life expectancy.
- 3.2.5 Other criteria such as a tree's physical dimensions, age class, location and its amenity, heritage and environmental significance are also considered. A breakdown of attributes required for each category can be obtained from Appendix B – *Explanation of Tree Assessment Terms*.

3.3 Images and Site Photographs

- 3.3.1 All photographs were taken at the time of the site inspection by the inspecting arborist. Photographs have been altered for brightness and/or cropped only. Other images used within this report have been sourced from ArborSafe or via the internet. The source of all images has been referenced accordingly.

3.4 Determining Tree Retention Values

- 3.4.1 Collectively tree attributes are reviewed and used to categorise tree value in a development context. Additional information explaining Tree Retention Value can be found in Appendix C – *Tree Retention Values*.

4 Observations

4.1 Site Details

- 4.1.1 The site was located within the City of Nedlands (CoN) Local Government Area (LGA).

4.2 Site Assessment Data

- 4.2.1 Refer to Appendix E – *Tree Assessment Data* for data relating to the specific trees covered within this report.

4.3 Tree / Site Images



Figure 1. Tree 3. Author, August 2024.



Figure 2. Tree 1. Author, August 2024.



Figure 3. Tree 4. Author, August 2024.



Figure 4. Tree 13. Author, August 2024.



Figure 5. Trees 8 10 and 11. Author, August 2024.



Figure 6. Tree 7. Author, August 2024.

4.4 Heritage/Environmental Status

- 4.4.1 A search of *Environment Online* (Government of WA, 2024) returned no overlays for Aboriginal Cultural Heritage, Heritage Council WA or Environmentally Sensitive Areas (ESA) as relate to the subject site.

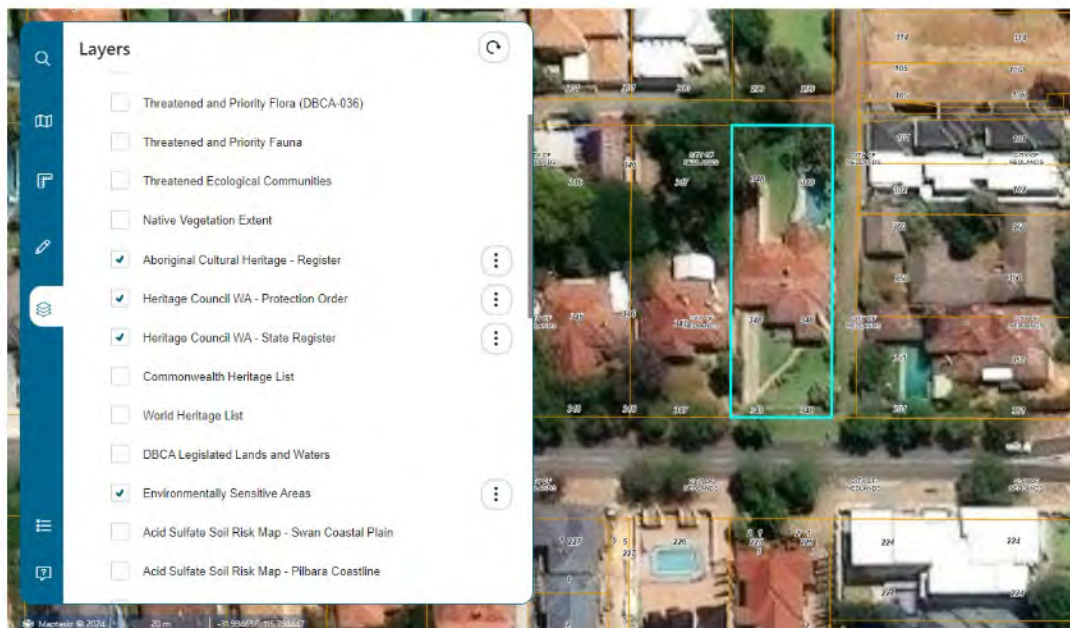


Figure 7. Environmental overlays. WA Gov. Environment Online, August 2024.

4.5 Proposed Construction

4.5.1 Plans of the existing site and of the proposed development were provided to Civica ArborSafe on 21 August 2024 and included:

- *Sketch Design Completion Package, Version 2, State of Kin, 2 August 2024.*
- *Feature Survey, Job No. VS009899, Version 1, Vision Surveys, 28 March 2024*

4.6 Outline of Site Trees

4.6.1 Eight trees were inspected and are the subject of this report. Complete attributes for each tree can be found in the *Site Assessment Data* section of this report.

4.6.2 The subject trees were numbered as per the convention applied within the site's feature survey. Subject trees were not tagged.

4.6.3 Tree 1 was identified as a CoN street tree asset located within the road berm along Waratah Avenue.

5 Discussion

5.1 TPZ Encroachment

5.1.1 Major encroachment. As per the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*, a major encroachment into the TPZ of any tree is considered to occur when it is beyond 10% of the total TPZ area.

5.1.2 Minor encroachment. A minor encroachment is determined as being less than 10% of the total TPZ area. Trees with minor encroachment may be retained with specific, generic or no protection requirements throughout the construction stage.

5.1.3 No encroachment. Trees with no encroachment may be retained with specific, generic or no protection requirements throughout the construction stage.

5.1.4 For the purposes of this report, trees to be removed or retained have been identified as those:

- Requiring removal due to major encroachment into their TPZ
- Retainable and requiring specific protection requirements throughout construction (i.e. generic requirements plus arborist supervision and careful construction methods within their TPZ)
- Retainable and requiring generic tree protection measures only (i.e. protective fencing and restriction of activities within the TPZ).

5.1.5 The main development impact which affects trees, but not necessarily to the point of requiring immediate removal, is significant root damage/severance due to major TPZ encroachment. Root damage/severance largely occurs due to two main impacts – soil compaction (compacting existing site soil to build on or installing additional fill to raise soil levels) and/or direct root severance (excavation for service installation or lowering surface levels).

5.1.6 The assumption of allowable encroachment and minimal long-term health or structural impacts to trees relies on a combination of the following being used - root sensitive construction methods being adhered to within the TPZ, minimal excavation within the TPZ to limit root severance (i.e. construction placed outside the TPZ where possible), fill rather than excavation utilised to affect level changes where possible (i.e. to minimise root severance and allow the tree's root system time to adjust), no construction occurring within the SRZ, compensatory area being available around the unimpacted aspects of the trees, and the enhancement of the existing TPZ area (i.e. mulched, soil conditioning and irrigation when required).

6 Recommendations

6.1 Tree Removal

- 6.1.1 Five trees would require removal to facilitate the proposed development, based upon supplied plans. The intended design/site layout would require modification/revision to ensure the post work viability of one or more of these trees.

6.2 Tree Retention

- 6.2.1 Three trees were recommended for retention and require specific and/or generic protection measures during construction to ensure that they remain viable following the completion of works.
- 6.2.2 Tree protection measures (including protective fencing) should be in place PRIOR to demolition.
- 6.2.3 Tree 1 is to be excluded from site via external boundary fencing and/or rigid tree protection fencing* (**refer to appendices for specifications*) for the duration of the project (including demolition).
- 6.2.4 Two trees (numbered 3 and 7) require specific protection controls, with expected TPZ encroachments greater than 10%.

6.3 Tree 3

- 6.3.1 Tree 3 was located within a neighbouring property. In the first instance, any and all proposed encroachment(s) into the designated SRZ of Tree 3 are to be eliminated at the design phase, as significant root damage/severance inside of this area can impact future tree health and/or stability within the soil profile.
- 6.3.2 Preference should be given to piles, pier and beam and/or suspended sections as opposed to contiguous trenching where such works are proposed within the TPZ.

6.4 Tree 7

- 6.4.1 Proposed site plans show major encroachments into the TPZ/SRZ of Tree 7 equating to approximately 50-60%. These incursions include excavations for building foundations and hard surfacing of adjacent courtyard areas.
- 6.4.2 Where such encroachments cannot be reduced below 20% and/or eliminated from the SRZ by design, further information will be required in order to demonstrate that Tree 7 would remain stable/viable post project completion.
- 6.4.3 Root sensitive excavation is to be undertaken to a depth of approximately 60cm (and at a minimum width to achieve the required depth) along the proposed building foundation lines as shown within the site's Tree Protection Plan (Tree 7). Techniques for root sensitive exploration may include:
- Excavation using a high-pressure water jet and vacuum truck
 - Excavation using an air spade with vacuum truck
 - Excavation by hand
- 6.4.4 Where exploratory excavation(s) identifies significant root mass, a modification to the proposed design and/or a revision of individual tree retention/removal status may be required.
- 6.4.5 Using the Arborist Network Root Loss Calculator (The Arborist Network, 2023), the severance of roots for a given tree must not exceed 30% of the tree's estimated total root mass. This figure may vary based upon site observations and individual tree characteristics.
- 6.4.6 Roots discovered are to be treated with care and minor roots (<50mm in diameter) pruned with a sharp, sterile handsaw or secateurs.

- 6.4.7 All significant roots (>50mm in diameter) are to be preserved/protected from desiccation, recorded, photographed and reported to the project arborist for review. The project arborist may subsequently determine that retention of such roots is required for future tree health/viability or that such roots can be pruned without any significant impact(s) on future tree health/stability.

6.5 Cellular Confinement Systems (CCS)

- 6.5.1 Where proposed TPZ encroachments, including loss of permeable surfaces, represent an incursion in excess of 20% (Trees 3 and 7), such surfaces are to be installed above the existing grade and be of a permeable nature to allow the passage of air and moisture into the soil profile. If the surfacing is to be load bearing, a geogrid/web or similar such design is to be incorporated to ensure the soil profile within the TPZ does not become compacted.
- 6.5.2 In order to create a stable base/foundation for hard surfacing adjacent to the subject trees, it is recommended that a cellular confinement system, made of high density polyethylene (HDPE), be used. The cells should be filled with clean angular stone to increase water/gas permeability and load spreading capacity.
- 6.5.3 Geotextile products should conform to ISO 13426-1:2019 *Geotextiles and geotextile-related products* – Strength of internal structural junctions Part 1: Geocells (International Organization for Standardization (ISO), 2019).
- 6.5.4 In order to be an effective tree protection/conservation measure **geocell systems must be installed above grade** with the finished surface layer approximately 150mm above existing ground levels. A degree of levelling/ground preparation not exceeding the removal of more than 50-100mm of existing sand may be considered tolerable but is to be **supervised by the project arborist** to avoid unnecessary damage to surface root mass.
- 6.5.5 A base layer of geotextile is required beneath the cellular confinement system in order to separate fill material and subgrade, infill is to be consolidated but not excessively compacted.
- 6.5.6 Ground preparation works must be undertaken manually or with the assistance of a small (<2 tonne) excavator positioned outside of the TPZ or upon suitable ground protection to minimise compaction/machine slewing damage.
- 6.5.7 Underground services should not be routed below the CCS.

6.6 Surface Finish/Wearing Course

- 6.6.1 Areas of finished surfacing within designated TPZ areas are to be permeable in nature. Suitable finishes may include loose gravel, resin bound gravels or permeable block paving e.g. concrete block permeable paving, porous block paving or clay block permeable paving (Arboricultural Association, 2020). A block paved finish will require a second geotextile layer between the cellular in-fill and sand base.

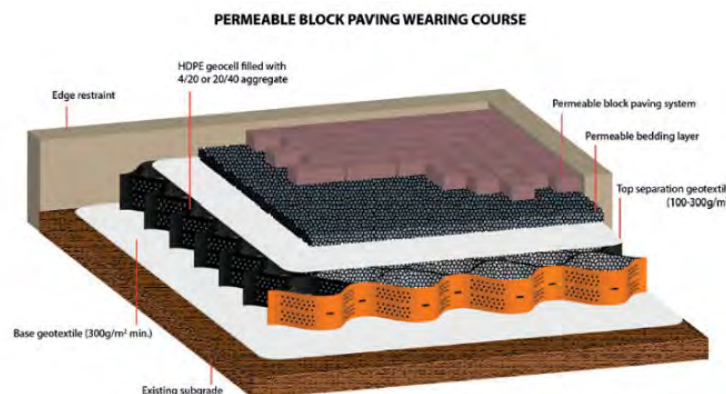


Figure 8. Recommended specification for block paving above a cellular confinement system. Arboriculture Association, 2022.

6.6.2 Finished surfacing must have a minimum set-back of no less than 25cm from the trunks/butress roots of subject trees to allow space for future secondary growth and/or minimise premature surface distortion/displacement.

6.7 Tree Pruning

6.7.1 All pruning/tree removal is to be undertaken in accordance with the Australian Standard AS 4373–2007: *Pruning of Amenity Trees* (Standards Australia, 2007) and by a suitably qualified arborist(s) (minimum AQF 3 arborist).

6.7.2 Reduction pruning should focus on the removal of smaller diameter branches where feasible and remove no greater than 10% of the total crown. Branches no greater than 50mm diameter are to be removed unless specifically approved by the project arborist.

6.8 Replacement Trees

6.8.1 Replacement trees must be selected, sourced and planted as per CoN guidelines - including Section 7.4 of LPP 3.3: Tree Retention (City of Nedlands, 2024).

6.8.2 Landscape plans must include planting locations, species lists and appropriate planting/aftercare specifications to ensure the best chances of tree establishment.

7 References

- Arboricultural Association, 2020. *Guidance Note 12. The Use of Cellular Confinement Systems Near Trees: A Guide to Good Practice*. [Online]
Available at: https://www.trees.org.uk/Trees.org.uk/media/Trees-org.uk/Misc%20images/Bookshop/AA_GuidanceNote12_CellularConfinementSystems-Web.pdf
[Accessed August 2024].
- City Of Nedlands, 2019. *Local Planning Scheme No. 3*. [Online]
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[Accessed August 2024].
- City of Nedlands, 2024. *LPP 3.3: Tree Retention*. [Online]
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[Accessed August 2024].
- Government of WA, 2024. *Environment Online Interactive Map*. [Online]
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- International Organization for Standardization (ISO), 2019. *ISO 13426-1:2019(en) Geotextiles and geotextile-related products — Strength of internal structural junctions — Part 1: Geocells*. [Online]
Available at: <https://www.iso.org/obp/ui/en/#iso:std:iso:13426:-1:ed-2:v1:en>
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- Standards Australia, 2007. *AS 4373–2007 Pruning of Amenity Trees*, GPO Box 476 Sydney NSW 2001: Standards Australia.
- Standards Australia, 2009. *AS 4970–2009: Protection of Trees on Development Sites*, GPO Box 476 Sydney NSW 2001: Standards Australia.
- The Arborist Network, 2023. *Root Loss Calculator*, s.l.: CC-BY-NC-ND 4.0.
- The British Standards Institution, 2012. *BS5837–2012: Trees in relation to design, demolition and construction*, London: BSI Standards Limited.

Site map



Appendices

Appendix A. Arboricultural reporting assumptions and limiting conditions

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownership of any property are assumed to be good. No responsibility is assumed for matters legal in character.
2. It is assumed that any property/project is not in violation of any applicable codes, ordinances, statutes or other government regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified in so far as possible, however, the consultant can neither guarantee nor be responsible for the accuracy of the information provided by others.
4. The consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by anyone but the person to whom it is addressed, without the prior written consent of the consultant.
7. Neither all nor any part of the contents of this report, nor any copy thereof, shall be used for any purpose by anyone but the person to whom it is addressed, without the written consent of the consultant. Nor shall it be conveyed by anyone, including the Client, to the public through advertising, public relations, news, sales or other media, without the written consent of the consultant.
8. This report and any values expressed herein represent the opinion of the consultant and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. Sketches, diagrams, graphs and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise.
10. Information contained in this report covers only those items that were examined and reflect the condition of those items at the time of inspection.
11. Inspection is limited to visual examination of accessible components without dissection, excavation or probing. There is no warranty or guarantee expressed or implied that the problems or deficiencies of the plants or property in question may not arise in the future.

Appendix B. Explanation of tree assessment terms

Tree number: Refers to the individual identification number assigned within the ArborSafe software to each assessed tree on the site and the number which appears on the tree's tag.

Tree location: Refers to the easting and northing coordinates assigned to the location of the tree as obtained from the geo-referenced aerial image within the ArborSafe software.

Tree species: Provides the botanic name (genus, species, sub-species, variety and cultivar where applicable) in accordance with the International Code of Botanical Nomenclature (ICBN), and the accepted common name.

Trees in group: The number of trees encompassing a collective assessment of more than one tree. Typically grouped trees have similar attributes that can be encompassed within one data record.

Height: The estimated range in metres attributed to the tree from its base to the highest point of the canopy. Where required height will be estimated to the nearest metre.

Diameter at Breast Height (DBH): Refers to the tree's estimated trunk diameter measured 1.4m from ground level for a single trunked tree. These estimates increase in 50mm increments. Where required DBH will be measured to give an accurate measurement for single trunked trees, trees with multiple trunks, significant root buttressing, bifurcating close to ground level or trunk defects and will be measured as per the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.

Tree Protection Zone (TPZ): A specified area above and below ground and at a given distance measured radially away from the centre of the tree's trunk and which is set aside for the protection of its roots and crown. It is the area required to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. The radius of the TPZ is calculated by multiplying its DBH by 12. TPZ radius = DBH × 12. (Note "Breast Height" is nominally measured as 1.4m from ground level). TPZ is a theoretical calculation and can be influenced by existing physical constraints such as buildings, drainage channels, retaining walls, etc. (Standards Australia, 2009).

Structural Root Zone (SRZ): The area close to the base of a tree required for the tree's anchorage and stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres. SRZ radius = $(D \times 50)^{0.42} \times 0.64$ (Standards Australia, 2009).

Canopy spread: The estimated range in metres attributed to the spread of the tree's canopy on its widest axis. Where required crown spread will be estimated to the nearest metre.

Origin: Refers to the origin of the species and its type.

Category	Description
Indigenous	Occurs naturally in the local area and is native to a given region or ecosystem.
State Native	Occurs naturally within State but is not indigenous.
Australian Native	Occurs naturally within Australia and its territories but is not a State native or indigenous.
Exotic Evergreen	Occurs naturally outside of Australia and its territories and typically retains its leaves throughout the year.
Exotic Deciduous	Occurs naturally outside of Australia and its territories and typically loses its leaves at least once a year.

Health: Refers to the health and vigour of the tree.

Category	Description
Excellent	Canopy full with even foliage density throughout, leaves are entire and are of an excellent size and colour for the species with no visible pathogen damage. Excellent growth indicators, e.g. seasonal extension growth. Exceptional specimen.
Good	Canopy full with minor variations in foliage density throughout, leaves are entire and are of good size and colour for the species with minimal or no visible pathogen damage. Good growth indicators, none or minimal deadwood.
Fair	Canopy with moderate variations in foliage density throughout, leaves not entire with reduced size and/or atypical in colour, moderate pathogen damage. Reduced growth indicators, visible amounts of deadwood, may contain epicormic growth.
Poor	Canopy density significantly reduced throughout, leaves are not entire, are significantly reduced in size and/or are discoloured, significant pathogen damage. Significant amounts of deadwood and/or epicormic growth, noticeable dieback of branch tips, possibly extensive.
Dead	No live plant material observed throughout the canopy, bark may be visibly delaminating from the trunk and/or branches.

Age: Refers to the life cycle of the tree.

Category	Description
Young	Newly planted small tree not fully established may be capable of being transplanted or easily replaced.
Juvenile	Tree is small in terms of its potential physical size and has not reached its full reproductive ability.
Semi-mature	Tree in active growth phase of life cycle and has not yet attained an expected maximum physical size for its species and/or its location.
Mature	Tree has reached an expected maximum physical size for the species and/or location and is showing a reduction in the rate of seasonal extension growth.
Senescent	Tree is approaching the end of its life cycle and is exhibiting a reduction in vigour often evidenced by natural deterioration in health and structure.

Structure: Refers to the structure of the tree from roots to crown.

Category	Description
Good	Sound branch attachments with no visible structural defects, e.g. included bark or acute angled unions. No visible wounds to the trunk and/or root plate. No fungal pathogens present.
Fair	Minor structural defects present, e.g. apical leaders sharing common union(s). Minor damage to structural roots. Small wounds present where decay could begin. No fungal pathogens present.
Poor	Moderate structural defects present, including bifurcations with included bark with union failure likely within 0–5 years. Wounding evident with cavities and/or decay present. Damage to structural roots.
Hazardous	Significant structural defects with failure imminent (3–6 months). Defects may include active splits and/or partial branch or root plate failures. Tree requires immediate arboricultural works to alleviate the associated risk.

Useful Life Expectancy (ULE): Useful life expectancy refers to an expected period of time the tree can be retained within the landscape before its amenity value declines to a point where it may detract from the appearance of the landscape and/or presents a greater risk and/or more hazards to people and/or property. ULE values consider tree species, current age, health, structure and location. ULE values are based on the tree at the time of assessment and do not consider future changes within the tree's location and environment which may influence the ULE value.

Category
0 Years
<5 Years
5–10 Years
10–15 Years
15–25 Years
25–50 Years
>50 Years

Defects: Visual observations made of the presenting defects of the tree and its growing environment that are, or have the capacity to impact upon, the health, structural condition and/or the useful life expectancy of the tree. Defects may include adverse physical traits or conditions, signs of structural weaknesses, plant disease and/or pest damage, tree impacts to assets or soil related issues.

Tree significance: Includes environmental, social or historical reasons why the tree is significant to the site. The tree may also be rare under cultivation or have a rare or localised natural distribution.

Arborist actions: A list of arboricultural and/or plant health care works that are aimed at maintaining or improving the tree's health, structural condition or form. Actions may also directly or indirectly reduce the risk potential of the tree such as via the removal of a particular branch or the moving of infrastructure from under its canopy.

Appendix C. Tree retention values

Based upon a modified version of the British Standard BS 5837–2012: Trees in relation to design, demolition and construction – recommendations.

Category and definition	Criteria (including sub-categories where appropriate)		
	1. Arboricultural qualities	2. Landscape qualities	3. Cultural and environmental values
Category A			
Trees of High Quality with an estimated remaining life expectancy of at least 25 years and of dimensions and prominence that it cannot be readily replaced in <20 years.	Trees that are particularly good examples of their species, especially if rare or unusual (in the wild or under cultivation); or those that are important components of groups or avenues.	Trees or groups of significant visual importance as arboricultural and/or landscape features. (e.g. feature and landmark trees).	Trees, groups or plant communities of significant conservation, historical, commemorative or other value (e.g. remnant trees, aboriginal scar trees, critically endangered plant communities, trees listed specifically within a Heritage statement of significance).
Category B			
Trees of Moderate Quality with an estimated remaining life expectancy of 15–25 years and of dimensions and prominence that cannot be readily replaced within 10 years.	Trees that might be included within Category A but are downgraded because of diminished condition such that they are unlikely to be suitable for retention beyond 25 years.	Trees that are visible from surrounding properties and/or the street but make little visual contribution to the wider locality.	Trees with conservation or other cultural value (trees within conservation areas or landscapes described within a statement of significance, locally indigenous species).
Category C			
Trees of Low Quality with an estimated remaining life expectancy of 5–15 years, or young trees that are easily replaceable.	Trees of very limited value or such impaired condition that they do not qualify in higher categories.	Trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.
Category U			
Trees in such a condition that they cannot realistically be retained as viable trees in the context of the current land use for longer than 5 years.	Trees that have a severe structural defect that are not remediable such that their failure is expected within 12 months. Trees that will become unviable after removal of other Category U trees (e.g. where for whatever reason the loss of companion shelter cannot be mitigated by pruning). Trees that are dead or are showing signs of significant, immediate and irreversible overall decline. Trees infected with pathogens of significance to the health and or safety of other trees nearby Low quality trees suppressing adjacent trees of better quality. Noxious weeds or species categorised as weeds within the local area. Note: Category U trees can have existing or potential conservation value* which might make it desirable to preserve.		

* Where trees would otherwise be categorised as U, B or C but have significant identifiable conservation, heritage or landscape value even though only for the short term, they may be upgraded, although they might be suitable for retention only.

Appendix D. Tree protection measures

All trees to be retained require protection during the construction stage. Tree protection measures include a range of:

- activities restricted within the TPZ
- protective fencing
- trunk and ground protection
- tree protection signage
- involvement from the project arborist
- project milestones
- compliance reporting.

Activities prohibited within the TPZ include:

Activities generally excluded from the TPZ without direct consent from the Project Arborist include:

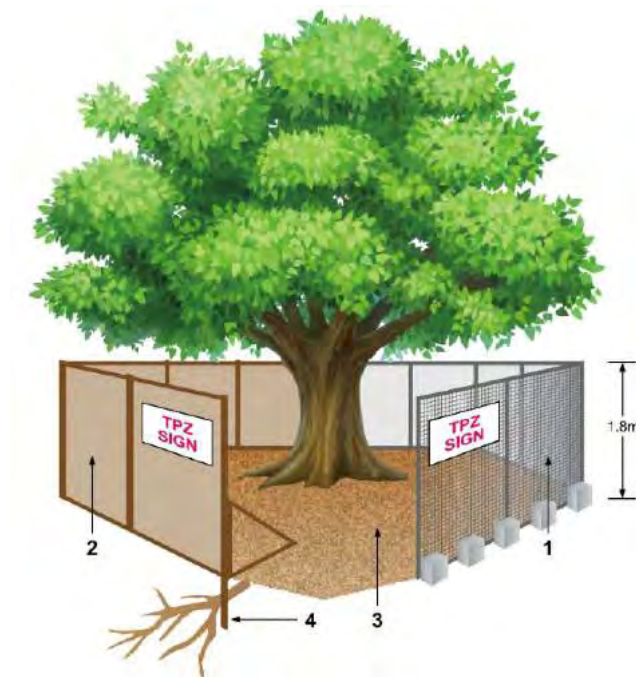
- machine excavation including trenching
- excavation for silt fencing
- cultivation
- storage
- preparation of chemicals, including cement products
- parking of vehicles and plant
- refuelling
- dumping of waste
- wash down and cleaning of equipment
- placement of fill
- lighting of fires
- soil level changes
- temporary or permanent installation of utilities and signs
- physical damage to the tree.

Protective fencing

Fencing should be erected before any machinery or materials are brought to site and before commencement of works, including demolition. Protective fencing specifications should be specified within the Development Consent, Arboricultural Impact Assessment and Tree Protection Plan. Once erected, protective fencing must not be removed or altered without approval from the Project Arborist. The TPZ should be secured to restrict access.

Australian Standard AS 4687–2007: *Temporary Fencing and Hoardings* specifies applicable fencing requirements. Shade cloth or similar should be attached to reduce the transport of dust, other particulate matter and liquids into the protected area.

TPZ fencing is to be a minimum of 1.8m high and mesh or wire between posts must be highly visible. Fence posts and supports should have a diameter greater than 20mm and should ideally be freestanding, otherwise be located clear of the roots.



Legend:

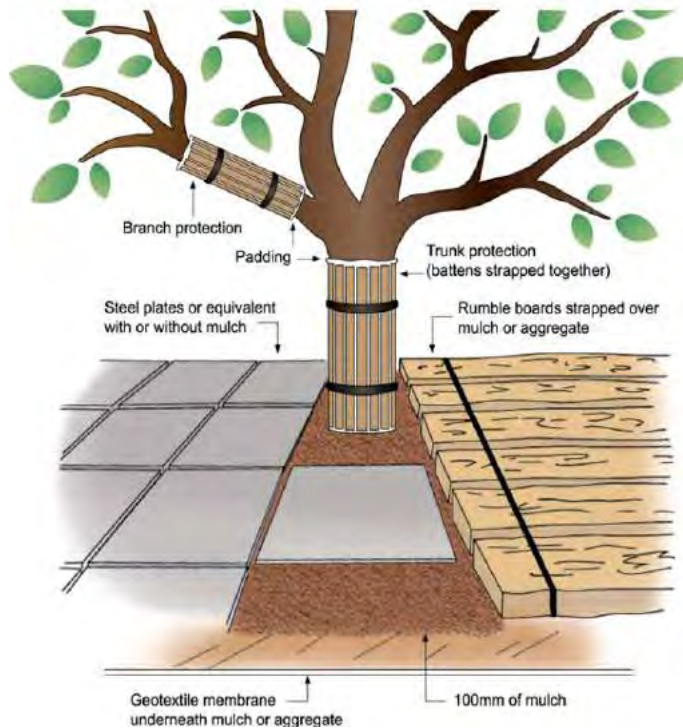
1. Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
2. Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
3. Mulch installation across surface of TPZ (at the discretion of the Project Arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
4. Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

Figure 1. Depicts standard fencing techniques. AS 4970–2009.

Trunk and ground protection

Where installation of tree protection fencing is not possible, trunk protection measures should be installed to prevent mechanical damage to trees to be retained. Trunk protection should be installed as specified by the Project Arborist.

If temporary access for machinery is required within the TPZ, ground protection measures will be required. The purpose of ground protection is to prevent root damage and soil compaction within the TPZ. Ground protection should be installed as specified by the Project Arborist.



1. For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.
2. Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

Figure 2. Depicts trunk and ground protection techniques. AS4970-2009.

Signs

Signs identifying the TPZ should be placed around the edge of the TPZ, be visible from within the development site, and comply with AS 1319–1994: *Safety Signs for the Occupational Environment*.



Figure 3. Typical Tree Protection Zone signage.

Tree quality

		Health**			
		Excellent/ Good	Fair	Poor	Dead
Structure	Good	A	B	C	U
	Fair	B	B	C	U
	Poor	C	C	U	U
	Hazard *	U	U	U	U

* Structural hazard that cannot be remediated through mitigation works to enable safe retention.

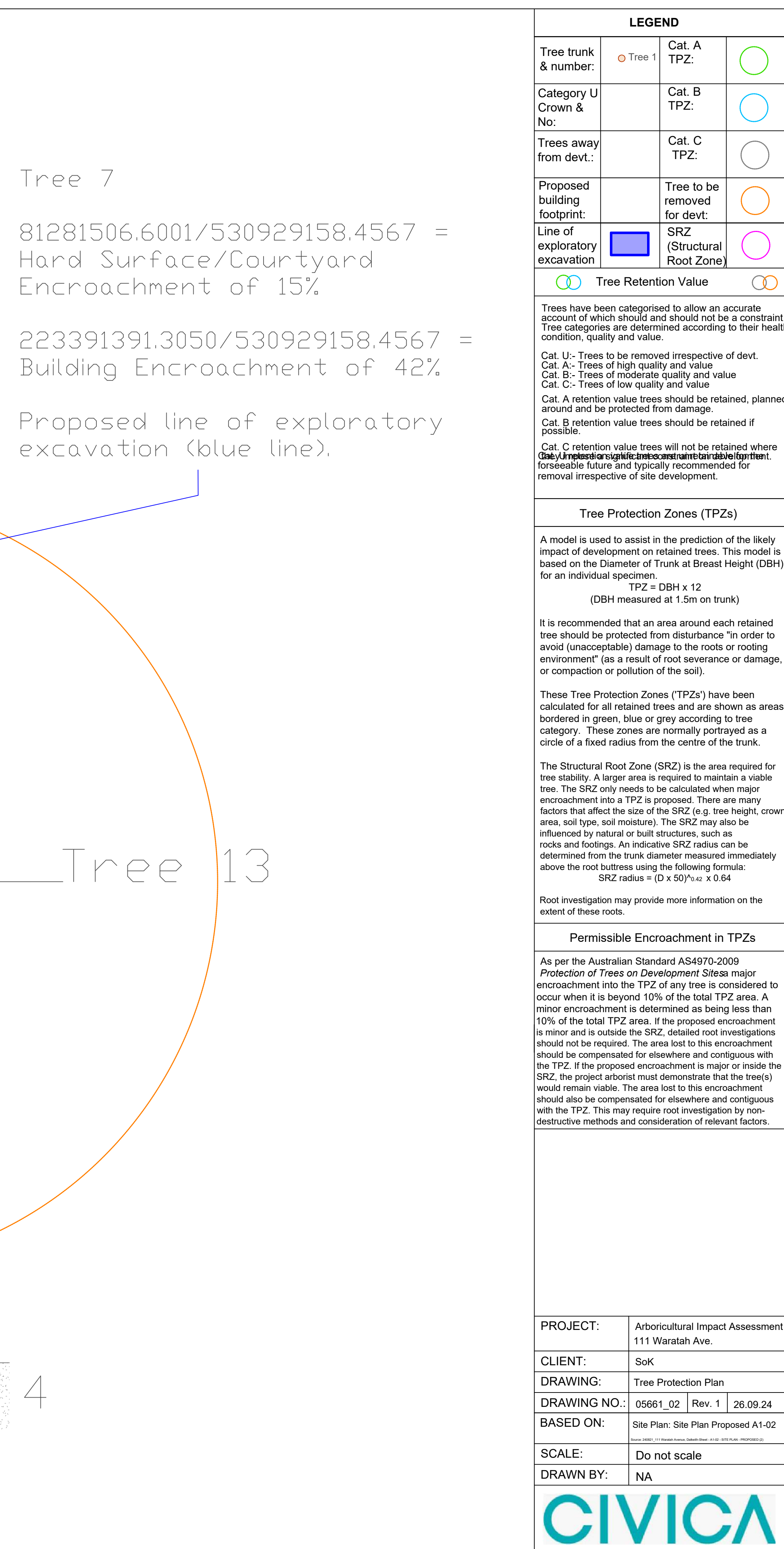
** Trees of short term reduced health that can be remediated via basic, low cost plant health care works (e.g. mulching, irrigation etc.) may be designated in a higher health rating to ensure correct retention value nomination.

Category A	Typically trees in this category are of high quality with an estimated remaining life expectancy of at least 25 years and of dimensions and prominence that it cannot be readily replaced in <20 years. The tree may make significant amenity contributions to the landscape and may make high environmental contributions. In some cases, trees within this category may not meet the above criteria, however possess significant heritage or ecological value. Trees of this retention value warrant design consideration and amendment to ensure their viable retention.
Category B	Typically trees in this category are of moderate quality with an estimated remaining life expectancy of 15–25 years and prominence of size dimensions that cannot be readily replaced within 10 years. They may make moderate amenity contributions to the landscape and make low/moderate environmental contributions. Trees with this retention value warrant lesser design consideration in an attempt to allow for their retention.
Category C	Trees in this category are of low quality with an estimated remaining life expectancy of 5–15 years, or young trees that are easily replaceable, may have poor health and/or structure, are easily replaceable, or are of undesirable species and do not warrant design consideration.
Category U	Trees in this category are found to be in such a condition that they cannot realistically be retained as viable trees in the context of the current land use for longer than five years. These trees may be dead and/or of a species recognised as a weed that resulted in them being unretainable.

Appendix E. Tree assessment data

Tree no.	Easting (GDA94)	Northing (GDA94)	Botanical Name	Common Name	Origin	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Health	Structure	Age	TLE (Yrs.)	Defects	Significance	Arborist comments	Tree Quality Score	Tree Retention value subcategory	Recommendation
1	381826.47	6459584.88	Lophostemon confertus	Queensland Box	Australian Native	1	30	46	4.8	72.38	2.1	5-10	5-10	Fair	Fair	Semi-Mature	10-15	Co-dominant stems; Deadwood/stubs > 30mm; Dieback; Epicormic growth;	Other significance; Amenity value/shade;	Council street tree. Tree showing signs of reduced health/vigour.	B		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
3	381818.62	6459587.55	Corymbia ficifolia (hybrid)	West Aust. Red Flowering Gum	Australian Native	1	40	35	3.6	40.72	2.4	5-10	5-10	Good	Fair	Semi-Mature	15-25	Co-dominant stems; Deadwood/stubs < 30mm; Epicormic growth;	Attractive landscape feature; Amenity value/shade;	Located on neighbouring property.	B		Retain tree with specific protection requirements (i.e. Generic measures plus supervision of works within the TPZ and/or use of root sensitive construction techniques).
4	381831.58	6459591.71	Corymbia calophylla	Marri	State Native	1	52	53	6.2	122.33	2.5	10-15	5-10	Fair	Fair	Semi-Mature	15-25	Co-dominant stems; Deadwood/stubs < 30mm; Dieback; Epicormic growth;	Attractive landscape feature; Amenity value/shade;	Tree showing signs of reduced health/vigour. Possibly C. ficifolia TBC.	B		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
7	381815.62	6459592.42	Corymbia citriodora	Lemon-scented Gum	Australian Native	1	100	120	13.0	527.67	3.5	20-30	10-15	Good	Fair	Mature	25-50	Co-dominant stems; Epicormic growth; Poor pruning; Previous failure(s);	Attractive landscape feature; Amenity value/shade; Significant due to age/size; Active nesting by fauna;	An established and significant tree visible from surrounding properties. Slick nest observed in upper crown.	A		Retain tree with specific protection requirements (i.e. Generic measures plus supervision of works within the TPZ and/or use of root sensitive construction techniques).
8	381816.19	6459596.27	Schefflera actinophylla	Umbrella Tree	Australian Native	1	35	52	5.4	91.61	2.3	5-10	5-10	Good	Fair	Mature	15-25	Co-dominant stems; Crossing/rubbing branches;	Amenity value/shade;	Previously lopped landscape planting.	C		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
10	381816.51	6459600.52	Schefflera actinophylla	Umbrella Tree	Australian Native	1	38	44	4.6	65.33	2.3	5-10	<5	Good	Fair	Semi-Mature	15-25	Co-dominant stems; Crossing/rubbing branches;	Amenity value/shade;	Landscape planting.	C		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
11	381820.08	6459598.87	Corymbia ficifolia (hybrid)	West Aust. Red Flowering Gum	Australian Native	1	45	40	4.2	55.42	2.5	5-10	<5	Fair	Fair	Semi-Mature	10-15	Co-dominant stems; Deadwood/stubs > 100mm;	Amenity value/shade;	Co-dominant stem has previously died back.	C		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
13	381827.61	6459599.1	Eucalyptus globulus	Southern Blue Gum	Australian Native	1	108	115	12.0	452.39	3.6	15-20	10-15	Fair	Fair	Mature	25-50	Co-dominant stems; Epicormic growth; Suppressed;	Attractive landscape feature; Amenity value/shade; Significant due to age/size;	Tree has a somewhat asymmetric crown with significant/previous limb removal.	B		Remove - tree located within proposed development footprint or has major encroachment into its TPZ.

Appendix F. Tree protection plan



LEGEND			
Tree trunk & number:	 Tree 1	Cat. A TPZ:	
Category U Crown & No:		Cat. B TPZ:	
Trees away from devt.:		Cat. C TPZ:	
Proposed building footprint:		Tree to be removed for devt:	
Line of exploratory excavation		SRZ (Structural Root Zone)	
 Tree Retention Value			
Trees have been categorised to allow an accurate account of which should and should not be a constraint. Tree categories are determined according to their health condition, quality and value. Cat. U- Trees to be removed irrespective of devt. Cat. A- Trees of high quality and value Cat. B- Trees of moderate quality and value Cat. C- Trees of low quality and value Cat. A retention value trees should be retained, planned around and be protected from damage. Cat. B retention value trees should be retained if possible. Cat. C retention value trees will not be retained where they impede or originate the constraint or are otherwise of little or no value for future development.			
Tree Protection Zones (TPZs)			
A model is used to assist in the prediction of the likely impact of development on retained trees. This model is based on the Diameter of Trunk at Breast Height (DBH) for an individual specimen. TPZ = DBH x 12 (DBH measured at 1.5m on trunk) It is recommended that an area around each retained tree should be protected from disturbance "in order to avoid (unacceptable) damage to the roots or rooting environment" (as a result of root severance or damage, or compaction or pollution of the soil). These Tree Protection Zones (TPZs) have been calculated for all retained trees and are shown as areas bordered in green, blue or grey according to tree category. These zones are normally portrayed as a circle of a fixed radius from the centre of the trunk. The Structural Root Zone (SRZ) is the area required for tree stability. A larger area is required to maintain a viable tree. The SRZ only needs to be calculated when major encroachment into a TPZ is proposed. There are many factors that affect the size of the SRZ (e.g. tree height, crown area, soil type, soil moisture). The SRZ may also be influenced by natural or built structures, such as rocks and footings. An indicative SRZ radius can be determined from the trunk diameter measured immediately above the root buttress using the following formula: SRZ radius = (D x 50^{0.5}) x 0.84 Root investigation may provide more information on the extent of these roots.			
Permissible Encroachment in TPZs			
As per the Australian Standard AS4970-2009 <i>Protection of Trees on Development Sites</i> a major encroachment into the TPZ of any tree is considered to occur when it is beyond 10% of the total TPZ area. A minor encroachment is determined as being less than 10% of the total TPZ area. If the proposed encroachment is minor and is outside the SRZ, detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. If the proposed encroachment is major or inside the SRZ, the project arborist must demonstrate that the tree(s) would remain viable. The area lost to this encroachment should also be compensated for elsewhere and contiguous with the TPZ. This may require root investigation by non-destructive methods and consideration of relevant factors.			
PROJECT:		Arboricultural Impact Assessment 111 Waratah Ave.	
CLIENT:		SoK	
DRAWING:		Tree Protection Plan	
DRAWING NO.:		05661.02	Rev. 1 26.09.24
BASED ON:		Site Plan: Site Plan Proposed A1-02	
Source: (08/21) 111 Waratah Avenue, Graham Road, 4101, 3161, 4102, 4103, 4104, 4105, 4106, 4107, 4108, 4109, 4110, 4111, 4112, 4113, 4114, 4115, 4116, 4117, 4118, 4119, 4120, 4121, 4122, 4123, 4124, 4125, 4126, 4127, 4128, 4129, 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 4138, 4139, 4140, 4141, 4142, 4143, 4144, 4145, 4146, 4147, 4148, 4149, 4150, 4151, 4152, 4153, 4154, 4155, 4156, 4157, 4158, 4159, 4160, 4161, 4162, 4163, 4164, 4165, 4166, 4167, 4168, 4169, 4170, 4171, 4172, 4173, 4174, 4175, 4176, 4177, 4178, 4179, 4180, 4181, 4182, 4183, 4184, 4185, 4186, 4187, 4188, 4189, 4190, 4191, 4192, 4193, 4194, 4195, 4196, 4197, 4198, 4199, 4200, 4201, 4202, 4203, 4204, 4205, 4206, 4207, 4208, 4209, 4210, 4211, 4212, 4213, 4214, 4215, 4216, 4217, 4218, 4219, 4220, 4221, 4222, 4223, 4224, 4225, 4226, 4227, 4228, 4229, 4230, 4231, 4232, 4233, 4234, 4235, 4236, 4237, 4238, 4239, 4240, 4241, 4242, 4243, 4244, 4245, 4246, 4247, 4248, 4249, 4250, 4251, 4252, 4253, 4254, 4255, 4256, 4257, 4258, 4259, 4260, 4261, 4262, 4263, 4264, 4265, 4266, 4267, 4268, 4269, 4270, 4271, 4272, 4273, 4274, 4275, 4276, 4277, 4278, 4279, 4280, 4281, 4282, 4283, 4284, 4285, 4286, 4287, 4288, 4289, 4290, 4291, 4292, 4293, 4294, 4295, 4296, 4297, 4298, 4299, 4300, 4301, 4302, 4303, 4304, 4305, 4306, 4307, 4308, 4309, 4310, 4311, 4312, 4313, 4314, 4315, 4316, 4317, 4318, 4319, 4320, 4321, 4322, 4323, 4324, 4325, 4326, 4327, 4328, 4329, 4330, 4331, 4332, 4333, 4334, 4335, 4336, 4337, 4338, 4339, 4340, 4341, 4342, 4343, 4344, 4345, 4346, 4347, 4348, 4349, 4350, 4351, 4352, 4353, 4354, 4355, 4356, 4357, 4358, 4359, 4360, 4361, 4362, 4363, 4364, 4365, 4366, 4367, 4368, 4369, 4370, 4371, 4372, 4373, 4374, 4375, 4376, 4377, 4378, 4379, 4380, 4381, 4382, 4383, 4384, 4385, 4386, 4387, 4388, 4389, 4390, 4391, 4392, 4393, 4394, 4395, 4396, 4397, 4398, 4399, 4400, 4401, 4402, 4403, 4404, 4405, 4406, 4407, 4408, 4409, 4410, 4411, 4412, 4413, 4414, 4415, 4416, 4417, 4418, 4419, 4420, 4421, 4422, 4423, 4424, 4425, 4426, 4427, 4428, 4429, 4430, 4431, 4432, 4433, 4434, 4435, 4436, 4437, 4438, 4439, 4440, 4441, 4442, 4443, 4444, 4445, 4446, 4447, 4448, 4449, 4450, 4451, 4452, 4453, 4454, 4455, 4456, 4457, 4458, 4459, 4460, 4461, 4462, 4463, 4464, 4465, 4466, 4467, 4468, 4469, 4470, 4471, 4472, 4473, 4474, 4475, 4476, 4477, 4478, 4479, 4480, 4481, 4482, 4483, 4484, 4485, 4486, 4487, 4488, 4489, 4490, 4491, 4492, 4493, 4494, 4495, 4496, 4497, 4498, 4499, 4500, 4501, 4502, 4503, 4504, 4505, 4506, 4507, 4508, 4509, 4510, 4511, 4512, 4513, 4514, 4515, 4516, 4517, 4518, 4519,			

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