Tapping Infill Housing Project
Lot 1001 (#20) Clarkson Avenue, Tapping
Grouped Housing Development Application

January 2019

Prepared for
Nicheliving Pty Ltd

Nicheliving

ZMH ARCHITECTURE PLANNING INTERIOR DESIGN

Taylor Burrell Barnett

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1 INTRODUCTION

1.1 PROPOSAL

This report outlines Nicheliving's proposed infill housing development on Lot 1001 (#20) Clarkson Avenue, Tapping. To be developed in 3 stages depending on market uptake, the total development will encompass:

- 64 x Double-Storey **'Townhouses'**, constituting the bulk of the main survey-strata scheme, involving:
  - Three (3) different 3 bedroom x 2 bathroom typologies;
  - Nine (9) different 3 bedroom x 2.5 bathroom typologies (inclusive of varied elevations for interest);
  - Two (2) different 4 bedroom x bathroom typologies;
  - Three (3) different 4 bedroom x 2.5 bathroom typologies (inclusive of varying elevations); &
  - One typology that can be purchased in either a 3x2.5 or 4x2.5 arrangement (upstairs activity or bedroom).
- 14 x Single-Storey **'Units'**, positioned along the eastern and south-eastern boundaries of the parent lot, where they will act as a transitional building element to adjacent existing low-density housing, involving:
  - One 2 bedroom x 2 bathroom typology; &
  - Four (4) different 3 x 2 Single-Storey (Unit) typologies (inclusive of varying elevations).
- 6 x Double-Storey **'Townhouses'** located along the southern boundary of the site, where a significant sewer easement ensures a large separation from existing residences, involving:
  - Two (2) different 3 bedroom x 2.5 bathroom typologies; &
  - Two (2) different 4 bedroom x 2.5 bathroom typologies.

  These dwellings will sit within two separate Strata Schemes, due principally to their severance from the balance of the site due to the approved public road extension of Hirundo Bend.
- Construction of a comprehensive private road network within a Common Property Lot varying between 5-12m in width (depending on the orientation of housing and the number of lots each section services);
- Significant visitor parking, in the form of 12 parking bays internal to the site, plus a further 21 bays along Clarkson Avenue and Corvus Road where they can be periodically shared by patrons of adoining land uses; &
- The erection of a temporary sales office and car park at the intersection of Clarkson Avenue and Corvus Road.

Greater detail on the specific components of the application is provided further in this report, together with a statement of claim regarding compliance with relevant State Policies and the City of Wanneroo Town Planning Scheme and Local Planning Policy requirements.

1.2 LEGAL DESCRIPTION

Encompassing 1.939ha of unutilised urban land, the property details and tenure of the land the subject of this application are described in the table below. A copy of the *Certificate of Title* is attached as ***Appendix A***:

Lot No.	Volume	Folio	Plan	Area (ha)	Owner
1001	2939	561	405944	1.939	Freshlink Export Pty Ltd c/- Corporate Administrators Pty Ltd

1.3 SITE APPLICATION BACKGROUND

October 2016: Structure Plan Amendment No.23 approved by Western Australian Planning Commission (WAPC);

February 2017: Deposited Plan 405944 (excising Lot 1001 from broader landholding) endorsed by LandGate;

November 2018: East Wanneroo Cell 1 *Local Development Plan No.3* Approved by City of Wanneroo (***Appendix B***);

December 2018: *Parent Subdivision Plan* approved by the WAPC (***Appendix C***);

1.4 LOCATION

Ideally located on the western edge of the established suburb of Tapping, the site lies within close proximity to a full range of existing and planned commercial offerings, including an approved centre immediately west of the site, the existing Carramar Village (1.5km to the north), Banksia Grove Village (3km to the northeast), Wanneroo District Town Centre (4.5km to the south) and the Joondalup Strategic Metropolitan Centre (5km to the southwest). Both the Wanneroo and Joondalup centres (inclusive of the Joondalup Health Precinct and Edith Cowan University) also act as significant employment generators.

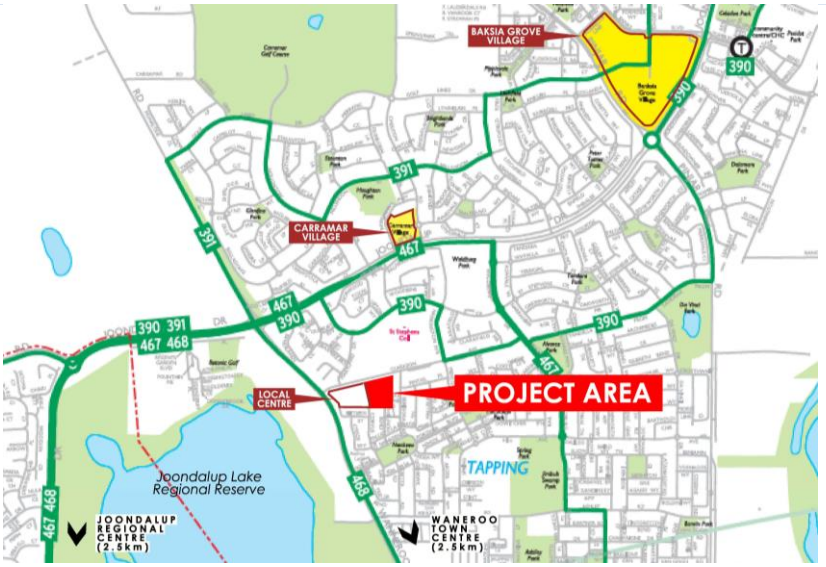


Figure 1: Location Plan

Several educational facilities are also within close proximity, including the privately-operated St. Stephen's School Carramar (immediately north of the subject site on the opposite side of Clarkson Avenue), Tapping Primary School (1km to the northeast) and the Spring Hill Primary School (1km to the southeast), whilst Wanneroo Secondary College (6km to the south) and Kinross College (7km to the west) are the closest public high schools.

1.5 SITE FEATURES

The site slopes gently westward towards Corvus Road, having been cleared of all vegetation (aside from a couple of isolated paddock trees) and improvements during its excision from the broader land holding for individual sale.

Figure 2: Site Features

2 PLANNING FRAMEWORK

2.1 REGION & LOCAL SCHEME ZONINGS

Lot 1001 is entirety zoned 'Urban' under the *Metropolitan Region Scheme* (MRS) and 'Urban Development' under the City of Wanneroo *Town Planning Scheme No.2* (TPS2), requiring an approved Structure Plan prior to comprehensive subdivision and/or development.

Lot 1001 also falls within the East Wanneroo Cell 1 Development Contribution Area, requiring the payment of contributions towards the coordinated provision of select infrastructure, open space and City administration costs. Payment of the relevant fee is expected to occur as part of the preceding parent subdivision implementation and condition clearance process.

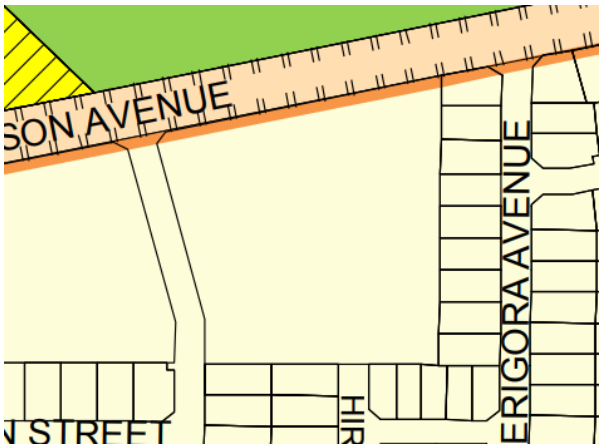


Figure 3: TPS2 Zoning

2.2 EAST WANNEROO STRUCTURE PLAN

The above TPS2 requirement is fulfilled by the *East Wanneroo – Cell 1 Structure Plan* (C1SP), in which Lot 1001 is zoned 'Residential' and allocated an 'R60' residential density coding, subject to compliance with a number of site-specific subdivision and development requirements set out in Clause 4.1.1, a number of which have already been met via the preceding subdivision and Local Development Plan (LDP) outcomes.

The Development Application's compliance with the balance of these requirements (in addition to the approved LDP and other relevant State and local planning and development requirements) is addressed later in this report.

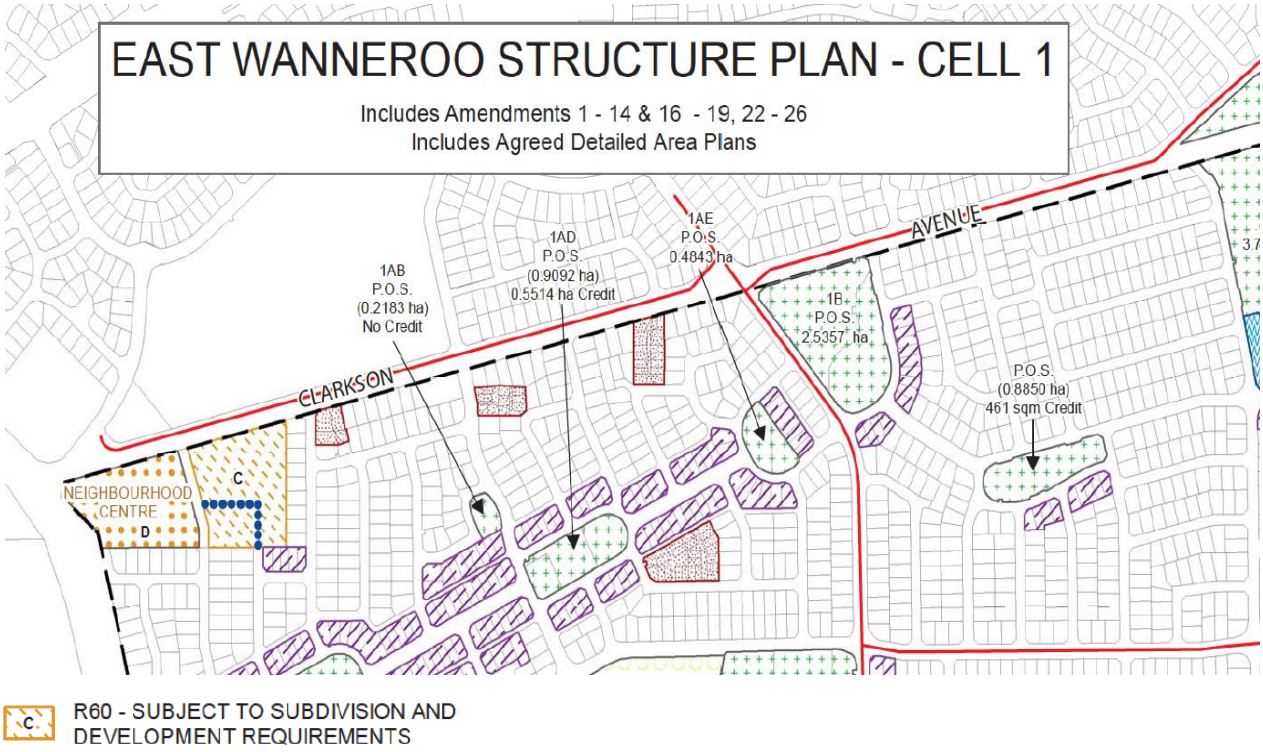


Figure 4: East Wanneroo Structure Plan (EWSP)

2.3 EAST WANNEROO CELL 1 – LOCAL DEVELOPMENT PLAN NO.3

Approved by the City of Wanneroo on the 2nd November 2018, the *East Wanneroo Cell 1 – LDP No.3* establishes a framework for comprehensive grouped dwelling residential development of the site.

In accordance with the requirements of C1SP Clause 4.1.1, the LDP sets key development parameters relating to an appropriate mix of building types, built forms, building heights, setbacks, orientation and scale, that seek to achieve the following objectives:

- activation of street frontages on Corvus Road, from the extension of Hirundo Bend to Clarkson Avenue;
- integration with surrounding residential and commercial development;
- passive surveillance of public interfaces; and
- creation of a pedestrian friendly environment and a strong and identifiable sense of place.

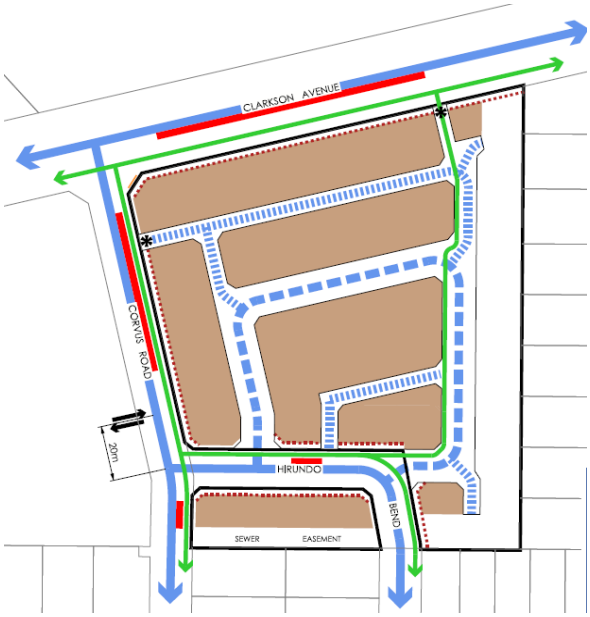


Figure 5: East Wanneroo Cell 1 – LDP No.3 (extract)

2.4 APPROVED SUBDIVISION & PROPOSED SURVEY-STRATA SCHEMES

It is important to note, that whilst one comprehensive development application is proposed, ultimately the collective housing will sit within three survey-strata schemes whose extents match the layout of the parent subdivision approved in September 2018 (***WAPC Ref. #157216*** – ***Appendix C***).

The same application involves extension of Hirundo Bend through to Corvus Road, in accordance with the subdivision and development requirements specifically outlined for this land in the East Wanneroo C1SP.

One comprehensive application, seeking approval to all three survey-strata schemes has been lodged with the WAPC for approval concurrent with this application.

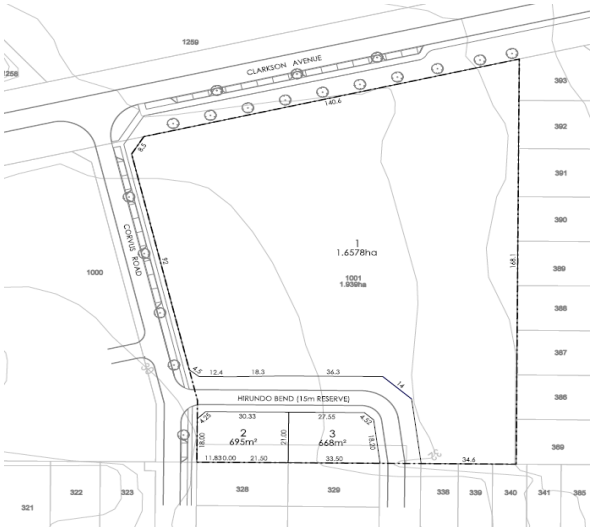


Figure 6: Parent Subdivision Approval

2.5 DETERMINATION PROCESS

The entirety of the development is classified as Grouped Dwellings, which are listed as a **'D'** use in TPS2, meaning a use class that is not permitted, unless the decision maker exercises its discretion to approve the use having regard for the provisions of Clause 67 of the *Local Planning and Development (Local Planning Schemes) Regulations* (2015).

Consultation pursuant to Clause 64 of the Regulations, with the public generally, or with the owners or occupiers of land directly adjacent or in the vicinity of the site, is at the local government's discretion.

As the combined value of the development exceeds $10M, jurisdiction to determine the application passes to the Metropolitan North-West Development Assessment Panel (DAP) with the City being responsible for preparation of the Responsible Authority Report.

3 THE DEVELOPMENT PROPOSAL

3.1 KEY DESIGN PRINCIPLES

In summary, the design has been prepared to take advantage of the site's excellent attributes for infill housing via embracing the following key elements:

- A wide variety of lot sizes and housing typologies are proposed, specifically to enhance the range of dwelling stock available in the locality, to improve housing affordability and create important age-in-place opportunities, within immediate proximity to a wide range of services and amenities;
- Dwellings range from relatively modest two-bedroom single-storey units, to double-storey four-bedroom homes;
- All dwellings have been designed to a high standard, involving a wide range of materials and colours to ensure the creation of attractive internal streetscapes throughout the development, inclusive of the use of multiple elevations for the four main typologies that have been re-stamped throughout the collective site;
- Other than along the eastern and south-eastern boundaries of the site (where it directly abuts existing low-density housing, or is not separated by a significant sewer easement), all dwellings are double-storey in height;
- Matching parapet walls are proposed on most internal and/or side boundaries, in order to maximise development efficiencies by making use of land that would otherwise be lost to upper floor side setbacks.
- All perimeter housing present towards and take primary pedestrian access directly from the external road network, thereby ensuring highly attractive and well-surveilled streetscapes. This is also assisted by the creation of a limited number of outdoor living areas (where necessary due to other competing factors), adjacent the southern verge of Clarkson Avenue;
- Aside from eight (8) dwellings fronting Hirundo Bend, all dwellings take vehicular access directly from the private internal street network, with connections to the external network spaced to ensure safe access/egress;
- The internal road network is made up off 5.4m carriageways (plus 0.3m kerbs on either side) within 6m wide rear laneways and 7.5 – 12m wide internal private streets, allowing for two-way passing of vehicles along all portions of the network, inclusive of embayed visitor parking (wherever possible) and suitable landscaping;
- Pedestrian access forms a fundamental element of the design, with a 1.2m wide footpath proposed on all internal streets that housing front towards, inclusive of key connections to the extended perimeter public foot and dual path network, that provide access to shared embayed visitor parking and following anticipated pedestrian desire lines to the planned commercial facilities on the opposite side of Corvus Road, and the existing school playing fields on the northern side of Clarkson Avenue.

3.2 COMPLIANCE WITH LOCAL DEVELOPMENT PLAN

The design of the development has had specific regard for the requirements of the Local Development Plan for Lot 1001 Clarkson Avenue, Tapping, in that:

- All housing along the western edge deliberately orientate towards and take direct pedestrian access (inclusive of visitor parking and a shared path connection), ensuring a highly activated Corvus Road frontage;
- The design accommodates key connections to surrounding land use, in addition to the use of a transitional built form edge, that seeks to minimise any potential impact on surrounding existing development;
- All public edges have housing (inclusive of openings at both levels) that orientate directly towards and thereby ensure a high level of passive surveillance is achieved; &
- Dedicated connections have been provided along key pedestrian desire lines through the site, both to the existing school and future shopping facilities, in addition to a comprehensive footpath network internally.

3.3 COMPLIANCE WITH RESIDENTIAL DESIGN CODES

3.3.1 SITE AREA

As discussed in Section 2.4 above, the development will ultimately form the subject of three separate Survey-Strata schemes. Compliance with the relevant minimum and average lot area requirements is achieved across all three schemes, as summarised below:

STRATA SCHEME / PARENT LOT #1 – NORTH OF HIRUNDO BEND

- 78 x Grouped Dwelling/Survey-Strata Lots

  Ranging between 117m^2 (Lot 71) and 247m^2 (Lot 33) in area, with an average lot size of 154m^2, in excess of the 120m^2 minimum (once adjoining truncations are included in the calculations) and 150m^2 average lot area requirements of the land's 'R60' density coding.

STRATA SCHEME / PARENT LOT #2 – SOUTH OF HIRUNDO BEND (SW CORNER)

- 3 x Grouped Dwelling/Survey-Strata Lots

  Ranging between 226m^2 (Lots 2 & 3) and 242m^2 (Lot 3) in area, with an average lot size of 231m^2, in excess of the 120m^2 minimum and 150m^2 average lot area requirements of the land's 'R60' density coding.

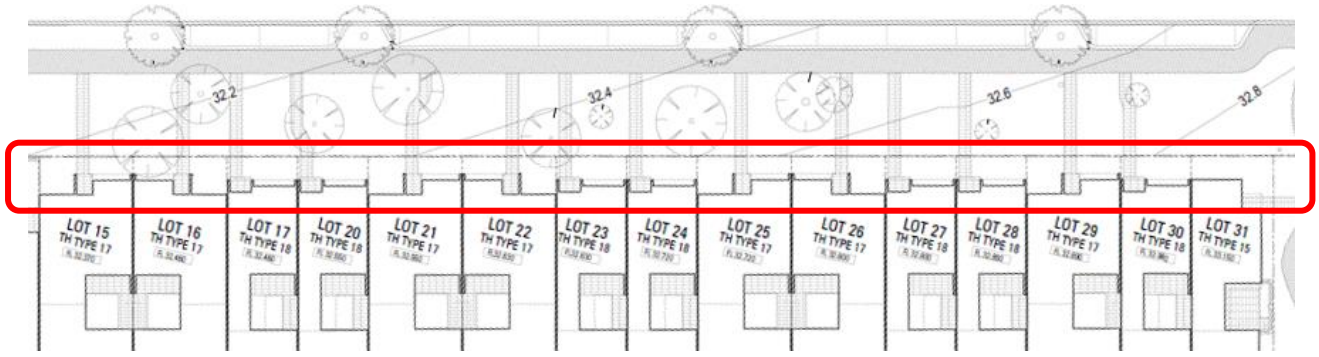
STRATA SCHEME / PARENT LOT #3 – SOUTH OF HIRUNDO BEND (AS IT BENDS AROUND TO THE SOUTH)

- 3 x Grouped Dwelling/Survey-Strata Lots

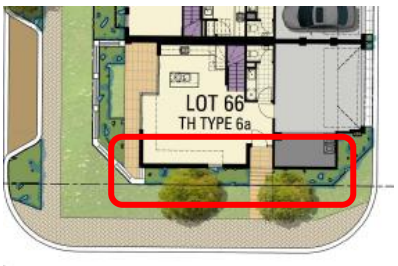
  Ranging between 219m^2 (Lot 3) and 226m^2 (Lots 1 & 2) in area, with an average lot size of 223m^2, in excess of the 120m^2 minimum and 150m^2 average lot area requirements of the land's 'R60' density coding.

3.3.2 STREET SETBACKS & OPEN SPACE

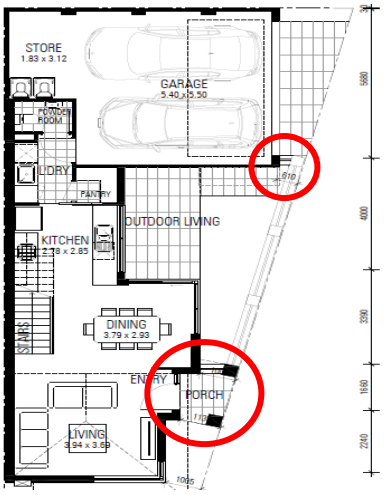
Externally, the development readily complies with the 2m Primary Street setback requirement of the land's R60 density coding, once consideration is given to the averaging of setbacks for Townhouse Typology 17 (Lots 8-9, 12-13, 15-16, 21-22, 25-26, 29, 38, 41-42, 45-46 & 48) where porches and balconies encroach a maximum of 0.5m into the front setback area and Townhouse Typology 1 (Lot 32) where a corner of the front porch encroaches a maximum of 0.95m into the front setback area (due principally to the angle of the lot). The staggered encroachments are deliberate, to ensure a highly articulated and interesting streetscape as opposed to the use of a uniform setback.



The only other variation to a public street setback involves Townhouse Typology 6a (Proposed Lot 66), involving a 1m setback from Hirundo Bend, however this is due to the pedestrian entrance being deliberately positioned on the longer side elevation to improve the dwelling's presentation towards the public street. Otherwise the setback would be treated as a secondary street elevation for which the proposed 1m setback is compliant with 'R60' requirements.



Consistent with all of Nicheliving's Grouped Housing Projects, internally the dwellings have been deliberately pulled forward towards the private street network (down to a typical average of somewhere between 1-2m), with second-storey overhangs, entry porches and garages coming as close as 0.5m (Townhouse Typology 7 – Lot 3), 0.25m (Townhouse Typology 10 – Lot 70), or an absolute minimum of nil (Townhouse Typology 12a – Lot 59), involving bespoke designs on irregular shaped lots at the end of blocks (caused principally by the shape of the parent allotment).



The impact of this variation is significantly diminished by the use of a 12m common property width for the primary internal access way, involving wider verges which when combined with the front setback, ensure an appropriate amount of landscaping can be provided in a manner that will ensure attractive streetscapes are created.

Another key benefit of this approach is the ability to maximise activation and surveillance along the street edge in addition to the availability of private open space to the rear of each dwelling, as evidenced by each dwelling and the overall development readily exceeding the minimum open space (40%+) and outdoor living area requirements of the 'R60' code (refer to *Open Space Calculations* prepared by ZMH at ***Appendix D***).

Despite the reduction (including a typical 0.5m garage setback to all laneway serviced dwellings) sufficient area remains available to accommodate the full range of turning movement from vehicles accessing each garage from the Private Street network in a safe and efficient manner.

3.3.3 BOUNDARY SETBACKS & HEIGHT

Single and/or double-storey parapet walls are proposed on most internal side boundaries and in some limited instances (involving relatively unique or squat style lot product: e.g. Lots 56, 59, 70-71 & 73), rear lot boundaries.

All parapet walls are located behind the front setback and have been specifically positioned having regard for the design of adjacent dwellings (in particular the location of adjacent outdoor living areas). Where located on shared boundaries, walls have been paired with boundary walls of similar height and length meaning very few windows or major openings that will be impacted by a loss of access to daylight. At street corners building articulation has been wrapped around the secondary elevation (including windows behind the front setback) to ensure the buildings appear attractive from all public vantage points.

Despite the relatively small lot sizes, the overall design is reliant on very few parapet walls along external lot boundaries, with short sections of single-storey walls required to accommodate the proposed housing designs on Lot 33 (Townhouse Type 5), Lot 73 (Townhouse Type 4) and Lot 74 (Townhouse Type 3). In all instances the walls are located on the rear (as opposed to side) boundary of adjoining lots where they are unlikely to have an adverse impact on neighbour amenity (improved privatisation of adjoining outdoor living areas and rear yards), or major opening access to direct sunlight and air.

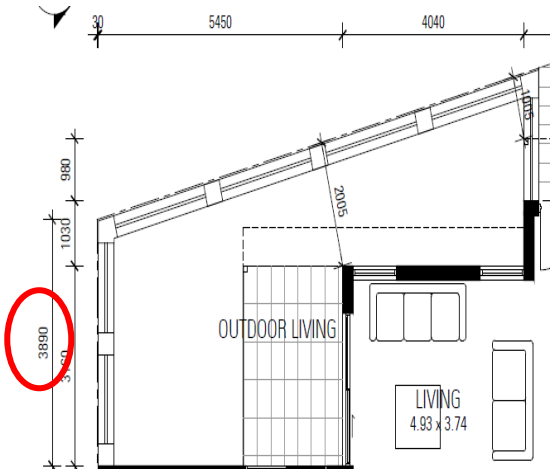
Overall building heights range between 1.9m (shortest boundary wall) to 8.7m (tallest ridge height) throughout, again consistent with typical terrace style development and in accordance with the Category 'B' maximum building height requirements of the R-Codes. When combined with the proposed range of building materials, the result is a varied and articulated built form arrangement that positively contribute to both internal and external streetscapes.

3.3.4 OUTDOOR LIVING AREAS

The majority of the proposed grouped dwellings incorporate either a ground floor outdoor living area measuring at least 16m^2 in area, typically with a minimum dimension of 4m, in accordance with the requirement of the 'R60' code. Slight relaxations are proposed for:

- Townhouse Typology 1 (Lot 32) – down to 3.89m,
- Townhouse Typology 6a (Lot 66) – down to 3.22m;
- Townhouse Typology 7 (Lot 3) – down to 3.5m;
- Townhouse Typology 12a (Lot 59) – down to 3.9m;
- Townhouse Typology 13 (Lot 37) – down to 3.7m;
- Townhouse Typology 15 (Lot 31) – down to 3.92m;

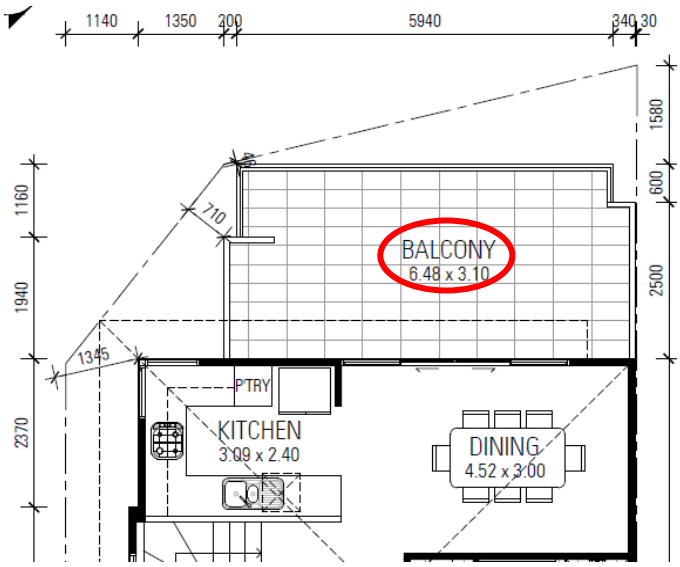
due principally to the unique shape of the lots involved, however this reduced dimension is offset by the provision of additional, clearly useable open space immediately adjacent, taking the total area well in excess of 16m^2.



A variation is also sought to the Outdoor Living Area requirement for:

- Townhouse Typology 8 (Lot 67)
  – 18m^2 with a minimum dimension of 3.1m;
- Townhouse Typology 10 (Lot 70)
  – 16m^2 with a minimum dimension of 3.7m; &
- Townhouse Typology 11 (Lot 71)
  – 17m2 with a minimum dimension of 3.3m.

Designed as 'upside down houses', with balconies coming directly accessible off their living spaces on the first-floor level where they can best take advantage of the dual aspect afforded as a result of being a corner lot. We submit that this typology should be treated as *'apartments on the ground'*, with an elevated balcony of similar dimensions sufficient for future occupant's outdoor living needs.



3.3.5 LANDSCAPING

In accordance with City of Wanneroo requirements for a development of this nature, attached as ***Appendix E*** is a detailed *Landscape Concept* prepared by LD Total. The plan demonstrates the proposed landscaping approach to the site inclusive of proposed species, sizes and plating densities.

Particular attention has been applied to maximising the number of street trees that can be accommodated both in the public and private street network, and to ensure an appropriate balance between paved and landscaped areas. This is greatly assisted by virtue of the large existing verges associated with Corvus Road and Clarkson Avenue, plus the use of a 12m common property width for the primary access way internally.

The cumulative effect is the creation of both safe and attractive internal streetscapes, and a development that positively contributes to local amenity and microclimate, as demonstrated in the concept provided. Adjustments and/or further detail can be submitted for Council review and approval in response to the typical, anticipated condition of development approval.

3.3.6 ACCESS

Consistent with the approved LDP road network, the proposal involves three access/egress points from the public road system, all via the approved extension of Hirundo Bend. Aside from Lots 1-6 and 48-49, all dwellings take vehicle access directly from the private internal road system, involving a series of rear laneways (typically 6m in width), and private streets (varying in width between 5-8m depending on the number of houses they serve and the need to accommodate a pedestrian footpath), all feeding off a main loop road contained within a 12m wide common property lot that includes space for visitor parking embayments and verge landscaping.

Of note, the private street network way has been specifically designed and tested to ensure it can accommodate the necessary turning movements (including those involved in privately managed refuse collection), entering and exiting the site in a forward gear, passing opportunities along the full length of the access network, and all parking bays have been designed in accordance with AS2890.

Pedestrian movement forms a fundamental element of the design, with a comprehensive footpath network proposed, involving:

- A 1.2m wide footpath on at least one side of all internal roads (aside from rear lanes, where separate pedestrian access is provided at the front of dwellings, and the short 5m lane in the south east corner of the site, which serves just 2 dwellings);
- Extension of the existing dual use path along the land's frontage to Clarkson Avenue and a footpath along the land's frontage to the Hirundo Bend extension; &
- The provision of additional pedestrian connections to the external road/path network, along anticipated pedestrian desire lines towards planned commercial facilities on the opposite side of Corvus Road, and the existing playing fields associated with St Stephen's School Grammar on the northern side of Clarkson Avenue.

3.3.7 PARKING

On-site parking is provided in the form of a double garage for every dwelling, in accordance with the 'Location B' R-Code requirements. Bicycle parking can be readily accommodated for all dwellings within their own garage or dedicated external store.

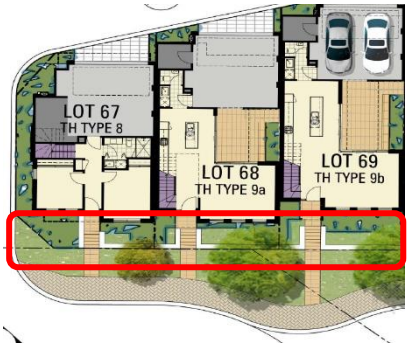
Despite removal of the visitor car bay shown on the LDP within the northern verge of Hirundo Bend (due to space limitations and a preference to extend the public footpath through that area), a total of 33 visitor parking bays are still proposed, including the creation of twelve (12) visitor parking bays on-site, plus a further 21 within the verge of the surrounding road network. This level of provision easily exceeds the 20 on-site bays typically required for a collective 84 lot grouped housing development.

In terms of arrangement, the bays have been strategically positioned throughout and around the estate to ensure there is visitor parking within reasonable proximity of the front door of every dwelling. Whilst no dedicated visitor bay is proposed adjacent the two southern survey-strata schemes, it should be noted that replication of traditional front setback requirements has resulted in driveway lengths (for all six dwellings) with a length that can readily accommodate the parking of at least two visitor cars, in addition to their double garages.

Attached at ***Appendix F*** is a Traffic Impact Statement prepared by FLYT, confirming the suitability of the proposed access, parking, bicycle and pedestrian movement arrangements

3.3.8 SITE WORKS, RETAINING WALLS & STORMWATER MANAGEMENT

Included for the City's approval in Calibre's *Servicing Report* at ***Appendix G*** are a preliminary earthworks design and stormwater management strategy for the total development. In summary, stormwater will be managed via on-site infiltration and underground storage devices, before overtopping into external road reservations during larger events. A condition requiring the preparation of further detail for the City Engineer review and final approval prior to construction is anticipated as a condition of Development Approval.

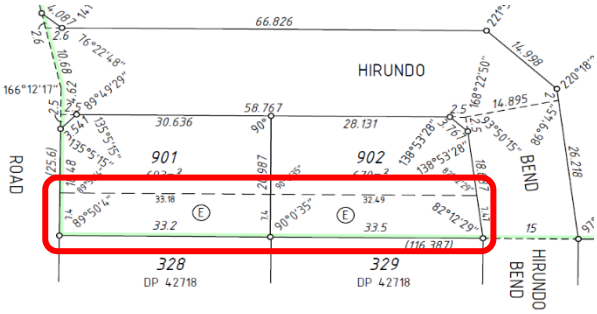


Retaining (generally along the southern and/or western boundary of the proposed lots) is required to address the westerly slope of the existing site, with the largest portions (those greater than 500mm in height) occurring principally along the northern and eastern edges of the Hirundo Bend extension (Proposed Lots 66-73), the eastern edge of Corvus Road (Proposed Lots 6-14) plus short sections internal to the development at the front of Proposed Laneway Lots 42-48, and the rear/side boundary of Proposed Lots 1-2 and 73-74. Stairwells have been specifically designed and included in each of the above instances to ensure adjacent housing properly addresses and can accommodate direct pedestrian access from the adjoining private or public road.

3.3.9 VISUAL PRIVACY & OVERSHADOWING

By virtue of the use of single storey dwellings along the perimeter of the site where it abuts existing dwellings, the existing sewer easement along a portion of the southern boundary of the site, and the orientation and use of parapet walls on most internal lot boundaries, no screens or special treatments are expected to be required to comply with the relevant standards of the Codes.

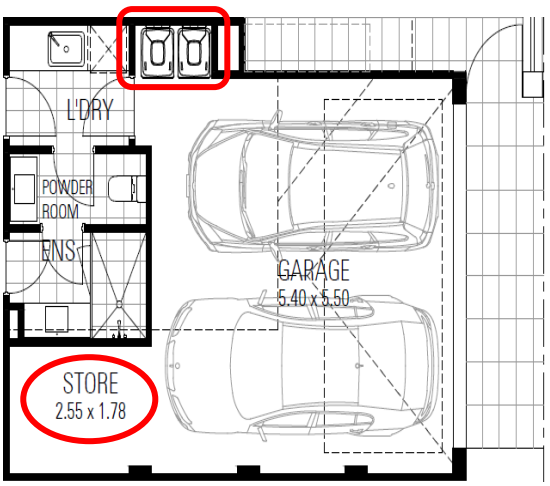
Due to the orientation of the lot, the limited use of parapet walls on external lot boundaries and the restriction of external lots to single-storey (unless already pushed well away from the rear boundary due to the existing 7.4m wide sewer easement along the southern boundary of the site), any impact will be limited internal to the development and known by purchasers at the point of sale.



3.3.10 FACILITIES, STORE & EXTERNAL FIXTURES

No communal open space or facilities are proposed within the development beyond the private street network, visitor parking and communal servicing areas. Nor are any separated external outbuildings proposed, with each dwelling instead encompassing at least a 4m^2 store with a minimum dimension of 1.4m, all of which are accessed via the garage or external to the dwelling.

Separated storage for refuse and recycling bins are also provided wherever practical to do so, in addition to clothes drying areas screened from public view. Detail on how services and external fixtures will be integrated into the building design and/or screened from the primary street will be provided at the Building Licence stage of development.



3.4 STAGING & IMPLEMENTATION

3.4.1 STAGING

Clearing, bulk earthworks and physical construction will commence immediately upon the completion and approval of Engineering Drawings, obtained following the issue of Development Approval.

Collective development is anticipated to occur in three stages, commencing at the western edge of the site then proceeding in a clockwise direction based on the coloured extents shown beside.

Full development of the site is expected to take between 2-3 years from the date of Approval depending upon market conditions and uptake.

3.4.2 SERVICING

Typical of grouped dwellings development, other than water and sewer, all dwellings will be privately serviced internally via one connection to the external network.

Noteworth aspects of the servicing strategy contained in the *Servicing Report* at ***Appendix G*** include:

- Extension of Hirundo Road as a public road (in accordance with our preceding Parent Subdivision approval);
- Installation of a new padmount transformer at the rear of proposed Lot 14, adjacent the pedestrian access connection to the future adjoining shops, near the intersection of Clarkson Avenue and Corvus Road; &
- The use of common trenching, typically under the private carriageway internally, and within the southern verge of the public extension of Hirundo Bend.

The proposed site levels and the drainage detail included within the JDAP Development Application will be refined at the time of submitting detailed engineering drawings prior to construction.

3.4.3 REFUSE COLLECTION

Attached at ***Appendix H*** is a *Waste Management Plan* prepared by Dallywater Consulting. In summary the report indicates that the site will be serviced by private waste and recycling collection contractors, with one set of bins (i.e. 1 Mobile Garbage Bin with either 120 or 240 litre capacity and one Mobile Recycling Bin with either 240 or 360 litre capacity being required for each dwelling. Bins will be stored within individual dwellings (e.g. in the garages) and presented on collection days to the internal and/or external access roads. Residents will be required to place their own bins out prior to the collection and retrieve the bins as soon as practical after they have been emptied.

The design of the internal road system and associated truncations have had specific regard for the turning movements of an 8.8m long, privately managed refuse collection vehicle that will service the development internally. A plan prepared by Calibre Consulting showing the necessary turning movements within the development has been provided at the rear of the *Waste Management Plan*, to demonstrate how this could safely occur.

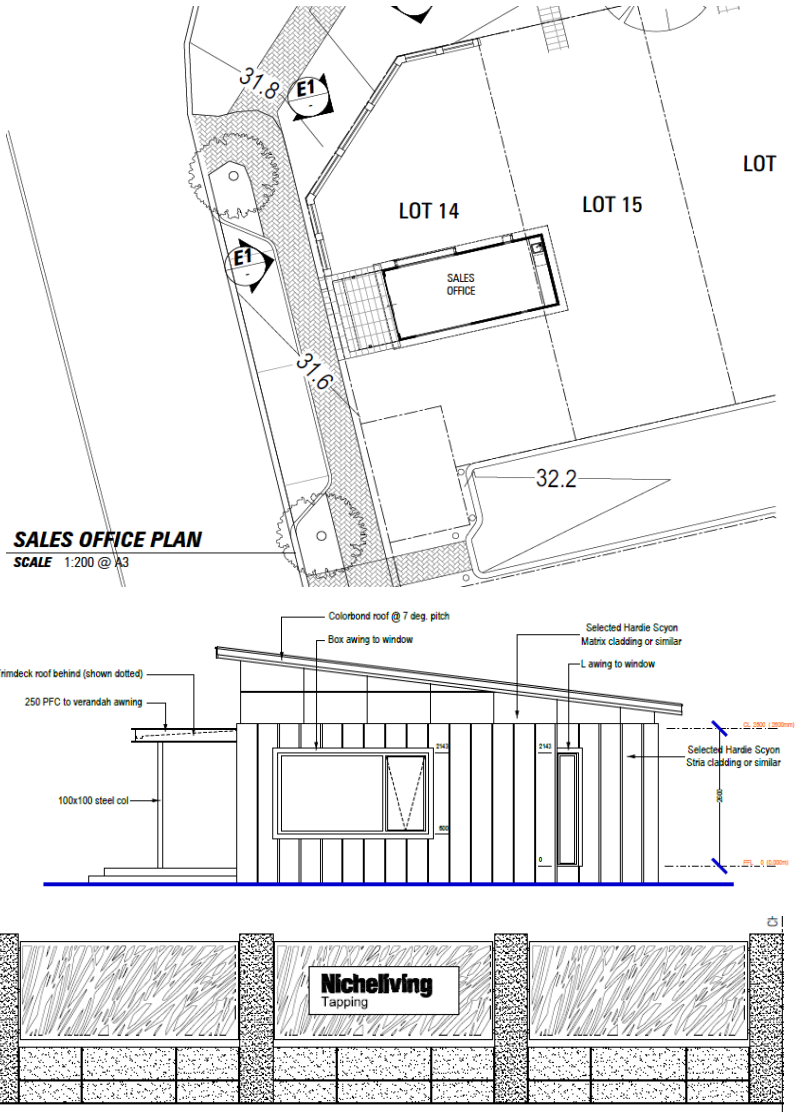
Where necessitated by the staging of construction, temporary turnaround areas will be provided at the termination of each private street pending future extension and integration as part of subsequent stages of development.

3.5 TEMPORARY SALES OFFICE & CAR PARK

Included in this application is the proposed erection of a Temporary 30m^2 Sales Office, plus a permanent high-quality Entry Fence inclusive of limited Project Signage. This location has been specifically chosen in recognition of the maximum exposure it affords, plus its immediate proximity to proposed visitor parking within the Corvus Road verge.

As the Temporary Sales Office is an existing pre-fabricated unit that is moved from one Nicheliving development site to another, it is ready for immediate installation as soon as the necessary Development Approvals are in place, and will operate until such time as construction of the development proceeds, triggering its need for relocation or removal.

The Temporary Sales Office will be open between the hours of 2-5pm Wednesday and 1-3pm Saturday and Sunday (or otherwise via appointment only). Maximum expected usage is up to 5 visitors each day, well within the capacity of the two bays proposed in the immediately adjacent Corvus Road reservation.



4 CONCLUSION

The application proposes the development of 84 grouped dwellings, including a range of typologies (varying from two to four bedroom single and double-storey townhouses), within a readily accessible, serviceable, well catered for and highly desirable locality.

As demonstrated in the previous section, the application is generally compliant with relevant aspects of the State and City's Statutory Planning Frameworks. Where variations are proposed to the deemed-to-comply standards of the Local Development Plan or Residential Design Codes, justification has been provided addressing the design principles associated to the relevant provisions.

Approval and implementation of the proposal will greatly improve housing affordability and diversity in the locality, enhance important age-in-place opportunities, and assist the City in meeting the residential density targets as set out in Directions 2031 and Beyond and the associated North West Metropolitan Sub-Regional Planning Framework