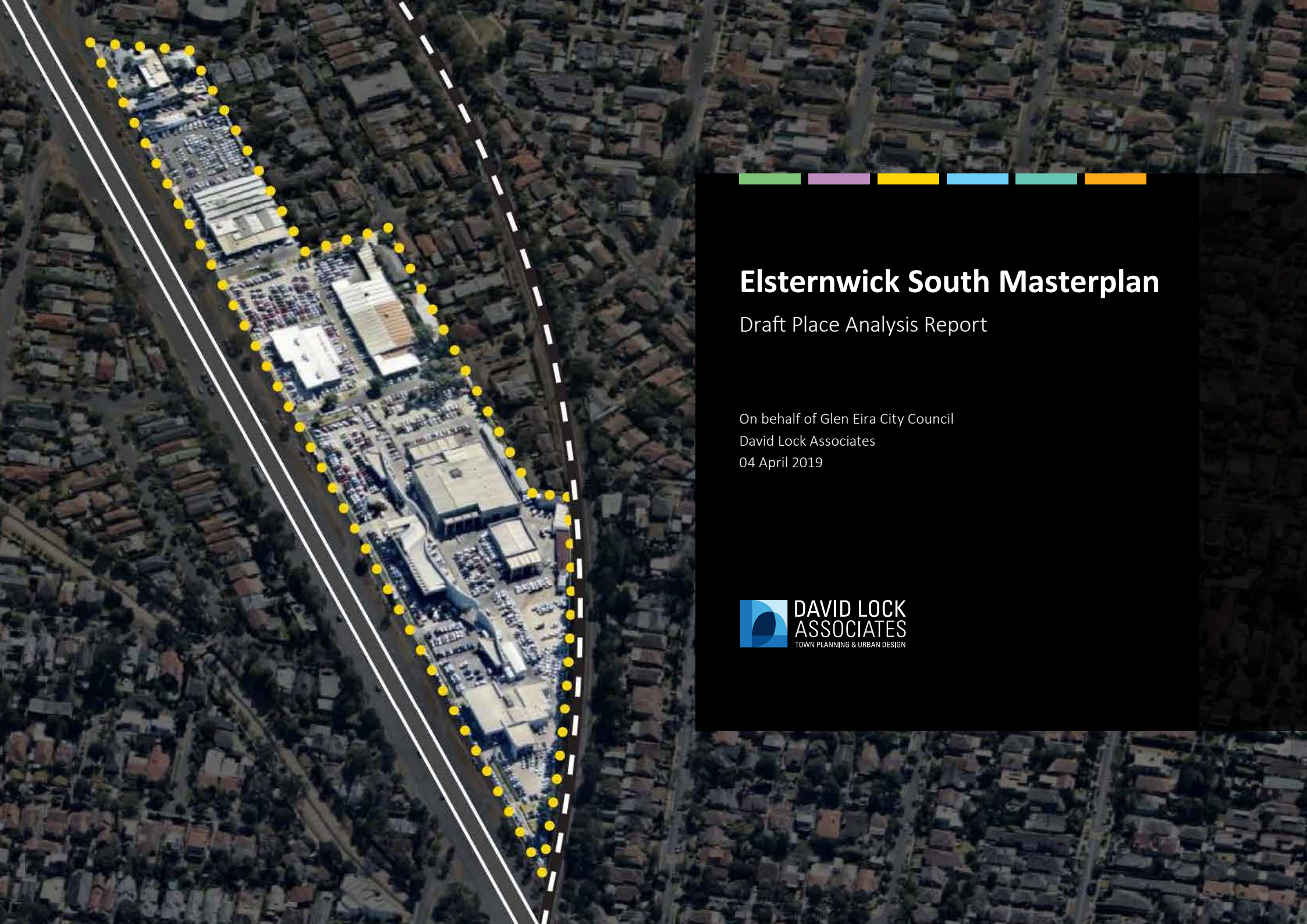

Elsternwick South Masterplan

Draft Place Analysis Report

On behalf of Glen Eira City Council
David Lock Associates
04 April 2019

DAVID LOCK ASSOCIATES
TOWN PLANNING & URBAN DESIGN

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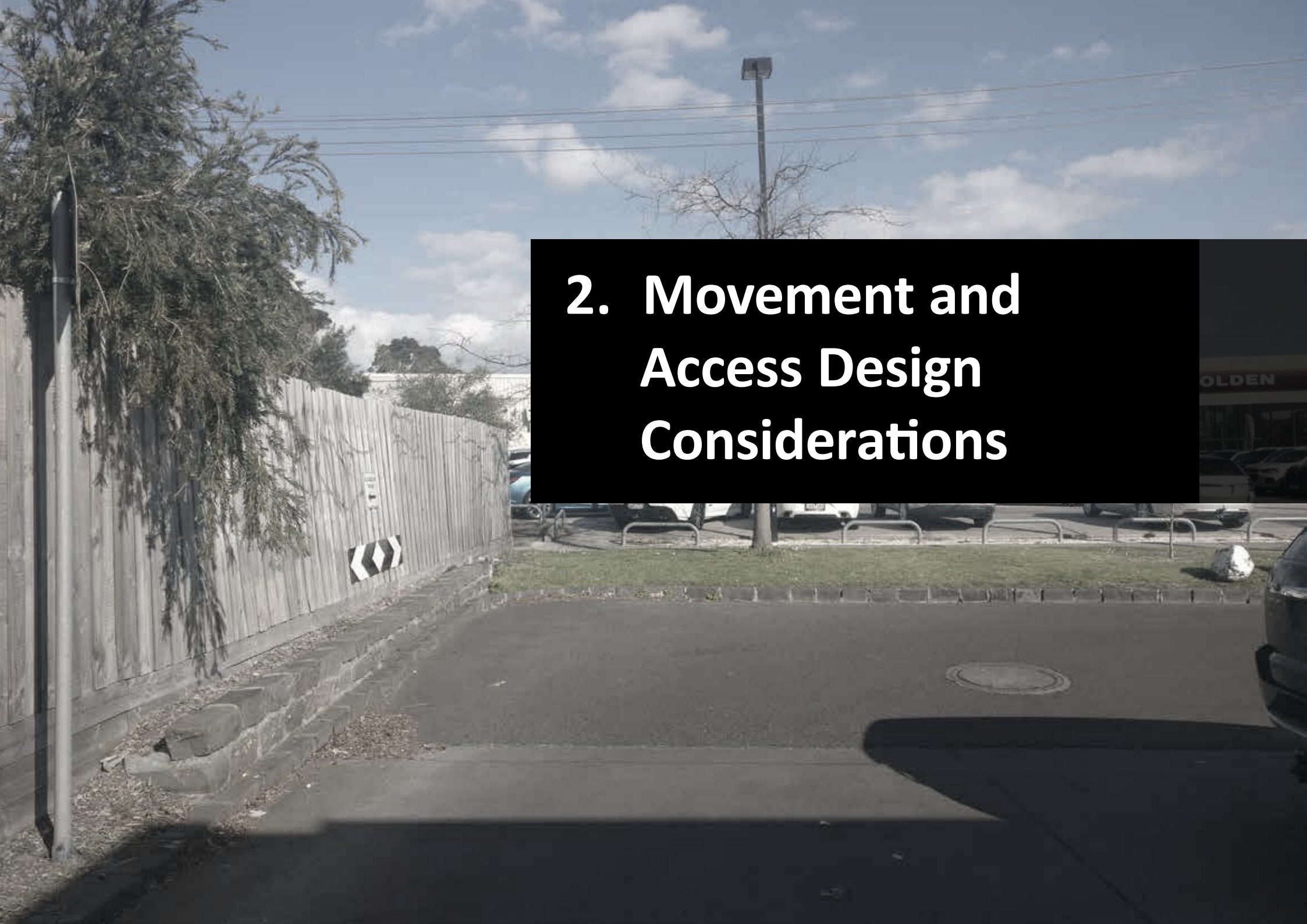
1. Introduction

David Lock Associates has prepared this Place Analysis Report to provide an analysis of the key synergies and conflicts between the technical specialties, stakeholder feedback, land ownership and public open space provision for the Elsternwick Urban Renewal South Area (urban renewal area). The analysis culminated in the preparation of a development scenario to which the consultant team has tested in terms of its impacts on the existing area and potential mitigation measures and delivery mechanisms.

The structure of this document is as follows:

- **Section 2.0** analyses the movement and access considerations and potential design options.
- **Section 3.0** analyses the public open space design considerations and potential design options.
- **Section 4.0** analyses the drainage considerations.
- **Section 5.0** existing land use design considerations and potential design options.
- **Section 6.0** outlines the overall design principles for the urban renewal area.
- **Section 7.0** provides a development scenario for the renewal area.
- **Section 8.0** tests the development scenario, its implications and potential mitigation measures.

This report will inform the Draft Master Plan to be prepared in the next phase of the project.



2. Movement and Access Design Considerations

The renewal area could potentially deliver approximately 1,500 dwellings, of which Council's goal is for 60% of the future population to utilise public transport, 40% cars. Based on these figures, TraffixGroup has assessed the existing constraints and limitations as well as opportunities for improvement to facilitate urban renewal.

Key **issues** identified in relation to movement and access are as follows:

- There are limited options for vehicles to exit to the north and no options for the area to the south of Oak Avenue;
- Bayside City Council support a signalised intersection to the Nepean Highway but do not want it to align with the existing intersections at Cochrane Street or Asling Street due to traffic on-flow into their municipality;
- Vic Roads required traffic analysis to determine whether a signalised intersection is warranted to ensure it will not significantly impact traffic flow along the Nepean Highway;
- There is currently a 1.2km gap between safe pedestrian points to cross Nepean Highway between signals at Rusden Street and the overpass next to the railway line;
- There is a need to improve pedestrian access across the Nepean Highway noting that the Elsternwick Primary School, Elsternwick Park and the linear shared cycle network on the western side of the Nepean Highway; and
- Transport for Victoria (TfV) support in-principle improved linkages to both Elsternwick and Garden Vale Stations although the detail and funding arrangements would need to be worked through.

Key **design options** identified in relation to movement and access are as follows:

- Implementation of a signalised intersection at Elm Avenue and the Nepean Highway. This would include a pedestrian crossing. The intersection will support the movement of vehicles out onto the Nepean Highway, and away from the local street network. The pedestrian crossing will support cyclist and pedestrian movements across to the City of Bayside and its amenities. See Figure 1 below.
- Options to revise the service lane to enable a signalised intersection at Elm Avenue. This may include the creation of a two-way service lane to the north of Oak Avenue, allowing traffic from the northern most block to exit via McMillan Street. Retention of the one-way service lane to the south of Oak Avenue to ensure all new development exits the renewal area via a new intersection from Elm Avenue.
- Provide an internal road circulation network that allows access to each development block in and out of the urban renewal area predominantly from the Nepean Highway.
- Potential options to prevent traffic from the urban renewal area entering St James Parade and the local road network via the service lane. See Figures 2 to 5 below.
- An elevated pedestrian bridge at the end of Elm Avenue that ramps up to the existing pedestrian bridge that crosses the railway line. This will enable more direct, convenient and safe access from the eastern side of the railway to the renewal area and onwards to the western side of the Nepean Highway and Bayside; and
- An elevated pedestrian bridge running along the railway reserve towards the southern end of the renewal area connecting it to Gardenvale Station. This will be supported by the introduction of an entrance to Gardenvale Station at the northern end.

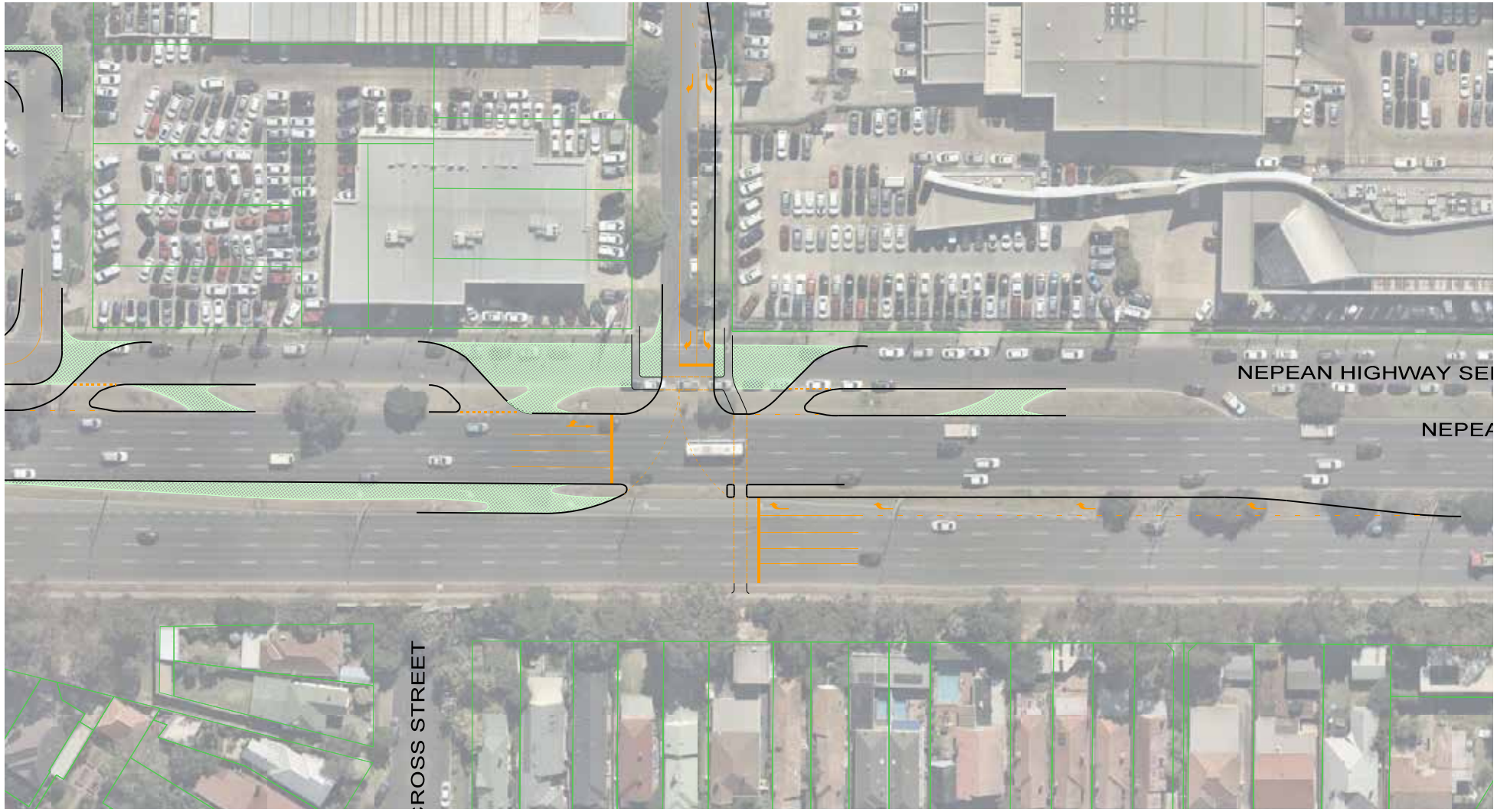


Figure 1. Design concept - New signalised intersection on Elm Street at Nepean Highway

Figure 2. St James Parade Option 1 - to prevent traffic from the urban renewal area entering St James Parade

Figure 3. St James Parade Option 2 - to prevent traffic entering St James Parade from the service road

Figure 4. St James Parade Option 3 - to prevent traffic from entering St James Parade whilst providing direct access to Elster Avenue.

Figure 5. St James Parade Option 4 - to prevent traffic from entering St James Parade whilst providing direct access to Elster Avenue.

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3. Public Open Space Design Considerations

The City of Glen Eira is currently under catered for with regards to public open space. Currently within the Gardenvale and Elsternwick Precincts, access to public open space is less than 3 sqm per person, which is well below the Glen Eira average of 12 sqm per person.

Based on this under supply, Council's open space team are aiming to achieve provision of a single neighbourhood park of 10,000 sqm within the urban renewal area. If this can't be achieved, more importantly, any public open space needs to demonstrate that its size, location and design can provide for both unstructured and recreational informal open space needs of the future population. This would be in addition to any communal open space (COS), and private facilities will not be considered as a replacement for those required in the public realm.

Key **issues** identified in relation to the provision of public open space are as follows:

- The catchment outside the urban renewal area is minimal due to the constraints of the railway line and the Nepean Highway. Therefore, the open space provision should be considered as supply for the new residents within the urban renewal area predominantly;
- The provision of 10,000 sqm of public open space, which equates to 17.5% of the urban renewal area, will be difficult to not only fund, but to locate within the landholdings equitably, whilst delivering the recreational informal open space components;
- The floorplate required by each car dealership does not allow for delivery of the public open space in the manner reflected in the Elsternwick Structure Plan (Figure 5). See Figure 6 for the floor plate requirements and location of public open space; and
- The need to protect public open spaces and residences from overshadowing.

Based on the issues identified, testing of different public open space layouts was undertaken. See figures 6 to 9.

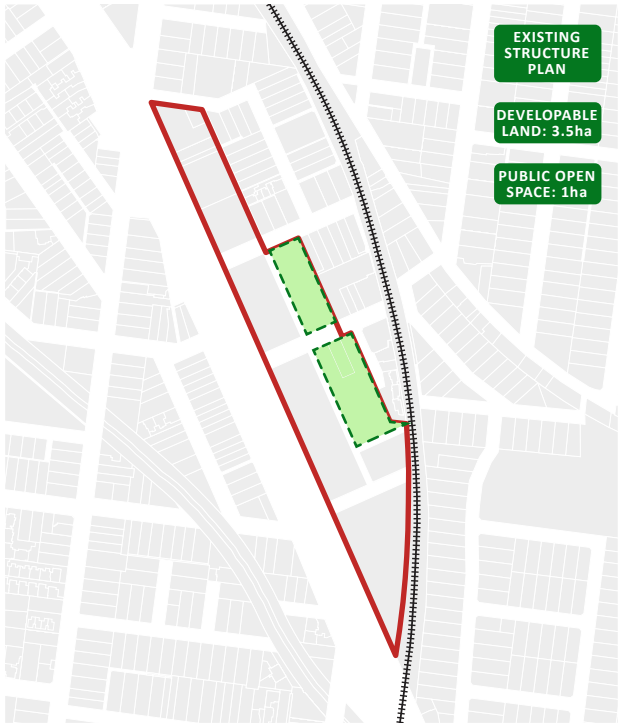

Figure 6. Option 1: Elsternwick Structure Plan

As outlined in the Structure Plan, Option 1 proposes two areas of public open space totalling 1ha with road frontages on the western side and side boundaries to existing residential properties on the eastern side. The high fences on the eastern side will create an inactive edge and contribute to lower levels of passive surveillance.

Figure 7. Option 2

Option 2 proposes two areas of public open space totalling 0.7ha sleeved on the eastern interface with new residential properties. The spaces are well connected in a north-south direction and the southern space is located to protect the tall canopy trees on the Toyota land. The main issue with this option is that both spaces aren't wide enough to allow for unstructured recreation activities.

Figure 8. Option 3

Option 3 proposes two areas of public open space totalling 0.8ha. The northern space between Elm and Oak Avenue directly abuts residentially zoned properties to the east. The southern most open space will be sleeved by new development and front a new local road to the north. The two main issues with this option are the lack continuity between the spaces and the 'backs of fences' the properties to the east create, reducing the opportunity for passive surveillance.

Figure 9. Option 4

Option 4 proposes a series of linear parks running in a north south direction with a total area of 0.6ha. The centre the park widens to allow for some unstructured and recreational informal open space needs. The predominantly linear nature of this park however, generally precludes active components, a key requirement from Council.

Based on the key synergies and conflicts, the **design options** identified in relation to the provision of public open space are as follows:

- Provide public open space that is contiguous in a north-south direction;
- Provide active edges to all sides of the public open space;
- Spread the location of the public open space equitably across landholdings; and
- Provide less than 10,000 sqm of public open space in the form of the following:

  → *An active component with a minimum dimension of 45 metres; and*

  → *A linear component with a minimum dimension that is suitable for canopy trees, passive uses and a shared path.*

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4. Drainage Design Considerations

Storm Consulting has modelled the existing drainage system based on existing data. They confirmed generally that the existing infrastructure was not an issue aside from the following issues:

- Nuisance flooding associated with climate change; and
- An existing large drain running along the northern boundary of the Ford dealership which cannot be built upon.

Based on the key synergies and conflicts, the **design options** identified in relation to the provision of drainage infrastructure are as follows:

- Provide public open space within the urban renewal area to substantially increase the amount of permeable surfaces;
- Up-size the drainage infrastructure as part of the redevelopment to future proof against climate change; and
- Ensure the redevelopment complies with Clause 53.18 'Stormwater Management in Urban Development'.

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5. Land Use Considerations

The urban renewal area includes a mix of existing land uses, however the predominant land owners are car dealerships. Overall, the percentage spread of landownership is as follows:

- 0.64% office
- 0.83% office
- 21.35% car sales
- 4.55% car wash
- 6.03% car sales
- 7.56% car sales
- 59.04% car sales

The two largest car dealerships have identified a desire to retain their existing uses and associated operations in the short to medium term.

Key **issues** identified in relation to land use are as follows:

- The car dealerships wish to retain their operations and the depth of their floorplates/ car yards into the short and medium term future. This has design implications for the following:

  → The provision of public open space within the urban renewal area, its size, shape and location, which was proposed within the Elsternwick Structure Plan to be predominantly over the two car dealership land holdings.

  → The ability to create connections north-south through the urban renewal precinct.

  → The impact of the nature of the car dealerships in relation to servicing vehicles and the need for areas for drop-off and pick up.

  → The impact of the car dealerships in relation to the public realm and the lack of activation.

  → The general impact on traffic movements through the urban renewal precinct.

Key **design options** in relation to land use requirements are as follows:

- Different shapes and sizes of public open space that still provide for informal recreation but work better with land ownership and the desire to retain existing uses;
- Deep floorplates (podiums) whilst accommodating public open space, north-south through movements and a mix of uses vertically (residential, commercial and office); and
- Vertical car dealerships that require a significantly reduced floorplate.

Figure 10. Ownership Map

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6. Built Form Considerations

The study area has a range of different external interfaces that any future development and built form outcome must consider and respond to. The Elsternwick Structure Plan calls for built form heights within the renewal area that vary from 4 to 12 storeys. The location of the tallest buildings within the Structure Plan were located to:

- Avoid overshadowing public open space;
- Avoid overshadowing sensitive residential properties to the east; and
- Push the height away from the sensitive interface towards the Nepean Highway, limiting visual bulk impacts.

To understand the implications of the proposed building heights and their varying scale and size, a Case Study Analysis Report was prepared that identified 7 different urban renewal developments in Melbourne of a similar nature to the study area.

From the case study analysis a bus tour was conducted with the Community Reference Group (CRG) to seek feedback on the different development outcomes and the positives and negatives.

Based on the urban design analysis completed, and the comments received from the CRG, key **issues** identified in relation to built form are as follows:

- The impact of 12 storey buildings on the sensitive residential interface to the east in relation to:

  → Overshadowing: The CRG would like to see no additional overshadowing to their properties.

  → Visual Bulk: The CRG would like to see the buildings spaced so that the height is spaced out with breaks between it. They would like to see appropriate building separation. A wall of tall development along the Nepean Highway should be avoided.

- The impact of building height on the amenity (overshadowing) of the proposed public open space and existing low-scale residential properties.
- The impact of height along the Nepean Highway on the residential properties on the western side of the Nepean Highway and their views towards the study area.

Key **design options** in relation to built form requirements are as follows:

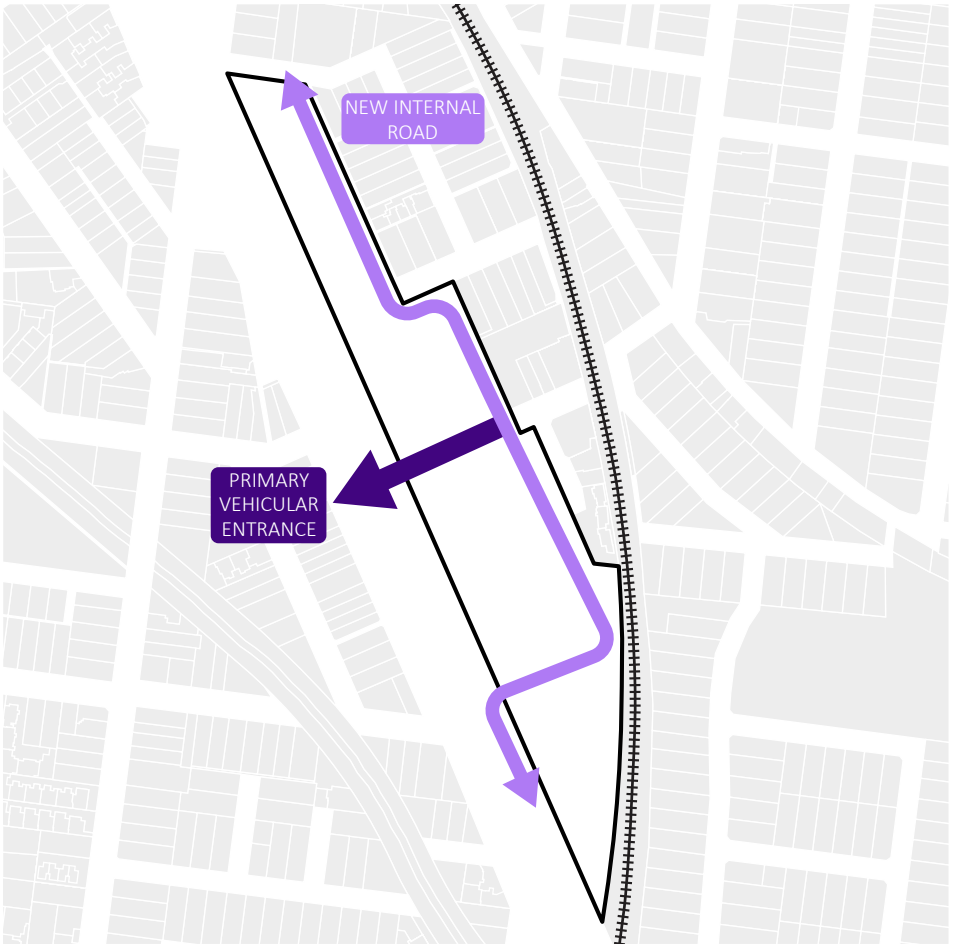
- Introduce a "mediating" built form, for example, 3 storey townhouses, which reduce views from the existing low-scale residential properties to the east to the high-rise apartments along the Nepean Highway;
- Place the tallest built form towards southern blocks of the study area, closest to the Nepean Highway;
- Vary building heights throughout the development to create an interesting skyline;
- Adequately separate taller form, avoiding a wall of buildings;
- Vary floorplates to allow for different uses and design outcomes; and
- Locate height to manage overshadowing as follows:

  → Public open space and public spaces: buildings must not cast any additional shadow past the shadows cast by existing buildings or hypothetical buildings built to the maximum street wall height of 17 metres, comprising up to 4 storeys, over new public open spaces between 9am and 3pm at the September Equinox and 11am and 2pm at winter solstice.

  → Sensitive residential interface: no overshadowing of residential areas between 9am and 3pm at the September equinox.

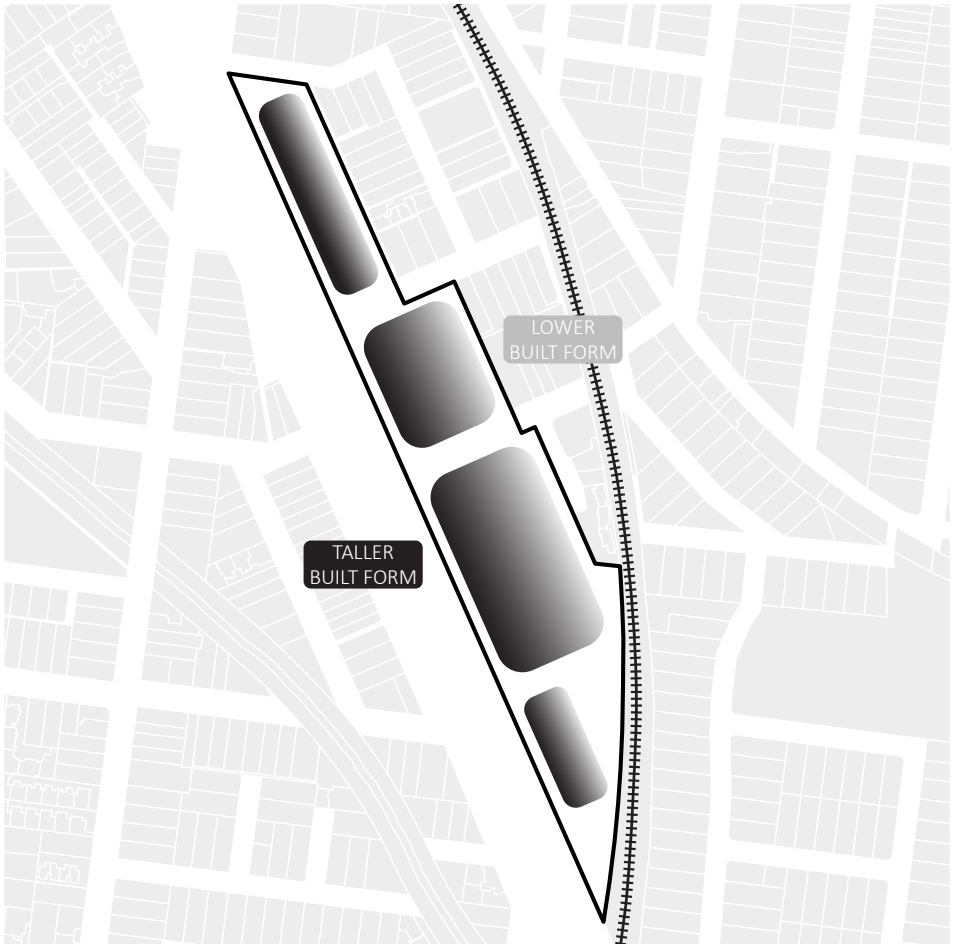
7. Design Principles

Following the background analysis and an understanding of the opportunities and constraints, a series of guiding design principles have been prepared:



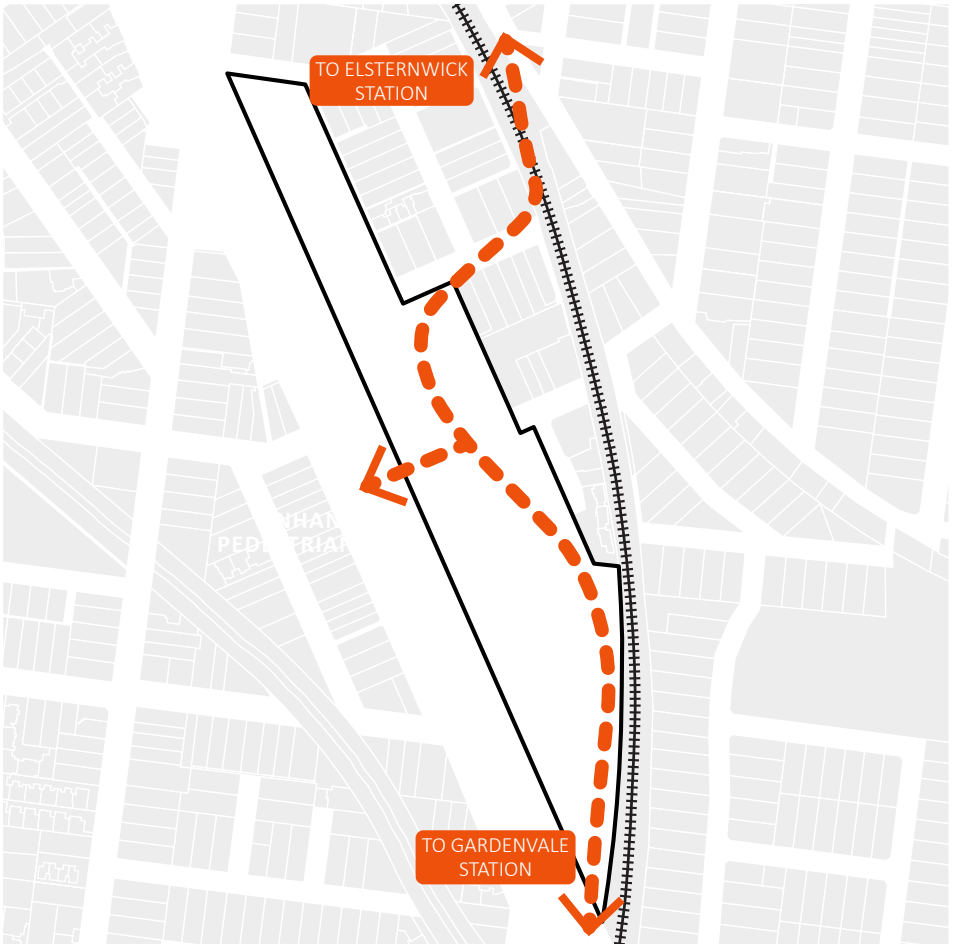
PRINCIPLE 1: CONNECTIVITY

Connectivity in relation to vehicular movements will need to be provided predominantly from a connection to the Nepean Highway. The internal road will be for local traffic movement, and not for people trying to exit out of the development.



PRINCIPLE 2: URBAN STRUCTURE

The urban structure of the urban renewal precinct should respond to its location at a highway interface with taller built form that will mark the entrances to the study area. The height of developments should transition in height downwards towards sensitive interfaces.

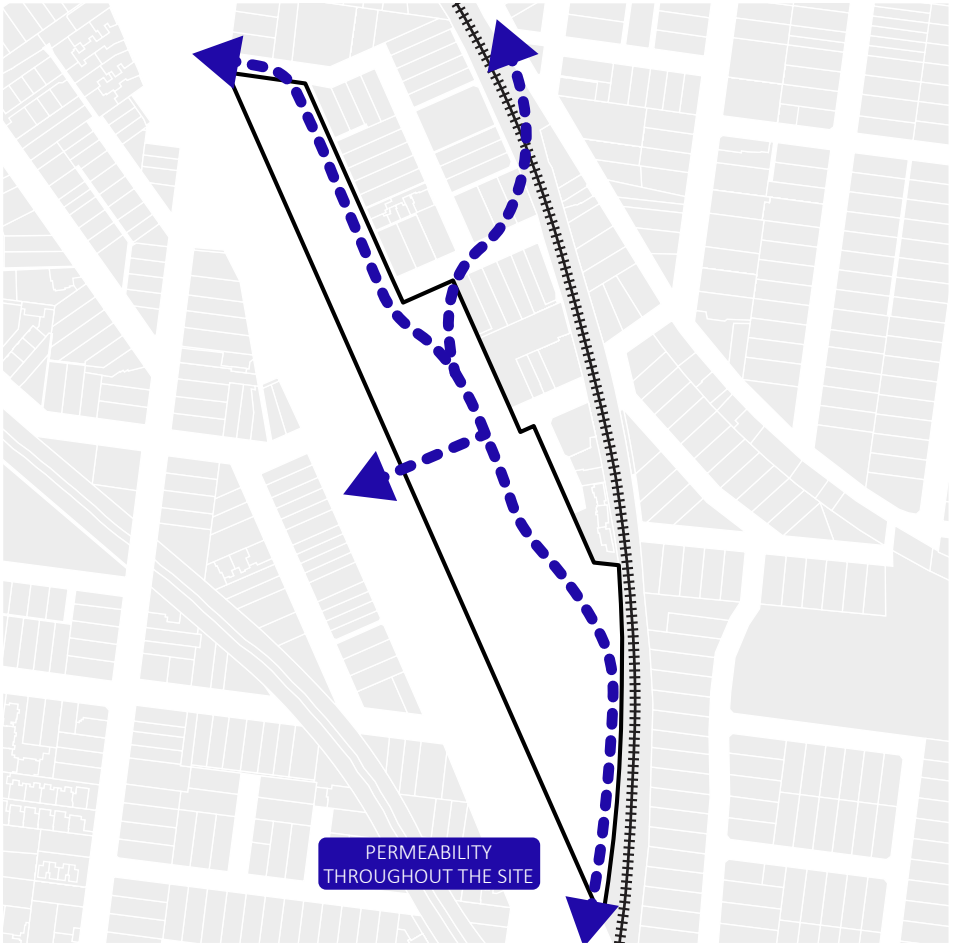


PRINCIPLE 3: ACCESSIBILITY

Pedestrian and cycling accessibility across the Nepean Highway, to Elsternwick Station and Gardenvale Station should be improved in order to increase the use of sustainable modes of transport to and from the study area.

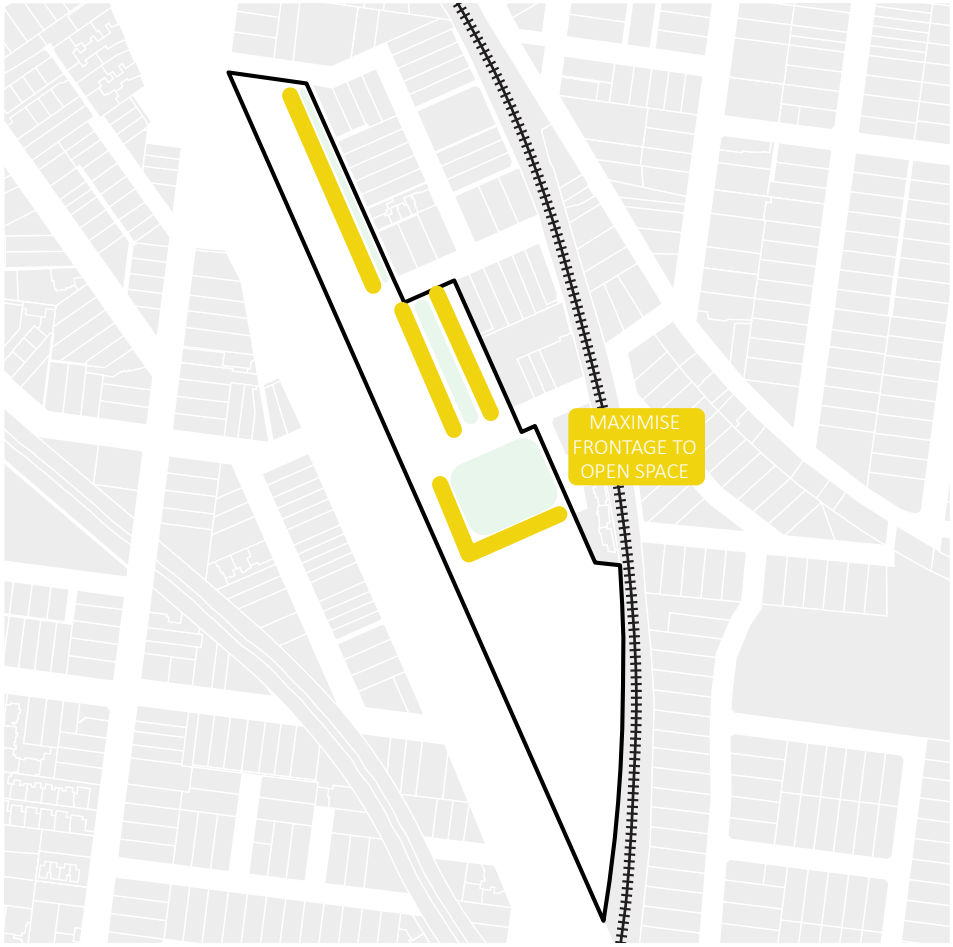
PRINCIPLE 4: INTERESTING SKYLINE

The overall building heights, density and typologies proposed witin the urban renewal precinct and particularly along the Nepean Highway should create a varied and interesting skyline, with height variation and spacing between buildings to avoid a wall of development.



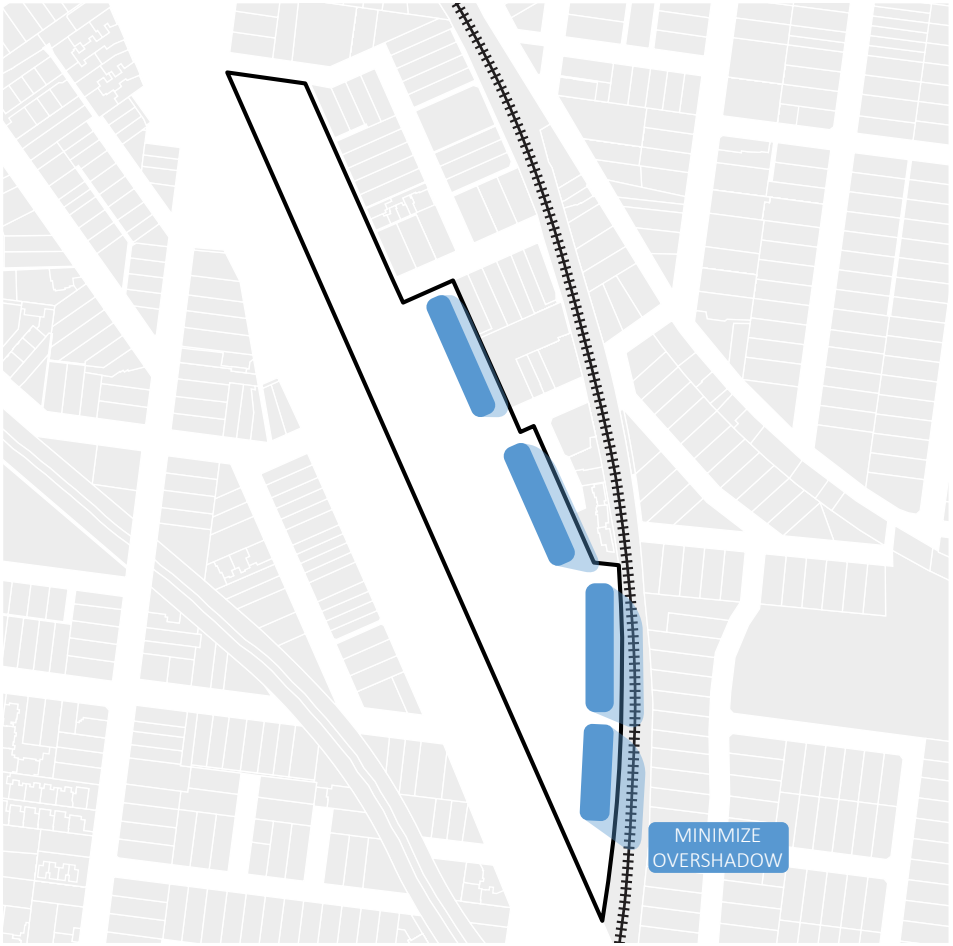
PRINCIPLE 5: PERMEABILITY

Redevelopment of the urban renewal precinct should create improved pedestrian and cyclist permeability, allowing greater connection between the residential hinterlands to the east and west and improved movements north and south.



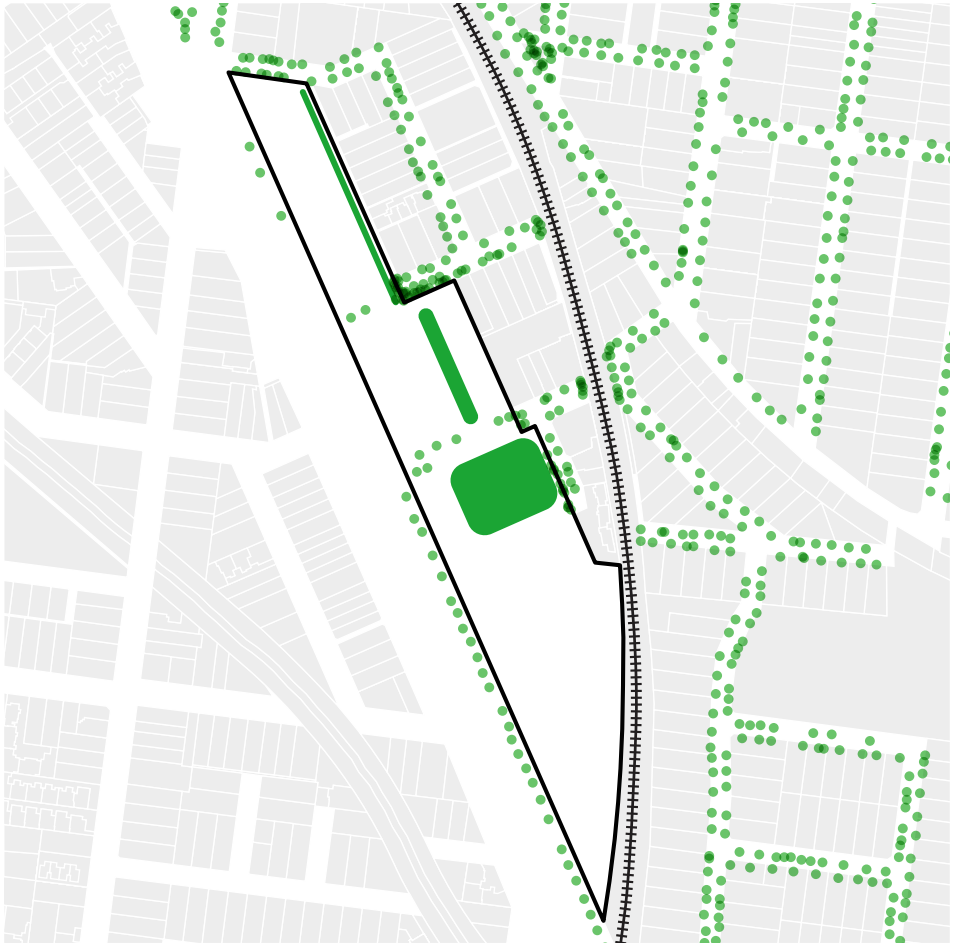
PRINCIPLE 6: ACTIVE EDGES

Any public open space provided in the urban renewal precinct should maximise its frontages and active edges. Active edges to public open space should be provided through building frontages and public roads. Active edges will ensure the public open space is passively surveilled.



PRINCIPLE 7: OVERSHADOWING

Built form with increased building height should be located to avoid overshadowing the secluded private open space of existing residential properties and any proposed public open space, within the urban renewal precinct.



PRINCIPLE 8: GREENING

The urban renewal precinct should ensure it provides increased green spaces and canopy trees to reduce potential urban heat island effect and to improve local biodiversity.

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8. Development Scenario

Following the background review, urban design analysis and workshopping the key synergies and conflicts between the technical areas, a development scenario has been prepared.

The purpose of the development scenario is to start to understand the practical implications of the synergies and conflicts. The development scenario identifies streets, laneways, blocks with initial building envelopes (including height), density, open space and the location of different land uses.

Key features of the development scenario are as follows:

- 7,115 sqm of public open space in the form of a linear trail running north-south through the urban renewal area connecting to a large east-west orientated space on Elm Avenue.
- 7,950m2 of communal open space (COS) for the residents and workers.
- A signalised intersection from Elm Avenue to the Nepean Highway. This would include a signalised pedestrian crossing on the southern side only, allowing greater movement of north-bound motorised traffic from the study area.
- An elevated ramp for pedestrians and cyclists from the eastern end of Elm Avenue along the railway line and across at the end of Oak Avenue, to improve accessibility to the Elsternwick Train Station and activity centre.
- An elevated ramp for pedestrians and cyclists from Marmara Drive along the railway line creating improved connectivity to Gardenvale Train Station.
- Four blocks of development which consist of the following:

  → Block 1: Mid-rise built form fronting the Nepean Highway with medium density as the intervening form to the low-scale residential dwellings to the east. The existing laneway running along the eastern edge will be widened to maintain access to the rear of properties fronting Alexandra Avenue whilst providing a shared green space and frontage for the townhouses. The apartments and townhouses will be accessed via the service lane.

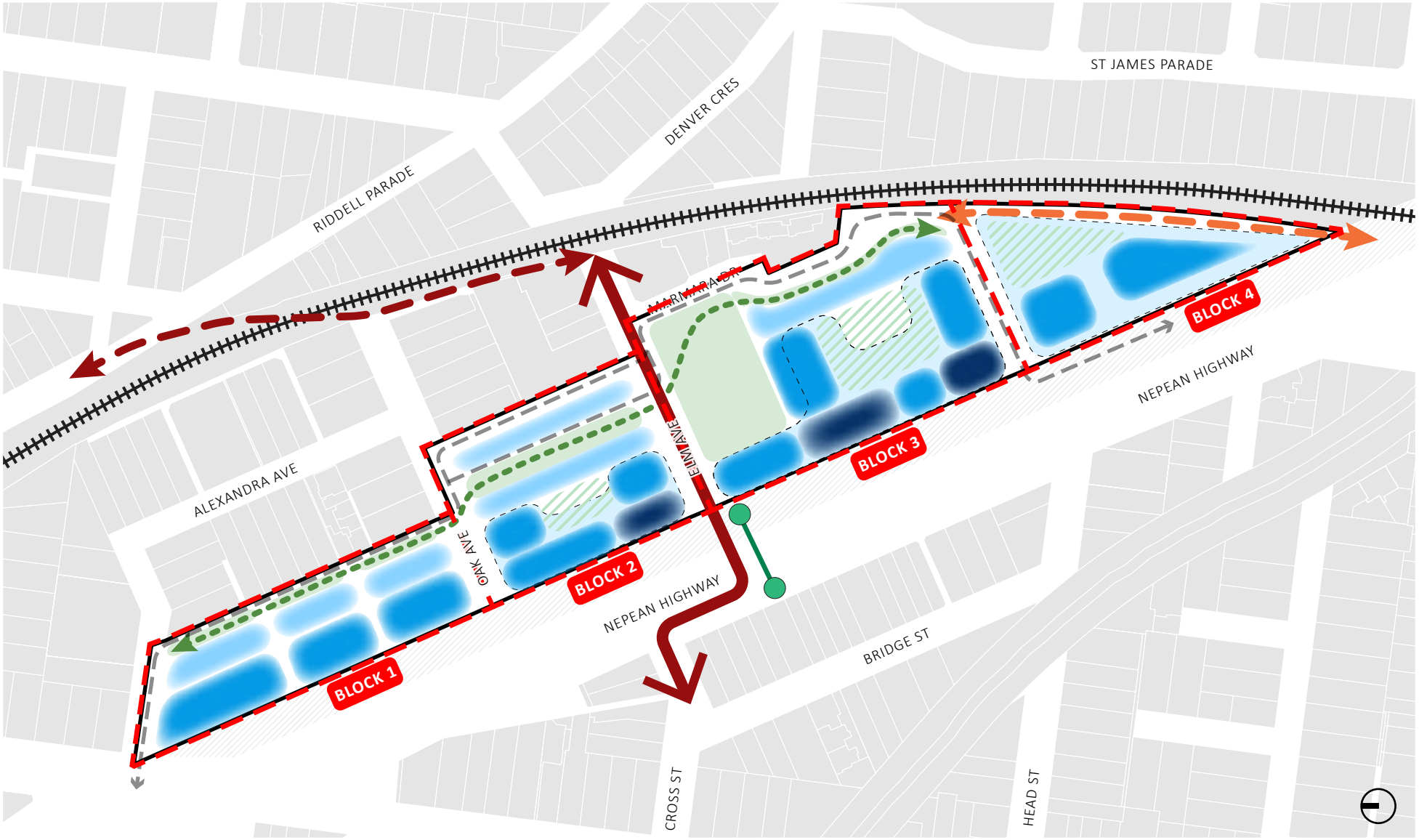
  → Block 2: A commercial podium will cater for the car showrooms with mid-rise to high density built form above. Townhouses will frame the edge of the podium to the east fronting a widened linear park (approximatively 20m wide).

  → Block 3: A commercial podium to cater for car show rooms with mid-rise and high density built form above. 4,326m2 of public open space (active reserve) sleeved by frontages to mid-rise density built form. A continuation of Marmara Road to a new east-west road widened to include a green link for pedestrians and cyclists.

  → Block 4: A commercial podium to cater for car show rooms with mid-rise density built form above, currently proposed as office space.

The development scenario outlined above and at Figure 10 below has informed a land budget for the urban renewal area. The land budget includes floor areas for each use proposed within the development scenario.

Refer to Figure 10 overleaf. The following section tests the development framework in relation to movement and access, economics and urban design.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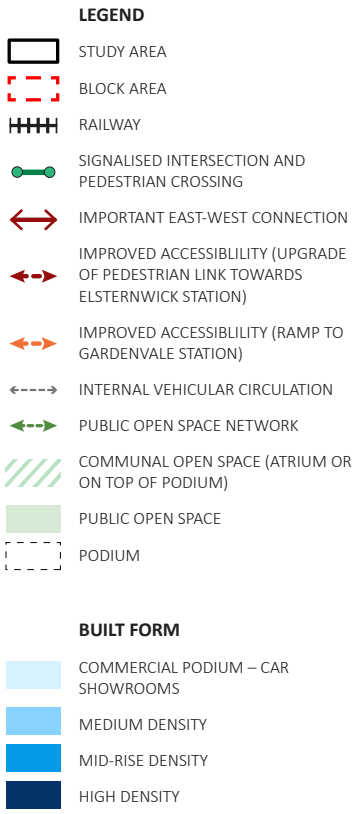

Figure 11. Development Scenario

9. Design Testing

The development scenario at Section 7.0 has enabled each consultant to update their findings from an assessment of the existing conditions to an assessment of the potential issues generated from a developed urban renewal area. The following section explains the findings of testing the development scenario in relation to movement and access, land use economics and urban design.

Movement and Access

Traffix Group has reviewed the potential estimated traffic generated by the urban renewal area, and provided potential mitigation measures.

Rates of traffic generation have been applied for each use proposed within the development scenario. Overall, the rates applied for the development scenario reflect Council's strategy to achieve 60% public transport use within the urban renewal area. The 60% public transport use target needs to be supported by implementation of the improvements to the accessibility to Gardenvale and Elsternwick Train Stations. Further details regarding the rate applied to each use can be found at Appendix A.

Based on the development scenario, Traffix Group confirmed the existing road network will not provide suitable options to head north from the majority of the development, which would result in high numbers of vehicles undertaking U-turns on Nepean Highway or turning into the local street network further to the south, i.e. St James Parade, to work their way north to Glen Huntly Road. Neither of these alternatives are considered appropriate for a development of this scale.

Based on this, Traffix Group has identified the following number of treatments to miminise the impacts of development traffic on the surrounding local street network and to provide safe and efficient access to the arterial road network:

- The redevelopment of the urban renewal area is expected to generate 934 vehicle trips during the AM peak hour and 936 vehicle trips during the PM peak hour based on the reduced traffic generation rates.
- A signalised intersection at Nepean Highway/Elm Avenue is required to allow safe access to and from the renewal area and to avoid traffic issues associated with U-turns on Nepean Highway or ‘rat running’ through local roads.
- Block 1 of the development scenario redevelopment could be isolated from Blocks 2 – 4 to limit the impact of development traffic on the local streets north of the renewal area, particularly Alexandra Avenue.
- There are a number of potential modifications to the Nepean Highway Service Road/St James Parade/Elster Avenue intersection, which involve the partial closure of St James Road, that could be implemented to prevent development traffic from using the local streets east of the railway line to access the Elsternwick Shopping Centre. However, significant consultation with the local area to the east of the railway line should be undertaken as part of a Local Area Traffic Management study before any changes are made to the access into St James Parade. This is also an opportunity to improve pedestrian amenity along the service road and make for a more pleasant walk to Gardenvale train station.
- The proposed Elm Avenue signalised intersection will operate below capacity based on the traffic volumes estimated using the reduced generation rates.

The treatments identified refer only to managing traffic. These will need to be coupled with upgrades to the access to each train station along with increased train services.

Land Use Economics and Development Contributions

HillPDA has provided high level comments on land use economics and development contribution methods available to the development scenario and its associated land budget.

In terms of proposed land uses, HillPDA found the amount of office space allocated in the development scenario to be significant. The viability of delivering this quantum of space from a market perspective will need to be tested in the context of the overall package that is presented to development proponents. It is possible that development sites would seek to avoid delivering the amount of office space as noted in the development scenario.

In terms of development contribution methods, HillPDA makes the following comments:

- The study area includes a number of major sites for which redevelopment timing is not certain. This makes use of a DCP difficult in this context given income estimates in a DCP are contingent on having a reasonable estimate of likely future development trends. Council would become responsible for delivering projects in a DCP, and as such the cost to Council and timing of the cost must be specified.
- The study area has a number of large sites and the opportunity exists to establish a development conditions regime that applies to sites and on land abutting sites. Redevelopment of sites could be associated with delivery of some works in the public domain.
- The scheduled open space contribution requirements in the planning scheme for land in the study area (at 5.7%) is less that the planned provision of 13.5%. As sites are developed, they would make a contribution to land or cash (depending on the location) however the contribution from sites will fall short of the plan. This will require other sources of funds to be used for delivering the open space and this could be in part from development conditions and agreements where it is in the interest of the developer to do so. It is possible that Council funding may also be required to deliver a share of the open space cost.
- An option that should be explored is a density bonus scheme. A density bonus scheme creates a nexus between increased density and public benefit. More specifically, it allows the local authority the discretion to allow increase the density on a site above the preferred control provide a public benefit is provided. For example, if the discretionary height limit is 6-8 storeys, Council may allow for increased heights (e.g. 12 storeys) if a public benefit, such as a public open space is provided.
- A significant amount of residential floorspace is included in the plan and this could be tiered under a base options and a bonus option. The bonus option could be linked to provision of public benefit such as public domain works and additional open space (over and above the Planning Scheme requirement). The viability of this tool needs to consider the overall package from the perspective of the developer which includes an office floorspace allocation, which may reduce the capacity of sites to make development contributions.
- The Special Rate and Charge Scheme remains a viable option for the plan. The proposed public domain works would generate a benefit for the development sites and as such this tool could be explored to assist with delivering public domain works.

Urban Design

The development scenario has been designed to respond to the findings of Stage 1 of this project and to address the synergies and conflicts identified with the CRG, the consultant team and relevant Council departments. From an urban design perspective the development scenario employs a design which:

- Focuses mid-rise and high density built form along the Nepean Highway predominantly, with the greatest height proposed in the least sensitive location.
- Applies medium density next to the sensitive low-scale residential interface to the east, providing a built form buffer to the high density development.
- Applies a mix of uses in each block to create diversity and interest.
- Creates podiums in Blocks 2, 3 and 4 for with large floorplates for car show rooms. Mid-rise and high density built form are proposed above the podiums.
- Provides approximately 7,900sqm of public open space in the form of varied linear reserves and an active space on Block 3. The public open space is designed to link north to south, whilst also providing frontage to the proposed townhouses along the eastern edge of the urban renewal precinct. Active edges are provided along the edges of the public open space with roads, residential frontages and retail uses.

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