

Traffix Group

Traffic Engineering Assessment

Proposed Development Plan

56-74 Station Street, Nunawading

Prepared for
Norcal Station Development Pty Ltd

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1. Introduction

Traffic Group has been engaged by Norcal Station Development Pty Ltd to prepare a traffic impact assessment report associated with Stage 2 Development Plan for a mixed-use development at 56-74 Station Street, Nunawading.

This plan has been prepared to accord with the requirements of Development Plan Overlay 7 (DPO7) which applies to the site under the Whitehorse Planning Scheme.

This report provides a detailed assessment of traffic and car parking matters for the Stage 2 Development Plans and responds to the DPO7 requirements as necessary.

2. Development Plan

The proposed Stage 2 Development Plan is for a mixed-use development at the north-east corner of the site at 56-74 Station Street, Nunawading.

Stage 1 of the overall site has been approved as part of previous development plans and planning approvals and is currently under construction. Stage 1 of the development included the development of the internal road network and the construction of 173 townhouse style dwellings.

A copy of the Stage 2 Development Plan prepared by Warren and Mahoney is attached at Appendix A.

Stage 2 of the development will include multi storey mixed use buildings in the north-east corner of the site. An indicative Stage 2 development summary has been prepared and identifies the following land uses across Building A and B. This development summary is provided for the purposes of informing car parking considerations and will ultimately be subject to change.

Residential Apartments

- Approximately +/-121 apartments, that may/are likely to consist of:
 - 15% x One-bedroom apartments,
 - 75% Two-bedroom apartments, and
 - 10% Three-bedroom apartments.

Commercial Uses

- Retail/Commercial – ~4,737m² NLA

Car Parking

Car parking is proposed within basement and mezzanine car parking areas. The indicative development schedule identifies a three-level basement capable of accommodating at least 395 car parking spaces.

The ultimate provision and supply of car parking would be confirmed in association with formal application plans that include a higher level of detail in the design of car parking spaces.

Allocation of car parking would be determined as part of the formal planning application and assessed against the requirements of Clause 52.06 as required.

Bicycle Car Parking

The Development Plan nominates that:

Basement 01: Shared End of Trip to include secure bike parks and Residential storage

Details of on-site bicycle parking opportunities and any End-of-Trip facilities would be included on any formal planning application drawings. The provision of bicycle parking will accord with the requirements under Clause 52.34 and any ESD requirements.

Vehicle Access

Vehicle access to the basement car parking areas is proposed via a two-way access point to Norcal Road located approximately 40m south of the intersection with Station Street.

The vehicle access would allow for two-way access to the basement car parking as required.

No vehicle access from the Stage 2 development to the internal road network of the Stage 1 development areas (residential subdivision) is currently proposed.

The road design/car parking location/road management is indicative at this stage and would be subject to Council approval as part of any future planning permit applications. The design of the basement layout and vehicle access arrangements are to accord with Clause 52.06-9 and AS2890.1-2004 as required.

Loading and Waste Collection

Loading and waste collection activities will be accommodated on-site.

The Development Plan nominates that:

Basement 01 will also include centralised waste collection, secure apartment storage, adequate secure bike storage with additional visitor bike parking.

Details of on-site loading and waste collection arrangements would be provided as part of the formal applications documents.

Development Plan Overlay

The proposed Development Plan is subject to the requirements of Development Plan Overlay – Schedule 7 (DPO7), which applies to the site. DPO7 includes the following requirements related to traffic engineering matters:

Requirements for development plan

The development plan must show or provide for:

- *Traffic management and traffic control works considered necessary due to the proposed development;*
- *The location and indicative number of car parking spaces;*
- *The majority of car parking provided at basement level or via a multi deck structure or ground level garages;*
- *Bicycle storage;*

- *Waste storage and disposal;*
- *Details of access connections between the land and the surrounding are including any proposed vehicle access points, traffic management and control methods and bicycle and pedestrian path connections;*

In addition to the above, supporting documents are required to accompany the Development Plan including:

Traffic Management Report

A Traffic Management Report which includes details relating to:

- *Traffic management and traffic control works considered necessary on the land and affected roads to mitigate the expected traffic impacts of the proposed development.*
- *The stages in the development in which the traffic management and control works internal and external to the land are to be undertaken to mitigate the expected traffic impacts of the proposed development, and*
- *Location of vehicles access points to the site.*

This report provides a response to the above matters with a summary provided at Section 6.

A copy of the concept plan for the redevelopment of the site as provided in DPO7 is presented in the following figure.

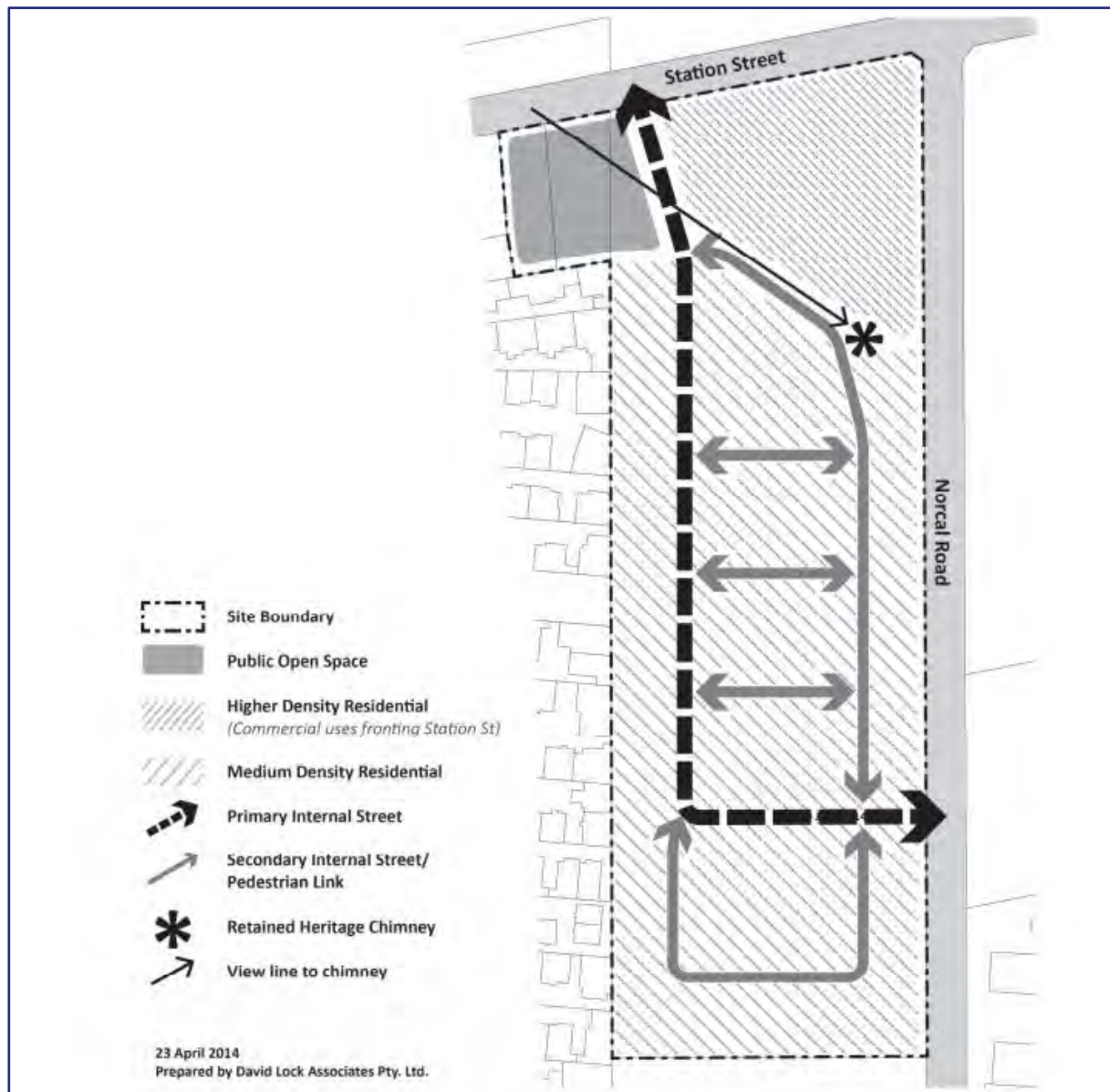


Figure 1: Concept Plan – Development Plan Overlay (DP07)

3. Existing Conditions

3.1. Subject Site

The subject site is located on the south-west corner of the intersection between Station Street and Norcal Road in Nunawading. A locality plan and aerial photograph of the site and surrounds is presented in Figure 2 and Figure 3.

The site is generally rectangular in shape with a total area of approximately 4.67ha. The site has frontages to Station Street and Norcal Road of approximately 120m and 390m, respectively. The area for which the current development plan applies is located in the north-east corner of the site. The site is cleared outside of chimney and is temporarily being used for construction activities for Stage 1 and includes a temporary land sales office located off Norcal Road.

The site is known as the Daniel Robertson Brickworks and has been used as Brickworks since the 1800's, although this function has now ceased. The rear portion of the site was historically used as a clay quarry for bricks, which has now been filled in. Most of the buildings associated with the brickworks have been removed except for the historic chimney. The front part of the site is occupied by a more modern administration and sales building (now vacant) and some off-street car parking. A single dwelling is located at the north-west corner of the site (also vacant).

Vehicle access is provided by two, two-way crossovers to Station Street. There is a disused single width crossover to Norcal Road, located towards the site's southern boundary. The dwelling has a separate single width crossover to Station Street.

The substantial site frontages provide a considerable supply of on-street parking. Approximately 17 unrestricted car spaces are available along the site's frontage to Station Street and 58 unrestricted spaces along the site's frontage to Norcal Road.

Observations during the site inspections indicate that much of this parking within Station Street and the northern end of Norcal Road is used by railway commuters accessing Nunawading Station (currently unrestricted parking).

The site is located primarily within a Residential Growth Zone – Schedule 2, except for the north-east corner of the site, which is zoned Mixed Use. A land use zoning map is provided at Figure 4.

The site is also subject to a Development Plan Overlay – Schedule 7 (DP07).

The site is located within the Nunawading/Megamile Activity Centre as defined in the Nunawading Megamile Activity Centre Structure Plan (dated April 2008). The subject site is identified as a key development site in this structure plan.

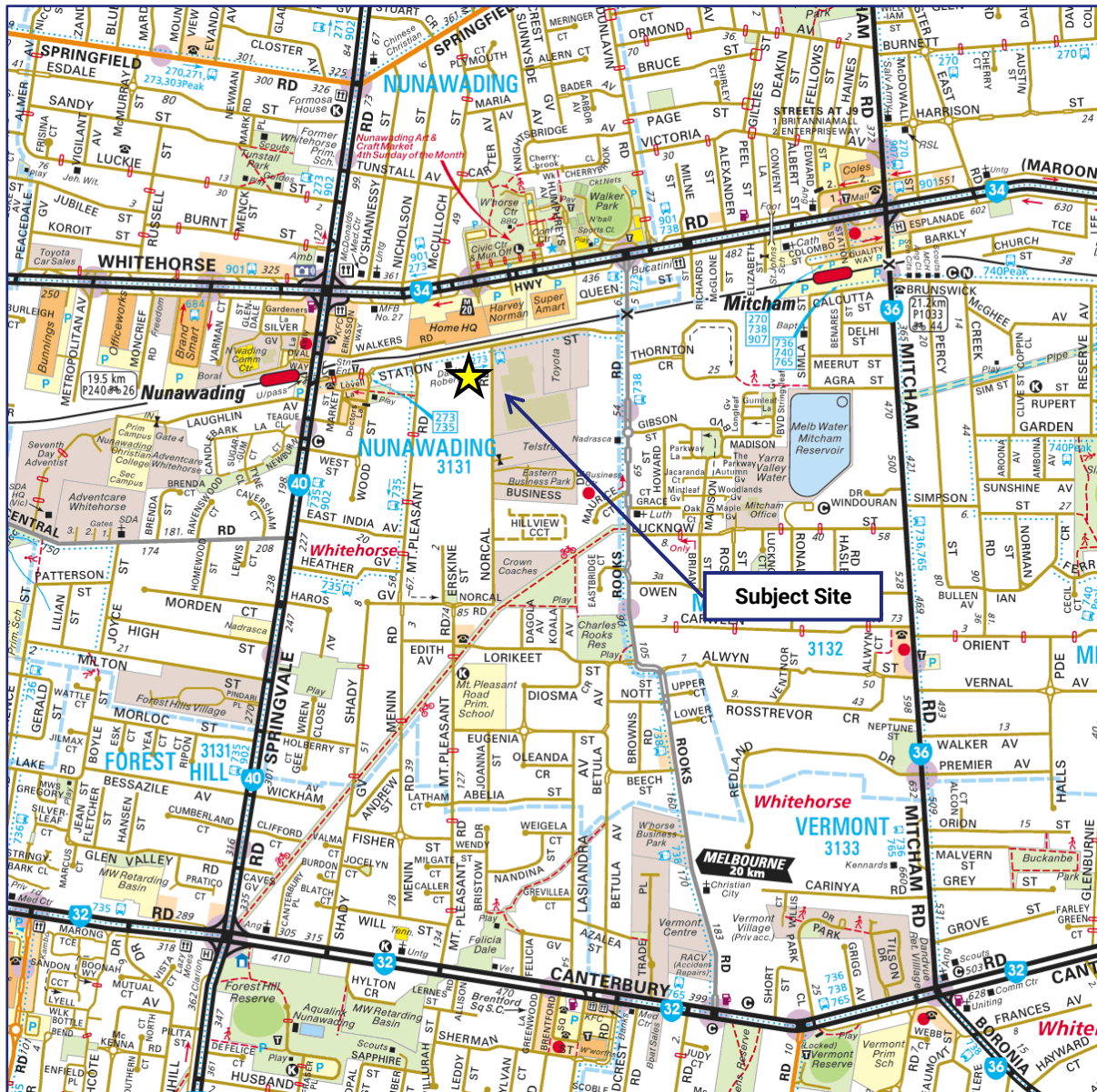


Figure 2: Locality Plan (source: Melways)



Figure 3: Aerial Photograph (source: Nearmap.com)

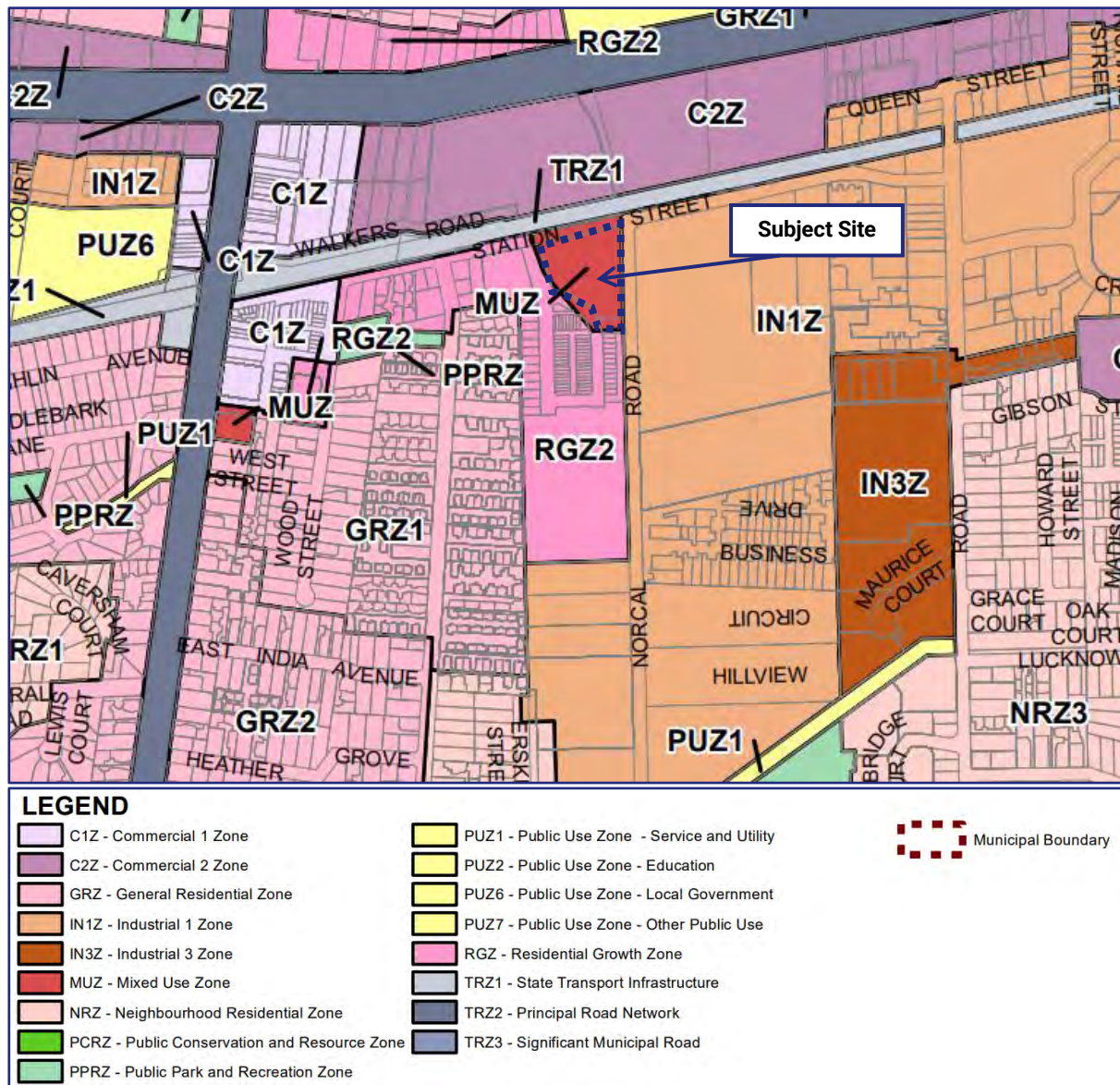


Figure 4: Land Use Zoning Map (source: VicPlan)

3.2. Road Network

Station Street is a 'Collector Road' under the City of Whitehorse Register of Roads, which extends in an east west direction between Rooks Road and Springvale Road.

Adjacent to the site, Station Street is configured with a 9.2m wide carriageway, which accommodates a through traffic lane in each direction and kerbside parallel parking on the south side of the road. Indented 90 degree parking is available along the north side, which is signed for use by for public transport users only.

Footpaths are only provided along the south side of Station Street.

The intersection between Station Street and Springvale Road is unsignalised and allows for all movements with the exception of right-out movements out of Station Street. A U-turn facility is provided just south of Station Street, which allows traffic exiting Station Street to travel north along Springvale Road.

The intersection between Station Street and Rooks Road is unsignalised and allows for all traffic movements. Separate left and right turn storage lanes are provided on Station Street. 'Keep Clear' line marking is provided on Rooks Roads.

Traffic counts undertaken by Traffix Group in March, 2012 indicate that Station Street carried the following traffic volumes:

- An average daily traffic volume of 4,606 vehicles per day between Springvale Road and Wood Street.
- An average daily traffic volume of 4,456 vehicles per day between Rooks Road and Norcal Road.

Peak hour traffic counts undertaken by Traffix Group were conducted between 7:30am-9:30am and 4:30pm-6:30pm on Thursday 6th February, 2020 at:

- Intersection between Springvale Road and Station Street, and
- Intersection between Whitehorse Road and Rooks Road.

The data collected identified peak hour overall intersection volumes between Springvale Road and Station Street of approximately:

- AM Peak Hour – 5,251 veh/hour
- PM Peak Hour – 4,695 veh/hour

The data collected identified peak hour overall intersection volumes between Whitehorse Road and Rooks Road of approximately:

- AM Peak Hour – 4,170 veh/hour
- PM Peak Hour – 4,232 veh/hour

Further discussion is provided in this report.

The default urban speed limit of 50km/h applies to Station Street.

Norcal Road is 'Collector Road' under the City of Whitehorse Register of Roads, which extends in a north-south direction between Mt Pleasant Road and Station Street. Adjacent to the site Norcal Road is configured with an 11.2m wide carriageway, which accommodates kerbside parking along both sides and a through lane in each direction. This carriageway width is significantly wider than a typical local street and is related to the requirement to accommodate heavy vehicles associated with the Industrial uses located along this section of road.

Footpaths are typically available along the western side of Norcal Road only.

The default urban speed limit of 50km/h applies to Norcal Road.

Springvale Road is an Arterial Road managed by the Department of Transport (DoT) and located within Transport Road Zone 2 (TRZ2) under the Planning Scheme aligned in a north-south direction.

Springvale Road has a divided carriageway providing 3 traffic lanes in each direction. A 70km/h speed limit applies to Springvale Road.

Springvale Road carried approximately 55,000 vehicles per day.

Rooks Road is classified as a 'Link Road' and is aligned in a north-south direction between Whitehorse Road and Canterbury Road.

In the vicinity of Station Street, Rooks Road provides two traffic lanes in each direction, although this narrows to one lane south of Station Street.

A signposted 50km/h speed limit applies to Rooks Road.

Whitehorse Road (Maroondah Highway) is an Arterial Road managed by the Department of Transport (DoT) and located within Transport Road Zone 2 (TRZ2) under the Planning Scheme and is aligned in an east-west direction.

Whitehorse Road has a divided carriageway providing 3 traffic lanes in each direction. An 80km/h speed limit applies to Whitehorse Road.

The intersections of Whitehorse Road/Springvale Road and Whitehorse Road/Rooks Road are signalised.

Whitehorse Road carries approximately 45,000 vehicles per day between Springvale Road and Rooks Road.

Canterbury Road is an Arterial Road managed by the Department of Transport (DoT) and located within Transport Road Zone 2 (TRZ2) under the Planning Scheme and is aligned in an east-west direction.

Canterbury Road has a divided carriageway providing 3 traffic lanes in each direction. A 70km/h speed limit applies to Canterbury Road between Springvale Road and Rooks Road.

The intersections of Canterbury Road with Springvale Road and Rooks Road are both signalised.

Canterbury Road carries approximately 41,000 vehicles per day between Springvale Road and Rooks Road.

Photographs depicting the surrounding road network are presented in Figure 5 to Figure 12.

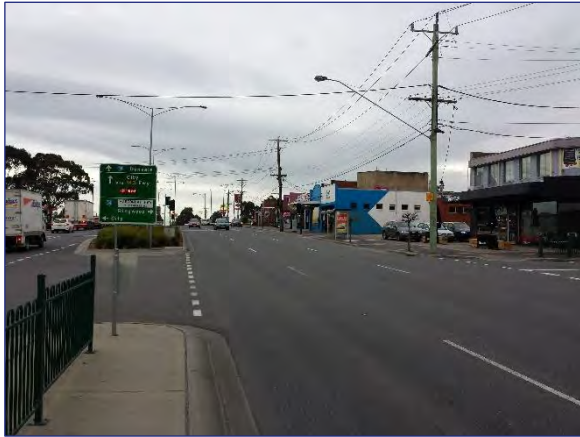


Figure 5: Springvale Rd – view north

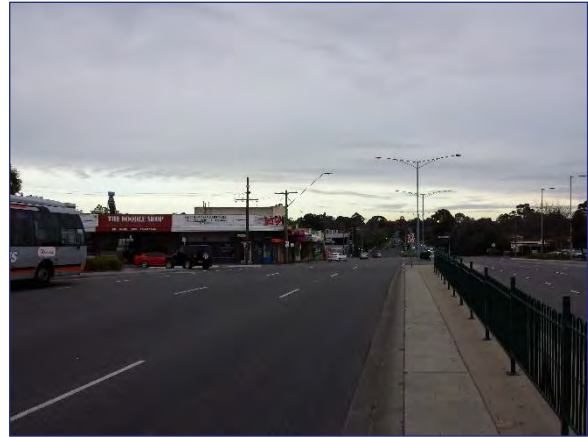


Figure 6: Springvale Rd – view south

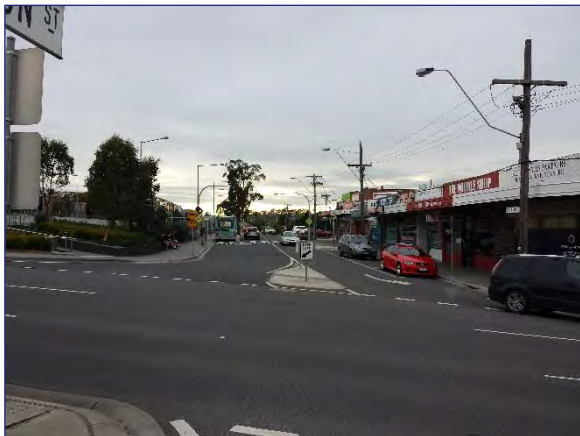


Figure 7: Station St – view east from Springvale Rd



Figure 8: Station St – view east from Rooks Rd

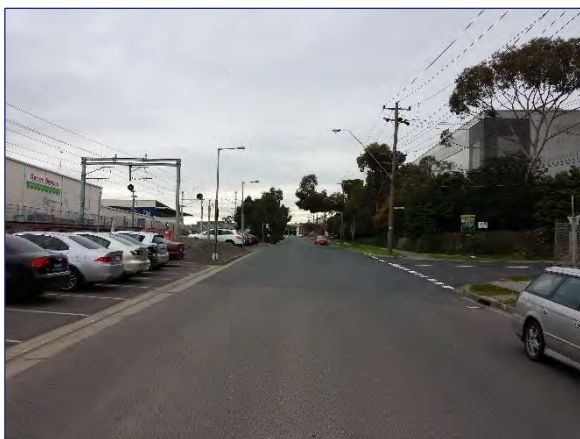


Figure 9: Station St – view east from subject site

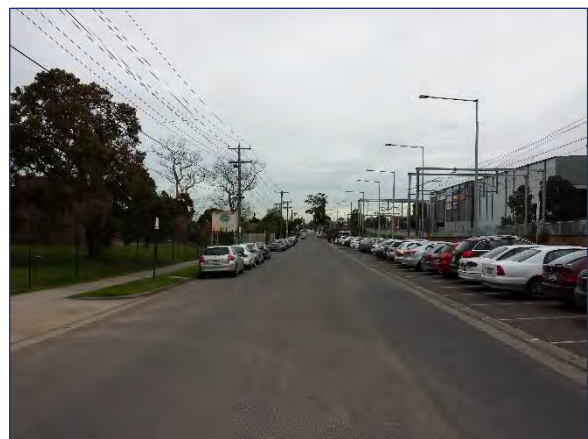


Figure 10: Station St – view west from subject site



Figure 11: Norcal Road – view north



Figure 12: Norcal Road – view south

3.2.1. Traffic Conditions

To determine the existing traffic conditions of the surrounding road network, turning movement counts were undertaken by Traffix Group at the following locations:

- Intersection between Springvale Road and Station Street, and
- Intersection between Whitehorse Road and Rooks Road.

The surveys were conducted between 7:30am-9:30am and 4:30pm-6:30pm on Thursday 6th February, 2020. These times are indicative of the typical commuter peak periods and for traffic associated with the proposed dwellings.

Figures which identify the recorded peak hour traffic volumes through each of the intersections are provided at Figure 13 and Figure 14.

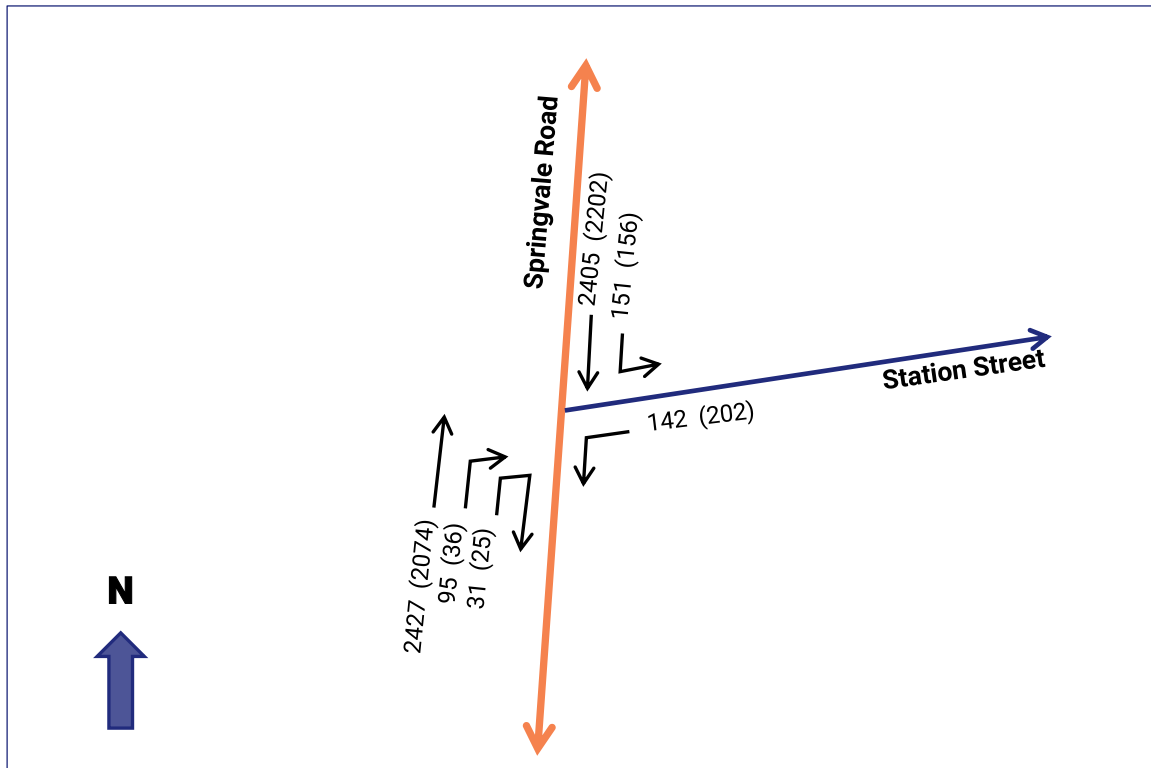


Figure 13: Turning Movement Counts - Intersection of Springvale Road and Station Street

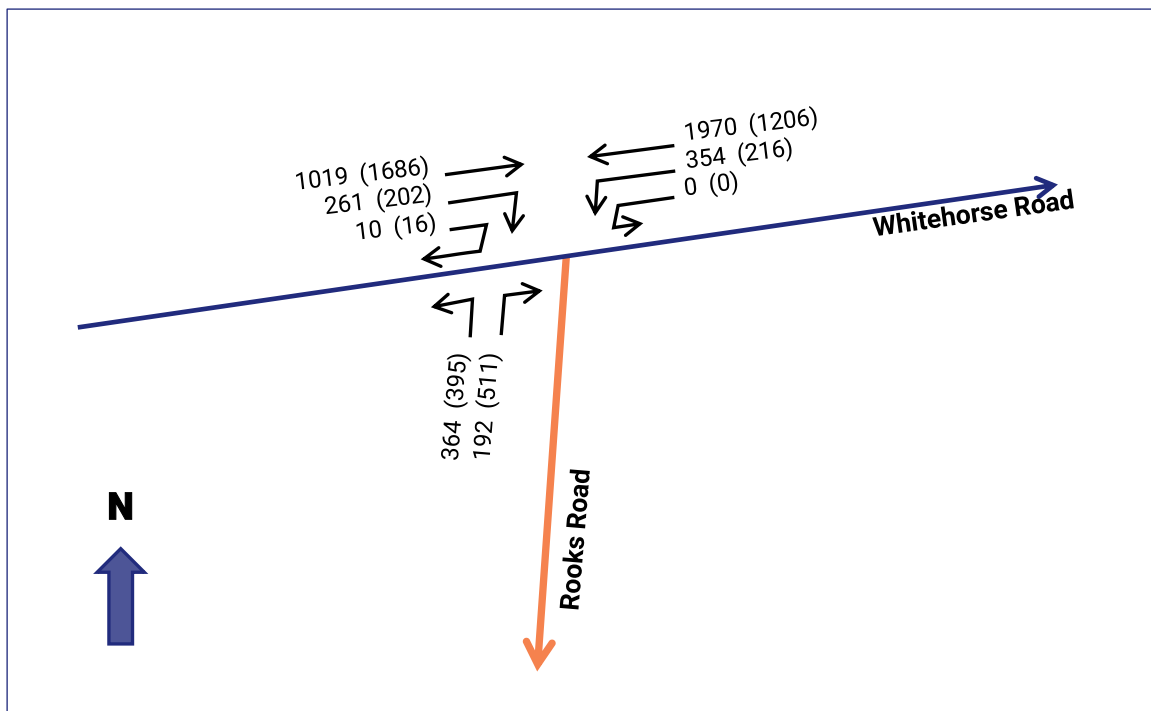


Figure 14: Turning Movement Counts - Intersection of Whitehorse Road and Rooks Road

2022 Comparison

In order to provide a comparison of the traffic data, a review of the available SCATS data for a date in February 2023 (Wednesday 8th February, 2023) has been undertaken for the intersection of Springvale Road and Station Street.

The available data identified peak hour overall intersection volumes along Springvale Road of approximately:

- AM Peak Hour – 4,784 veh/hour
- PM Peak Hour – 4,611 veh/hour

These volumes are generally lower or consistent with those volumes recorded during the 2020 counts when excluding the Station Street exit movements (5,109 during AM peak hour and 4,493 during the PM peak hour) and as such we are satisfied that use of the February 2020 data is acceptable for any assessments.

3.3. Alternative Transport

3.3.1. Public Transport

The site is well served by a number of public transport services, including Nunawading Station, two SmartBus services (along Springvale Road and Whitehorse Road) and a number of other standard buses services within walking distance of the site.

The site is located within the PPTN Area.

The available public transport services within close proximity of the site are shown in Figure 15 and detailed in Table 1.

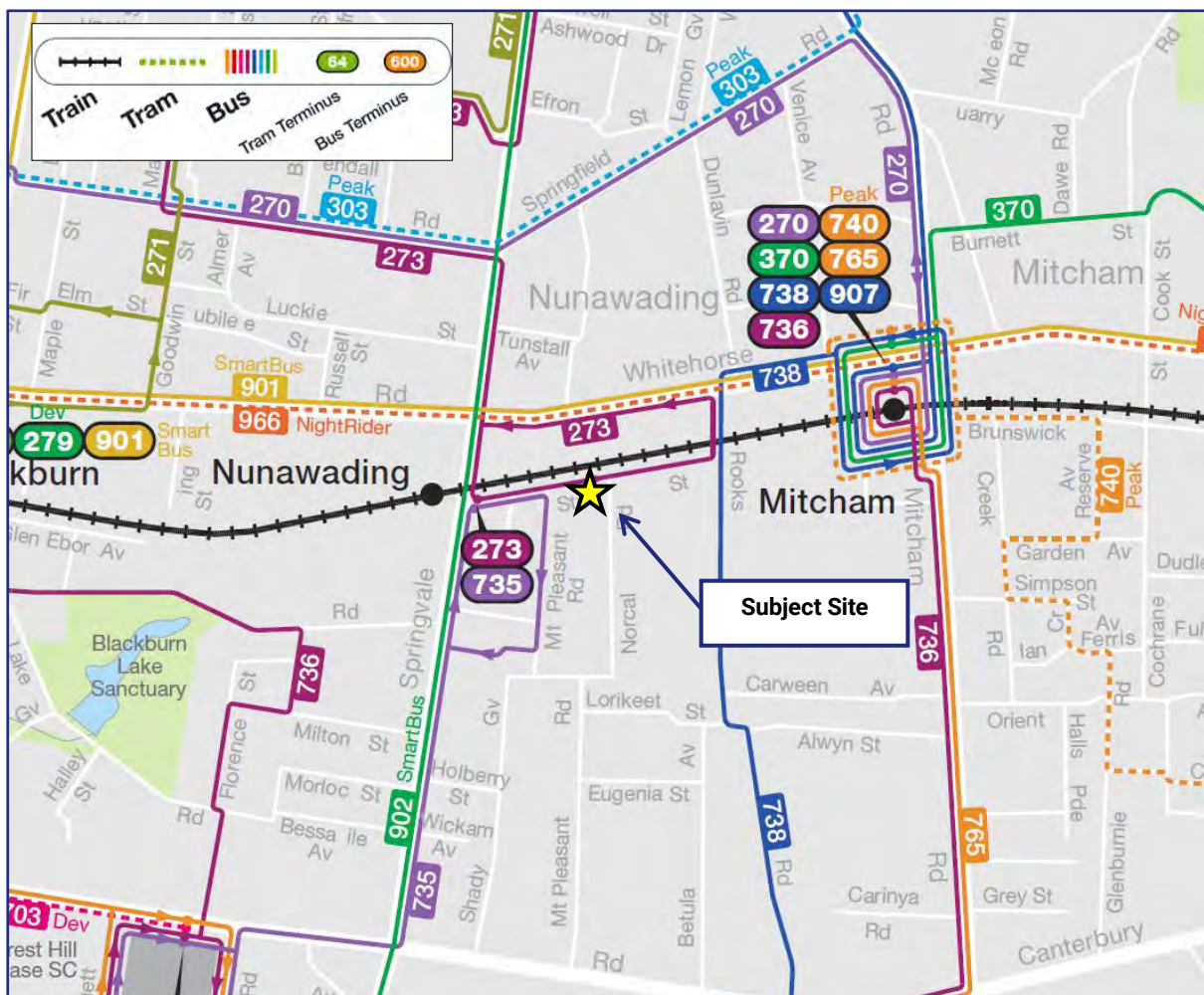


Figure 15: Public Transport Map (source: ptv.vic.gov.au)

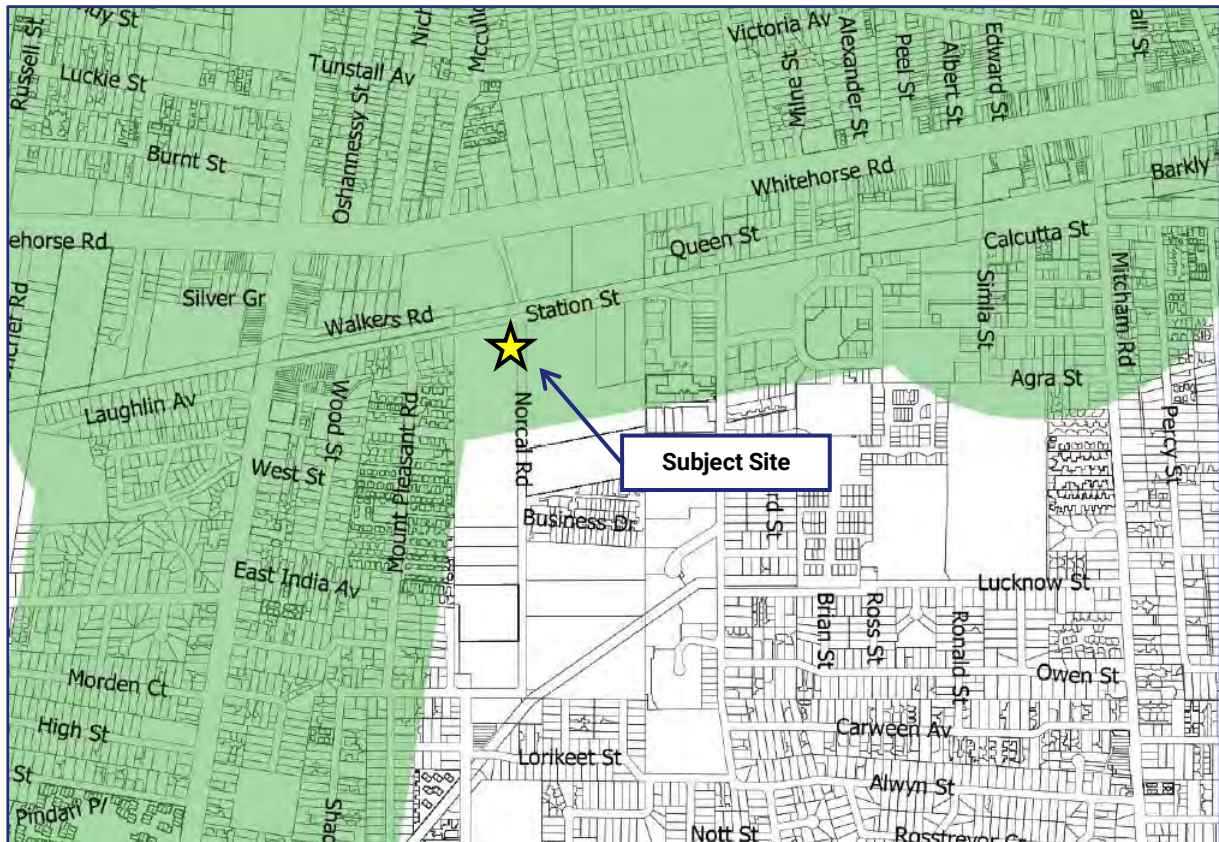


Figure 16: PPTN Area Map

Table 1: Public Transport Services

Service	Between	Via
Nunawading Station – approx. 500m west of the site		
Belgrave Line	Belgrave & CBD	Ferntree Gully, Ringwood, Blackburn, Box Hill, Camberwell, Burnley & Richmond
Lilydale Line	Lilydale & CBD	Croydon, Ringwood, Blackburn, Box Hill, Camberwell, Burnley & Richmond
Station Street – past the site		
Bus Route 273	Nunawading & The Pines	Springvale Road & Reynolds Road
Station Street – 300m west of the site		
Bus Route 735	Box Hill & Nunawading	Blackburn South & Forest Hill SC

Service	Between	Via
Springvale Road – approx. 400m west of the site		
Bus Route 902 SmartBus	Chelsea & Airport West	Springvale, The Glen SC, Doncaster SC, Greensborough & Broadmeadows
Rooks Road – approx. 500m east of the site		
Bus Route 738	Mitcham & Knox City SC	Wantirna & Vermont
Whitehorse Road – approx. 650m north of the site		
Bus Route 901 SmartBus	Frankston & Melbourne Airport	Ringwood, Dandenong, Knox SC, Blackburn, The Pines SC, Greensborough & Epping
Bus Route 966 NightRider (Sat & Sun AM only)	CBD & Croydon/Lilydale	Whitehorse Road
Note: All distances measured to the approximate mid-point of the site's frontage to Station Street.		

4. Traffic Impact Assessment

4.1. Traffic Generation & Impacts

In order to assess the likely traffic impacts we have considered traffic generation rates for the various uses as per those detailed within the RTA guidelines. As the land use for the commercial uses have not been fully resolved (office or retail) we have adopted a range of traffic generation rates.

Table 2: Expected Traffic Generation

Component	Size/No.	Peak Hour Traffic Generation Rate	Peak Hour Traffic
Dwelling	~121 dwellings	0.4 vte/hour per dwelling	49 vte per hour
Office/Retail	~4,737m ² (based on NLA)	Office - 2.0 vte/hour per 100m ² Retail - 5.0 vte/hour per 100m ²	95-237 vte per hour
TOTAL			144-286 vte per hour

4.2. Previous Analysis and Comparison

The traffic impacts associated with Stage 2 of the proposed Development Plan are similar with those previously assessed as part of the approval and implementation process for DP07.

Specifically, the assessment previously completed by Traffix Group (16542A#1) adopted approximately 400 dwellings across the site (50/50 split between apartments and townhouses) with 1,000m² of commercial floor areas. The total traffic impacts assessed under this scenario were 250 vehicle movements per hour.

The key findings of this assessment identified:

- *the development proposal will not have an unreasonable impact on the nearby road network and can be accommodated,*
- *Station Street has adequate capacity to accommodate the expected development traffic.*

For comparative purposes, we note that traffic impacts from the current development schemes consist of:

- Approved Stage 1 Development Plan (173 dwellings) – 87-104 vte per hour (based on 0.5-0.6 vte/hour/dwelling)
- Proposed Stage 2 Development Plan – 144-286 vte per hour
- **Total – 231-390 vte per hour**

As detailed above, the indicative development scheme identified within the Stage 2 Development Plan will potentially result in a minor increase in the traffic impacts (maximum

of 140 vte/hour). This increase is based on an assumption that all commercial floor areas are provided as retail land use which is considered a highly unlikely outcome noting that a significant proportion of the commercial areas are provided on upper levels.

The increase compared to the approved conditions equates to an average of 2-3 additional movement every 60 seconds during the peak hour. This increase in traffic would occur during the PM peak hour only noting that the retail uses would generate significantly reduced volumes during the AM peak hour.

Suitable conditions were included on Stage 1 Planning Permit that required the traffic impact assessments to be considered in a higher level of detail. Specifically, Planning Permit No. WH/2017/758 applies to Stage 1 allows for the development of 173 dwellings within individual allotments at the subject site.

Condition 16 under this Planning Permit requires further assessments are provided to the relevant authority as follows.

16. *Unless otherwise agreed in writing by VicRoads, before the development starts, a Transport Impact Assessment Report (TIAR) must be submitted to and approved by the Roads Corporation (VicRoads). The TIAR must include:*
 - a) *Predicted traffic generation and the impact of the development on the arterial road network in all relevant peak periods; in particular, its impact on the nearby intersections. The report is to include SIDRA analysis, including, but not limited to:*
 - i. *Springvale Road/ Station Street intersection; assessing impact on the storage capacity of the existing right turn lane for Station Street and impact on bus services.,*
 - ii. *White horse Road/ Rooks Road intersection; assessing impact on the storage capacity of the existing right turn lane for Rooks Road. Any possible extension of the right turn lane may have an impact on nearby intersections (Humphreys Avenue) due to closure of the median opening.*
 - iii. *Staging Plan for the overall development on site;*
 - b) *An electronic copy of all SIDRA files.*
 - c) *Signage and line marking plan.*
 - d) *A concept layout plan to show all the mitigating works required on the arterial road network as per the findings of the revised TIAR and to VicRoads satisfaction.*

We are of the opinion that a similar condition could be included for Stage 2 development application and that detailed analysis is not required at this time, on the basis of:

- Variation in traffic impacts compared to the original rezoning development scheme is minor and representative of 2-3 vehicle trips each hour.

Once allowing for distribution of these movements between entry/exit and the various connections to the wider road network impacts on any particular movement will be negligible, and

- Actual traffic impacts from the proposed development, and any associated requirement for remedial works, cannot be fully understood until such time as detailed development scheme is developed.

This is particularly relevant for the commercial components of the Development Plan noting that a significant variation in traffic impacts occurs for retail uses if adopting office or retail land use traffic generation rates (variation between 95 to 237 vte/hour).

5. Car Parking Requirements

The Development Plan nominates various uses under the land-use categories of 'dwelling', 'shop' and 'office' under Clause 73.03 of the Planning Scheme. The Planning Scheme sets out the parking requirements for new developments under Clause 52.06.

The purpose of Clause 52.06 is:

- *To ensure that car parking is provided in accordance with the Municipal Planning Strategy and the Planning Policy Framework.*
- *To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.*
- *To support sustainable transport alternatives to the motor car.*
- *To promote the efficient use of car parking spaces through the consolidation of car parking facilities.*
- *To ensure that car parking does not adversely affect the amenity of the locality.*
- *To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.*

The car parking requirements for the proposed use are set out under Clause 52.06 and the car parking table at Clause 52.06-5 of the Planning Scheme.

The site is located within the Principal Public Transport Network area and as per Clause 52.06-5, the Column B parking requirements apply. The statutory car parking assessment of the development is set out in the table below.

For the apartments we have adopted the split of apartment sizes as detailed previously of:

- 15% x One-bedroom apartments (18),
- 75% Two-bedroom apartments (91), and
- 10% Three-bedroom apartments (12).

This split may vary as part of the formal planning application scheme.

Table 3: Statutory Car Parking Assessment - Clause 52.06-5

Use	No. (Indicative)	Statutory Parking Rate (Column B)	Parking Requirement
One-bedroom apt.	18	1 car space per dwelling	18
Two-bedroom apt.	91		91
Three-bedroom apt.	12	2 car spaces per dwelling	24
Residential Visitors	121 (apt.)	No Requirement	0
Shop / Office	~4,737m ² NLA	3.0-3.5 spaces per 100m ² LFA/NFA	142-165
TOTAL			275-298

Under Clause 52.06-5, the statutory parking requirement for the indicative development scheme is 275-298 car spaces.

The Development Plan identifies a provision of at least 395 car parking spaces. Based on this level of car parking, a reduction of the standard car parking requirements would not be required by a future planning application.

5.1. Reducing the Requirement for Car Parking

Whilst a car parking reduction is not required some consideration for car parking reductions under Clause 52.06-7 is provided as follows.

Clause 52.06-7 allows for the statutory car parking requirement to be reduced (including to zero). An application to reduce (including reduce to zero) the number of car spaces required under Clause 52.06-5 or in a schedule to the Parking Overlay must be accompanied by a Car Parking Demand Assessment.

Clause 52.06-7 sets out that a Car Parking Demand Assessment must have regard to the following key factors:

- *The likelihood of multi-purpose trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.*
- *The variation of car parking demand likely to be generated by the proposed use over time.*
- *The short-stay and long-stay car parking demand likely to be generated by the proposed use.*
- *The availability of public transport in the locality of the land.*
- *The convenience of pedestrian and cyclist access to the land.*
- *The provision of bicycle parking and end of trip facilities for cyclists in the locality of the land.*

- *The anticipated car ownership rates of likely or proposed visitors to or proposed occupants (residents or employees) of the land.*
- *Any empirical assessment or case study.*

Planning Practice Note 22 (June, 2015) specifies that the provisions for reducing the car parking requirement draw a distinction between the assessment of likely demand for parking spaces (the Car Parking Demand Assessment), and whether it is appropriate to allow the supply of fewer spaces than assessed by the Car Parking Demand Assessment. These are two separate considerations, one technical while the other is more strategic. Different factors are taken into account in each consideration.

Accordingly, the applicant must satisfy the responsible authority that the provision of car parking is appropriate on the basis of a two-step process, which has regard to:

- *The car parking demand likely to be generated by the use.*
- *Whether it is appropriate to allow fewer spaces to be provided than the number likely to be generated by the site.*

An assessment of the appropriateness of reducing the car parking provision below the statutory requirement would accompany any future planning application and assessed by the Responsible Authority at the appropriate time.

We are generally satisfied that a reduction in the car parking requirements would be acceptable for a mixed use development at the subject site on the basis of:

- access to alternate transport, including Nunawading Railway Station,
- efficiencies and sharing of car parking resources, and
- availability of on-street car parking, including a high number of spaces along the site's frontage.

The detailed assessment against the decisions guidelines under Clause 52.06-7 would be provided as part of any formal planning application.

6. Bicycle Parking

Whilst plans of the bike parking areas have not been prepared the Development Plan specifies that:

Basement 01: Shared End of Trip to include secure bike parks and Residential storage.

Clause 52.34 of the Planning Scheme specifies bicycle parking requirements for new developments. The purpose of Clause 52.34 is to:

- *To encourage cycling as a mode of transport.*
- *To provide secure, accessible and convenient bicycle parking spaces and associated shower and change facilities.*

An assessment of the bike parking requirements under Clause 52.34 is provide in the following table.

Table 4: Statutory Car Parking Assessment - Clause 52.34

Use	No.	Statutory Parking Rate	Bike Parking
Apartment	~121	Resident - In developments of four or more storeys, 1 to each 5 dwellings Visitor - In developments of four or more storeys, 1 to each 10 dwellings	Resident: 24 Visitor: 21
Shop / Office	~4,737m ²	<u>Shop</u> Resident - 1 to each 600m ² of leasable floor area if the leasable floor area exceeds 1,000m ² Customers - 1 to each 500m ² of leasable floor area if the leasable floor area exceeds 1,000m ²	Staff: 8 Customer: 9
		<u>Office</u> Staff - 1 to each 300m ² of net floor area if the net floor area exceeds 1,000m ² Visitors - 1 to each 1,000m ² of net floor area if the net floor area exceeds 1,000m ²	Staff: 16 Visitor: 5

Any formal planning application should include bicycle parking at rates that accord with Clause 52.34 with end of trip facilities provided in accordance with Table 2 and 3 of Clause 52.34.

The Development Plan drawings ample areas within the basement that will accommodate bicycle parking.

We are satisfied that the required level of bike parking and associated EOT facilities can be readily accommodated.

7. Loading & Waste Collection

Loading

Clause 65.01 of the Planning Scheme specifies the following in respect to loading considerations:

Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate:

- *The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.*

Loading opportunities for the dwelling and commercial uses will be accommodated on-site with design of loading areas occurring as part of any detailed development plans.

Waste Collection

Waste collection will be on-site and via a private contractor.

Design of waste collection areas would occur as part of the detailed design process of any formal planning application.

The Development Plan specifies that:

Basement 01 will also include centralised waste collection, secure apartment storage, adequate secure bike storage with additional visitor bike parking.

We are satisfied that loading and waste collection will be accommodated within the basement as required with provided areas subject to further detailed design.

8. Development Plan Overlay Requirements

The redevelopment of the site is subject to the requirements of Development Plan Overlay – Schedule 7 to the site (DPO7). The DPO includes the following requirements related to traffic engineering:

Requirements for development plan

The development plan must show or provide for:

- *Traffic management and traffic control works considered necessary due to the proposed development;*
- *The location and indicative number of car parking spaces;*
- *The majority of car parking provided at basement level or via a multi deck structure or ground level garages;*
- *Bicycle storage;*
- *Waste storage and disposal;*
- *Details of access connections between the land and the surrounding are including any proposed vehicle access points, traffic management and control methods and bicycle and pedestrian path connections;*

Traffic Management Report

A Traffic Management Report which includes details relating to:

- *Traffic management and traffic control works considered necessary on the land and affected roads to mitigate the expected traffic impacts of the proposed development.*
- *The stages in the development in which the traffic management and control works internal and external to the land are to be undertaken to mitigate the expected traffic impacts of the proposed development; and*
- *Location of vehicle access points to the site.*

The proposed Development Plan is deemed to adequately address the above requirements. Specifically, the plans include:

- Access to on-site car parking areas for Stage 2 are provided from a two-way crossover and associated accessway from Norcal Road.

The location of the proposed access to Norcal Road is suitably offset from the intersection with Station Road to ensure it remains clear of any queuing that may occur at this location.

- Detailed layout plans of car parking areas have not been prepared at this time.

An indicative layout and capacity have been nominated within the Development Plan. It is too early in the design process to undertake a detailed design of the carpark noting that it would need to consider structure, services, core locations etc that are yet to be confirmed.

All car parking will be provided within the basement.

- Access locations for the development include details of the pedestrian and bicycle links.
- Waste storage and collection will occur on-site within basement areas as required. Detailed design of these storage areas and collection points would occur as part of the planning application drawings.

Traffic Management and Control Works

The Overlay requires consideration of the 'traffic management and control works internal and external to the land are to be undertaken to mitigate the expected traffic impacts of the proposed development'. Detailed analysis of the traffic impacts of the overall concept were previously completed by Traffix Group (16542A#1).

The key findings in this regard identified:

The report assesses the traffic impacts of the above development scenario. This report concludes that the new development traffic can be accommodated within the nearby road network with the following key findings:

1. *The development traffic can readily be accommodated at the key intersections of Springvale Road/Station Street and Rooks Road/Station Street.*
2. *There is a potential capacity constraint with the U-turn facility in Springvale Road, south of Station Street. This is likely to be addressed by development traffic choosing alternative routes during peak hours to avoid this U-turn. Alternatively, the pedestrian signals immediately south of this facility could be altered to activate in the event that a vehicle queue within the U-turn facility exceeds its capacity, allowing U-turning traffic to freely enter Springvale Road.*
3. *The post-development traffic volumes as a result of the proposed development will not exceed the environmental capacity of Station Street or Norcal Road, based on a conservative assessment of traffic generation rates.*

We note that the recommendation regarding 'the pedestrian signals immediately south of this facility could be altered to activate in the event that a vehicle queue within the U-turn facility exceeds its capacity' has in fact been installed at this location since the time of the original report.

As previously stated within this report we are of the opinion that the requirement for assessment and determining the requirements for remedial works is best addressed at the town planning stage. Consistent with Stage 1, a suitable permit condition could be included for these matters to be addressed at this time.

Overall, we are satisfied that from a traffic engineering perspective the proposed Development Plan for Stage 2 accords with the requirements of DP07.



Appendix A

Stage 2 Development Plan

56-74 STATION ST NUNAWADING

STAGE 2 DEVELOPMENT PLAN (FORMER DANIEL ROBERTSON BRICKWORKS SITE) REVISION C

25 AUGUST 2025

Prepared For

Whitehorse City Council on behalf of
Norcal Station Development Pty Ltd

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Document Revision Status

Revision C: 25 August 2025
DPO Report

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Disclaimer

While Warren and Mahoney has endeavoured to summarise the DPO process in this document and appendices, the report format cannot represent the broad range and depth of information captured on the additional material in the DPO Drawings, Specifications and Schedules. Approval of the specific issues contained in this report does not discharge the obligation of the client team to review the drawings and specifications in their entirety.

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MASTER PLAN OBJECTIVES	8
MASTER PLAN FRAMEWORK	10
AREA PLANS	19
MASSING & YIELD	21
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INTRODUCTION

Development Plan - Stage 2



The material in this report forms key design pillars and an enhanced response in this important urban renewal process and has a clear Urban Design Vision:

To create a successful mixed use precinct for Nunawading with all the uses, activities, spaces and places to support a healthy community with a strong urban identity.

To achieve this vision, the material to the Development Plan provides a set of key Master Plan objectives, design requirements and a series of indicative area plans that respond to the current site context and in doing so, will be a positive outcome for the site, the greater precinct and its users.

STRATEGIC URBAN ANALYSIS

Unlocking the wider precinct (area of focus) and surrounds (area of influence)



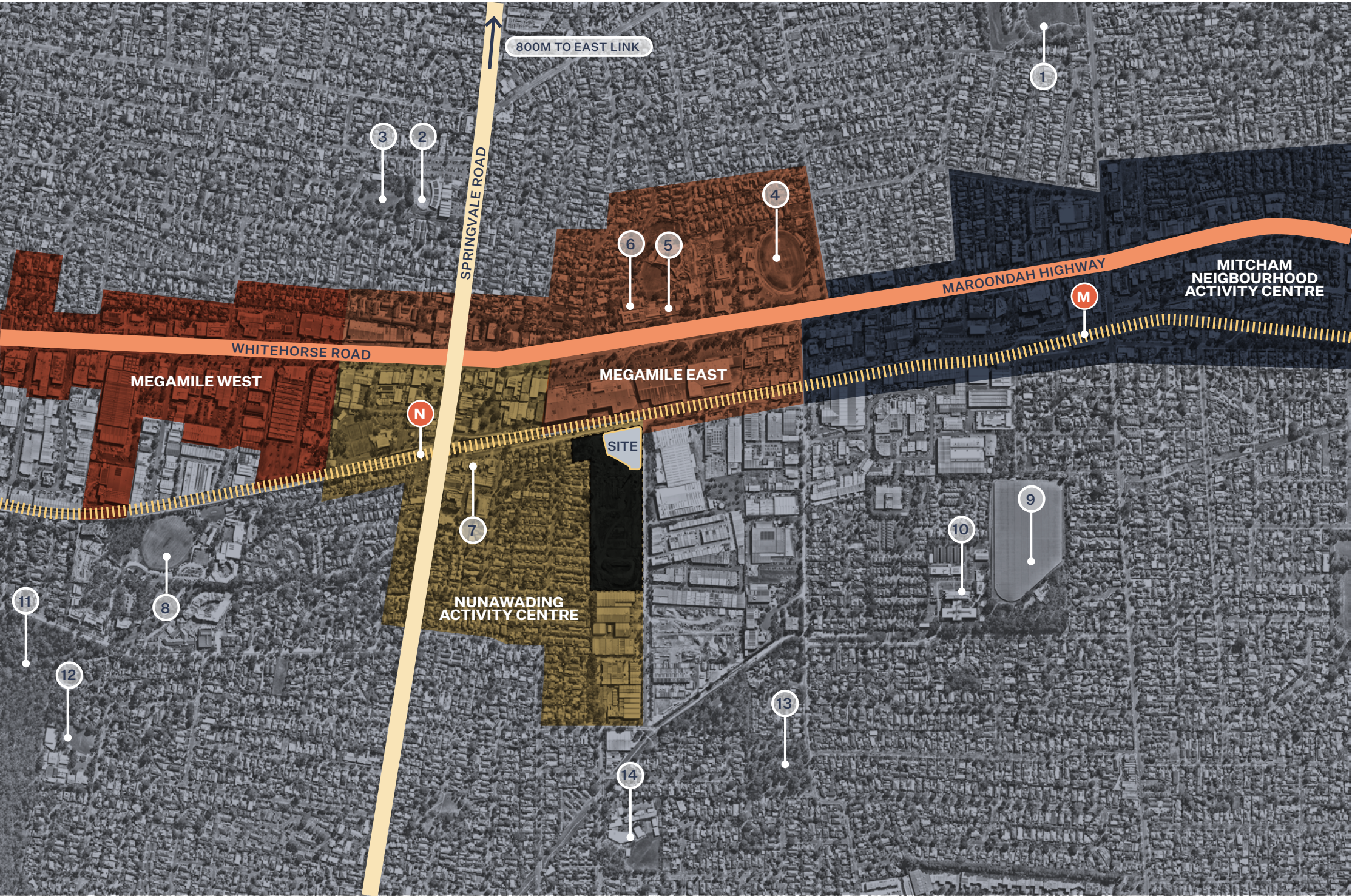
The Planning Scheme supports the creation of compact urban development where housing choice, retail, office-based employment, community facilities and services are encouraged in central locations near public transport. The Nunawading activity centre, encompassing MegaMile, has been designated as a ‘Major Activity Centre’ under the State Government’s metropolitan strategy *Plan Melbourne 2017-2050*.

The policy actively encourages the promotion and capitalisation of opportunities for urban renewal and infill redevelopment, such as that presented by the Site. This urban renewal precinct aims to contribute to Metropolitan Melbourne’s network of activity centres.

- MELBOURNE CBD
- SUBJECT SITE
- METROPOLITAN ACTIVITY CENTRE:
 - 1. SUNSHINE
 - 2. FOOTSCRAY
 - 3. BOX HILL
 - 4. RINGWOOD
- MAJOR ACTIVITY CENTRE

STRATEGIC URBAN ANALYSIS

Links between Metro strategy and Nunawading



The Subject Site is located within the Nunawading/MegaMile MAC, which is primarily centred around the Whitehorse Road corridor north of the Site. It caters to a range of convenience retail, food and drink and office land uses within close proximity to the Site. Strategically, its location makes it ideal to contribute to the revitalisation of the Nunawading/MegaMile MAC - its underutilised land parcel has the ability to strengthen connection to the broader metropolitan network.

The site is largely accessible via walking, cycling or other means of sustainable transport. The site benefits from a walk score of 85/100, placing it in the 'Very Walkable' category where most errands can be accomplished on foot. The surrounding area is well serviced by nearby public transport, including Nunawading Railway Station. It also benefits from proximity to several major arterial roads including Eastlink which is located approximately 2km north of the Site and accessible via Springvale Road.

- N NUNAWADING TRAIN STATION
- M MITCHAM TRAIN STATION
- SUBJECT SITE - STAGE 2
- STAGE 1 WORKS
- 1 HALLIDAY PARK
- 2 NUNAWADING COMMUNITY HUB/PRIMARY SCHOOL
- 3 TUNSTALL PARK
- 4 WALKER PARK
- 5 NUNAWADING LIBRARY
- 6 WHITEHORSE CIVIC CENTRE
- 7 NUNAWADING RETAIL CENTRE
- 8 NUNAWADING CHRISTIAN COLLEGE
- 9 MITCHAM RESERVOIR
- 10 YARRA VALLEY WATER
- 11 BLACKBURN LAKE SANCTUARY
- 12 BLACKBURN LAKE PRIMARY SCHOOL
- 13 CHARLES ROOK RESERVE
- 14 MOUNT PLEASANT ROAD PRIMARY SCHOOL

STRATEGIC URBAN ANALYSIS

Stage 1 Works

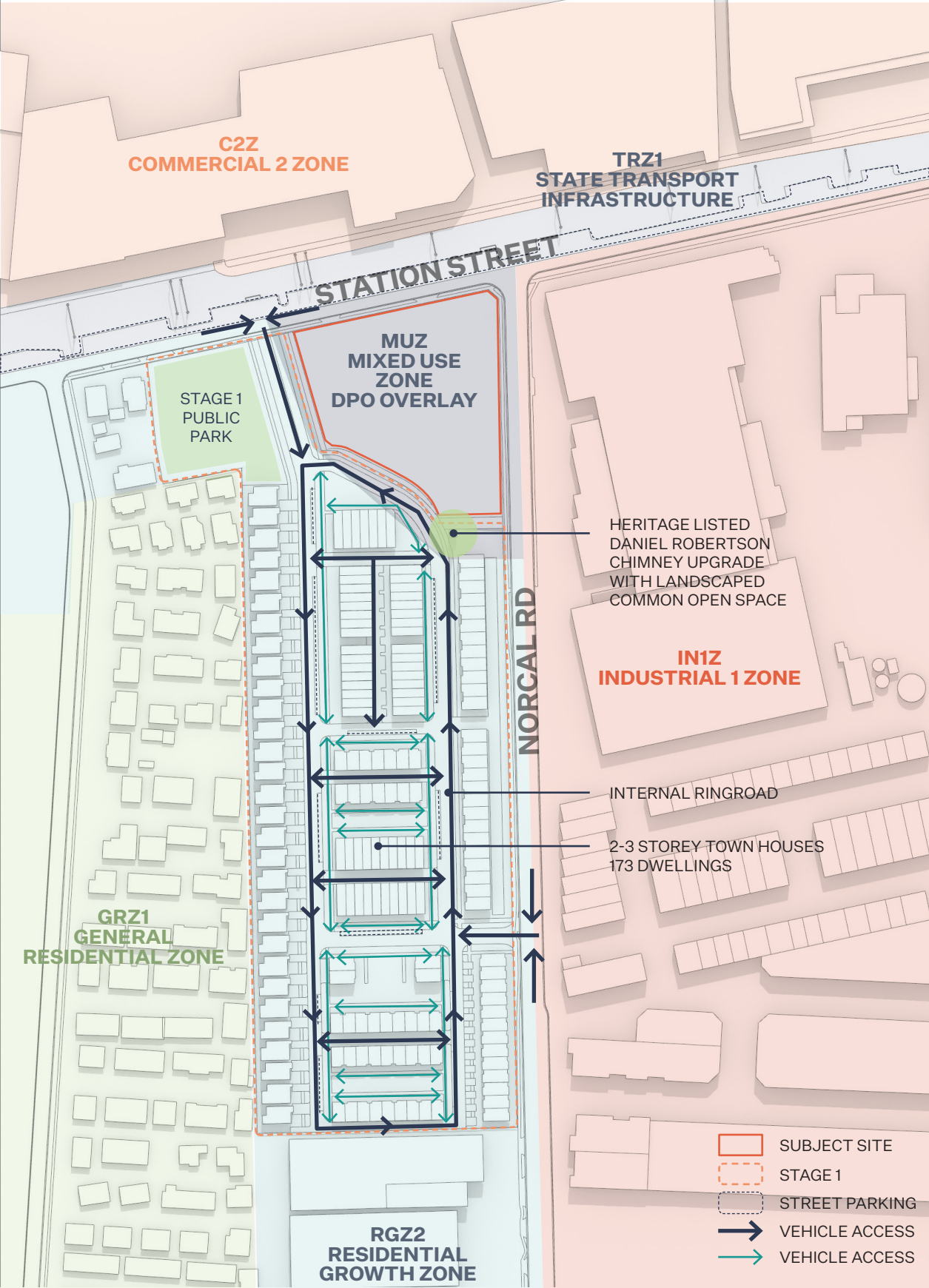
EXISTING CONDITIONS:

- OPPORTUNITY
- CONSTRAINT

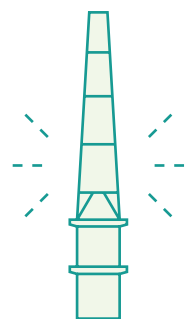
- NORTH**
4 STOREY BUILDINGS
ALONG MEGAMILE (LARGE
RETAILERS LOADING &
SERVICE AREAS)
- NORTH**
LILYDALE RAILWAY LINE &
COMMUTER CAR PARKING
- NORTH-WEST**
NUNAWADING RAILWAY
STATION (400M WEST)
NUNAWADING RETAIL
CENTRE (250M WEST)
- WEST**
CONNECTION TO PUBLIC
OPEN SPACE
- SOUTH-EAST**
DANIEL ROBERTSON
HERITAGE CHIMNEY
LOCAL LANDMARK
- WEST**
LOW DENSITY RESIDENTIAL
SINGLE-STOREY DETACHED
DWELLINGS
- EAST**
DOUBLE STOREY
COMMERCIAL LIGHT
INDUSTRIAL
- EAST**
NORCAL ROAD
- SOUTH**
LIGHT INDUSTRIAL



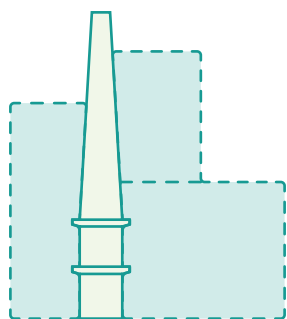
STAGE 1 - ZONING:



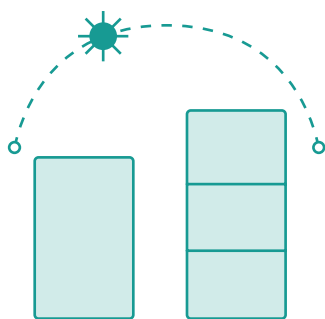
MASTER PLAN OBJECTIVES



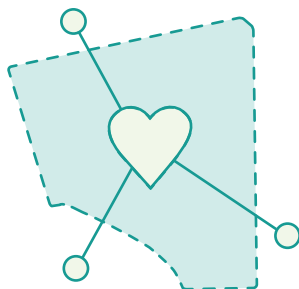
Cultural Heritage
& Urban Identity



Contextually
Responsive Built Form



Access to Sun
Buildings & Open Space



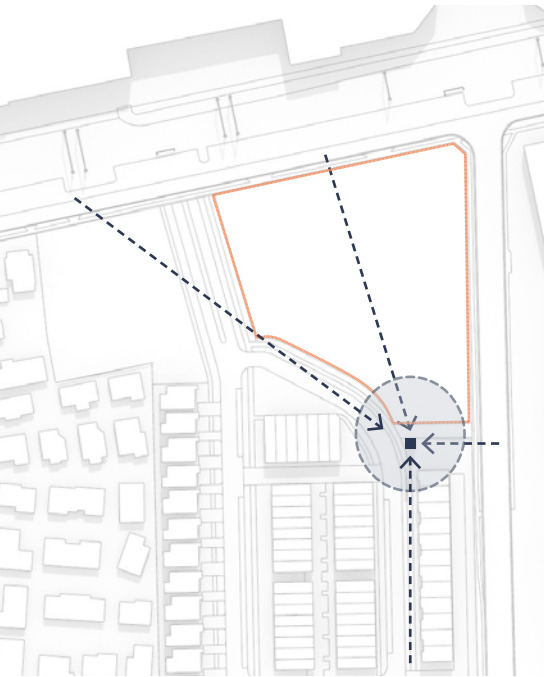
Connected Green
Network



Site Specific
Interfaces

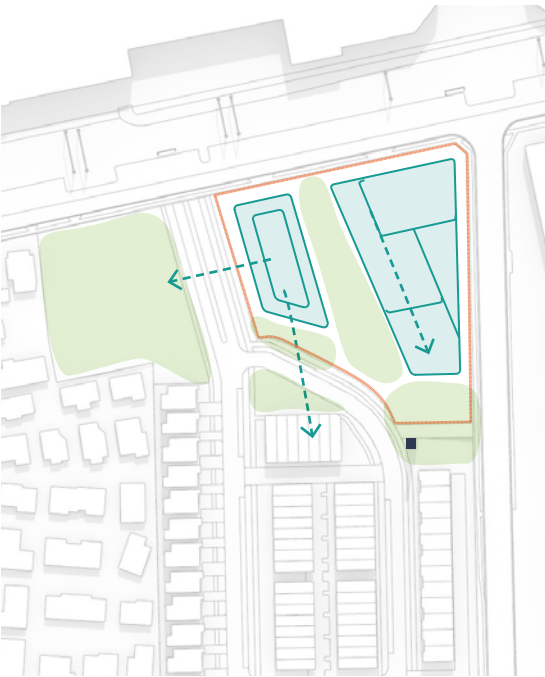
MASTER PLAN OBJECTIVES

Cultural Heritage & Urban Identity



Celebration of the heritage listed Daniel Robertson Brickworks heritage chimney as a local landmark. Retention of key views and new view line opportunities from approach and main open spaces with appropriate setbacks to protect the approved Chimney park amenity. Urban legibility with clear site lines maximises activation across the precinct.

Contextually Responsive Built Form



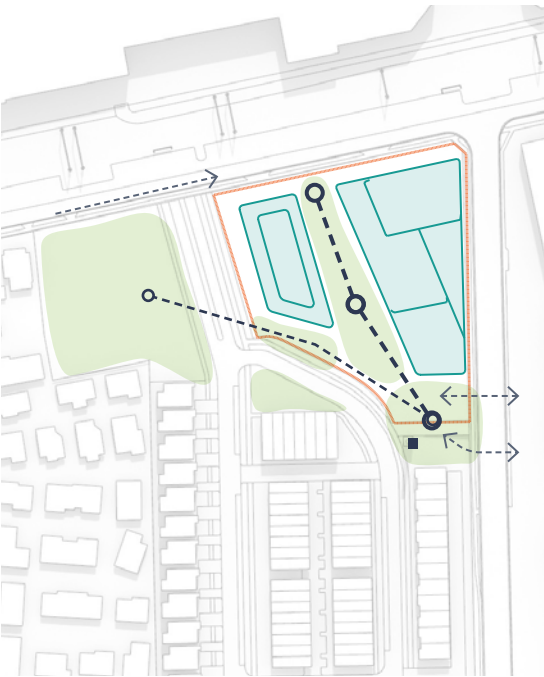
Built form responds to the scale of adjacent existing structures with a distinct spatial hierarchy. Highest form towards the east industrial with lowest form to the west residential. It is suggested that built form could take cues from existing datums to existing plinth and chimney. This provides a respectful relationship in between buildings and existing heritage structures.

Access to Sun Buildings & Open Space



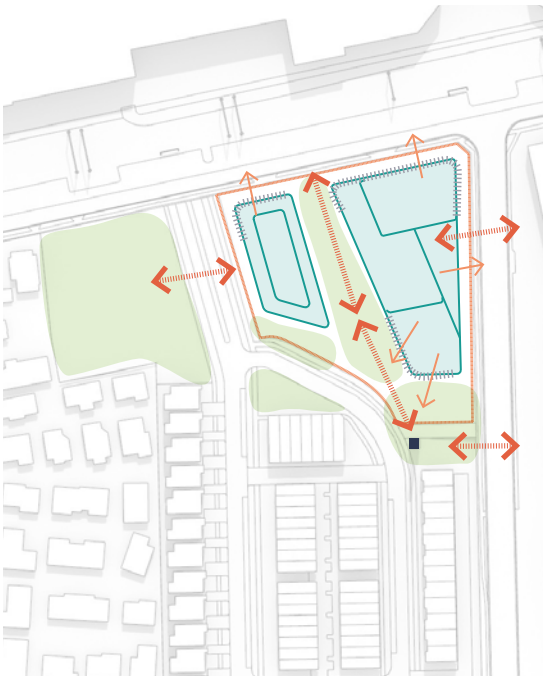
Built form prioritising appropriate solar access to desired activity and certain times for specific use that support the community including key open spaces and notable Chimney park. An overall assessment of shadow studies will ensure adequate protection and provide amenity of a diverse range of outdoor common areas.

Connected Green Network



Precinct to welcome and bring in the community through the network of substantial outdoor, open, permeable and connected spaces. This will include genuine integrated streetscapes and green linkages to create high quality public spaces, greater connectivity in between buildings that stitch the site into the surrounding community and links to greater pedestrian, cycle and road networks.

Site Specific Interfaces



Edges of the precinct is critical with an understanding of the unique nature of each interface. Setbacks to relatively low Stage 1 residential development to the south and west residential, protection from the Industrial to the north and east edges. Interfaces to be developed as urban frontages that respond to site specific conditions, notably level changes and overland flows.

MASTER PLAN FRAMEWORK

Preferred Building Heights + Setbacks

Overall building heights and setbacks govern unobstructed views to the historic landmark. Primary view cone to the heritage listed chimney is from Station St west.

HEIGHTS

- Maximum building heights no greater than 8 storeys with an urban block height strategy. Greatest height at the north eastern corner of Building A adjacent to large format industrial buildings with a gradual stepped transition to 3 storeys, at its southern edge. Transitional heights appropriately respond to adjacent residential areas to respect abutting low-rise development, and the future character of surrounding internal parklands and communal open space.
- Building B is at 8 storeys with the 2 upper levels setback to protect important views, minimise wind and shadow impacts to adjacent open spaces and transition to existing low residential stock.

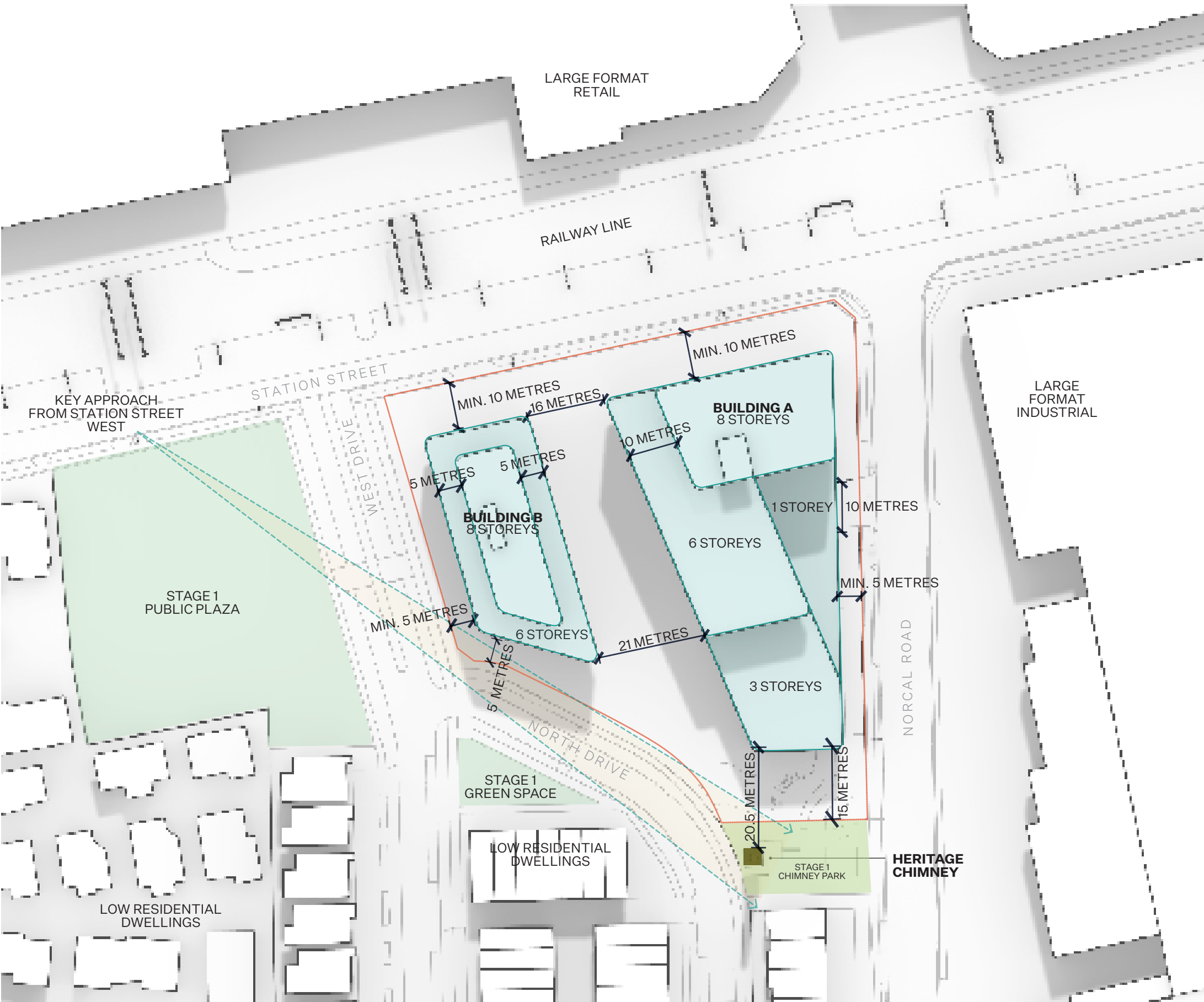
SETBACKS

- 20.5m setback from the heritage chimney to Building A. 5m from South western boundary to Building B to strengthen view corridor from main approach from Station St west.
- Minimum 10m setback along north boundary to allow for an appropriate urban street edge and buffer to the existing railway line.
- Minimum 5m setback along east and west site boundaries for landscaped opportunities and appropriate green lined edges.
- Buildings separated at minimum 16m to the north and 21m from south-east corner of Building B. Adequate setbacks between the upper levels of buildings to ensure private amenity including access to sunlight and outlook with high quality internal amenity.

PROJECT SITE

STAGE 1 OPEN PARKS

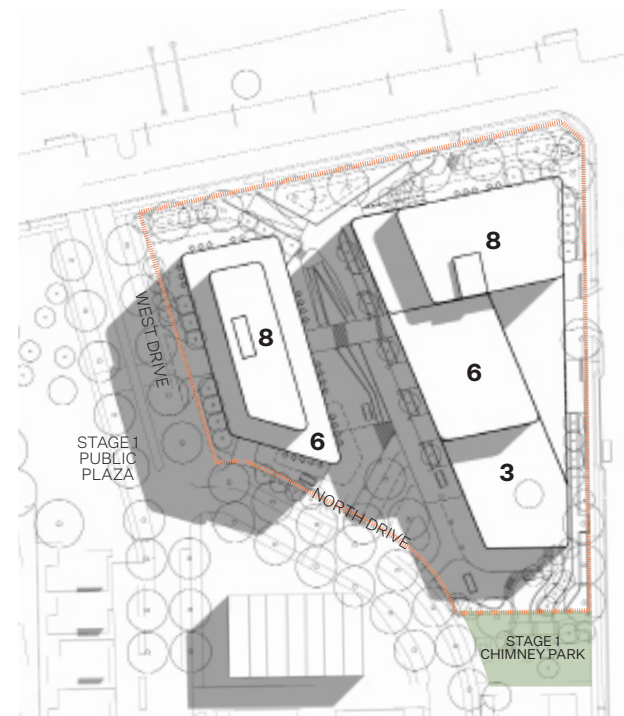
BUILT FORM



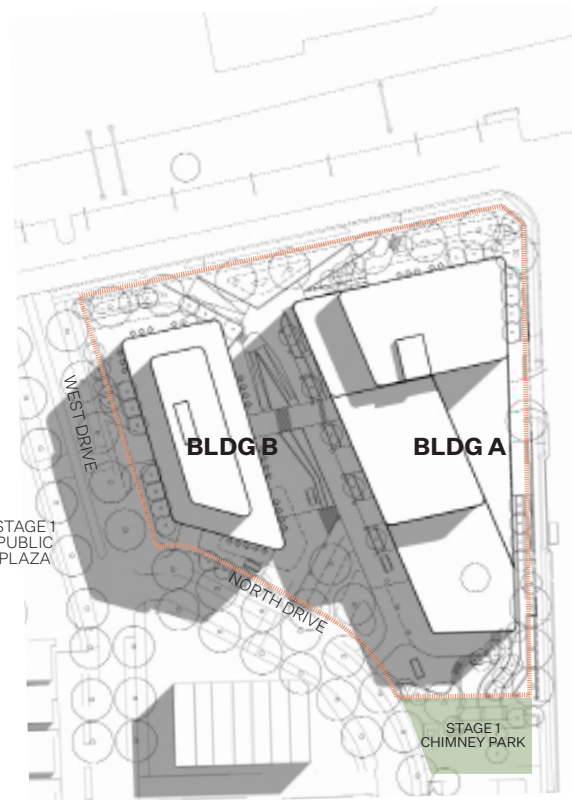
Sun Studies

Built form prioritising appropriate solar access to desired activity and certain times for specific use that support the community including key open spaces and notable Chimney park. These provide amenity of a diverse range of outdoor common areas.

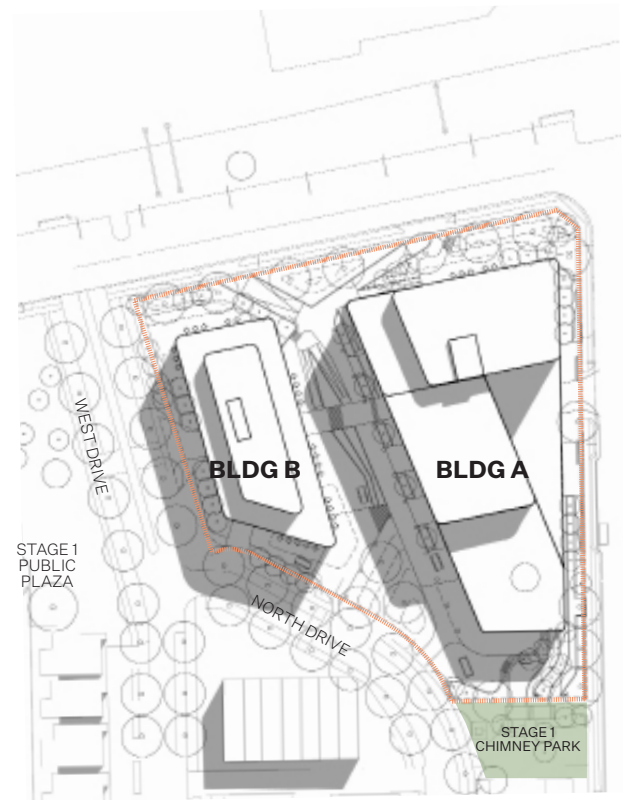
- No overshadowing between the hours of 11am and 2pm at the September equinox: of the entire north-eastern edge of Building B, the western footpath of West Drive, the southern footpath of North Drive, and the adjoining Stage 1 Public Plaza .
- No overshadowing of the NE elevation of Building B from Building A and the public path to its east between the hours of 11am and 12 noon at the September Equinox.



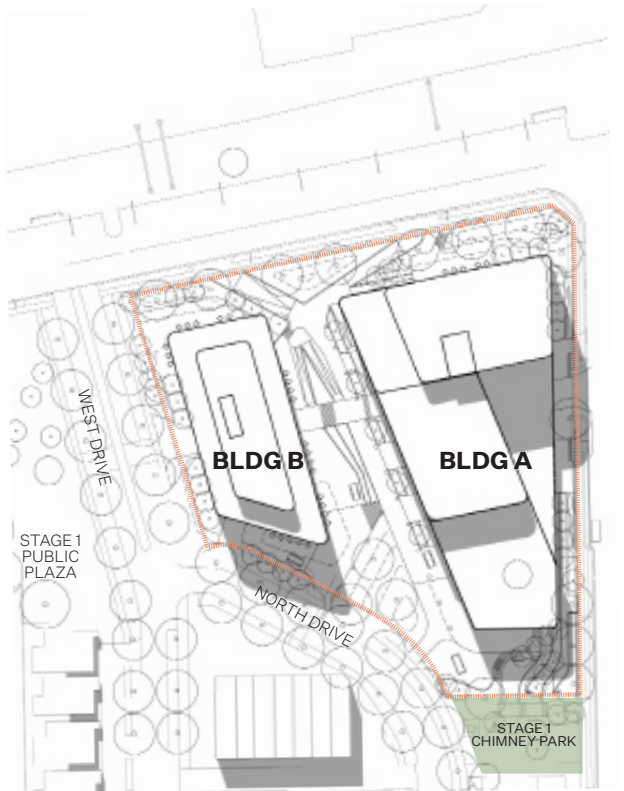
10AM



11AM

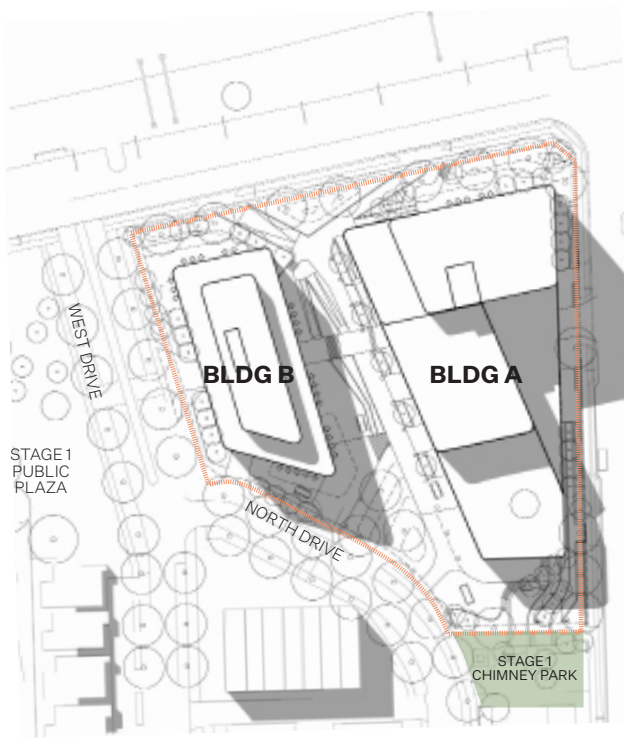


12PM

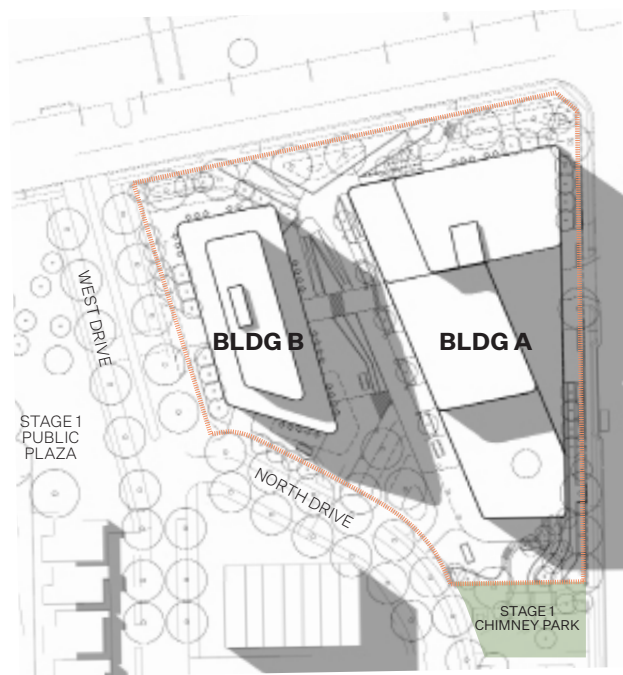


1PM

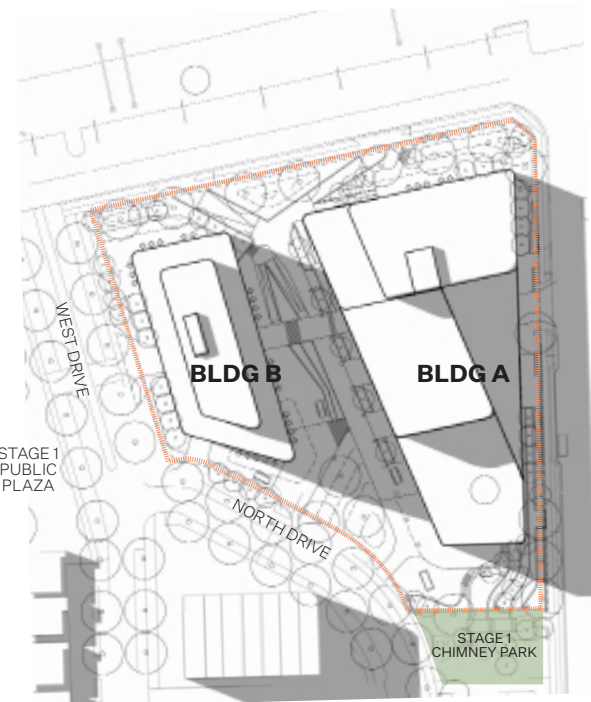
Promenade & Chimney Park solar access optimised for lunch time / afternoon use / activated key frontages



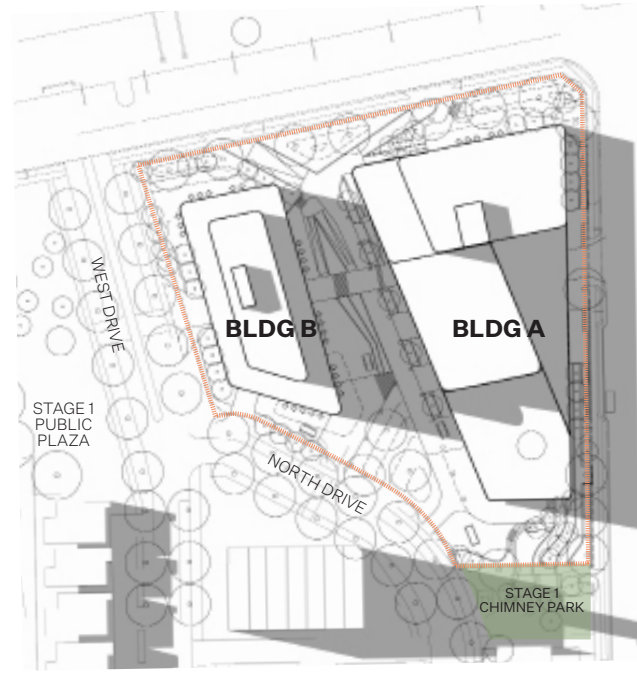
2PM



3PM



4PM



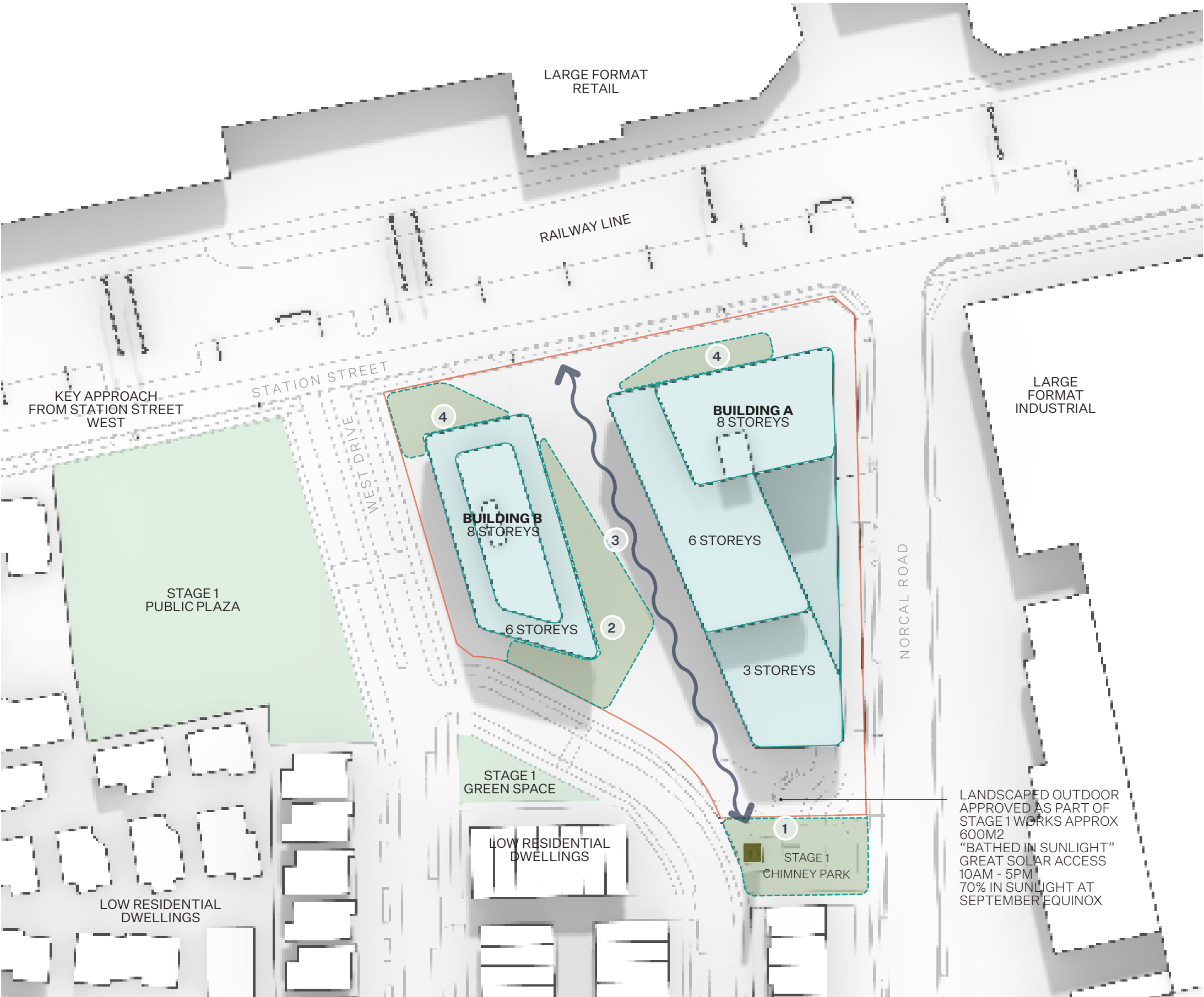
5PM

MASTER PLAN FRAMEWORK

Public Open Space Hierarchy

Provision of a variety of open space experiences suitable for their intended purposes that range from passive/informal to highly active urban destination that allows for a sense of community that is publicly accessible to greater Nunawading.

- 1 CHIMNEY PARK**
A major focus of community life for social gatherings and a unified public open space with engaging landscape features to highlight the heritage context of site. Designed as an extension of Stage 1 is a seamless landscaped transition, enjoying access to sunlight with minimal overshadowing between 10AM to 5PM. Outdoor hospitality opportunities to be considered to south of Building A to further strengthen activation of open space.
- 2 GROUND FLOOR FOCUS**
Key dwelling area directly basked in sunlight midday with a strong ground floor focus, retail activation for a welcoming urban experience.
- 3 GREEN TRANSITIONARY PROMENADE**
Central landscaped green axis with passive movement, lawn, small pockets of seating areas and main connector between entry point and activated open spaces. A key transitional space.
- 4 GREEN EDGE**
10m setback along north boundary to allow for an appropriate buffered edge from railway line with activated shopfronts



BUILT FORM

PRIMARY PUBLIC THOROUGHFARE

MASTER PLAN FRAMEWORK

Permeability - Ground Floor

A clear central link to the precinct to enable the Nunawading community to be invited in. This creates a community hub and enables a strong public realm on the ground plane.

RETAIL

Ground floor permeability to allow for retail shop fronts to be activated by public along North West of Station street to Building B and clear connectivity to Chimney Park. Direct entry from east along Norcal Road to ground floor retail of Building A. On grade loading from Norcal Road towards the South for additional servicing.

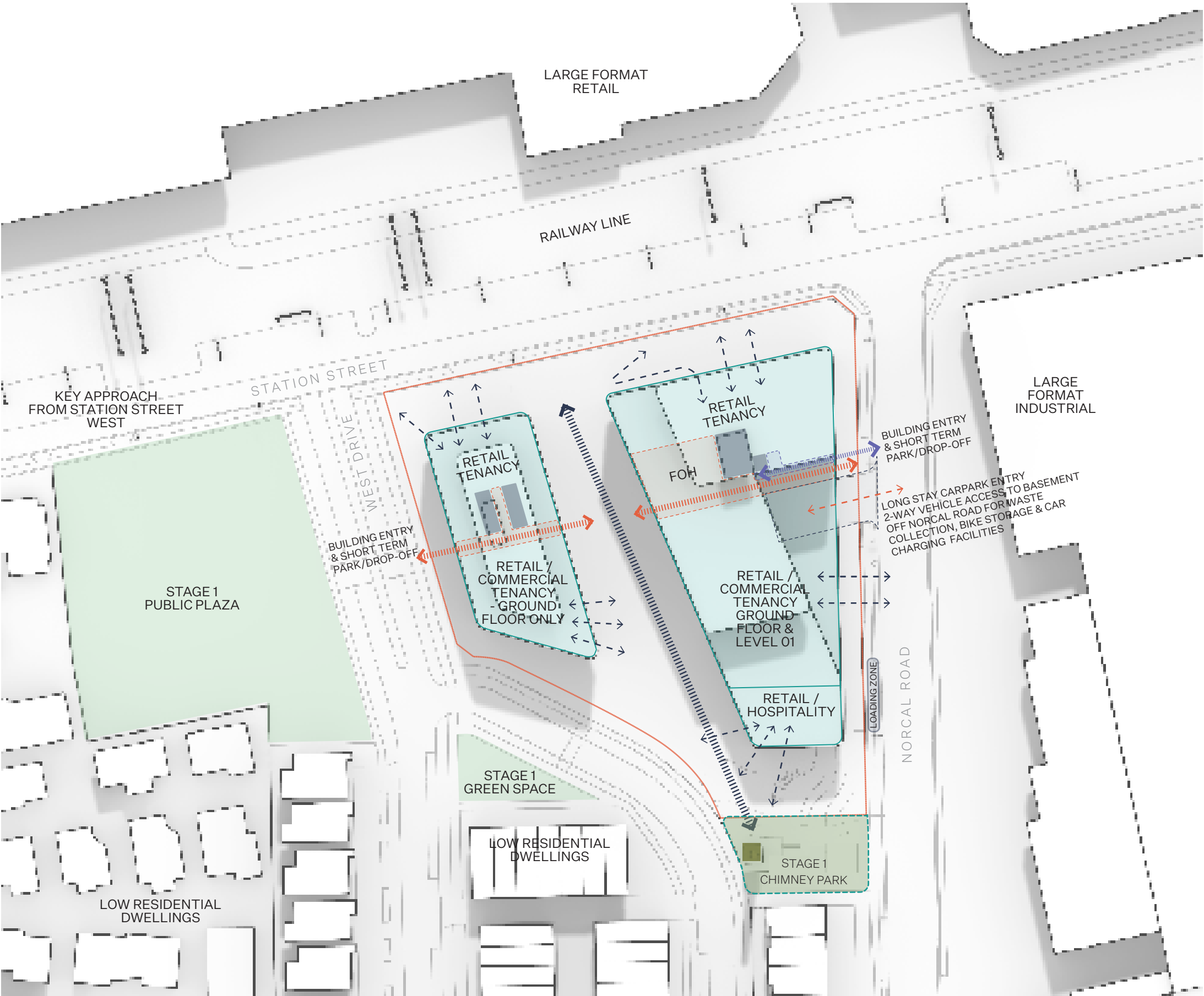
COMMERCIAL

Exclusive entry from Norcal Road with dedicated lift core and stairs for access to Level 01 Commercial.

RESIDENTIAL

Primary residential entries along east-west of site via central green spine and street facing entries along West Drive and Norcal Road. Short term parking and drop off to occur along these zones.

- MAIN OPEN TRANZIENT PLAZAS
- CHIMNEY PARK
- BUILDING CORE
- BASEMENT DRIVEWAY
- FRONT OF HOUSE LOBBY, CONCIERGE, MAIL
- COMMERCIAL LOBBY ACCESS TO LEVEL 01 & BASEMENT
- PRIMARY COMMERCIAL ENTRY ACCESS TO LEVEL 01 & BASEMENT
- PRIMARY PUBLIC CIRCULATION
- RETAIL/COMMERCIAL ENTRY
- RESIDENTIAL ENTRY
- VEHICULAR ENTRY



REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

MASTER PLAN FRAMEWORK

Edge Conditions + Site Levels

Distinct character to site specific edges of open space. Framing of edges allow for a respectful response to adjacent built form

BUILDING A

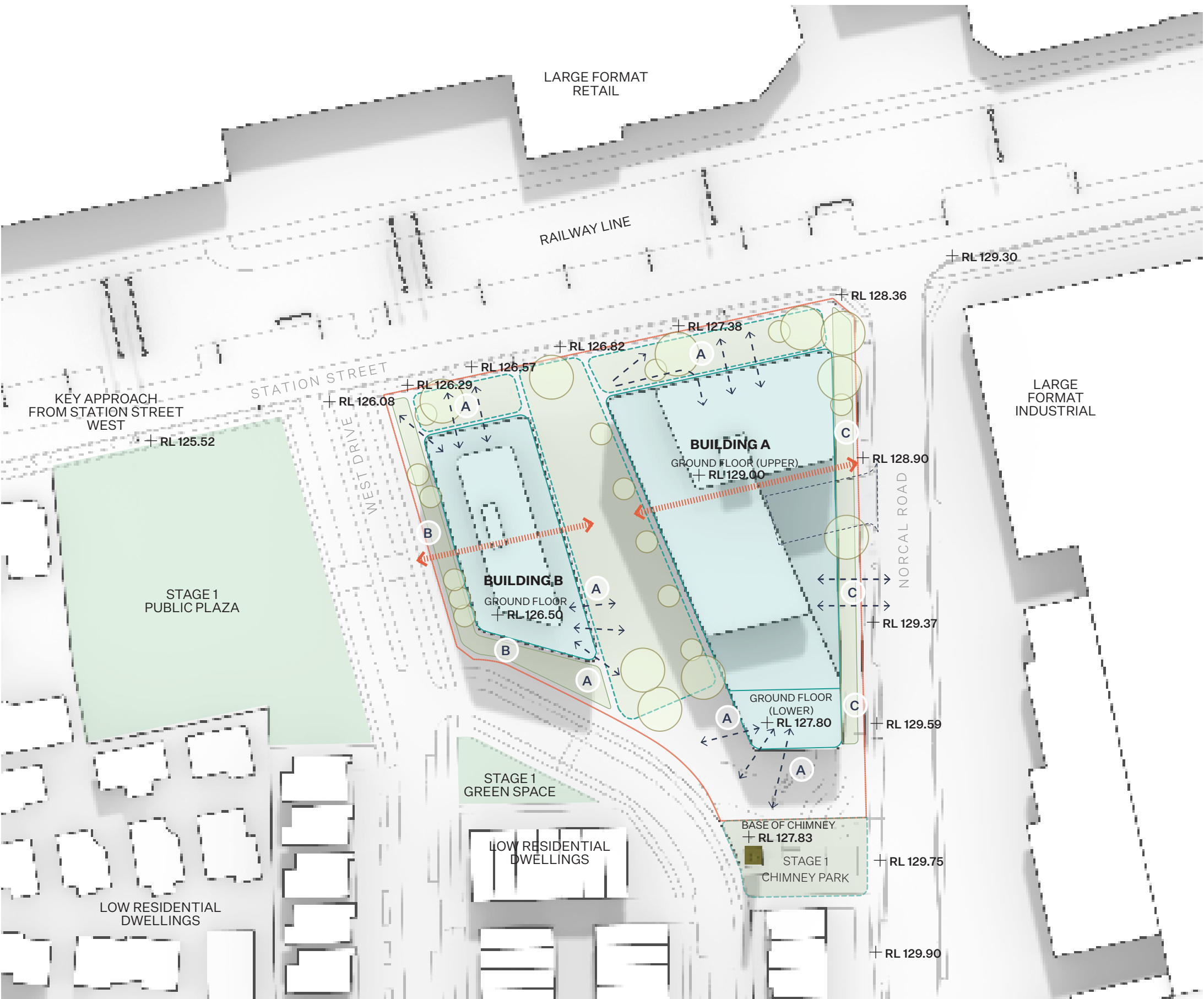
Ground Floor RL's to suit adjacent existing footpath levels for smooth transition. Building A split, lower level for better connectivity with Chimney Park with a flush transition. Ground Floor (Upper) to better transition into building entries from Norcal Road along the east.

BUILDING B

Ground Floor RL's to suit adjacent footpath and main approach from northwestern corner.

- A** RETAIL EDGE
Edging that maintain visibility into tenancies with quality built edges to encourage active public life.
- B** NEIGHBOURHOOD EDGE
Tree lined edging for a pleasant experience with passive informal bench seating for residents and soft transition to adjacent low rise housing.
- C** INDUSTRIAL EDGE
Interface condition that responds to large format industrial buildings. This interface will primarily be used for secondary entries and circulation

- PROJECT SITE
- STAGE 1 OPEN PARKS
- BUILT FORM
- RESIDENTIAL ENTRY
- RETAIL/COMMERCIAL ENTRY
- MAIN OPEN TRANSIENT PLAZAS
- CHIMNEY PARK



REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

MASTER PLAN FRAMEWORK

Active Frontages + Weather Protection

Provision of active frontages at ground level including a high level of public interaction to ensure a safe and varied public environment including along all internal and external streets, future parklands and communal open space areas.

ACTIVE FRONTAGES

Minimum 50% or 80% with adequate glazing and finer grain treatment to external facade to attract patrons into retail tenancies with good visual connection.

BUILDING INTERFACES

Good ‘street architecture’ with articulated facades, fenestration, parapets, detailing and materials that give a sense of human scale and interest to the street to be developed to activated frontages

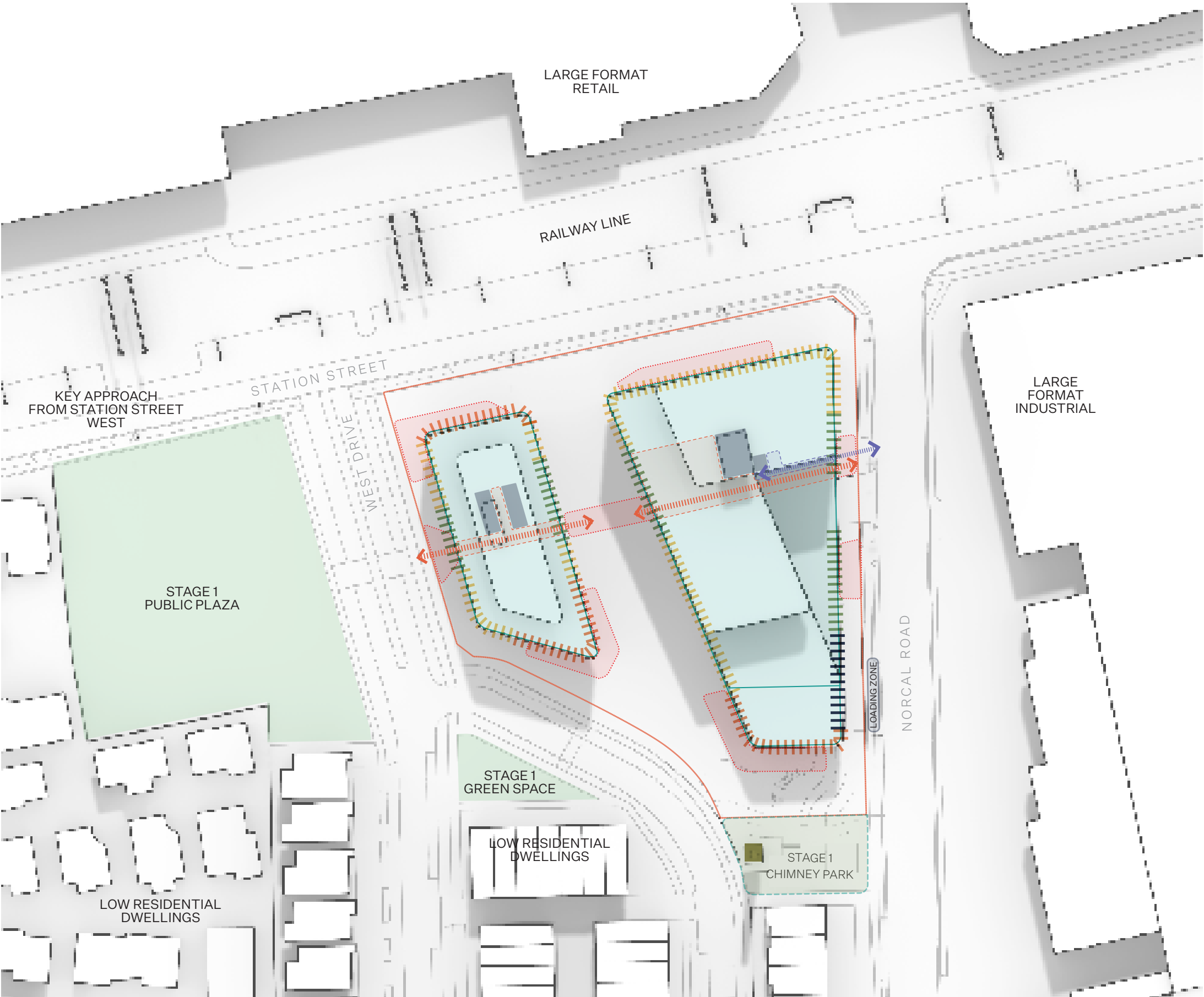
WEATHER PROTECTION

Continuous weather protection along proposed building interfaces to main street frontages and building entry points. Pedestrian comfort along these areas to be considered with wind mitigation strategies to include further ground floor indentations, fixed canopies and/or cantilevered awnings suitable for long term dwelling.

SERVICE FRONTAGES

On-grade service road frontages will provide access, loading/unloading. Isolating vehicle access off Norcal Road to allow for collection of waste located in basement

-  CANOPY WEATHER PROTECTION
BUILDING ENTRIES AND RETAIL ACTIVATION
-  RESIDENTIAL ENTRY
-  PRIMARY COMMERCIAL ENTRY
ACCESS TO LEVEL 01 & BASEMENT
-  ACTIVE FRONTAGES - 80%
-  ACTIVE FRONTAGE - 50%
-  SERVICE ROAD FRONTAGES
-  BUILDING LOBBY ACTIVATION

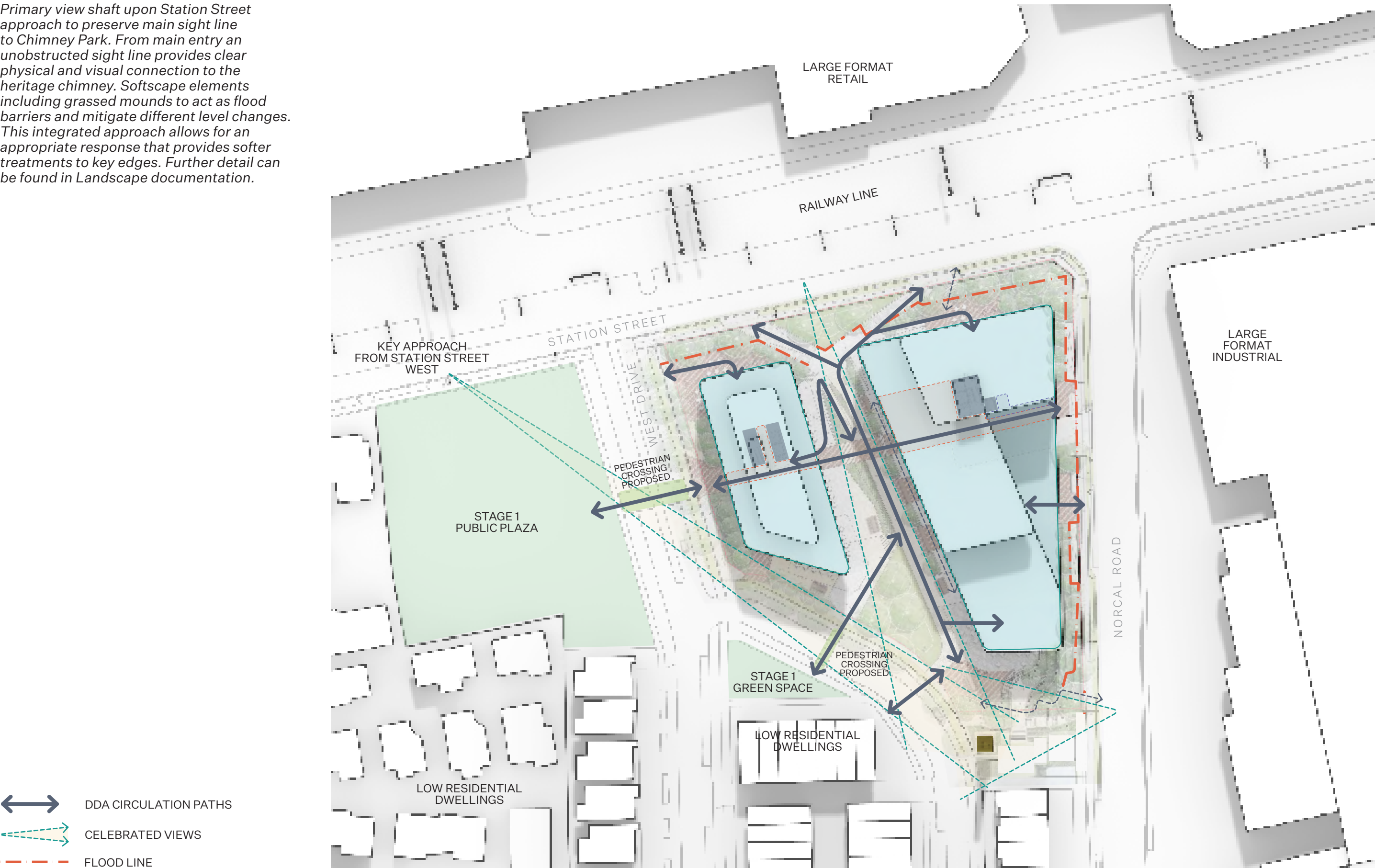


REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

MASTER PLAN FRAMEWORK

Desired Sight Lines

Primary view shaft upon Station Street approach to preserve main sight line to Chimney Park. From main entry an unobstructed sight line provides clear physical and visual connection to the heritage chimney. Softscape elements including grassed mounds to act as flood barriers and mitigate different level changes. This integrated approach allows for an appropriate response that provides softer treatments to key edges. Further detail can be found in Landscape documentation.



REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

MASTER PLAN FRAMEWORK

Typical Residential Layout

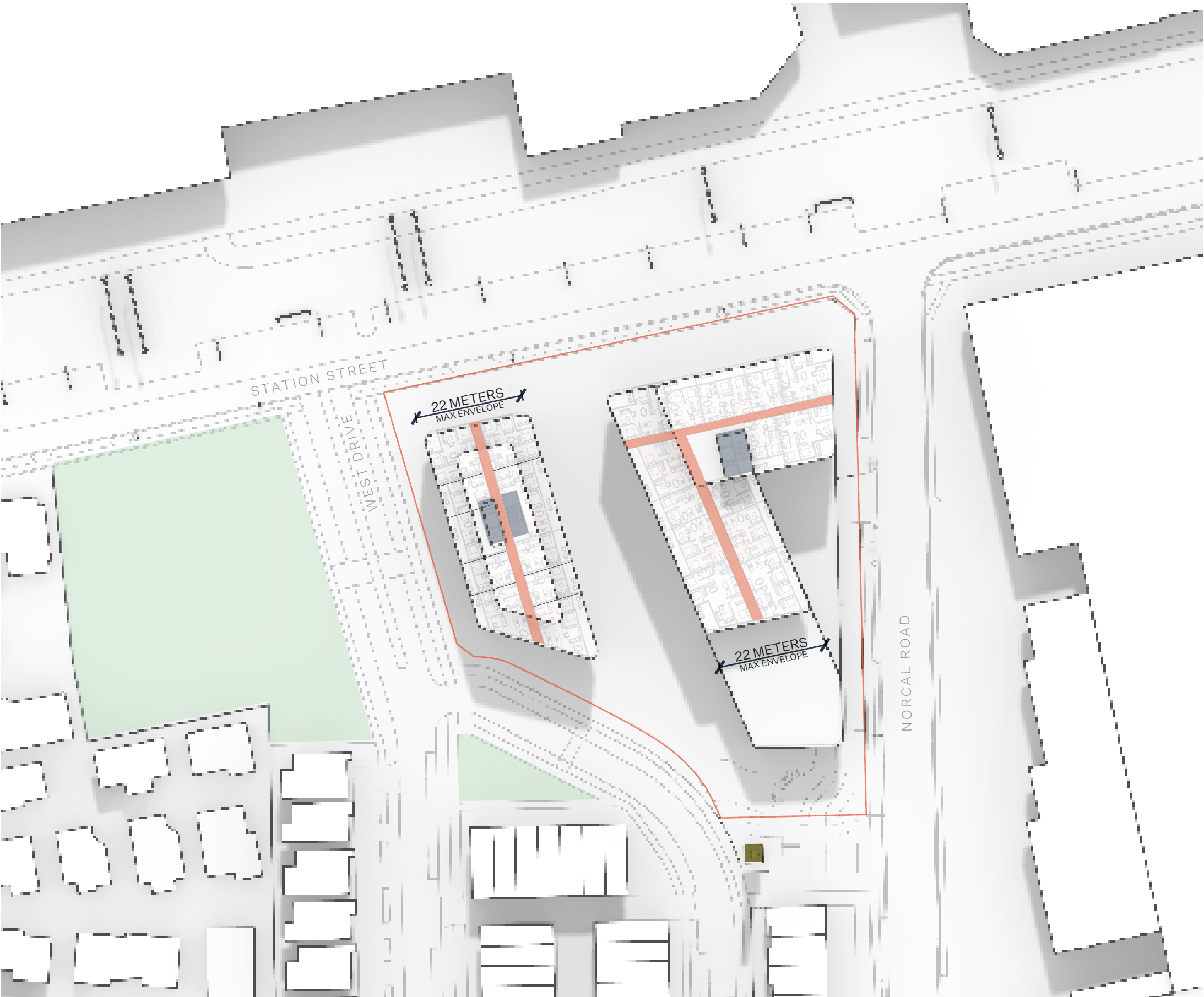
Generally double-loaded apartments within 22m overall building envelope width to include private open space with direct access off living areas and oriented to maximise sunlight access. This precludes any additional setback above the podium which would affect the optimisation of the building envelope to allow for efficient double loaded apartments.

Typical layouts shown are indicative only. 1-3 bedroom dwellings to be explored in concept and town planning phase to align with BADS requirements with associated internal and external storage and private open terraces/ balconies - extents to be determined in the next design phase.

Level 06 and Level 07 of Building B recessed to be single loaded apartments with only 12m overall width due to upper level setbacks.

- PROJECT SITE
- STAGE 1 OPEN PARKS
- BUILDING CORE
- RESIDENTIAL CIRCULATION

NOTE: General corridor lengths and visual breaks to be provided in Building A and Building B in the next design phase with enhanced amenity and connection at key arrival points to the floors and improved demarcation between tower forms. Areas shown for distribution of area and efficiency only.



MASTER PLAN FRAMEWORK

Upper Level Community Outdoor Amenity

Meaningful outdoor terraces for exclusive use for residents. Elevated communal spaces provide substantial occupiable rooftop spaces. Soil depths to be explored to provide large tree canopies. Further detail can be found in Landscape documentation.

- Level 01 associated with adjoining commercial space with all weather protection to align with Urban Design Guidelines of Victoria.
- Level 03 to be associated with outdoor social space conducive to communal social areas with supporting amenities, exclusive for resident use only.
- Level 06 to be associated with alternative relaxation, outdoor exercise, spaces for respite. Appropriate shelters, outdoor furniture to be included to suit upper level amenity zones exclusive for resident use only.

INDICATIVE PLANT EXTENT

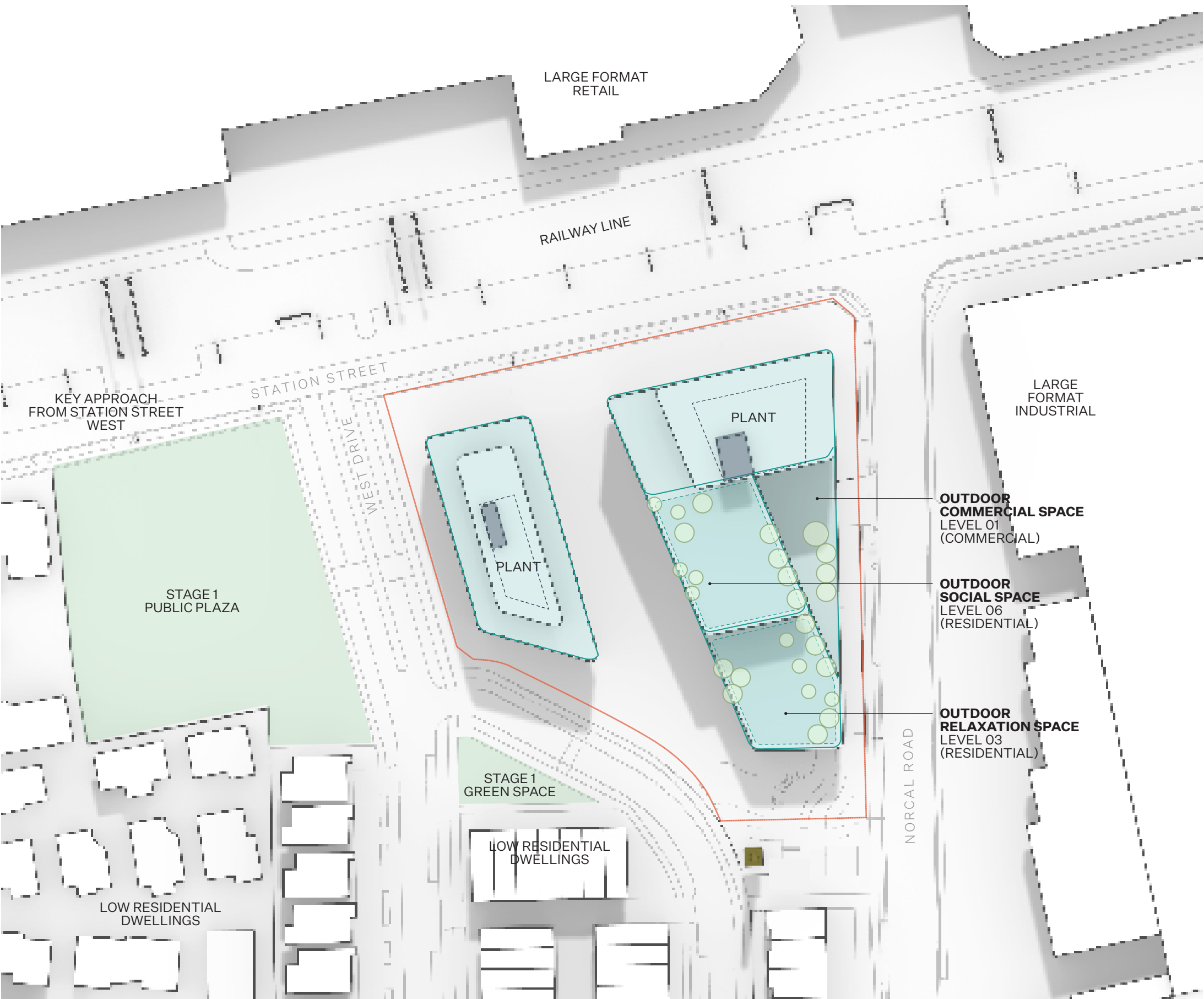
PROJECT SITE

STAGE 1 OPEN PARKS

BUILT FORM

OUTDOOR TERRACE

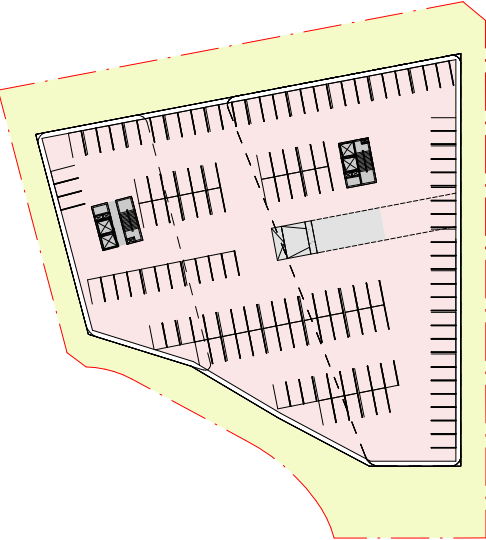
BUILDING CORE



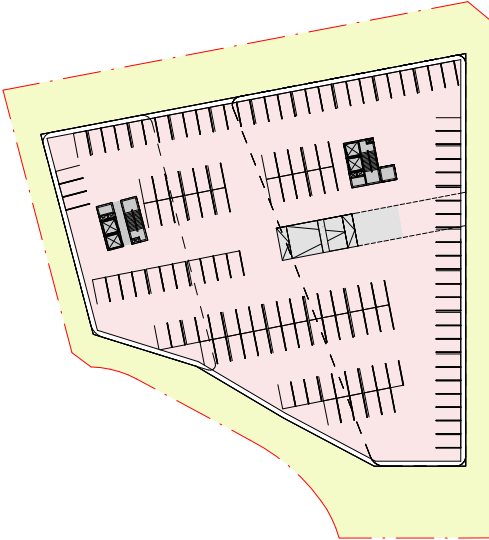
MASSING & YIELD

Area Plans

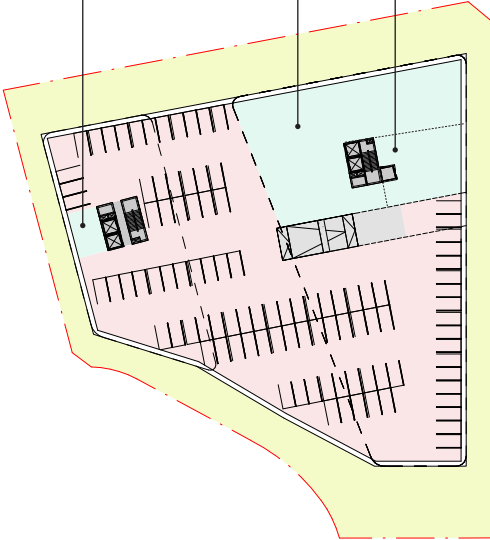
Secure car parking for dwellings, proposed retail and/or commercial tenancies to be in accordance with requirements Clause 52.06-5 - exact layout to be determined in concept and town planning phase with further traffic engineer input.



BASEMENT 03	
GFA (approx)	4,591 m²
Carpark	4,463 m²
Core / Services	128 m²
Car Park No. (approx)	134



BASEMENT 02	
GFA (approx)	4,556 m²
Carpark	4,419 m²
Core / Services	137 m²
Car Park No. (approx)	134



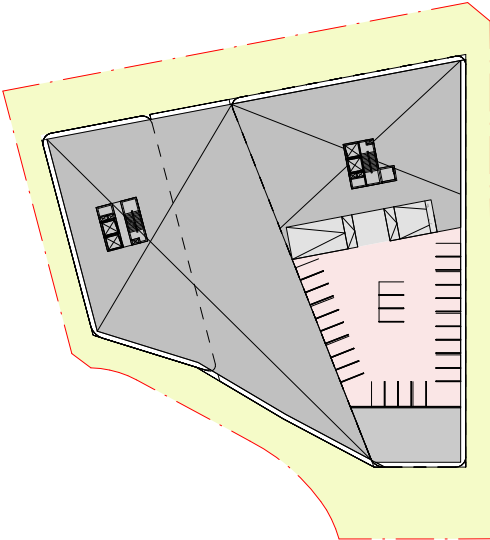
BASEMENT 01	
GFA (approx)	4,557 m²
Carpark	3,350 m²
Core / Services / Waste / Storage	1,207 m²
Car Park No. (approx)	101

Dedicated waste storage for Building B. Building Services to be included.

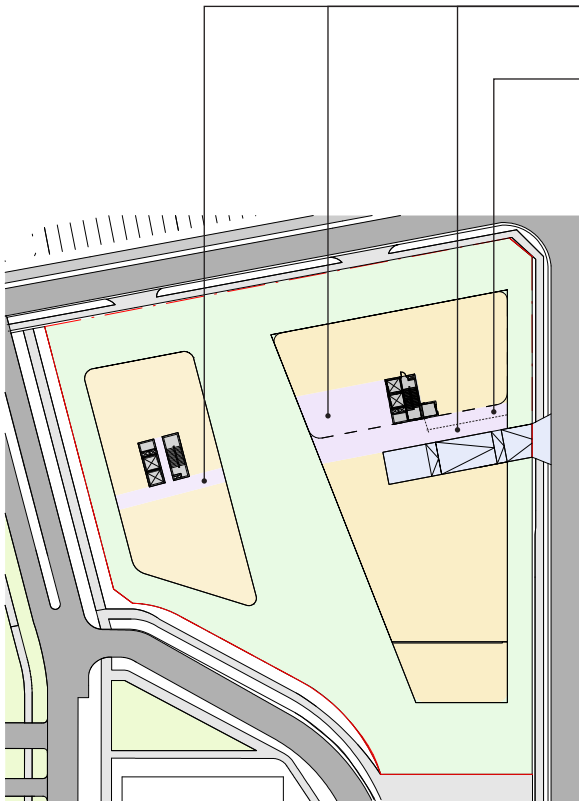
Shared End of Trip to include secure bike parks and Residential storage. Dedicated waste storage for Building A. Building Services to be included.

Dedicated waste facilities and lift for Commercial operations. Building Services to be included.

- RETAIL / COMMERCIAL
- WASTE / STORAGE
- CORE / CIRCULATION / SERVICES
- FRONT OF HOUSE
- DRIVEWAY
- CAR PARK
- DEEP SOIL PLANTING ZONE



BASEMENT 01 MEZZANINE	
GFA (approx)	1,031 m²
Carpark	1,031 m²
Car Park No. (approx)	26



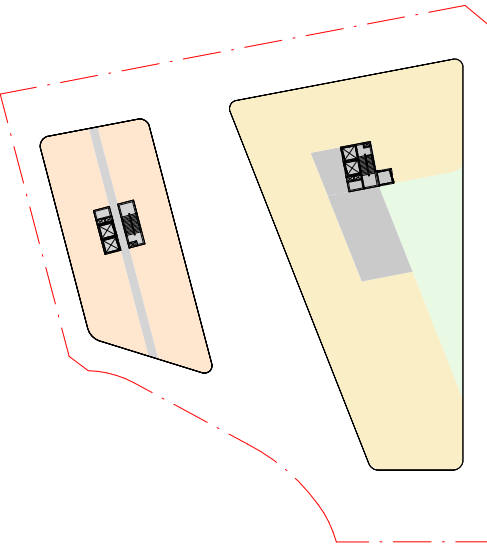
Entrance and lobby arrangements for Residents on Ground Floor

Dedicated entrance and lobby arrangements to Commercial on Ground Floor with access to Level 01 & Basement

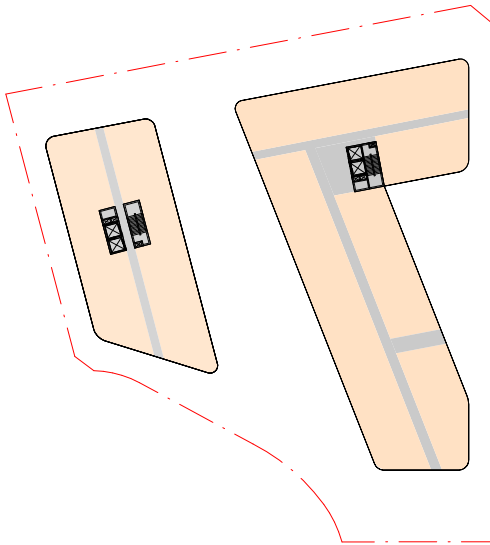
GROUND FLOOR	
Building A	
Retail NLA (approx)	2,008 m²
Core/Services/Commons/FOH	699 m²
Building B	
Retail NLA (approx)	895 m²
Core/Services/Commons/FOH	137 m²

MASSING & YIELD

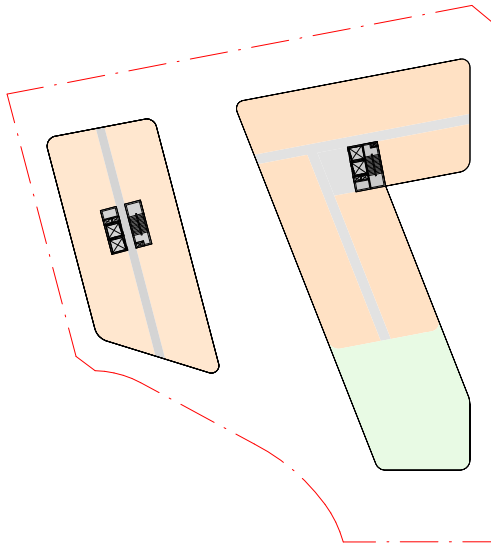
Area Plans



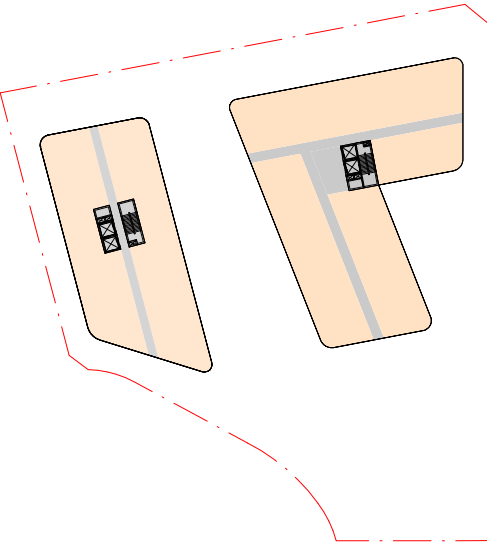
LEVEL 01	
Building A	
Retail NLA (approx)	1,903 m²
Core/Services/Commons	297 m²
Building B	
Residential NLA (approx)	884 m²
Core/Services/Commons	148 m²



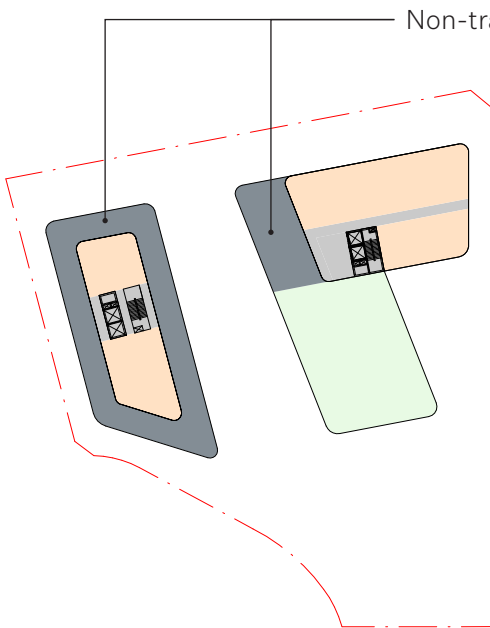
LEVEL 02	
Building A	
Residential NLA (approx)	1,878 m²
Core/Services/Commons	321 m²
Building B	
Residential NLA (approx)	884 m²
Core/Services/Commons	148 m²



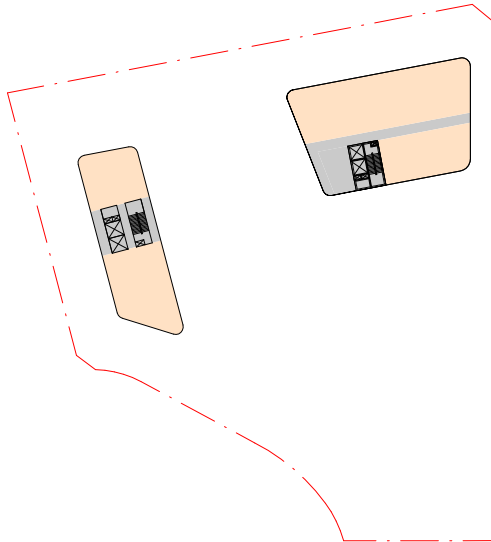
LEVEL 03	
Building A	
Residential NLA (approx)	1,362 m²
Core/Services/Commons	264 m²
Outdoor Terrace	572 m²
Building B	
Residential NLA (approx)	884 m²
Core/Services/Commons	148 m²



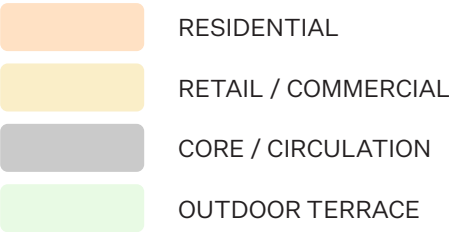
LEVELS 04-05	
Building A	
Residential NLA (approx)	1,362 m²
Core/Services/Commons	264 m²
Building B	
Residential NLA (approx)	884 m²
Core/Services/Commons	148 m²



LEVEL 06	
Building A	
Residential NLA (approx)	550 m²
Core/Services/Commons	182 m²
Outdoor Terrace	670 m²
Building B	
Residential NLA (approx)	324 m²
Core/Services/Commons	108 m²



LEVEL 07	
Building A	
Residential NLA (approx)	550 m²
Core/Services/Commons	182 m²
Building B	
Residential NLA (approx)	324 m²
Core/Services/Commons	108 m²



MASSING & YIELD

Overall building Envelope & Proposed Uses



REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

Site GFA	7,381 m²
Building Site Coverage	3,631 m²
Publicly Accessible Areas	3,750 m²

NLA Residential (approx)	12,131 m²
NLA Retail/Commercial (approx)	4,737 m²
GFA Basement (approx)	14,735 m²
GFA Total (approx)	31,603m²

MASSING & YIELD

Overall building Envelope & Proposed Uses



REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

RESIDENTIAL

Units: +/- 121
NLA: 12,131m² (approx)
NLA Efficiency: ~81% =9,826m²

A wide variety of dwelling sizes between 1-3 bedroom + study dwellings (from 60m² up to 120m²) and layouts for a range of housing stock. Secure basement parking and storage requirements will be provided with rooftop communal spaces and private open space via individual balconies with direct access off living areas and oriented to maximise natural daylight and noting minimum separation distances from units.

NOTE: General plant treatment to be integrated with built form to not result in increased perceived bulk and further potential overshadowing.

BASEMENT

GFA: 14,985m²
Car Parks: +/- 395

Three basement levels and a mezzanine to allow for service areas, end of trip facilities for exclusive use of residential and commercial/ retail tenants. Secure car parking for dwellings, proposed retail and/or commercial tenancies to be in accordance with requirements Clause 52.06-5 with any car parking reduction supported by an assessment that responds to relevant planning controls as required and to the satisfaction of the Responsible Authority. Electrical vehicle infrastructure for charging bays to be provided.

Basement 01 will also include centralised waste collection, secure apartment storage, adequate secure bike storage with additional visitor bike parking.

- RESIDENTIAL
- COMMERCIAL/ RETAIL
- ELEVATED COMMUNAL SPACE

MASTER PLAN FRAMEWORK

Visual Precedents - Articulation & Benchmark of similar typologies

Transitional Spaces

Gradual gradients into site with a hierarchy of pathways through green central spine with clear connectivity to mitigate various site levels.



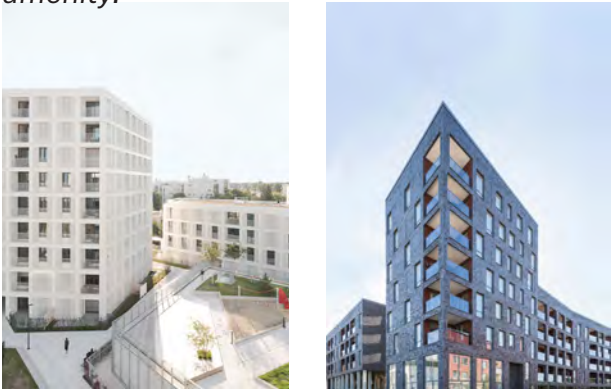
Place Making - Chimney Park

A distinctive site, currently undergoing construction through the stage 1 development, the inspired by its brick heritage, brick landscaped amphitheatre. A towering landmark with clear site lines.



Urban Home

Higher forms appropriately designed with expressed window articulation to erode harsh corners and provide good internal amenity.



Balancing Private & Communal

Multiresidential units with integrated outdoor terraces and balconies to allow for softened edges, welcome biodiversity and ensure good indoor and outdoor living to activate a communal hub.



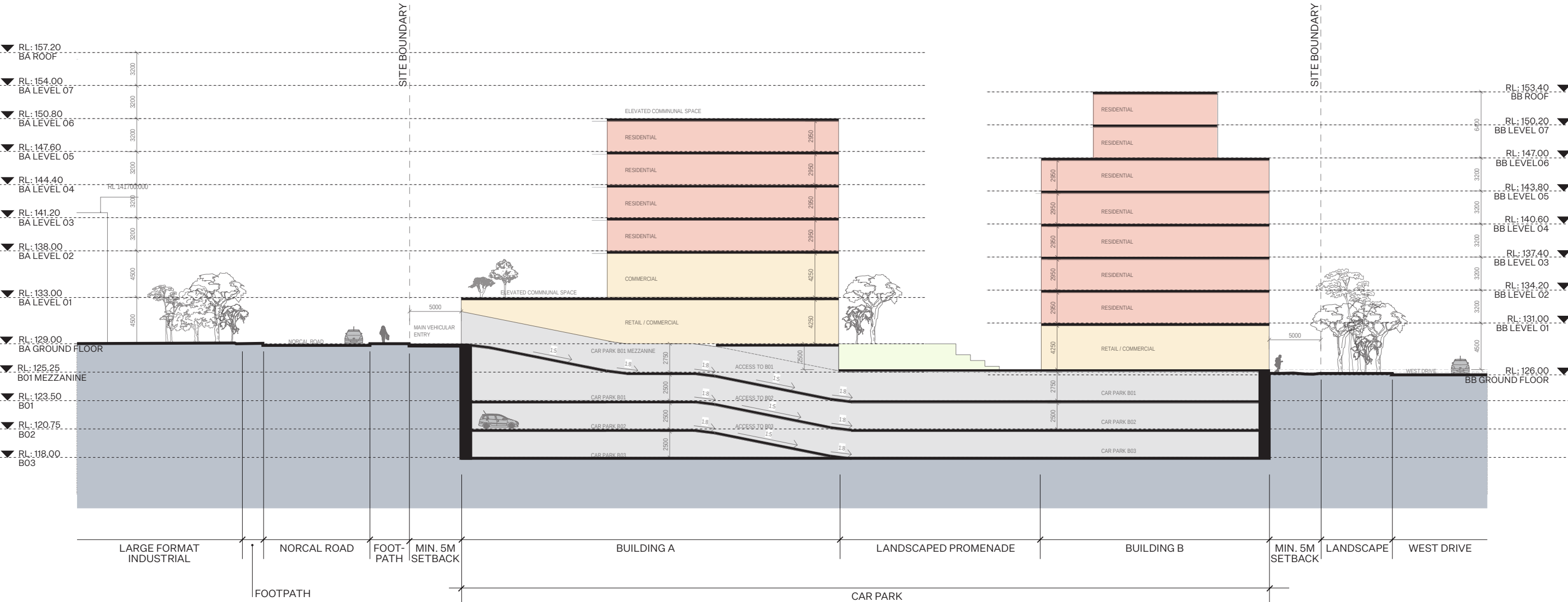
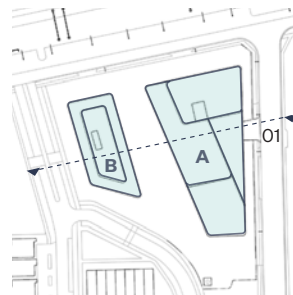
Podium / Heart of The Site

Lower built forms to activate the ground plane with punctuated and legible entries to allow for intuitive wayfinding and a human scale response. Podium to meaningfully interact with Chimney Park with associated retail and hospitality offering for an activated urban area as primary focus of the site.



SITE SECTIONS

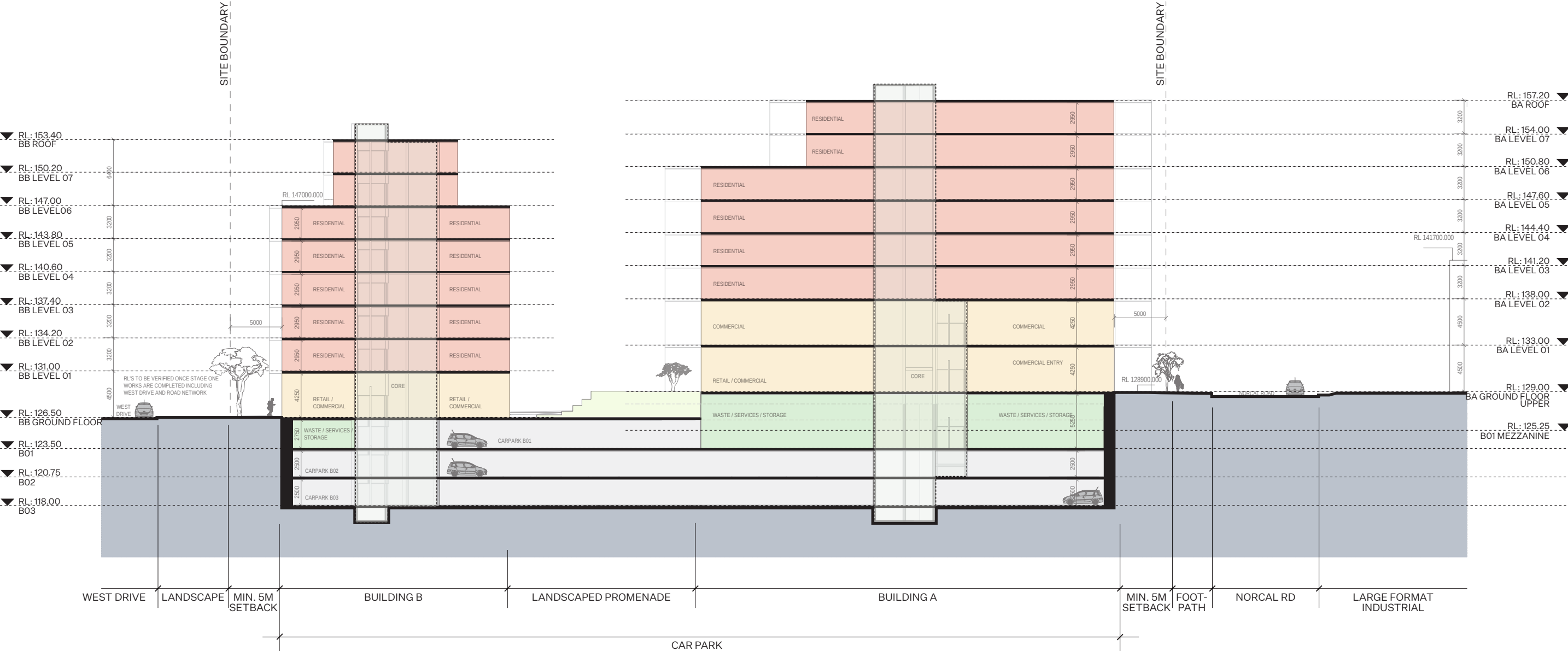
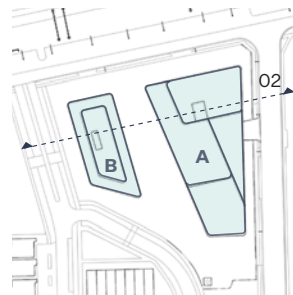
Section 01



REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

SITE SECTIONS

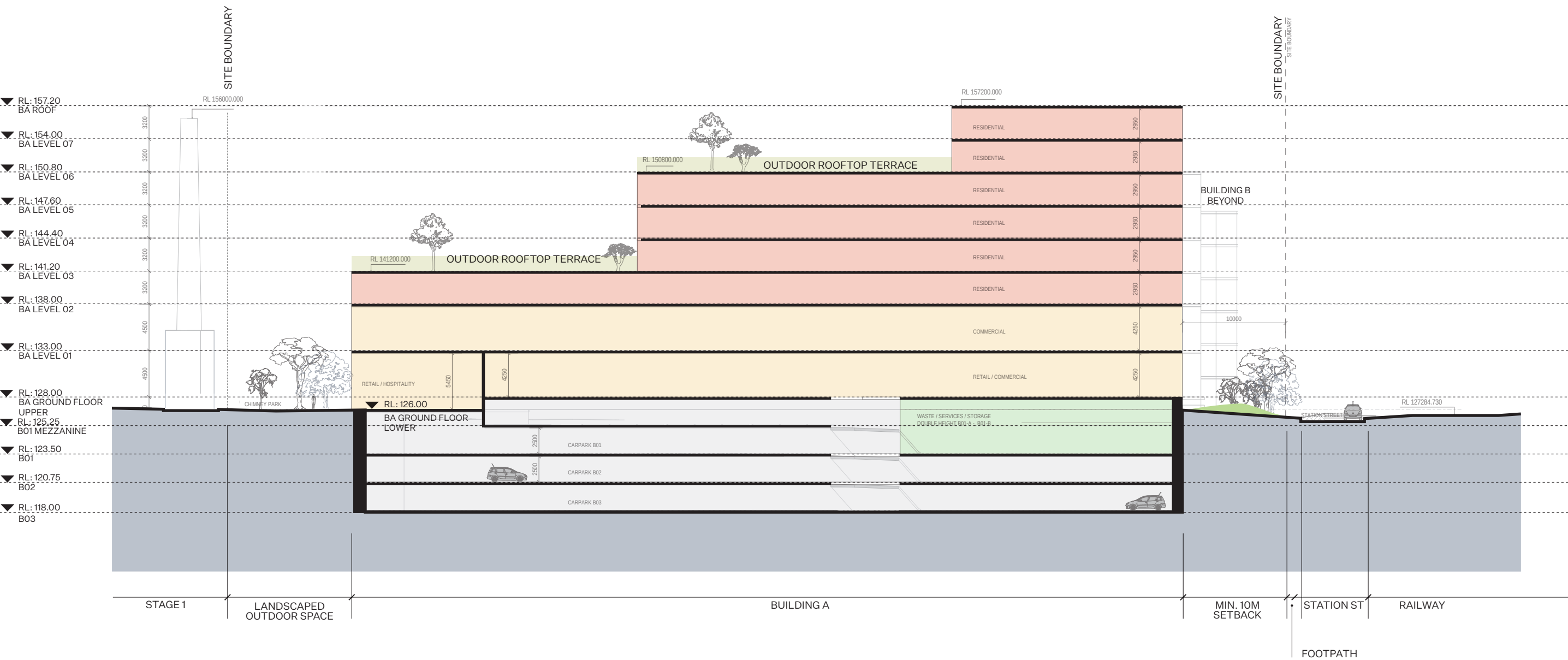
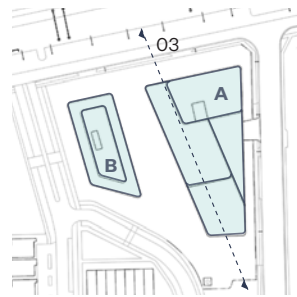
Section 02



REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

SITE SECTIONS

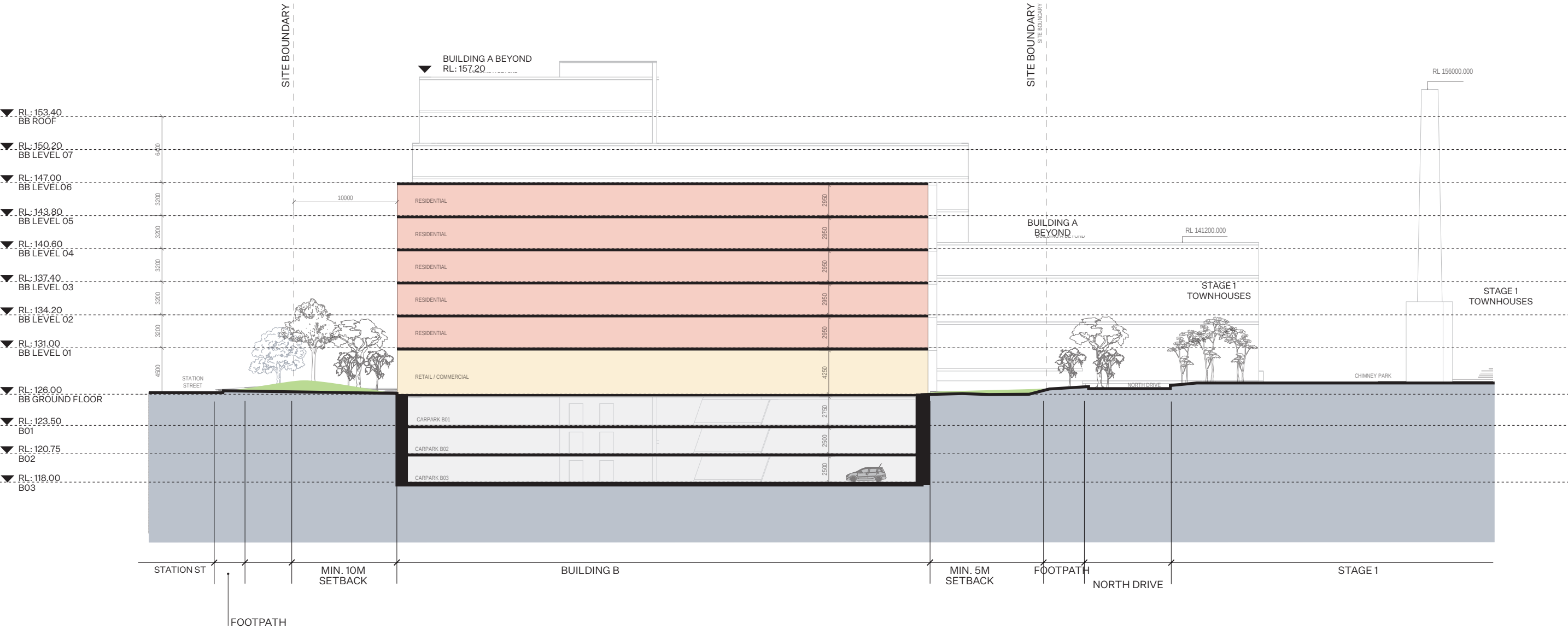
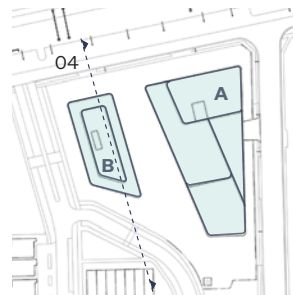
Section 03



REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

SITE SECTIONS

Section 04



REFER TO LANDSCAPE DOCUMENTATION FOR DETAILED FEATURES

INDICATIVE 3D VIEWS CHIMNEY PARK FOCUS

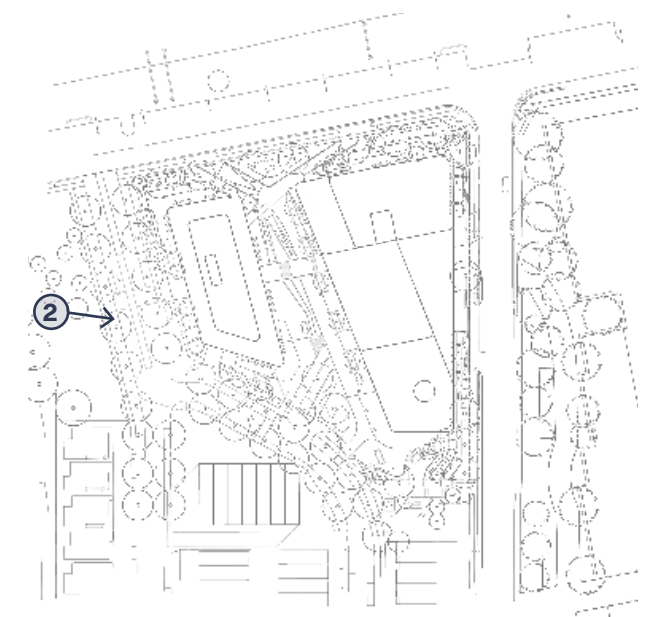
View 1 - From Precinct Entry along Station Street



REFER TO LANDSCAPE REPORT FOR FULL LANDSCAPE CONCEPT AND FEATURES

INDICATIVE 3D VIEWS CHIMNEY PARK FOCUS

View 2 - From Stage 1 Public Park (North West)



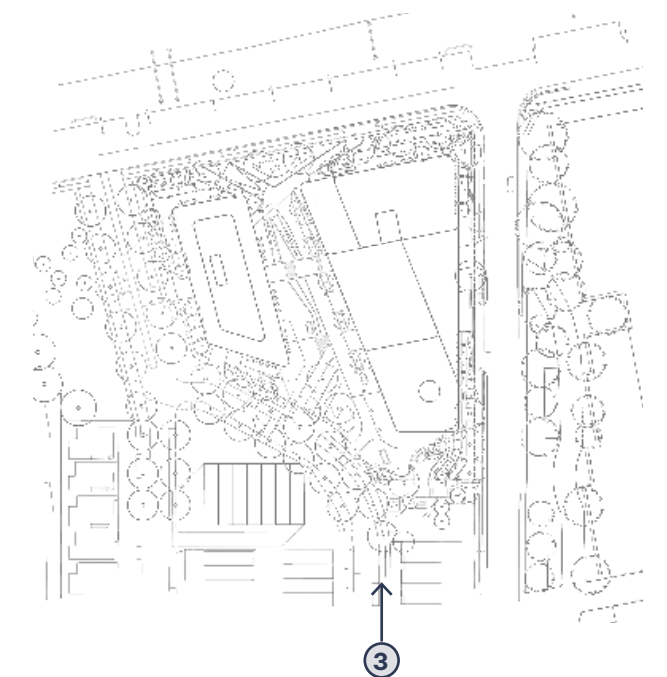
REFER TO LANDSCAPE REPORT FOR FULL LANDSCAPE CONCEPT AND FEATURES

INDICATIVE 3D VIEWS CHIMNEY PARK FOCUS

View 3 - From Stage 1 Townhouses (South)



REFER TO LANDSCAPE REPORT FOR FULL LANDSCAPE CONCEPT AND FEATURES



INDICATIVE 3D VIEWS CHIMNEY PARK FOCUS

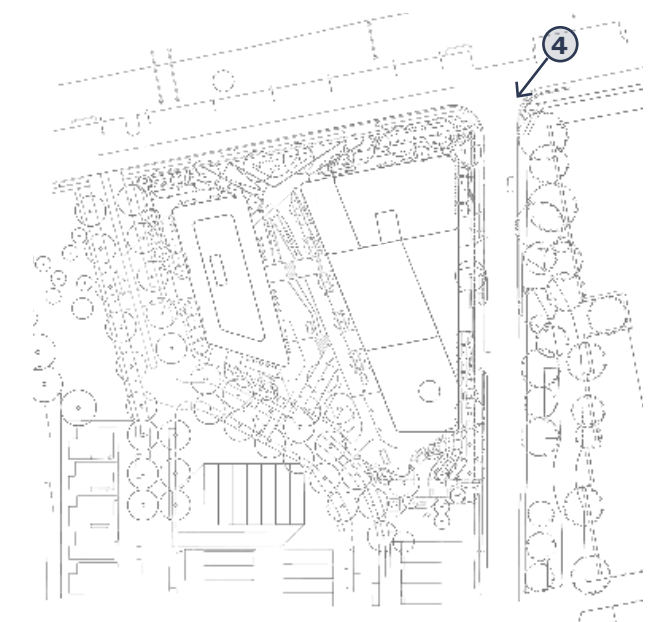
View 5 - From Norcal Road (South East)



REFER TO LANDSCAPE REPORT FOR FULL LANDSCAPE CONCEPT AND FEATURES

INDICATIVE 3D VIEWS

View 4 - From Corner of Norcal Road and Station Street (North East)



REFER TO LANDSCAPE REPORT FOR FULL LANDSCAPE CONCEPT AND FEATURES

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