FIVE DOCK TOWN CENTRE
URBAN DESIGN STUDY

RECOMMENDATIONS

ARUP Hill PDA STUDIO GL

City of Canada Bay

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Final - October 2013

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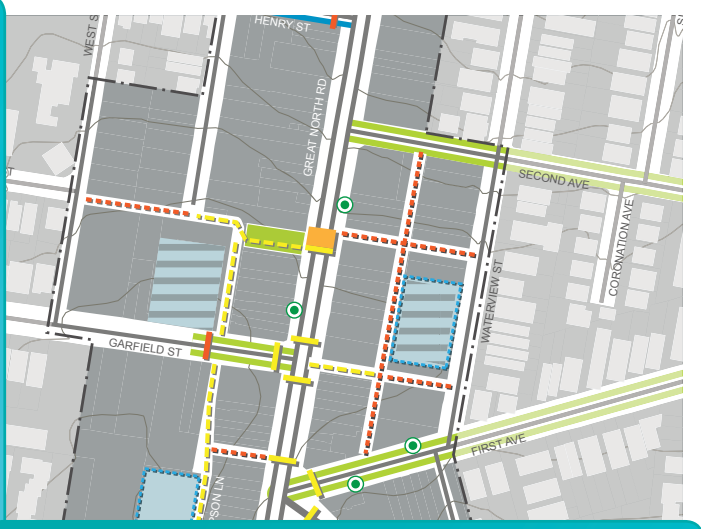
INTEGRATED AND CONNECTED

The heart of any centre is focused around a handful of streets, lanes and open spaces. The pattern of these places creates the framework in which it 'functions'. This study proposes to significantly improve Five Dock's urban structure by upgrading existing and creating new pedestrian-focused connections.

300 m ⟶ **750m**

Total length of current pedestrianised links — *Future provision*



ACCESSIBLE FOR ALL

A strong centre creates a safe environment for everyone including elderly, children and teenagers. It encourages a slow speed environment and discourages intrusive car parking and the number of driveways across footpaths. It is also easy for pedestrians, cyclists and vehicles to get around with minimal out-of-scale intersections. This study outlines opportunities for

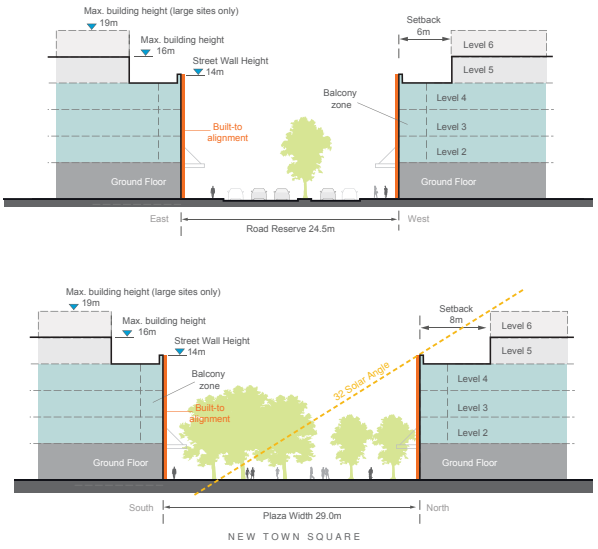
40% *more crossing points within the centre of Five Dock*

COMFORTABLE - WITH A HUMAN SCALE

The experience of a successful town centre occurs at a slow pace. People are attracted and comfortable if streets, squares and parks feel well-proportioned and contained by surrounding landscape and buildings. Quality detailed design, attractive shop fronts, awnings, wide footpaths and street trees together all contribute to this sense of comfort and delight.

70 + 120

existing street trees — *proposed new street trees*



DIVERSE AND VIABLE

A strong centre provides a range of local services and facilities including civic, recreation, commercial and residential. Smaller shops are dependent on the activity that a retail or a civic anchor (such as a library) generates. The key to a successful local centre lies in discouraging internally focused shopping and encouraging street based retail. New links and public spaces create the potential for an additional of

1.8km *frontages that benefit directly from quality public domain*

MEMORABLE AND ATTRACTIVE

A distinctive centre expresses the diversity and reflects the aspirations of the local community. The use of high-quality materials, the choice of landscape and street furniture, the location of public art and the provision of public open space all contribute to the creation of a place of enjoyment and pride. This study illustrates Five Dock's potential for almost

4x *more public space compared to the current provision (Fred Kelly Place)*

SAFE AND VIBRANT

A successful centre attracts people by creating a welcoming, safe and interesting experience, both during the day and after hours. Vibrancy is key and relies on a diverse mix of uses, visible activity at street level and buildings that clearly address and overlook streets, lanes and open spaces. Residential uses that are integrated within centres greatly support activity levels. For the Five Dock Town Centre, this study estimates

300+ *additional dwellings in the longer term (15+ years)*

FIVE DOCK TOWN CENTRE

URBAN DESIGN STUDY

01 INTRODUCTION

1.1 CONTEXT OF THIS STUDY

Background and purpose

The Five Dock Town Centre Urban Design Study was commissioned by the City of Canada Bay Council in 2013 and builds on previous work, including the Five Dock Town Centre Strategy (2012), which explored the economic factors that influence the centre and identified actions to enhance its vitality in the future.

One of the key recommendations was to consider the Five Dock Town Centre from an integrated design perspective (by undertaking this Urban Design Study) to ensure that any potential changes to the existing planning controls, such as building scale, density and height, were carefully considered. The Urban Design Study was also to identify improvements to the public domain and consider opportunities for future redevelopment within the centre.

The study structure

The Five Dock Urban Design Study is comprised of two parts. The first is the 'Recommendations' report which contains the overall aspiration and future direction for the centre. Proposed actions are illustrated across a range of scales, from overarching framework layers to more detailed transformation of streets, places and catalyst sites.

The second part of the study is the 'Background' report, which documents the process and studies undertaken to determine the recommendations. The document outlines the parallel consultation process with key stakeholders, Council staff and the community, a detailed site analysis, a review of relevant policies and specialist consultant advice.

The study area

The study area of the Five Dock Town Centre includes the commercial and retail area of Five Dock along an 800m long section of the Great North Road. The centre is bound by Lyons Road to the north, East and West Street to the west, Fairlight Street and Queens Road to the south and Waterview Street to the east.

During the study process, the original study area of the centre was extended (see adjacent diagram) to include the western side of Waterview Street, land between West and East Street, north of the Police Station and to the west of Thompson Lane, between Garfield Street and Kings Road.

In the centre of the study area is Fred Kelly Place, sometimes referred to as 'Five Dock Town Square' by locals. The small square is arguably the focus point of the centre, offering a small playground, seating facilities and public art.

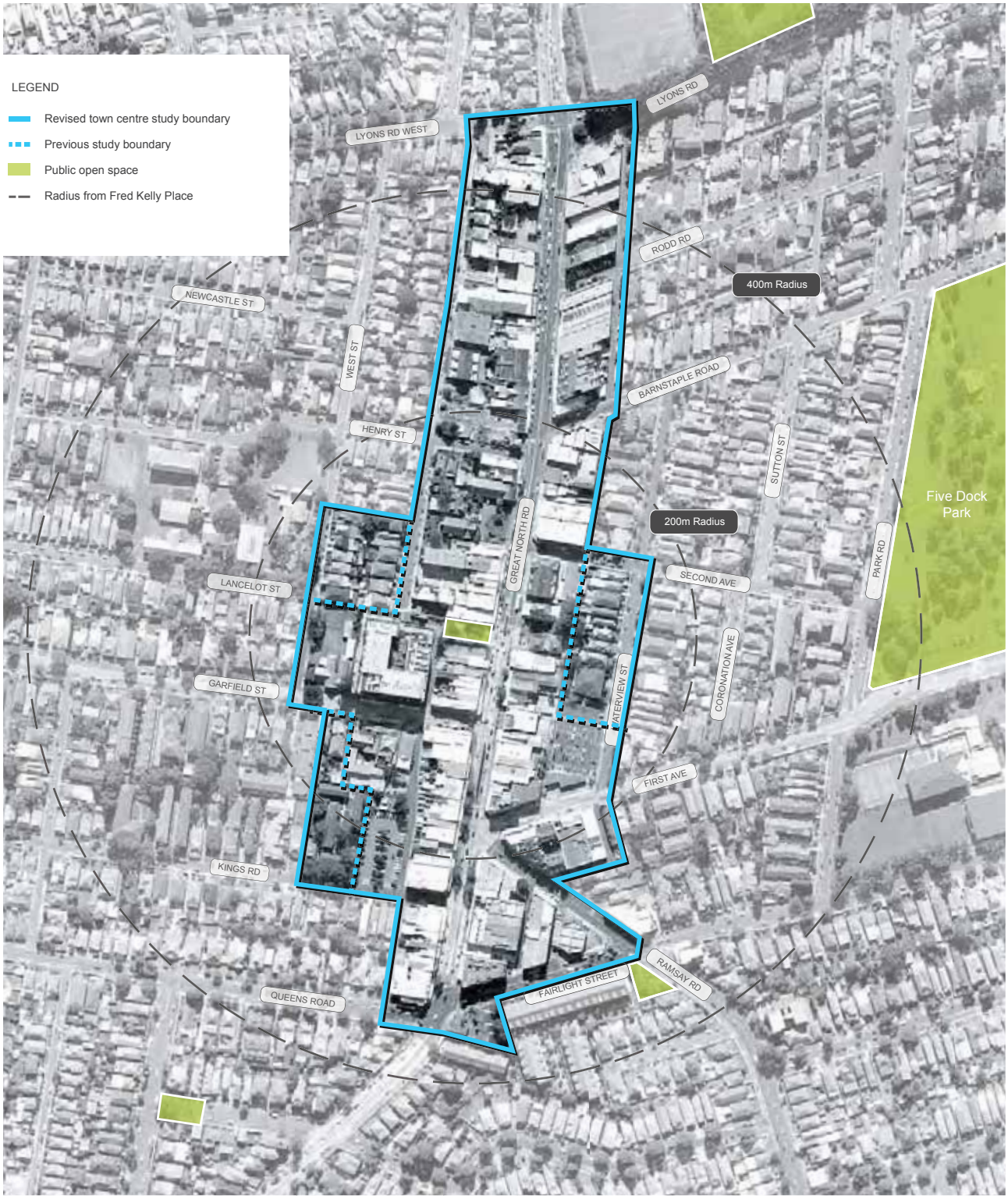


Figure 1. Five Dock Town Centre study area

1.2 OBJECTIVES AND ASPIRATIONS

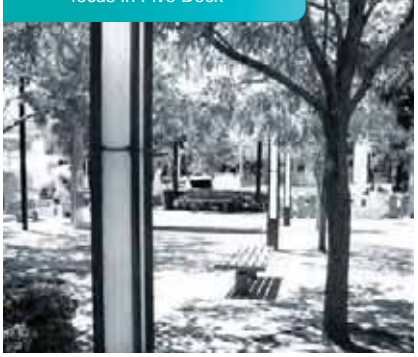
This section provides a brief overview of the original study objectives contained in Council's brief (below) and the key community aspirations (to the right) that were captured during the consultation process (May to July 2013).

01 Enhance the economic viability and vibrancy of Five Dock

02 Achieve a high standard of sustainable development

03 Improve the visual and aesthetic qualities, amenity, liveability and attractiveness of Five Dock

04 Provide a community focus in Five Dock



05 Identify opportunities for Council owned land

06 Ensure that building envelopes respect height, scale and massing of surrounding buildings

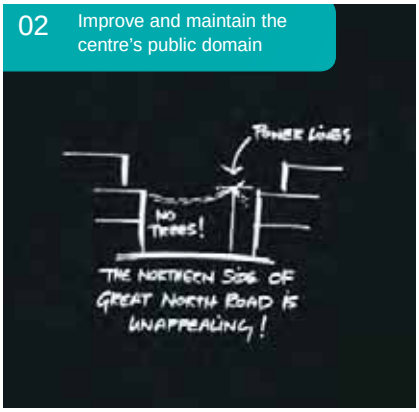
07 Provide recommendations that are deliverable

08 Provide mechanisms to implement recommendations

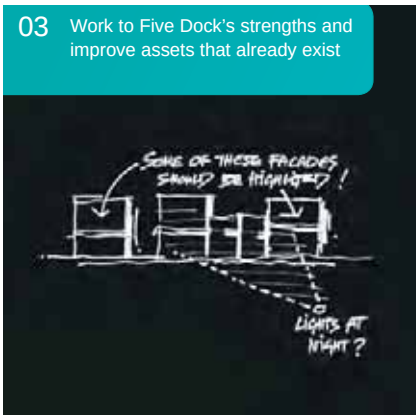
09 Engage the community effectively throughout the preparation of the Urban Design Study

01 Create a focus for the community in the town centre

02 Improve and maintain the centre's public domain

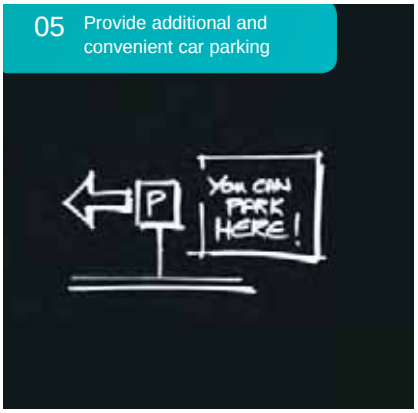


03 Work to Five Dock's strengths and improve assets that already exist

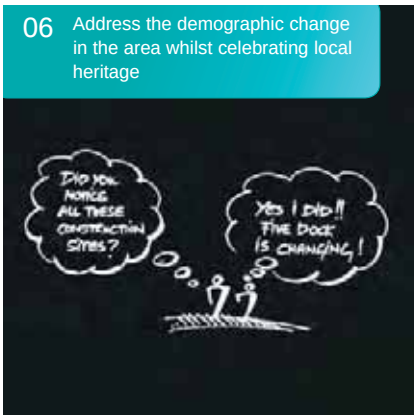


04 Maintain the friendly, village feel of Five Dock

05 Provide additional and convenient car parking

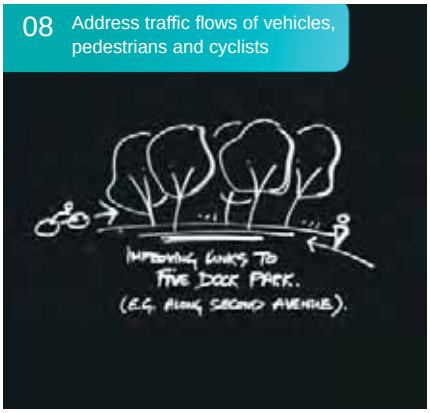


06 Address the demographic change in the area whilst celebrating local heritage

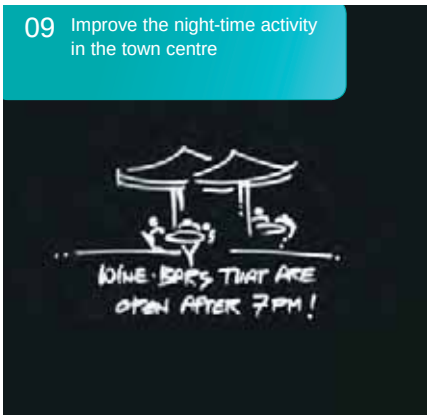


07 Provide additional facilities, i.e. toilets, bins, seats and shelters

08 Address traffic flows of vehicles, pedestrians and cyclists



09 Improve the night-time activity in the town centre



1.2 DRIVERS FOR POSITIVE CHANGE

The following five drivers for positive change in the Five Dock Town Centre have been identified during the preparation of this study, and have shaped the recommendations of this report.

They are based on the study objectives and an understanding of the requirements of successful centres for the long term.

A strong focus for the community

Centres provide the 'heart' of the local community, a shared place that not only provides for day to day needs but also a place to come together for events and social activities.

Strong centres are vibrant places that have a mix of uses with high levels of activity along streets, lanes and areas of open space every day and long into the night. They reflect the diversity of the local residents and offer a wide range of local services and uses (including retail, civic and recreation) within close walking distance of homes, local businesses and transport.

A better place to live and work

All over Sydney, centres are changing into destinations where people come to spend time, meet friends and be entertained. Centres have also become the place where many, from the young to the elderly, make their home.

People are looking for housing that is adaptable and accommodates a mix of income and living choices in a location that is safe and secure, offering a healthy, active lifestyle with good access to community infrastructure, public transport, services and jobs.

Connecting people and places

A good centre is a place with a high level of local and regional accessibility and where cars travel slowly, making it easier to cross the street and a pleasant place to walk, sit and talk.

A legible and accessible environment is one where everyone, including elderly, children and teenagers, find it easy and safe to get around. It provides an effective, connected framework of streets, lanes and public places that make it convenient to access the centre and everything it has to offer.

An enhanced built environment

People are attracted to places that are clean and welcoming and provide a comfortable and aesthetically pleasing environment.

Well maintained shop fronts and awnings, attractive landscaping and trees that provide shelter from the elements and generous pedestrian spaces all contribute to this sense of comfort and delight as do respecting and enhancing heritage buildings and well-proportioned, human scale, buildings and streets.

Squares, open space areas and parks provide places to linger and where the sense of place and local identity can be reinforced.

A strategy for long-term prosperity

Centres need activity to remain attractive and linked to this is the need to provide improvements and opportunity for reasonable expansion and change over time. Development controls need to be realistic, providing sufficient incentives to encourage high quality outcomes with flexibility to accommodate fragmented ownership and differing needs.

Clustering attractors together will provide the opportunity for long term success as will ensuring street based retail occurs along popular routes between key destinations such as supermarkets, libraries, banks, schools and clubs and carparks and bus stops.


FIVE DOCK
TOWN CENTRE
URBAN DESIGN STUDY

FRAMEWORK

02

A strong community heart

Green streetscapes

Local identity and pride

2.1 PUBLIC SPACES AND PLACES

Public spaces are fundamental to public life. Their quality, appearance and functionality is particularly crucial for centres as it is where many different people, uses and activities come together in one location.

A strong community heart

The majority of public spaces in the Five Dock Town Centre are streets and laneways, predominantly designed to cater for vehicles and parking.

A notable exception is Fred Kelly Place, a small public square and popular meeting place centrally located between the Great North Road and a recent mixed use development that incorporates Five Dock's public library, a busy supermarket (Supabarn) and ample underground carparking.

Fred Kelly Place, together with an L-shaped open space on the other side of Great North Road near the post shop, defines the civic focal point of the town centre. Individually each space is too small to cater for the activities that want to occur in a town square, such as markets, events and community gathering. Extending one, if not both of these spaces, would strengthen the 'heart' of Five Dock.

The adjacent framework diagram shows a new town square located to the east of Great North Road on Council-owned land that would provide enough space for a range of activities including events as well as public art, seating facilities, tree planting and children's play.

It may also be possible to extend Fred Kelly Place to the north by acquiring a private property (currently occupied by the Westpac bank). Ultimately the two public open spaces could be connected via a raised pedestrian crossing, creating a strong, distinctive and centrally located heart for the Five Dock Town Centre.

Green Streetscapes

A key issue that emerged during consultation with the local community is the lack of greenery in the town centre. Many streetscapes appear barren and are dominated by 'hard' materials such as asphalt and concrete.

The northern section of the Great North Road in particular is in urgent need of streetscape upgrades. Focusing efforts to establish street trees and landscape treatments in this area would have maximum positive impact on the look and feel of the centre.

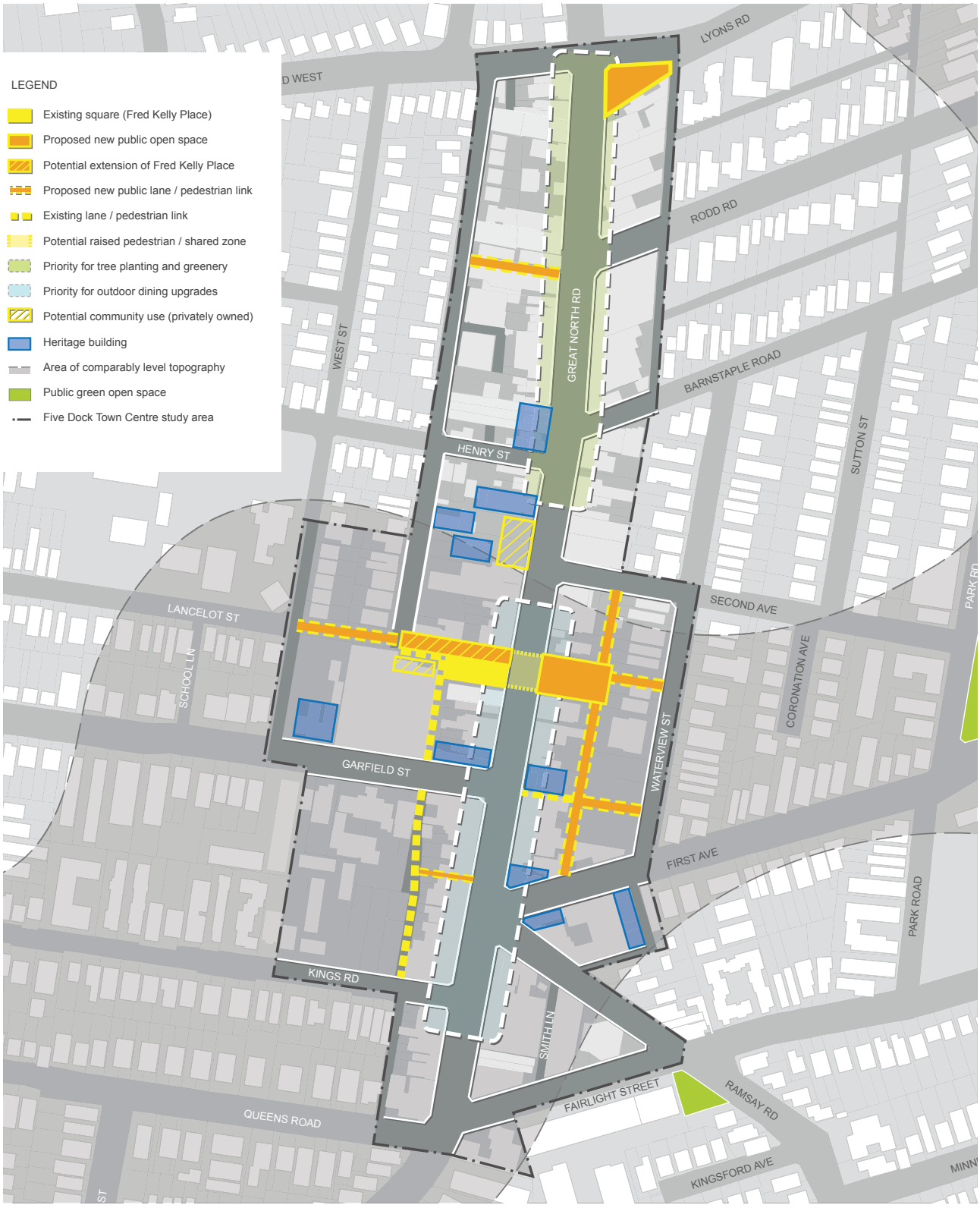


Figure 2. Public Spaces and Places Framework

Local identity and pride

Public spaces, public art, local heritage and temporary events play an important role in establishing and reinforcing a centre's local character and strengthening community identity.

With a few exceptions, public art in Five Dock is rare. The City of Canada Bay's Public Art Strategy notes that art should be included into centres in various ways, as stand-alone elements or integrated into the public domain such as street furniture or paving, and be inclusive of the various local community and cultural groups.

Potential locations for public art include the new town square, the proposed northern gateway park/plaza and in various streets and lanes throughout the study area.

Activity clusters

One of the key challenges of Five Dock is the long, elongated shape typical of a main street centre that stretches 800 metres from Lyons Road in the north to Queens Road in the south.

The centre would benefit from a 'cluster' approach which maximises the synergies that occur when similar uses are in close proximity. Instead of 'activating' the entire length with the same mix of uses, a cluster-approach would involve grouping activities in different areas, reinforcing where this is already occurring naturally.

This is also supported by an analysis of the centre's topography, which found there is a significant level change of 16 metres from the top of the ridge near Fred Kelly Place to Lyons Road to the north and that the majority of the facilities of the centre are grouped around the highest part of the centre either side of a natural ridge.

As a rule of thumb, the majority of people will walk 200-300 metres between destinations within a town centre. Any longer, and there is a tendency to use their car or visit a different, more convenient centre.

One cluster opportunity is to locate a second retail anchor within 200m of the Supabarn, and another involves strengthening the emerging 'medical cluster' near Barnstaple Road. A third is improving outdoor cafes and al-fresco dining between Second Avenue and Kings Road where the majority of cafes and restaurants are already located.

Green Streetscapes

Seed idea, Stage 2 community consultation

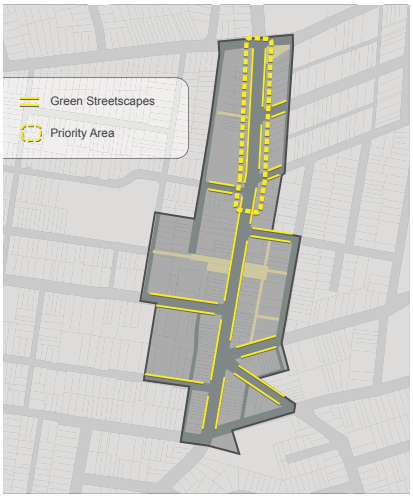
The northern end of Great North Road has few street trees or landscape features. This idea involves identifying locations for new street trees and landscaping the highly visible street corners.

It also proposes to increase the number of benches and bins, e.g. near medical facilities and replace the stencil concrete footpaths along the entire main street. This could initially be a mixture of asphalt and linear pavers. The asphalt would, over time, be replaced with natural stone pavers.

Spatial Design Principles - Public Spaces and Places

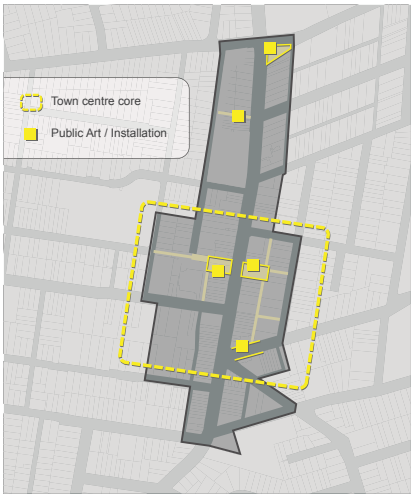
A strong community heart

Create a central public open space that reflects the aspirations of the local community, and can accommodate a range of activities and events.



Green streetscapes

Increase street trees and landscape features to soften the 'hard' look and feel of key streets, in particular along the northern part of Great North Road.



Local identity and activity clusters

Strengthen the centre's local identity by incorporating art into public spaces and focus activity in 'clusters' to benefit from synergies that similar uses create.

Implementation Steps	
PS-01	Improve the northern section of Great North Road by establishing street trees and landscape treatments along each side, with street trees within a potential central green median (if possible) and at prominent street corners.
PS-02	Create a northern gateway for the town centre by relocating the slip-lane off Lyons Road and converting the triangular-shaped area into a Gateway Park or Plaza.
PS-03	Create a new square opposite the existing Fred Kelly Place on Council-owned land (aka 'Fred Kelly Place No.2') to increase public space provision in the centre and provide an uplift for surrounding sites.
PS-04	Increase the size of Fred Kelly Place to the north and connect with the new square to the east via a raised pedestrian crossing, creating a central and strong community space and focus for Five Dock.
PS-05	Develop a consistent design palette for the treatment of all public spaces, that focuses on the activities people want to experience in a centre including walk, sit, watch, meet, talk, play, dine-out, shop, wait, interact, relax.
PS-06	Increase the (perceived) level of safety in the centre e.g. through good lighting levels after hours, clear sightlines along pedestrian routes and active/passive surveillance of public spaces and links.
PS-07	Commission public art that is reflective of the various community/cultural groups in the area, adding to the centre's local character and identity; key locations include the new town square and the northern gateway.
PS-08	Strengthen the emerging medical cluster to the north by creating a safer environment for pedestrians including a new zebra crossing, ample seating facilities, proximity to bus stops and safe drop-off / pick-up zones.
PS-09	Focus on the core of the centre; recognise that centres are contested spaces that thrive on the synergies created when activities are located in close proximity to each other.
PS-10	Seek opportunities to open up private landholdings for community events and/or public use, such as markets on the forecourt of St. Albans Church or Wi-Fi on the terrace in front of Five Dock library.

A robust urban structure

A fine-grain pedestrian network

More efficient carparking

2.2 ACCESS AND MOVEMENT

How people access and move around the place is fundamental to the success of any centre. The network of streets, lanes and pedestrian links provide the 'glue' that binds an area together, orchestrating how it operates.

A robust urban structure

The urban structure of the Five Dock Town Centre has its historic origins in subdivisions from the early 1830s.

The Great North Road, running north to south forms the spine of the town centre. Although experiencing high traffic volumes, the street offers a comparably low-speed, pedestrian-friendly environment especially around the core of the centre, created by recent design initiatives such as kerb extensions, raised pedestrian crossings and landscaped medians.

Off Great North Road, east-west side streets rarely align to form four-way intersections. In addition, streets to the east, with the exception of Second Ave, meet the central spine at an angle. This urban structure creates a unique but challenging environment, particularly for people travelling east west.

The adjacent diagram shows a number of proposed new connections. The aim is to increase the robustness of the urban structure, not only to make wayfinding and connectivity easier but also to allow people to access the centre more easily. Increased connections allow more choice and help 'unlock' the value of the entire centre and that of adjoining land.

A fine-grain pedestrian network

The network in the core of the centre is proposed to change the most, with a focus on improving pedestrian movement and connectivity.

Several pieces of land between Great North Road and Waterview Street are owned by the City of Canada Bay Council. Together with the new eastern town square, there is an opportunity to redevelop this entire area and create new development and a permeable, fine-grain network of public lanes and pedestrian links.

Over the long term it should also be possible to create a direct connection between the Five Dock Primary School to the west of the study area and Great North Road, linking the school more closely with the town centre.

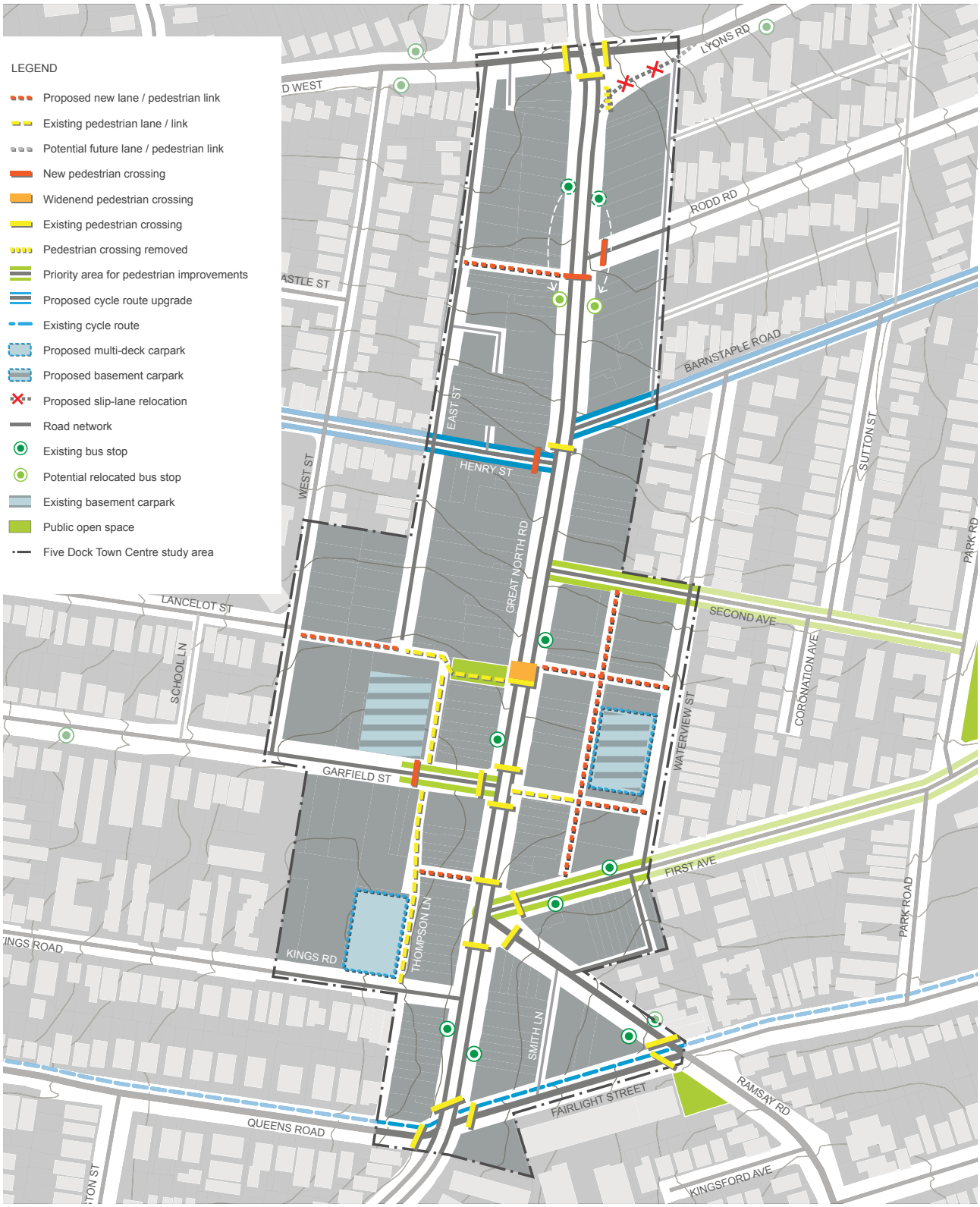


Figure 3. Movement and Access Framework

Pedestrian activity and desire lines

The Five Dock Town Centre, like most centres, has high pedestrian activity. Crossing Great North Road can be difficult due to comparably high traffic volumes (both local and through-traffic). Long waiting periods at signals, in particular at the intersection of First Avenue and Ramsay Road and opposite Fred Kelly Place lead to frequent jaywalking.

Adding a crossing point to the north of the centre, near Rodd Road, as well as widening and raising the crossing at Fred Kelly Place would improve this situation. A more radical approach could occur at First Avenue, which could be traffic-calmed to offer higher pedestrian amenity.

Other pedestrian desire lines include routes to Five Dock Park along First and Second Avenue and along the eastern section of Garfield Street. These routes are highlighted in the framework diagram as priority areas for pedestrian improvement.

There is also high pedestrian activity between Kings Road public carpark and Five Dock Club on the other side of Great North Road. Adding a crossing point at the end of Kings Road is difficult due to its proximity to the signalised intersection to the north. However, new links and mid-block connections could direct pedestrians to the existing crossing points.

East-west cycle connection

The cycle link along Henry Street and Barnstaple Road is considered a crucial link, connecting to the town centre, the primary school to the west, the park to the east and the wider surrounds.

Currently, cyclists have to share the road with vehicles and the line markings and symbols on the road are faded and hard to see due to parked cars. A dedicated two-way cycle lane (which may require narrowing of Henry Street to one-way for vehicles) and providing a safer way to cross Great North Road should be investigated.

Consolidated, efficient carparking

Locating carparks strategically and at the edges of the core will encourage walking trips and benefit retail along popular routes. (This strategy follows the 'Westfield principle' where the highest rents are paid by shops located on the route from the carpark to an anchor, e.g. Target or a supermarket).

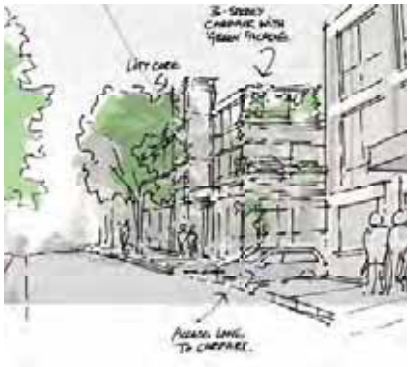
Consolidating parking and increasing the overall number of spaces in the centre could be accommodated by developing a multi-level carpark at Kings Road and integrating existing public spaces at Waterview Street into a new mixed-use development.

A multi-deck carpark

Seed idea, Stage 2 community consultation

Car parking is an important component of every successful town centre. Multi-level car parks, while expensive to build, provide high numbers of well-located parking.

This idea suggests that a possible location for a multi level car park is the Council owned land off Kings Road. The carpark would need to be carefully designed to ensure appropriate interface with the adjoining residential uses.



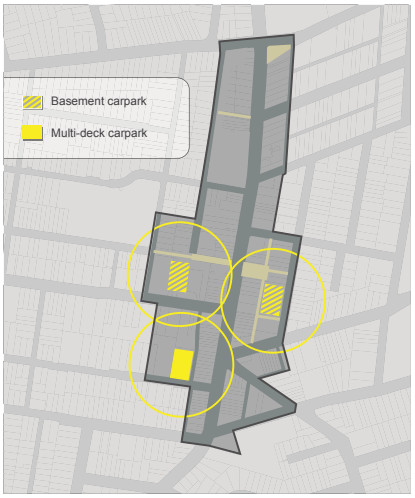
Spatial Design Principles - Access and Movement

A permeable urban structure

Achieve a more permeable access network, with a particular focus on improved east-west connectivity and easy wayfinding by creating new links.

A robust pedestrian network

Focus on safe and convenient walking routes to open spaces, public transport, schools and shops through a fine-grain pedestrian network.



More efficient carparking

Consolidate on- and off-street carparking in multi-level carparks to free up space for widened footpaths and increased street tree planting.

Implementation Steps

AM-01	Continue to promote a low-speed, pedestrian-friendly environment along Great North Road by design initiatives such as kerb extensions, raised pedestrian crossings and landscaped medians.
AM-02	Improve existing east-west connections (Council-owned roads) with a focus on upgrading the pedestrian environment of First and Second Avenue as important linkages between the centre and Five Dock Park.
AM-03	Create new east-west connections (including mid-block links and the central east-west spine through Fred Kelly Place); explore opportunities to delver these links in cooperation with (and co-funding by) private developers.
AM-04	Establish a safe and fine-grain pedestrian network in the core of the centre, in particular through the 'Waterview' urban block (bound by Great North, Second Avenue, Waterview Street and First Avenue).
AM-05	Promote cycling to/from the centre and between destinations such as schools and parks by upgrading the existing central cycle link along Barnstaple Road and Henry Street and providing more cycle parking.
AM-06	Promote public transport usage by providing convenient access, safe crossings and high-quality facilities such as bus shelters, signage, displays, seating, bins and high lighting levels at bus stops after dark.
AM-07	Improve wayfinding in and around the centre by consolidating signage, carefully placing new and relocating existing signs where appropriate.
AM-08	Consolidate and seek to increase the overall carparking capacity of the centre. Consider building a multilevel carpark at Kings Road (existing on-grade Council car park) or alternatives on the general presumption that publicly accessible car parking in the centre should not be reduced.

A memorable, distinctive place

Defined public domain

Human scale and proportion

2.3 URBAN AND BUILT FORM

The character of a place is intrinsically defined by the relationship between built form and the public domain. Building setbacks, heights and built-to alignments are key elements that define spaces, while facades, materials, colours and textures add the character and 'feel' that people connect with.

A memorable and distinctive place

One of Five Dock's most distinctive assets are the number of prominently located historic buildings which create charm and local character.

One example is the former CBC Bank at the intersection of Garfield Street and Great North Road, which is one of the area's best surviving inter-war commercial buildings and currently occupied by NAB. Another memorable impression is created by the two historic triangular buildings, one of which is the Five Dock Hotel, that define the intersection of First Avenue and Ramsay Road.

Highlighting these assets by framing them with trees, lighting facades after dark and providing an adjacent high-quality public domain is an effective way to celebrate the local history as well as create a distinctive centre that attracts more people.

The centre's unusual urban structure with numerous T-intersections, while of disadvantage for its accessibility and connectivity, is a key strength when it comes to creating a memorable place.

Due to the T-intersections, views when traveling towards the centre often terminate in buildings. The perception of the entire centre will be increased if these prominent buildings are well designed and maintained. This same principle also applies to corner sites.

Defined public domain

To clearly define the public domain buildings in the centre should continue to be built to the street alignment.

This important enclosure is mostly intact along Great North Road, but is lacking along some of the centre's side streets. An example is the bottle shop on First Avenue next to the Five Dock Hotel, which is set well back with driveways and parking located next to the street.

The adjacent diagram identifies the location of recommended urban edges. Additional design controls that ensure these edges are 'active', avoiding long blank walls and ensuring ground floors clearly address the public domain are also recommended.

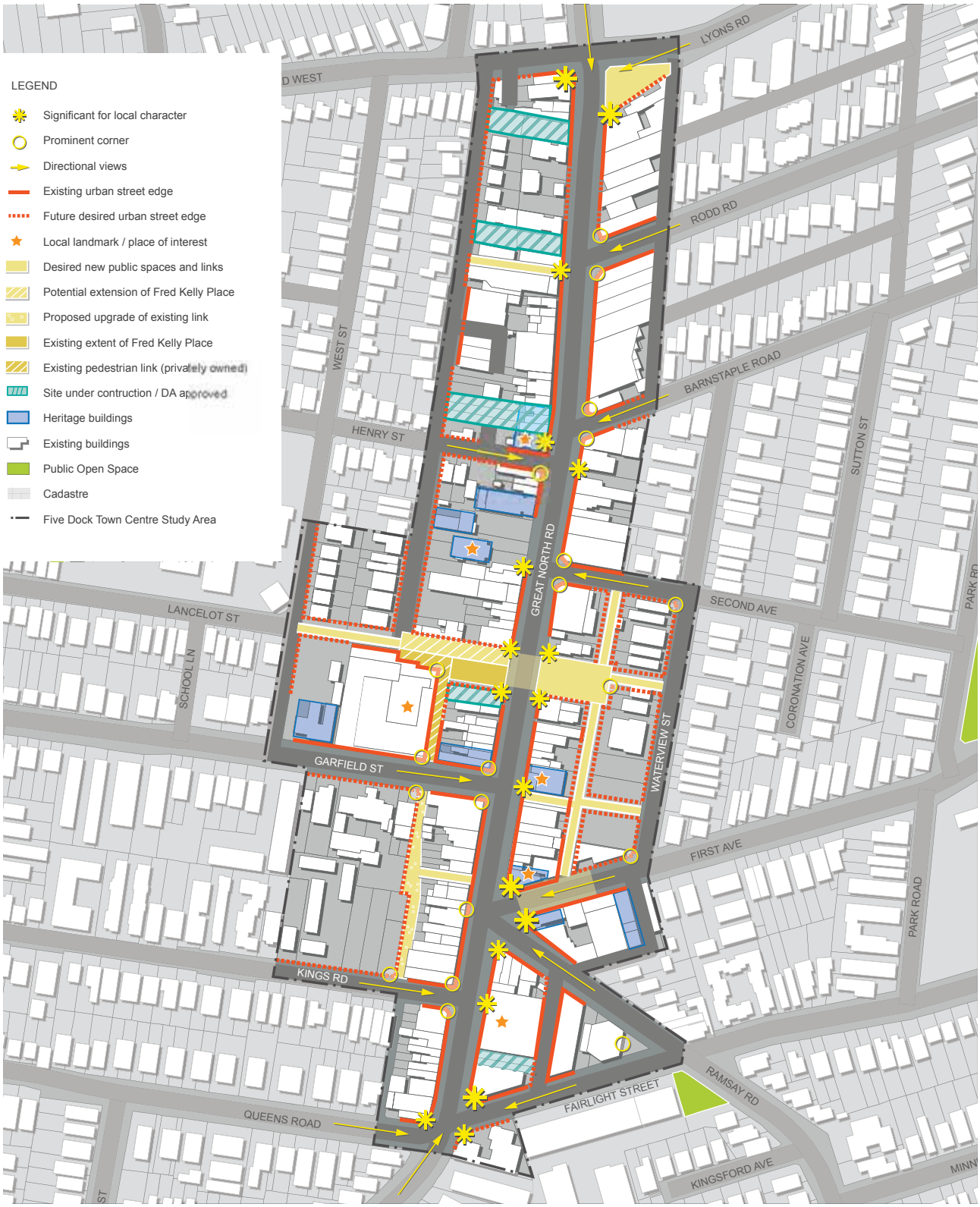


Figure 4. Urban and Built Form Framework

Human scale and proportion

Five Dock's 'village character' is valued by the local community and one of the reasons people visit and spend time in the centre. To support this village feel, and to ensure streets and public open spaces have the best possible access to breezes and sunlight, building heights and setbacks need to be carefully established.

Currently, the maximum building height for most of the town centre is set at 15 metres, which allows for 4-5 storeys. 'Squeezing' five levels into this envelope, however, requires minimal floor to floor dimensions, creating poor retail spaces on the ground floor. This can be observed in a number of recent developments along the Great North Road, some of which appear to be struggling to attract retail tenants.

Increasing the maximum building height to 16 metres and adding a requirement that regulates ground floor ceiling heights to be sufficient for retail uses (3.6m metres) could address this issue.

To protect the village feel and ensure a good microclimate within the public domain, upper levels should be set back. This will minimise the bulk and scale that is visible from the street.

A standard street wall height of 14 metres (4 storeys) along Great North Road will help create a "village" street proportion of 2:1 and also help protect the visual curtilage of heritage buildings.

Along other streets in the town centre building heights and setbacks should follow similar built form envelope controls, however, additional stepping down in some areas may be required depending on their impact on the public domain and/or neighbouring properties.

Quality new development

The existing development controls that regulate the shape of new development in the centre require revision.

It is believed they were written with commercial buildings in mind, but for mixed use/residential development (the majority of development applications Council receives) the controls facilitate odd outcomes. Resulting buildings appear 'squat' with deep floor plates that can have poor residential amenity and limited access to sunlight and ventilation (see Section 3.3 for detailed recommendations).

Encouraging good development

Seed idea, Stage 2 community consultation

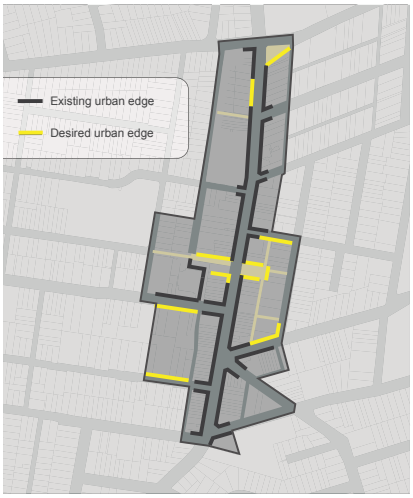
The current development controls facilitate development that can appear squat, and relies on internal light wells and in some cases views across neighbouring properties to create necessary light and amenity.

The idea is to retain the same amount of floor area but increase the height of the ground level and increase building height along the Great North Road to 4-5 storeys. These changes would encourage better quality buildings that have higher internal amenity and ground floors that present well to the footpath.

Spatial Design Principles - Urban and Built Form

A memorable, distinctive place

Apply careful design to the built form (facades) at prominent, highly visible corners and where views terminate from side streets and public open spaces.



Defined public domain

Focus on a continuous built form urban edge to the public domain, in particular along Great North Road and key civic spaces such as Fred Kelly Place.

Prominent places of interest

Highlight local landmarks and heritage by lighting facades after dark, framing buildings with trees and providing high-quality public domain in front.

Implementation Steps

UF-01	Highlight key heritage and character buildings in the centre, in particular those that are located at highly visible corners or termination of views such as the former CBC Bank, Five Dock Hotel and the former Post Office.
UF-02	Safeguard the 'village character' of the centre through setting consistent street wall heights, creating a human scale (built form to street proportions) and locating active frontages along key streets and open spaces.
UF-03	Ensure new development in the centre enhances the overall visual appearance of the streetscape and integrates well with its surrounds, in particular when interfacing with existing low-density residential areas.
UF-04	Clearly define and reinforce the visual enclosure of public places and streetscapes through new development and street tree planting, with a focus on Great North Road and streets within the centre's core.
UF-05	Support the creation of the centre as a 'memorable place' with well-designed and maintained development, in particular at highly visible corners and at the numerous termination of views along side streets.
UF-06	Apply ESD (ecologically sustainable development) design principles to create a pleasant microclimate of the public domain by greening the centre, minimising overshadowing during winter months, orientating new development to capture prevailing breezes and implementing WSUD (water sensitive urban design) measures.
UF-07	In addition to revising the current Development Control Plan (DCP), update relevant other development and planning controls such as the Local Environmental Plan (LEP), design guidelines and/or design codes to facilitate better quality and more sustainable development.
UF-08	Lead by example when redeveloping key sites in the centre that are owned in full or parts by Council to set clear expectations to the quality and sustainability of new development by private investors.

2.4 CATALYSTS AND RENEWAL

Centres such as Five Dock experience ongoing change and urban renewal sometimes rapid, sometimes slow.

For years there has been limited development activity in the centre, however more recently a large mixed use development, incorporating a supermarket and the public library, has created a destination. There are now several apartment buildings planned or under construction in the centre.

Public domain as a catalyst

Recent positive changes also include improvements to Fred Kelly Place and the widening of footpaths along Great North Road, which has allowed an increased number of outdoor cafes, tables and chairs.

Continuing to improve the quality of the public domain will function as a 'catalyst' that attracts private investment and redevelopment of surrounding properties. In return, private buildings need to 'give back' to the public domain by providing activated ground floors, well-maintained shop fronts and careful selection of colours, materials and signage. Ideally, this would follow a coordinated palette to create a cohesive character of the centre and tie in with the design of public street furniture.

Safety and surveillance

A centre's success is also linked to an individual's sense of safety and security. This is particularly important for a thriving night-time economy. Improving natural surveillance and adequate lighting, particularly along pedestrian-only routes, bus stops and carparks, is important as it will help increase the perceived level of safety in Five Dock.

Activity generators

Public places in a centre are not only important for the social life of locals. They also need to be able to cater for small and large events, such as markets, shows, concerts, performances or fairs.

Events attract people, and people attract more people, who will spend time in the centre and money in the local shops, restaurants and cafes. The success of Ferragosto in generating this kind of activity is a good example. In order to start activating the centre especially after hours, it is recommended holding evening events such as a "pasta market" and encourage local businesses, cafes and restaurants to extend opening hours into the evenings and on weekends.

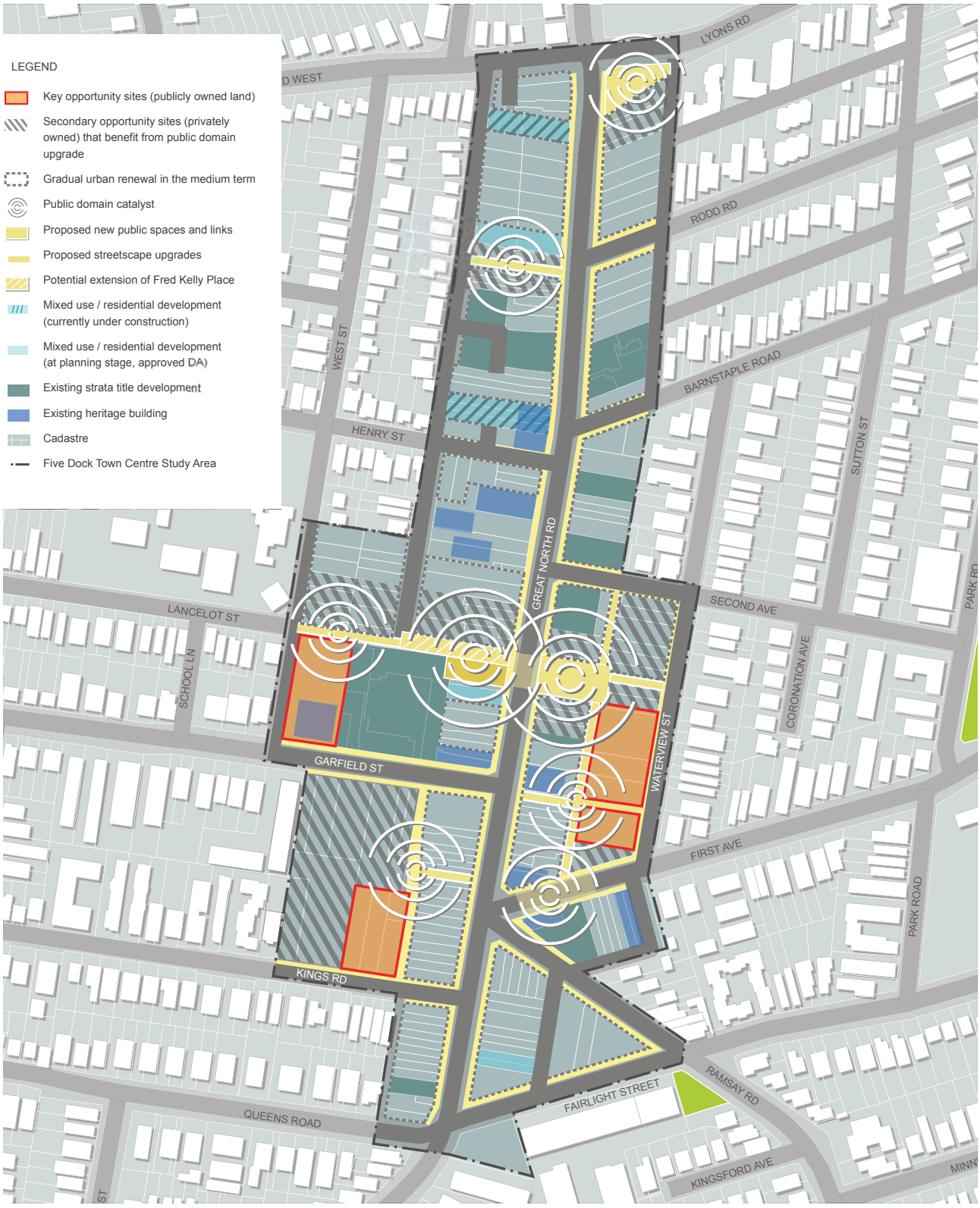


Figure 5. Catalyst and Renewal Framework

Incentives for development

In addition to enhancing the appeal of the public domain and strengthening the local character of the centre, there are a range of incentives which can encourage private redevelopment.

Five Dock, like many other main street centres, has a highly fragmented lot ownership pattern. Research shows that while minimum lot sizes (in the order of 400 sqm) can support feasible development, larger sites are needed for courtyard style developments and to create larger retail shops. Site amalgamation can be encouraged through bonuses such as increased height and/or floor space ratio.

Car parking provision also has an effect on the viability of development, and a reduction in car parking requirements for development should be considered based on comparable areas located along major transport nodes.

Strategic opportunity sites

Council owns key sites in the town centre that could be comprehensively redeveloped to stimulate broader investment and to improve the centre's amenity, making it more attractive for private investment.

Opportunity sites are shown on the framework diagram on the previous page. Their extent is based on current ownership patterns (in particular land in public ownership), their strategic location, e.g. at a gateway or within the centre core, and their proximity to other land or uses that are likely to benefit or create key synergies.

The largest site incorporates the on-grade carpark at Waterview Street, and is considered key to the establishment of the new town square and to enable the proposed network of lanes and pedestrian links in this area.

Some opportunity sites require land swaps or acquisitions to unlock their value and provide an urban renewal catalyst to adjoining land. In order to maximise the potential of the NSW Police site, for example, the proposed public link that connects the school with Fred Kelly Place, would help provide good access to the site.

Another catalyst is located to the north of the centre, at the intersection of Lyons Road and Great North Road where relocation of the left-turn slip lane off Lyons Road would free up space for a new gateway park.

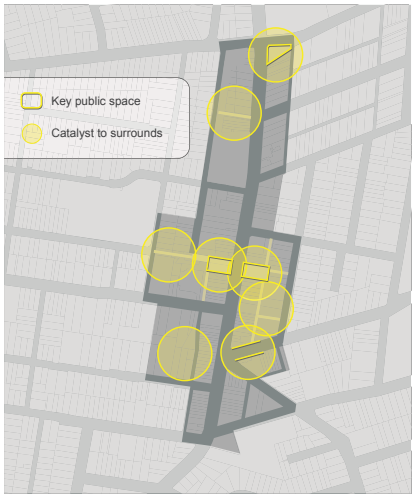
Encouraging night-time economy

Seed idea, Stage 2 community consultation

There is a lack of options for spending time in the centre or socialising after dark other than mainstream drinking venues (pubs). This 'ghost town' feel makes it uninviting to visit the centre in the evenings.

This idea involves increasing the lighting in the centre, e.g. up-lighting of trees to create a pleasant atmosphere at night and improve safety along key routes. This would also encourage cafes, bars and retailers to stay open late.

Spatial Design Principles - Catalysts and Renewal



Public domain as a catalyst

Locate public spaces and upgrades to the public domain where they offer maximum benefit to adjoining land and act as a catalyst for urban renewal.

Incentives for development

Amend current planning and development controls to support feasible development while improving the quality of delivered built form.

Strategic opportunity sites

Stimulate broader investment and improve the centre's service offering by consolidating and developing key strategic sites in the centre.

Implementation Steps

CR-01	Continue to improve the public domain quality across the entire centre, with a focus on green streetscapes and attractive public spaces that provide a 'catalyst' to attract redevelopment of surrounding properties.
CR-02	Create additional public connections throughout the centre to provide improved access to properties, 'unlocking' the land value and incentive for redevelopment and investment.
CR-03	Encourage a thriving night-time economy that attracts a wide range of people by increasing the (perceived) level of safety e.g. through good lighting levels, clear sightlines and both active and passive surveillance.
CR-04	Increase activity levels in the centre after dark by extending opening hours, attracting small licenced premises (e.g. wine bars and restaurants) and by holding evening events such as Friday "pasta markets".
CR-05	Stimulate broader investment and improve the centre's service offering by developing key strategic sites, including Waterview Street carpark and the NSW Police site.
CR-06	Create the opportunity for a comprehensive development within the Waterview block by consolidating Council's landholdings through incorporation of government land (state-owned) and purchase of private properties.
CR-07	Increase the feasibility of redevelopment in the centre by amending current development controls, supporting site amalgamation and incentivising development of smaller sites, e.g. reduction of carparking requirements.
CR-08	Make it more affordable to live, work and visit the centre by supporting active and public transport, increasing the diversity of accessible local services and applying ESD design principles for new development.

FIVE DOCK TOWN CENTRE URBAN DESIGN STUDY

03 PUBLIC DOMAIN

3.1 PUBLIC DOMAIN IMPROVEMENTS

Public squares, lanes and shared zones

The adjacent diagram illustrates the ultimate potential for various and much needed new public places in the town centre, including the northern gateway park/plaza, the new town square and an extended Fred Kelly Place.

The network shown also includes existing public spaces that are recommended for upgrading to be safer and to offer more pedestrian amenity, such as Thompson Lane.

In the ultimate scenario (10+ years) there would be a three-fold increase in the provision of quality public space, including squares, pedestrianised lanes and linkages.

Design guidance








Public Squares and Civic Open Spaces	
Flexibility and Functionality	Open spaces need maximum flexibility to cater for various activities and events. Minimise 'clutter' (e.g. signage) and place street furniture, trees and other elements along the edges or as separation of 'activity zones' within open spaces.
Legibility and Wayfinding	Sightlines along pedestrian desire lines are to be kept free of visual obstructions, in particular where open spaces connect to pedestrian lanes.
Safety and Surveillance	Appropriate lighting levels are required for all open spaces. Upper levels of adjoining development need to overlook open spaces and ground floors are to clearly address the public domain (active frontages).
Comfort and Microclimate	Adjoining development needs to minimise overshadowing of open spaces, in particular during winter months. Open spaces also need to capture natural prevailing breezes during summer (this relies on careful composition of adjoining buildings and openings) and offer a balance of shady areas and sunny spaces.

Pedestrianised Lanes and Shared Zones	
Vehicles and Pedestrians	Effective shared zone treatments slow traffic down and create safe environments for pedestrians while still allowing for vehicular access. A speed limit of 10km/h should be applied to all pedestrianised lanes and shared zones in the centre.
Legibility and Safety	All lanes and connections need to be on a straight alignment where possible and sightlines are to be kept free of visual obstructions. Where lanes are offset or 'dog-leg', a widening of the public domain and higher lighting levels after dark are required at the node (place where change of direction is required).
Accessibility	All walking environments are to cater for the needs of less mobile groups such as seniors, disabled people, children or parents with prams.
Design Quality	It is important to select design elements carefully (ideally from a coherent palette) as pedestrians experience their environment at a slow pace, taking in the detail of materials, colours, textures and other visual and tactile treatments.

Street trees and landscape treatments

Overhead power lines are a key constraints to tree planting in the Five Dock. Located along most streets of the centre, with the exception of the southern part of Great North Road, power lines are expensive to underground, and planting trees underneath them causes safety issues and increased maintenance costs.

It is recommended that additional trees are planted on the opposite side of the main power lines where ever possible. There may also an opportunity for a green median with central tree planting along the northern part of Great North Road.

The ultimate long-term scenario (as shown adjacent) would significantly increase the number of trees in the public domain, with almost half of all additional trees located in new public spaces.

Design guidance








Street trees	
Placemaking	Street trees are one of the most effective ways of creating pleasant urban environments. Tree planting should help to create memorable places in the centre and reinforce the movement hierarchy to support wayfinding in the centre.
Selection Criteria	Upright, compact trees are suitable for central median planting, while trees in open spaces can have spreading canopies. Where possible larger 'landmark' species should be selected for key locations, e.g. within open spaces, at the end of terminating views and prominent street corners.
Microclimate and Biodiversity	Increasing the tree canopy of an area is effective way to in mitigating the 'urban heat island' effect. Select species that are low in maintenance, require minimal irrigation and enhance biodiversity.
Diversity and Solar Access	A mix of evergreen and deciduous species will provide good solar access during winter months, while also ensuring that some trees remain green throughout the year.

Landscape treatments	
Comfort and Safety	Landscape treatments at street corners and along the footpaths create a buffer to moving traffic and increase safety and comfort levels for pedestrians. The centre's wide footpaths and existing kerb extensions at street corners allow for increased landscape treatments, ideally in permanent turf/garden beds. The location of planted verges needs to ensure access to parked cars and utilities is maintained.
Maintenance and Visual Coherence	Landscape treatments such as hedges and ground covers need to be low in maintenance and should be selected from a design palette (to be developed/consolidated) to ensure a coherent 'look and feel' of the centre. Species selection should support endemic vegetation communities.
Water Sensitive Treatments	Where possible, incorporate on-site detention and water quality improvement measures such as raingardens, bio-retention and bio-filtration systems.

Carparking, public transport and cycling

Carparking in town centres is a contentious issue. However, to balance the needs of all users including pedestrians, cyclists and people travelling with public transport, a few on-street parking spaces are recommended to be converted into shared and/or bus zones, a dedicated cycle link along Henry Street and Barnstaple Road and areas for kerb extensions and much needed street tree planting.

The reduction of on-street parking would be balanced when parking made possible by relocating the slip-lane to the north and the presumption that there will be no reduction in overall parking provision within the centre. There are also opportunities to gain spaces through all-day parking at Five Dock Park for those working in the centre.

Design guidance








On-street and off-street car parking	
Short-term Parking	A main street needs to have some short term parking but the majority of the demand will have to be located off the main street. It is important to balance needs of other users including pedestrians, cyclists and public transport users. Improved enforcement of short term parking will help turn-over of parking spaces maximising the benefit to shops and businesses.
Alternative Car Parking Provision	Consider a multi deck car park at Kings Road or alternatives to car parking provision. Should this proposal be pursued, detailed design should consider split-level (to respond to the natural topography and reduce internal ramp lengths), green facades and/or roof top activities. The façade treatment along Kings Road will be critical. The building could also include public art (possibility lighting) and solar cells.
Off-site Parking	Encouraging workers to park away from the centre would free up spaces for customers. The western side of Five Dock Park is not far and there is an opportunity to locate off-site car parking spaces for workers and employees along the edge of this park.

Public transport and cycling facilities	
Convenience and Comfort	All bus stops need to provide seating for waiting passengers. Covered bus stops are recommended and should be installed at all stops in the centre, except where awnings can provide adequate weather protection. Shelters should be narrow to limit footpath obstruction and incorporate signage/timetables and consistent branding.
Safety and Surveillance	All bus stops need to have adequate lighting around the stop after dark. Sightlines from public streets and adjoining development are to be kept as free of visual obstructions as possible.
Accessibility	To support public transport usage, ensure clear, direct routes to bus stops and provide safe crossings of main roads in close proximity (zebra crossing or signalised intersection).
Cycling Facilities	The key east-west cycle connection along Barnstaple Road and Henry Street should be upgraded into a high-quality link, either a dedicated lane or on-road path (line markings). Additional cycle parking facilities are to be installed in public spaces, next to key destinations and incorporated into light poles. To avoid vandalism and theft, cycle parking needs to be provided in highly visible locations.

Street furniture and material selection

One of the key strengths of the Five Dock Town Centre are the wide footpaths along the Great North Road. The width allows for street tree planting and landscaping, seating facilities, and ample space for pedestrians and outdoor café/dining areas.

The current paving (stenciled concrete) is in need of an upgrade. It is also proposed to adopt a material palette and suite of street furniture such as seating, bins and signage that is consistent throughout the centre.

Design guidance







Street Furniture and Materials	
Cohesive Design Palette	Street 'furniture' includes a wide range of components and elements including benches, bins, bollards, cycle stands, fences, railings, tree grates, phone boxes, signage and shelters. To ensure consistency in the look and feel of these elements a coordinated design palette for the centre is required.
Aesthetics and Functionality	All elements of street furniture need to be of high aesthetic quality, contemporary, well-proportioned and appropriate to their context. When placing street furniture, avoid 'cluttering' the public domain. For seating facilities in particular, consider modular solutions that provide flexibility for the needs of different uses and can adapt to a range of locations. The surface material of bench seats is to ensure they are comfortable, temperate (not too hot or cold) and fast-drying.
Public Toilets	Investigate whether public toilets can be accommodated within a building that front onto public spaces, e.g. development near the new town square. If integration is not possible ensure freestanding structures do not dominate the space by locating them at the edge of public places. The detailed design will need to consider Crime Prevention Through Environmental Design (CPTED) principles to ensure safety and surveillance, while also minimising the risk of vandalism.
Outdoor seating/dining pods	Considerable investment has been outlaid for the existing outdoor seating 'pods' in the core of the centre and it is recommended they remain. However, a redesign is necessary to improve their look and feel. Timber or timber-composite screening could replace the existing steel panels, with planter boxes incorporated into the design to help green the centre. The existing plastic screens/blinds restrict views and quickly look untidy. A better solution is fixed glass panels up to 1200mm high that effectively shield patrons from traffic noise while allowing views to dinners and shop fronts.
Umbrellas	New outdoor dining should use umbrellas are a cost effective way of creating an informal, welcoming feel along the main street.. Umbrellas should be canvas material (no plastic or vinyl), free of advertisements, square in shape and of one solid colour and securely fixed. Ideally the colour and type of outdoor seating umbrellas should be specified as part of the public domain Design Palette and suggested colours include turquoise/blue (see photo above) and cream white.
Durability and Maintenance	Select durable, cost-effective materials that are easy to maintain. Recommendations include brushed stainless steel and painted steel (grey). Composite timber is an affordable alternative to real timber, low in maintenance and an suitable in particular for street furniture and screening.

Signage, lighting and art

The natural place in the town centre to integrate signage, public art and public facilities (such as toilets and baby change rooms) is at Fred Kelly Place and/or the new town square. Council currently have plans for new public toilets for Fred Kelly Place.

It is recommended that wayfinding signage is provided that includes a map of the centre and locates civic and public facilities. This could also involve local business or community groups who could co-fund the signage.

The adjacent diagram also highlights priority areas for increased lighting, in particular along existing and proposed pedestrian routes, to support a sense of safety after hours.

Design guidance





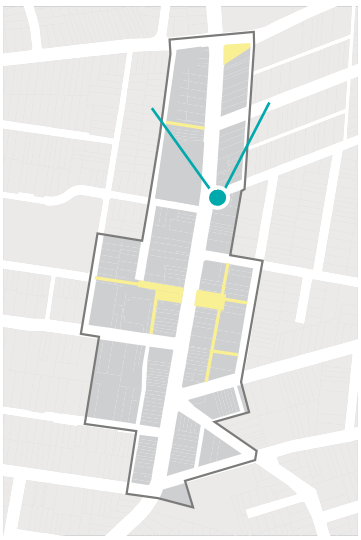


Signage and Lighting	
Wayfinding for all users	The centre needs to consider lighting on a pedestrian scale as lighting suitable for vehicular car activity is different to that needed to create a pleasant safe environment for pedestrians. Good lighting for laneways, public squares and pedestrian links is particularly important. Vehicular traffic requires clear signage to car parks but signage for pedestrians is also required to encourage activity across the centre. The signage strategy should be consistent and coordinated with the Design Pallet.
Reducing Clutter	The quality of the pedestrian environment is a critical part of the “look and feel” of a centre. Bins, post, signs and utilities can clutter the footpath and create a poor impression. Integrating signage should be considered to reduce the number of poles. Allowing shops, especially florists and fruit and vegetable shops to spill out onto the street can add light and colour into the quality of the pedestrian environment.
Information Boards	It is recommended that ‘information boards’ are provided in key locations such as Fred Kelly Place and/or the new town square. These would be designed to encourage pedestrian activity and should include a map of the centre, marking key civic destinations (such as the library) and public facilities (toilets, baby change rooms etc.).
General Lighting	Lighting illuminates businesses, creates an evening ambiance and discourages crime. A variety of light sources is available along the Great North Road including signs, display windows and shopfronts, architectural lighting, and general street lighting. Keeping lights under awnings switched on into the evening should be encouraged. For safety heavily used spaces such as car parks, major pedestrian routes, entries to buildings and entries to public toilets should be brightly lit. Utilise a mix of lighting including overhead street lights, building or pole mounted lights, bollards, street furniture, feature lights, facade lights and shop fronts to create variety and character.
Uplighting of Assets	The uplighting of trees, heritage buildings and public art is an effective way to create a pleasant atmosphere in the evening and support the night time economy. Lighting of buildings should be shielded and mounted so as to only distribute light directly up or down along the face of the façade.

3.2 DESIRED FUTURE CHARACTER

The Great ‘Green’ North Road


Existing situation



01 New street trees in a central median along the northern part of Great North Road create a ‘green boulevard’

02 The median features native, water-sensitive planting and adds to the greener look & feel of the area

03 Amended development controls allow for four levels plus a fifth level which is set back from the street

04 A new crossing and the narrowing of travel lanes increase pedestrian safety and accessibility

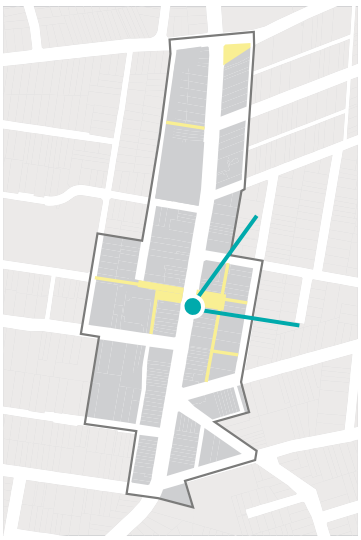
05 Landscape treatments at street corners and threshold treatments further improve the new look & feel

Artist’s impression of the potential future look and feel of Great North Road


03
04
05
WHITE
WHITE LADY
SHARE THE ROAD

The New Town Square

Existing situation



01 Outdoor tables and chairs spill out onto the square and offering a pleasant place to sit, relax and watch.

02 A combination of grass and paving adds green and a place to play, while also allowing for markets and events.

03 High quality paving, seating facilities and landscape treatments add to the character of the new square.

04 New development, limited to six levels in height, frames the square and provides enclosure and surveillance.

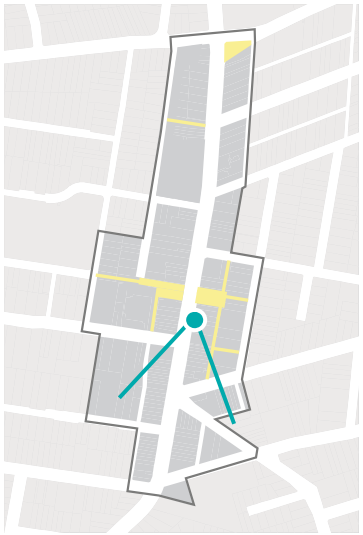
05 Active retail frontages on the ground floor of the new built form address the public domain and attract activity.

Artist's impression of the potential future look and feel of the new town squa


02
03
04
05

Outdoor dining ‘pods’

Artist’s impression of the potential future look and feel of outdoor dining



01 New umbrellas add to the atmosphere of the street and are canvas material, one solid colour and securely installed.

02 Fixed glass panels replace the previous plastic blinds and shield patrons from traffic noise.

03 Planter boxes are incorporated into the design of the pod and help green the streetscape.

04 The timber-look of the pods is also applied to the screening to the street, replacing the current thin steel panels.


Existing situation

Pedestrian connections

Artist's impression of the potential future look and feel of outdoor dining

01 Newly installed chalk-paint on the wall allows people to actively be part of, add to and interact with public art.

02 Mountable green 'living' wall elements create a more pleasant atmosphere of the link and are illuminated at night.

03 The small-stone paving adds to the pleasant feel and detracts from the narrow, linear shape of the link.

04 Lighting along the walls creates adequate lighting levels after dark and enhances safety and surveillance.

05 The wall has been converted into a glass facade leveraging off the passing traffic and adding interest to the link.

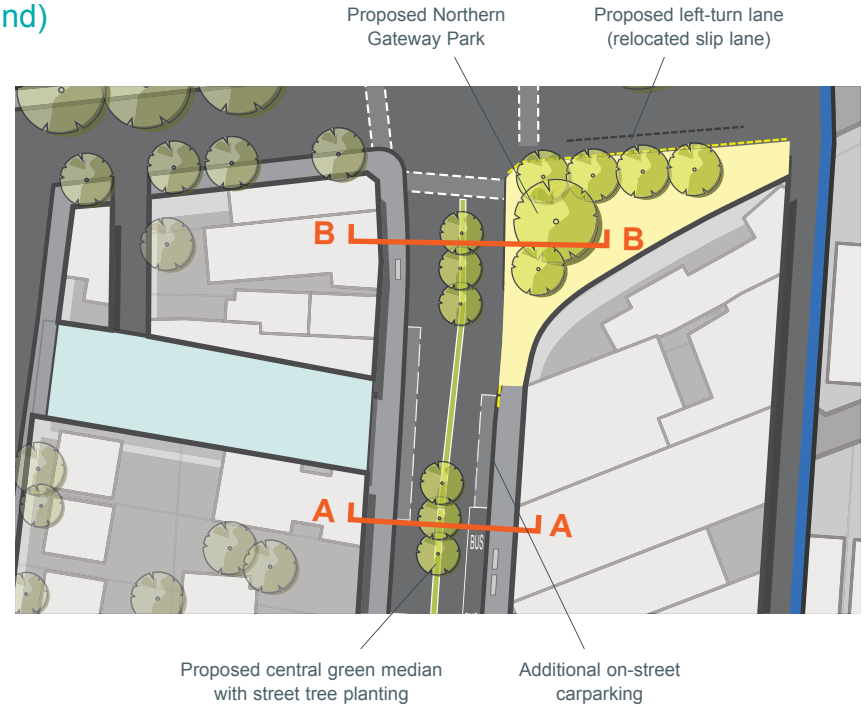

Existing situation

3.3 STREETS AND OPEN SPACES

LEGEND

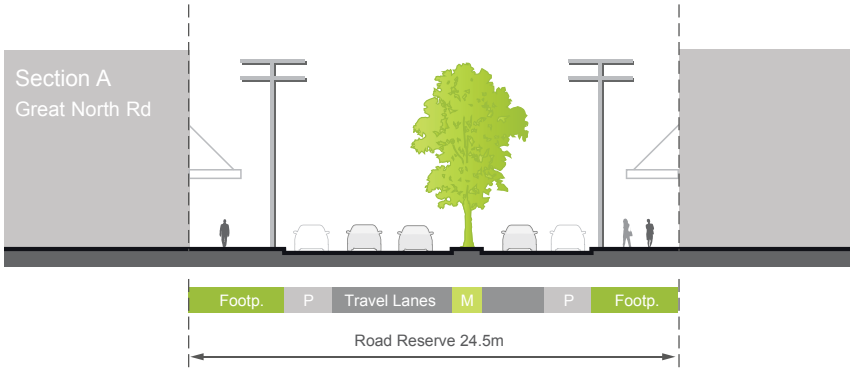
- Desired future public places and links
- Potential raised pedestrian / shared zone
- Potential new trees
- Existing trees on public land
- Existing trees on private land
- New pedestrian crossing (zebra)
- Proposed cycle route upgrade
- Proposed kerb extension
- Existing carpark
- Mixed use development (currently under construction or approved DA)
- Cadastre
- Five Dock Town Centre Study Area

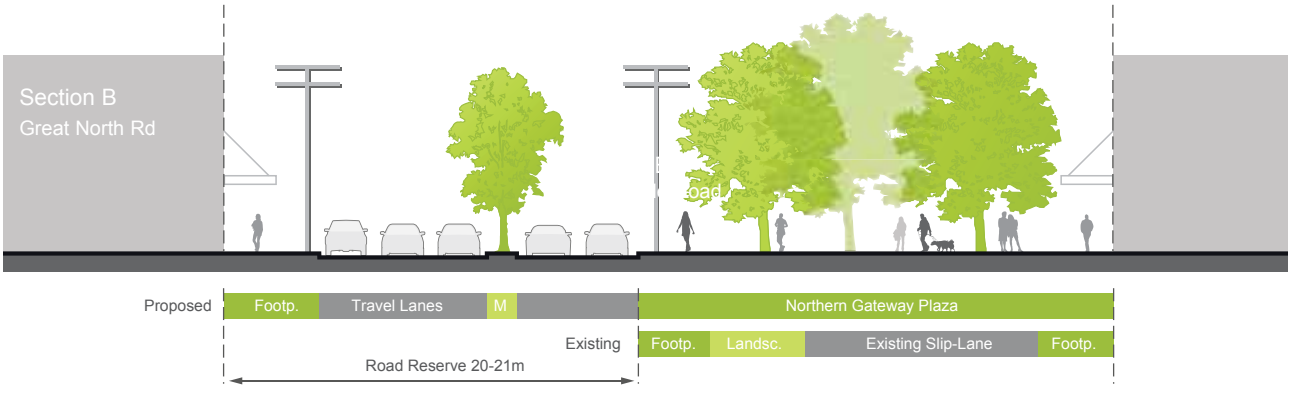
Great North Road (northern end)



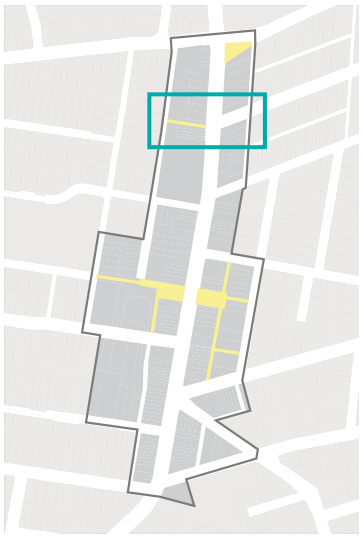
3.2.1 Northern Gateway: the proposed relocation of the existing slip-lane off Lyons Road would create space for a gateway plaza or park at this prominent arrival point to the town centre and become a catalyst for redevelopment.

3.2.2 Great North Road (north): Overhead power lines prevent mature tree planting along each side of the street. Instead, it is recommended that Council investigate the option of tree planting in a central green median.



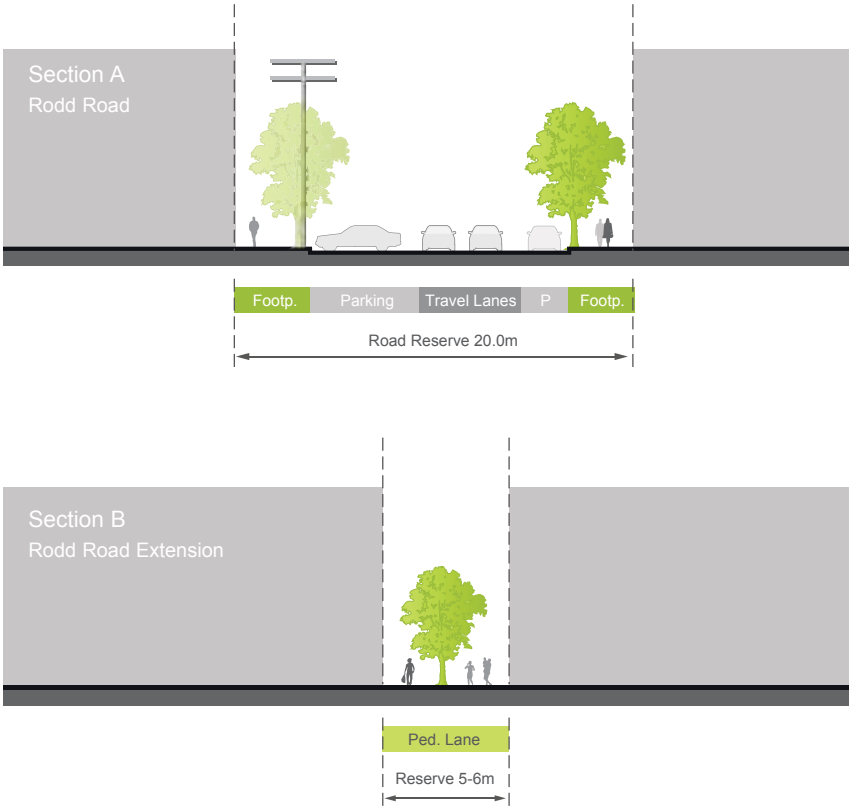


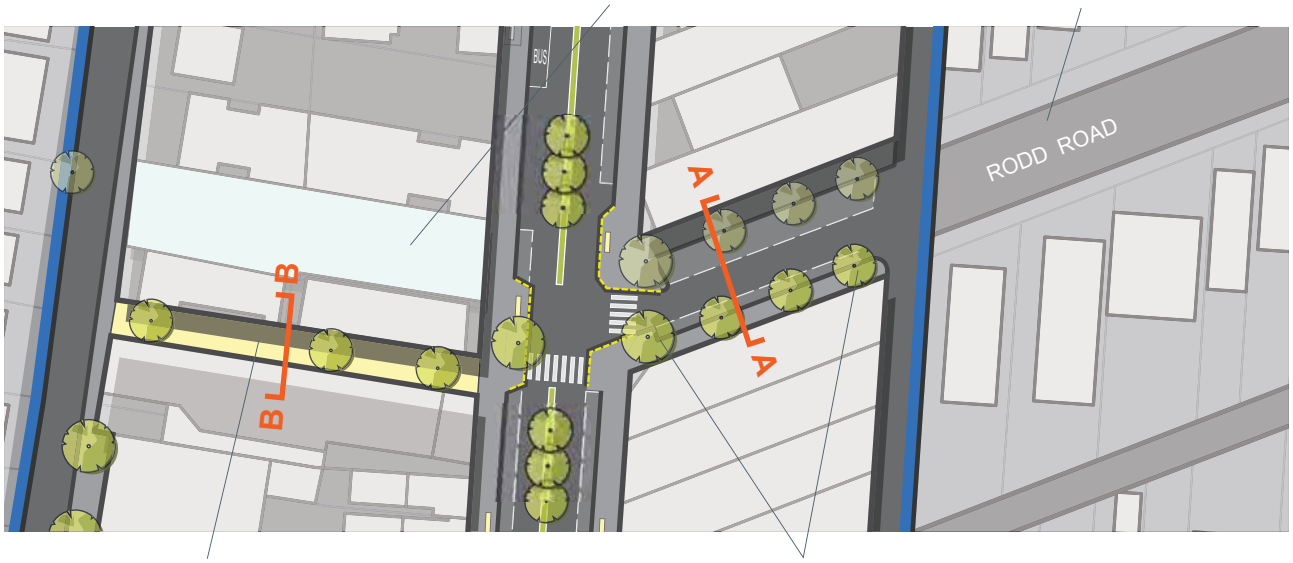
Rodd Road and potential link to East Street



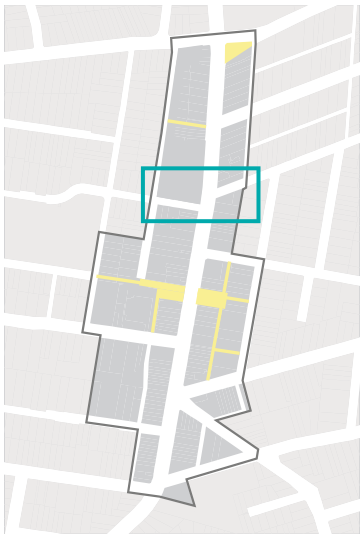
3.2.3 Rodd Road: a kerb extension and a zebra crossing on the northern side at the intersection with Great North Road would increase pedestrian safety. On the southern side, there is an opportunity for tree planting in the existing verge.

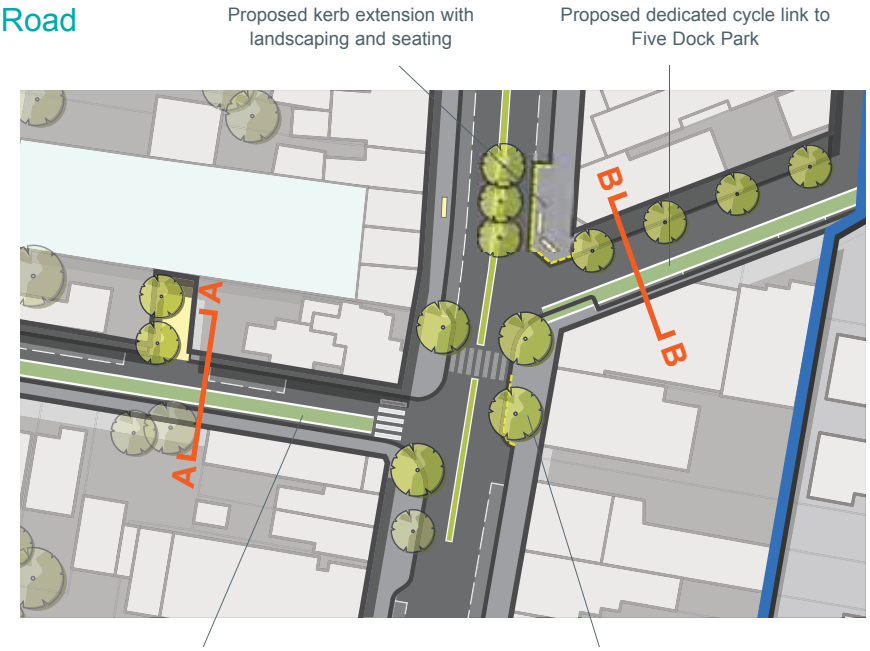
3.2.4 New pedestrian link: future development in this area could provide a link from Great North Road to East Street.





Henry Street and Barnstaple Road

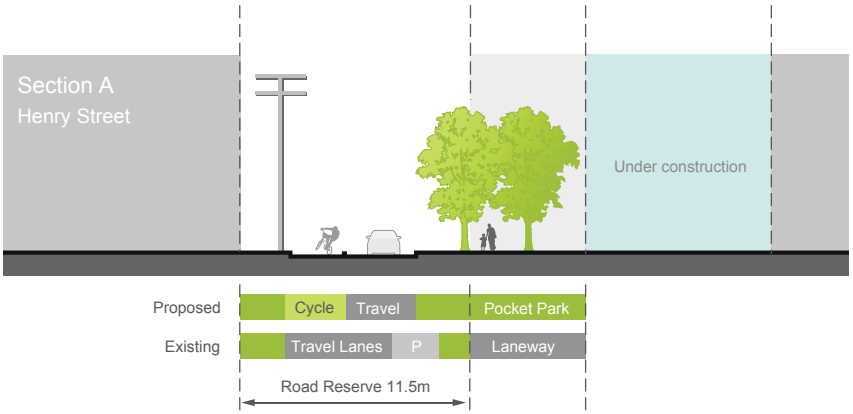


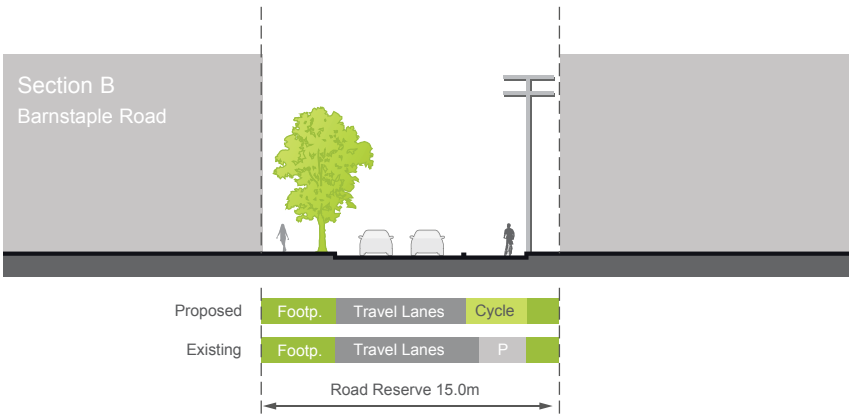


3.2.5 Henry Street: the road reserve of Henry Street is very narrow (11.5m). It currently allows for two-way vehicular access as well as an on-road cycle link and on-street parking.

It is proposed that Council investigate the option of building a two-way dedicated cycle facility and widen pedestrian footpaths to allow safer access for cyclists and pedestrians to Five Dock Primary School. To achieve this, vehicular access may need to be reduced to one-way.

3.2.6 Barnstaple Road: the cycle facility from Henry Street is proposed to be continued along Barnstaple Road. The slightly wider road reserve of 14.4m may make it possible to retain two-way access for vehicles. New street tree planting is proposed to the north, on the opposite side to the main power lines.





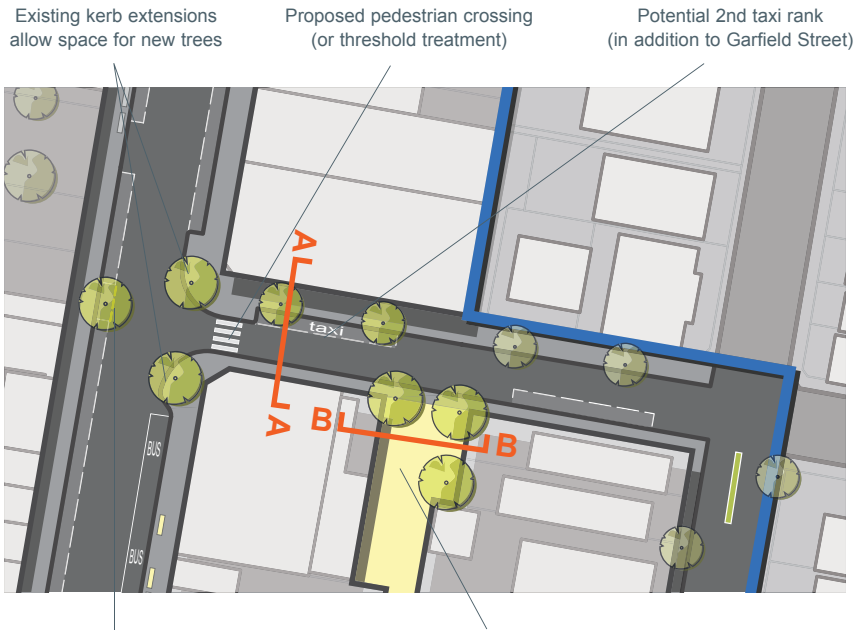
Second Avenue

3.2.7 Second Avenue: this street is an important, direct connection to Five Dock Park to the east and a priority area for pedestrian improvements.

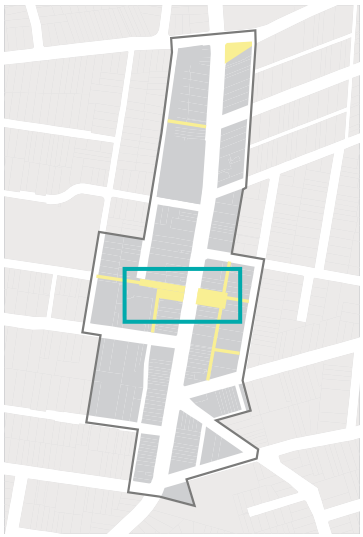
Existing kerb extensions (blisters) allow for additional street trees. It is recommended that trees are planted at the end of the vista along Second Avenue (should it be possible to remove the second driveway to St. Alban's Church).

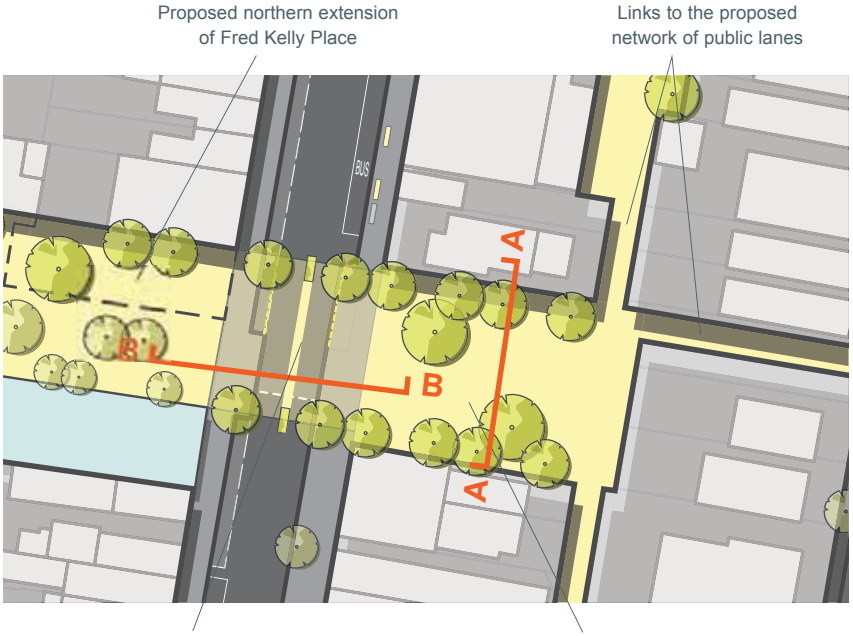
3.2.8 Second Avenue carpark: a small, council-owned carpark to the south is recommended to be converted into a shared zone, with 90 degree parking along its western side. This zone would also form part of the proposed network of pedestrian-friendly lanes to the south.

The access off Second Avenue should be reduced in width to allow for additional street tree planting at the entrance to the carpark. To signal pedestrian priority, a footpath continuity treatment in this area is recommended.



Fred Kelly Place Extension

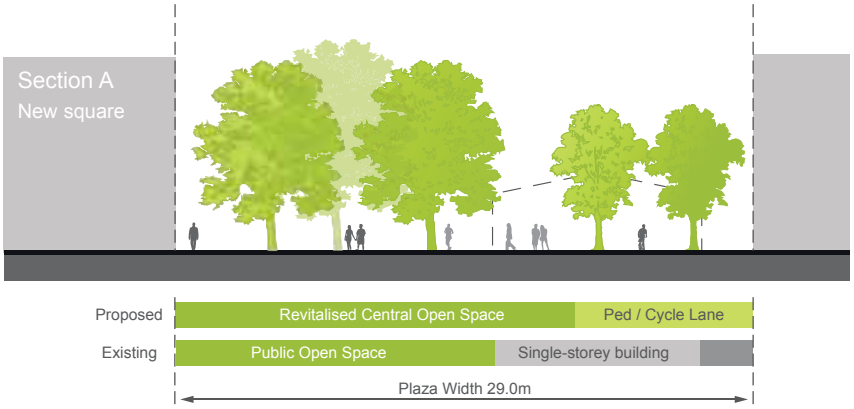


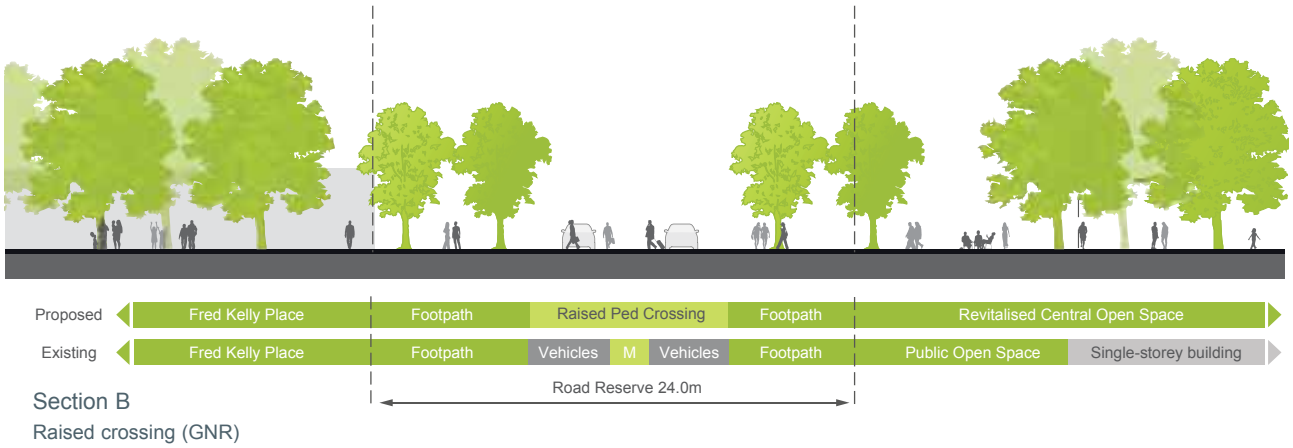


3.2.9 Fred Kelly Place (northern extension): the existing Fred Kelly Place could be extended to the north by acquiring a privately-owned plot of land currently occupied by the Westpac bank.

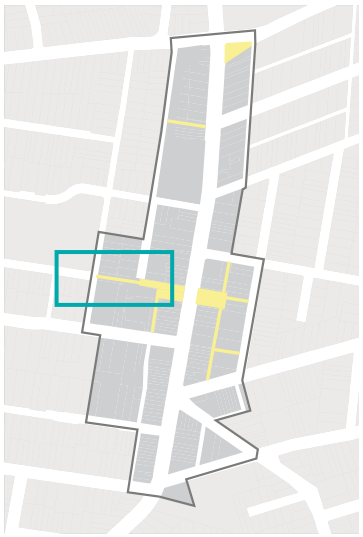
3.2.10 A new town square (aka Fred Kelly Place No.2): this new square would function in conjunction with Fred Kelly Place.

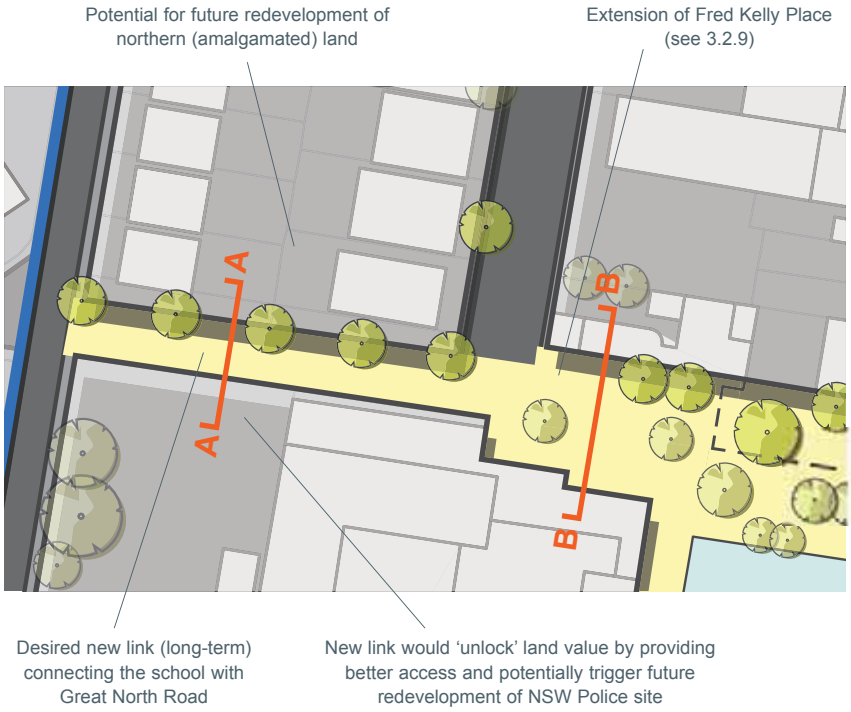
Both spaces combined, potentially connected via a raised pedestrian crossing, would provide a strong, central 'heart' for the town centre, with ample space to cater for events and activities.





Section B
Raised crossing (GNR)

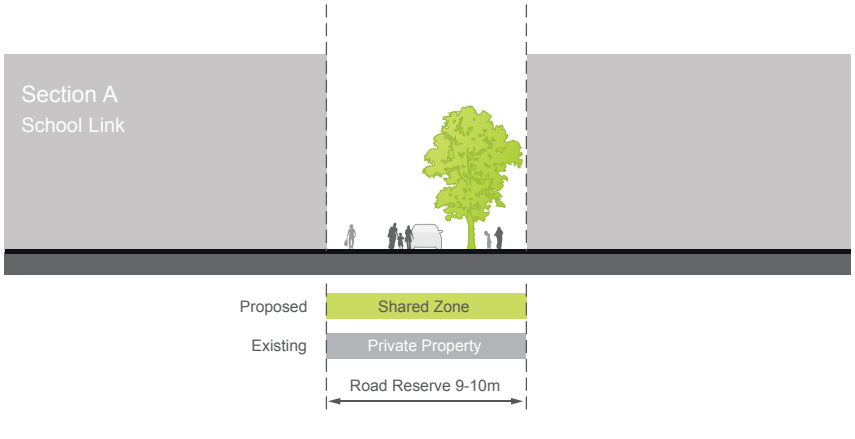


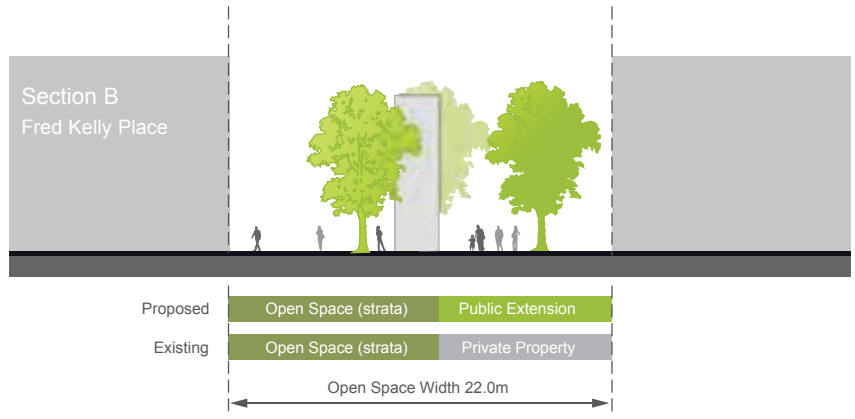


3.2.11 School link: in the long-term there may be an opportunity (through redevelopment) for a direct link from the Five Dock Public School to the town centre and Great North Road, which would provide a safe connection, in particular for students walking to/from bus stops. The land is currently in private ownership (two residential lots).

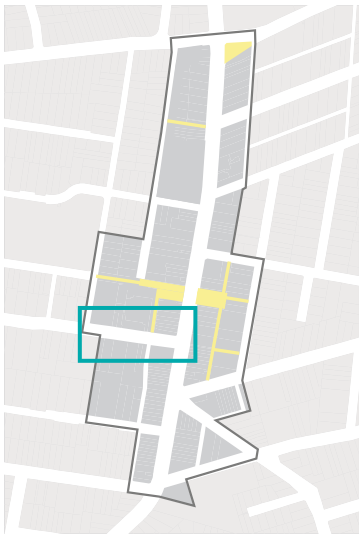
The proposed link would need to be 9-10m wide to allow for flexibility (vehicular access if required). The treatment should be similar to the public domain design of Fred Kelly Place so it becomes a natural extension of the square.

For the northern extension of Fred Kelly Place (see 3.2.9), relocating the existing substation (or alternatively sleeving it) and screening the ventilation stack of the underground carpark with vegetation should be considered.





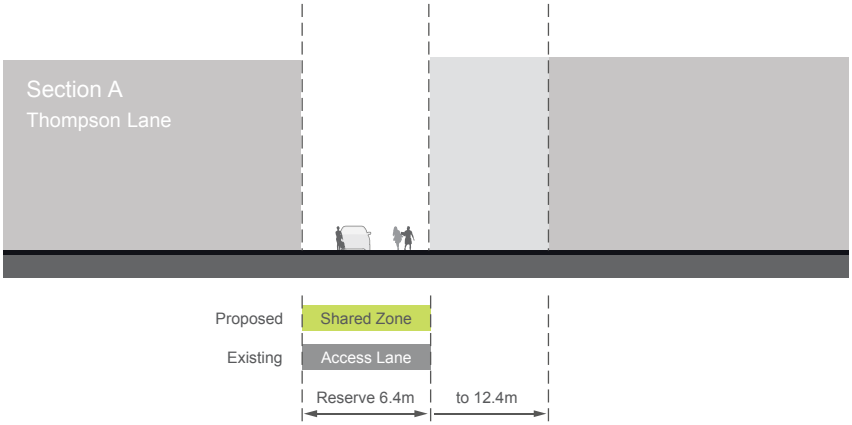
Garfield Street and Thompson Lane

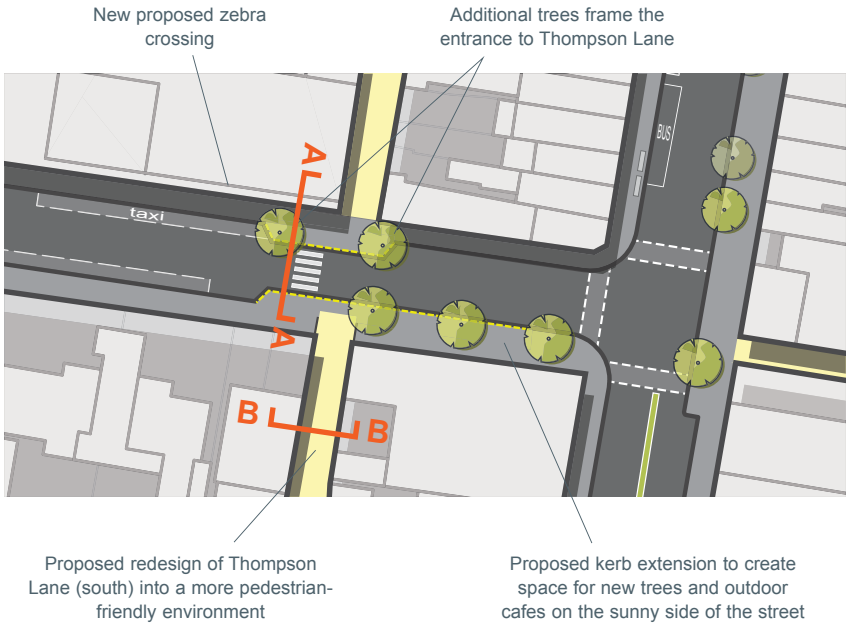


3.2.12 Garfield Street: currently, the eastern section of Garfield street is vehicular-dominated environment due to the exit/entry into the basement carpark, the supermarket loading dock and the existing taxi rank, all within close proximity of each other. In addition, Thompson Lane (south) is a point of entry to the Kings Road public carpark. The footpaths are busy at times with pedestrians, including school kids walking between the primary school to the north-west and bus stops located along Great North Road.

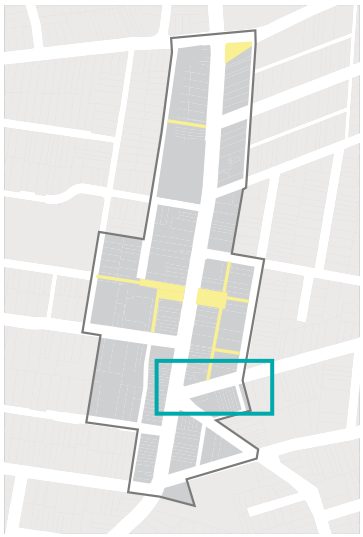
It is recommended Council retains vehicular two-way traffic and the left turning lane into GNR. The taxi rank size on northern side could be reduced (with some spaces relocated to Second Avenue or Great North Road).

There is an opportunity to extend the footpath on both sides of the street. Removing on-street parking to the south would unlock the potential for outdoor cafes/ dining and tree planting. A new pedestrian crossing west of Thompson Lane would improve pedestrian safety.



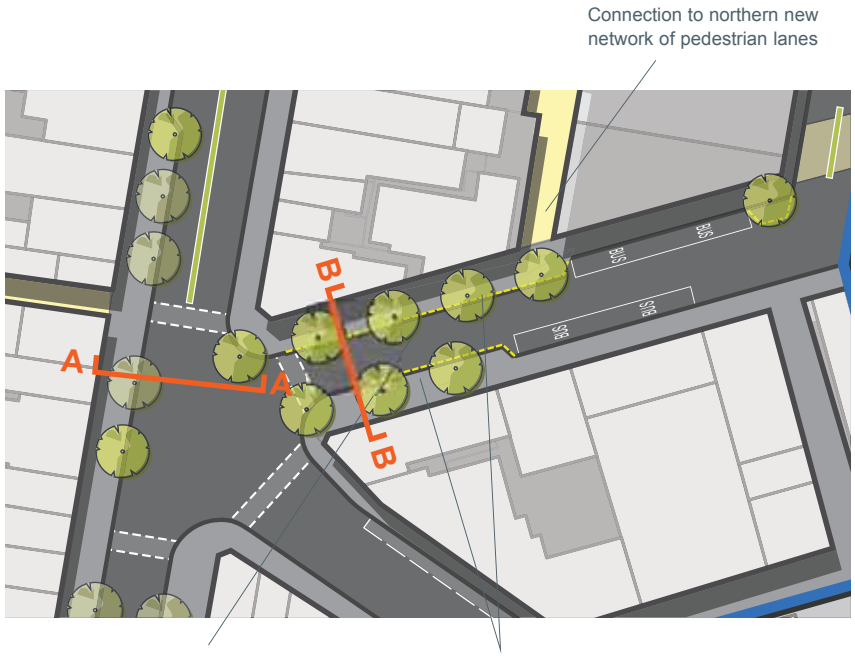


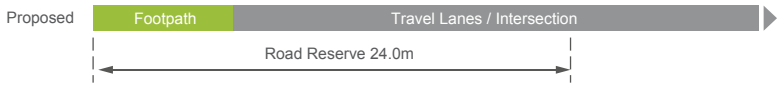
First Avenue



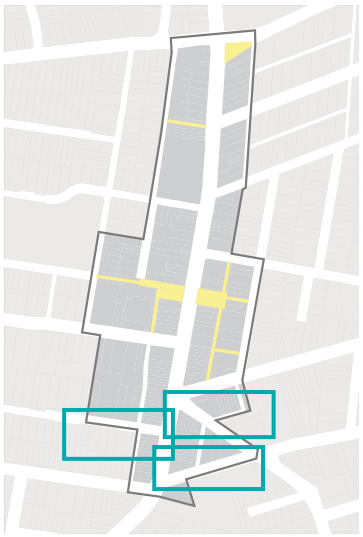
3.2.13 First Avenue: First Avenue is one of the oldest roads of Five Dock. The intersection with Great North Road and Ramsay Road is complicated due to the angle of the road alignments. The intersection is in particular inconvenient for pedestrians due to long crossing distances and waiting periods for green signals.

It is recommended that Council investigates to widen footpaths on each side to allow for mature trees, bus facilities with shelters and seating, and 'spill-out' spaces for adjoining uses, such as the Five Dock Hotel or the Gelateria.





Kings Road, Ramsay Road and Fairlight Street

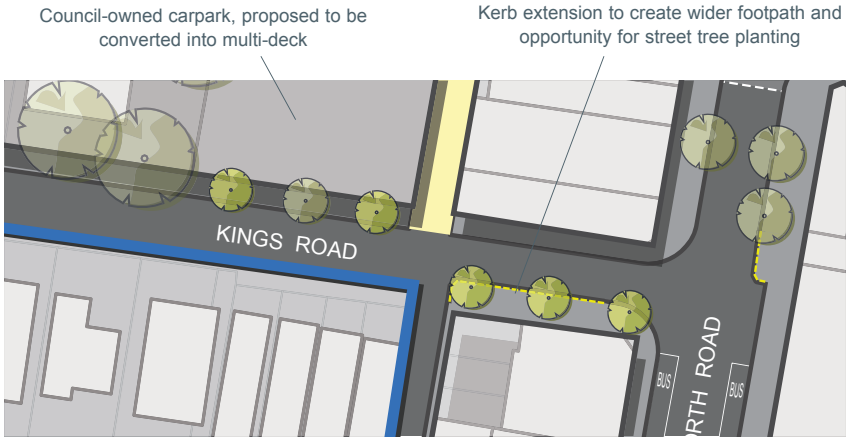


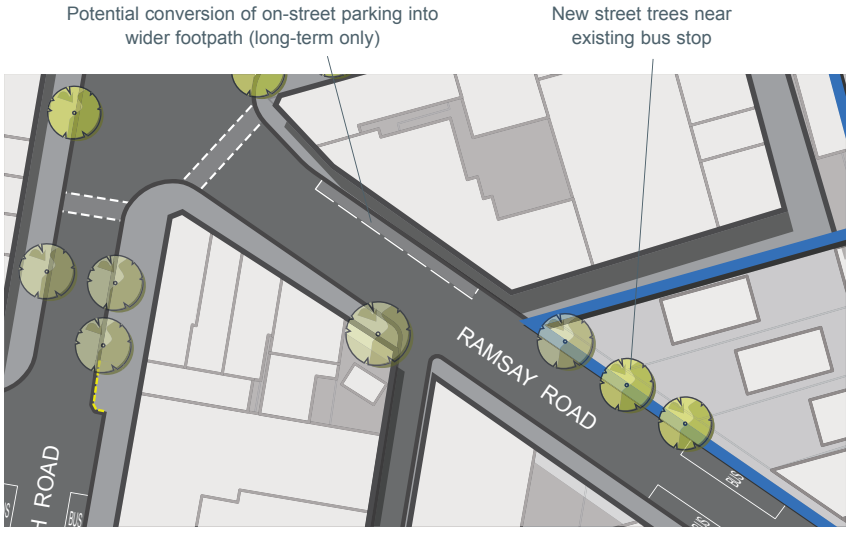
The southern streets of the town centre include Kings Road, Ramsay Road and Fairlight Street.

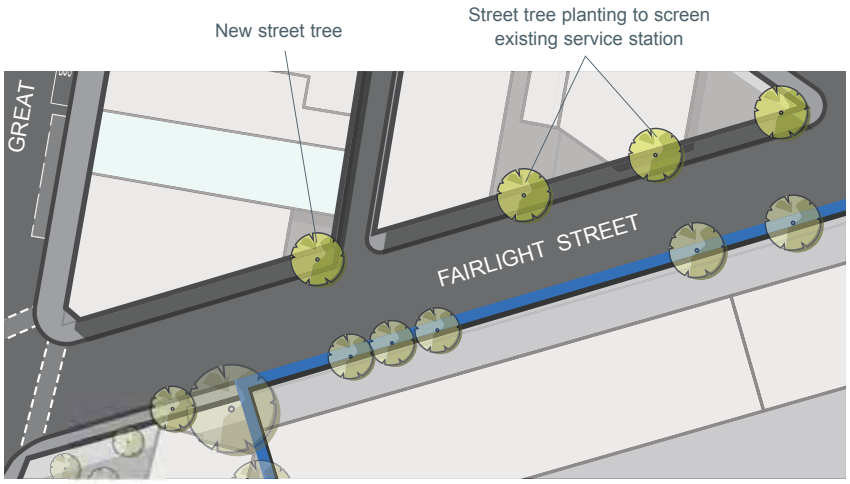
3.2.14 Kings Road has a road reserve of 14.5-16.0m and provides access to the public carpark. It is recommended that on-street parking along the southern side is converted into a wider footpath with tree planting.

3.2.15 Ramsay Road (RMS) has a 18.8m road reserve and is an important gateway to Five Dock as vehicles can turn both left and right into Great North Road. Overhead power lines prevent tree planting on the southern side. There may be an opportunity to plant trees in the verge along the northern side near the bus stop.

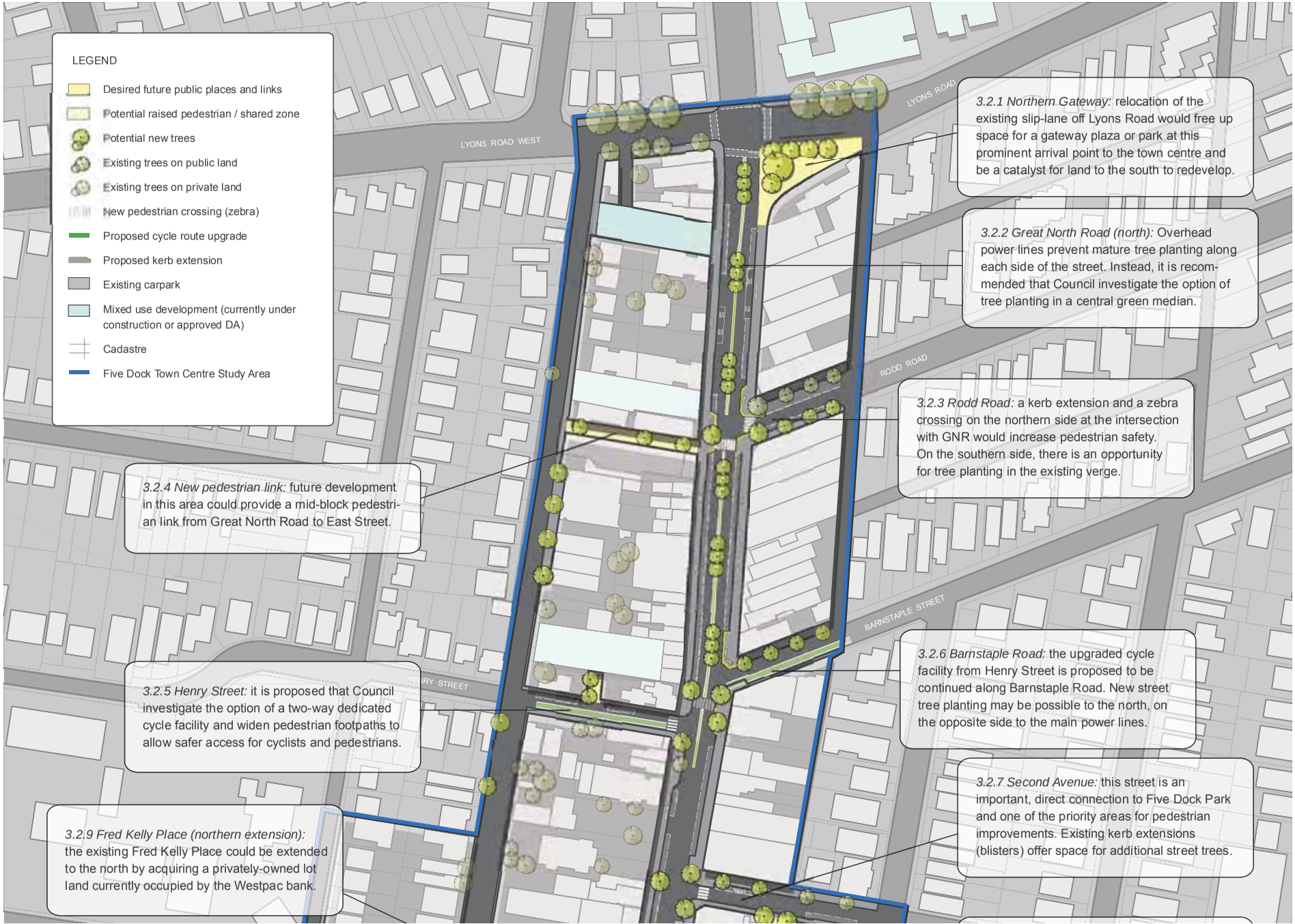
3.2.16 Fairlight Street (RMS) is 19.5m wide. Currently, vehicles are not allowed to turn right into Great North Road. Power lines and poles on the southern side restrict planting of further street trees, however tree planting to the north is recommended to reduce the visual impact of the service station at this gateway location.

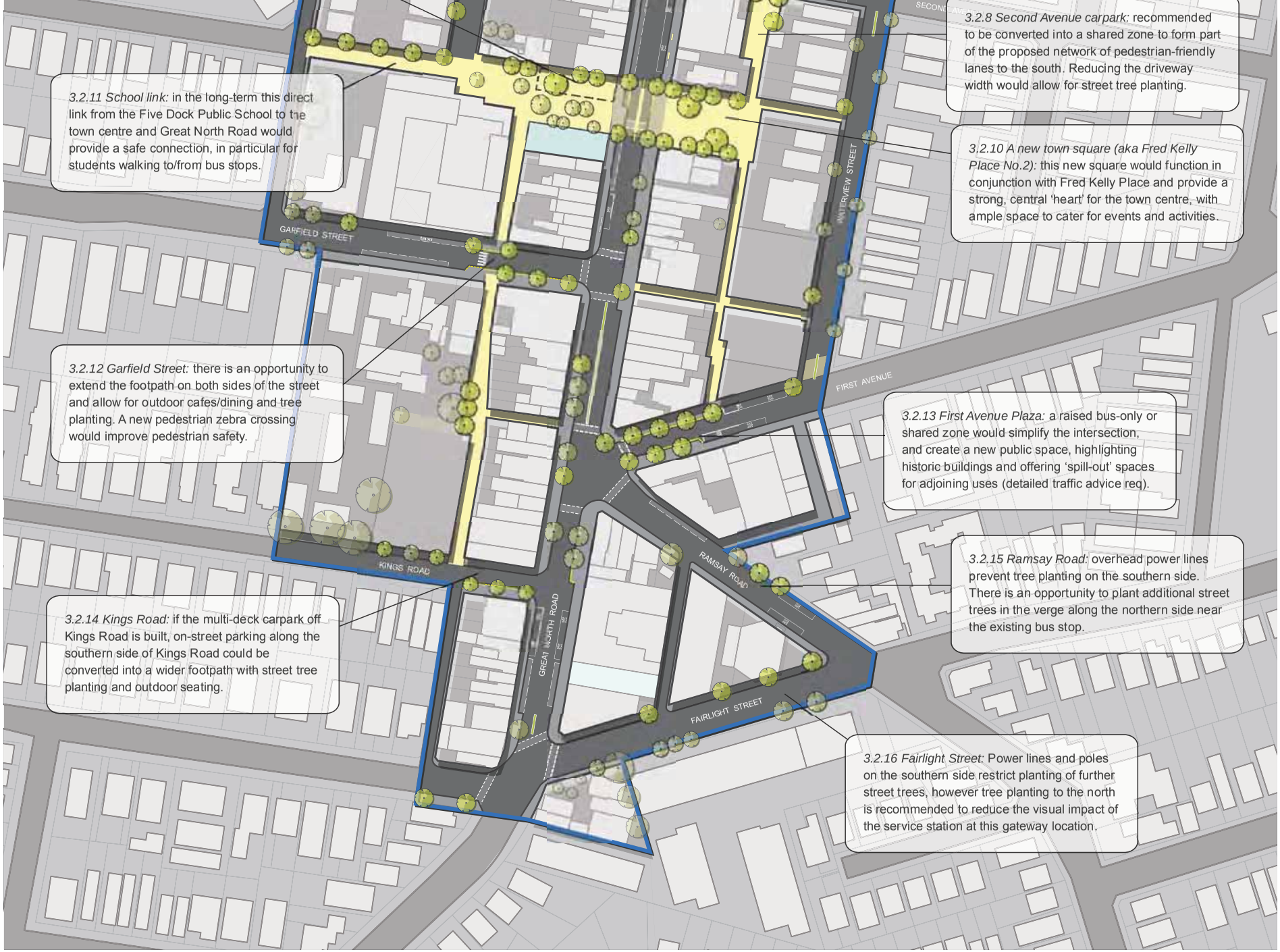






PUBLIC DOMAIN IMPROVEMENTS - OVERVIEW




GARFIELD STREET
FIRST AVENUE
KINGS ROAD
GREAT NORTH ROAD
RAMSAY ROAD
FAIRLIGHT STREET
WATERVIEW STREET
3.2.8 Second Avenue carpark: recommended to be converted into a shared zone to form part of the proposed network of pedestrian-friendly lanes to the south. Reducing the driveway width would allow for street tree planting.
3.2.11 School link: in the long-term this direct link from the Five Dock Public School to the town centre and Great North Road would provide a safe connection, in particular for students walking to/from bus stops.
3.2.10 A new town square (aka Fred Kelly Place No.2): this new square would function in conjunction with Fred Kelly Place and provide a strong, central 'heart' for the town centre, with ample space to cater for events and activities.
3.2.12 Garfield Street: there is an opportunity to extend the footpath on both sides of the street and allow for outdoor cafes/dining and tree planting. A new pedestrian zebra crossing would improve pedestrian safety.
3.2.13 First Avenue Plaza: a raised bus-only or shared zone would simplify the intersection, and create a new public space, highlighting historic buildings and offering 'spill-out' spaces for adjoining uses (detailed traffic advice req).
3.2.15 Ramsay Road: overhead power lines prevent tree planting on the southern side. There is an opportunity to plant additional street trees in the verge along the northern side near the existing bus stop.
3.2.14 Kings Road: if the multi-deck carpark off Kings Road is built, on-street parking along the southern side of Kings Road could be converted into a wider footpath with street tree planting and outdoor seating.
3.2.16 Fairlight Street: Power lines and poles on the southern side restrict planting of further street trees, however tree planting to the north is recommended to reduce the visual impact of the service station at this gateway location.
N
0
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FIVE DOCK TOWN CENTRE URBAN DESIGN STUDY

04 FUTURE DEVELOPMENT

4.1 PLANNING AND BUILT FORM CONTROLS

Planning and development controls play an important role in defining the future character of centres in particular. The following section suggests changes to existing controls to improve the feasibility and likelihood of development while at the same time increasing opportunities for better quality development. If adopted, the suggestions would require changes to the City of Canada Bay's current Local Environmental Plan (LEP) and Development Control Plan (DCP).

Land Use Zoning

Under the Canada Bay LEP 2013 (Local Environmental Plan) the entire area within the original Five Dock Town Centre study boundary is zoned 'Mixed Use' (B4) which allows flexibility for a wide range of residential, commercial and retail uses.

This study recommends protecting for future needs by expanding the width of the centre core and creating additional areas zoned 'Mixed Use' along West Street south of Henry Street, between Garfield Street and Kings Road and along Waterview Street south of Second Avenue (see adjacent diagram).

Retaining good quality retail spaces in a centre, where residential development is often more attractive to investors, can be a challenge. Other centres in Sydney have used the 'Commercial Core' (B5) zone to protect the retail offer as this zone does not permit residential use.

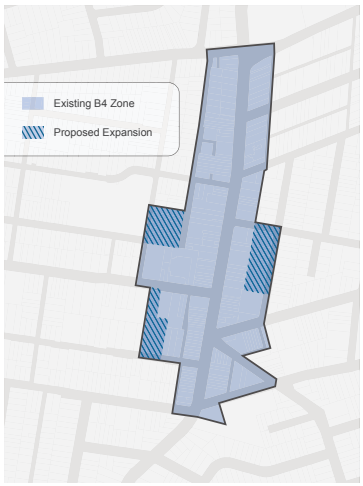
This approach is likely to be conceived as a "down zoning" in Five Dock so, as an alternative, it is recommended that development controls in the DCP are used to ensure high quality retail spaces are not lost during redevelopment of sites within the centre.

Floor Space Ratio (FSR)

A floor space ratio (FSR) is commonly used to estimate the potential of a site and therefore its "land value".

Generally, property owners expect that an FSR on a site can be achieved although in practice, detailed site testing shows other controls from parking, setbacks and heritage to overshadowing and building height impact on this "calculated potential".

Feedback from local developers and investors suggests development that conforms to the existing DCP controls in Five Dock struggles to achieve the current maximum FSR of 2.5:1. The study recommends changes to the DCP and height controls to make it more possible to achieve this density.



Proposed rezoned land in the centre core

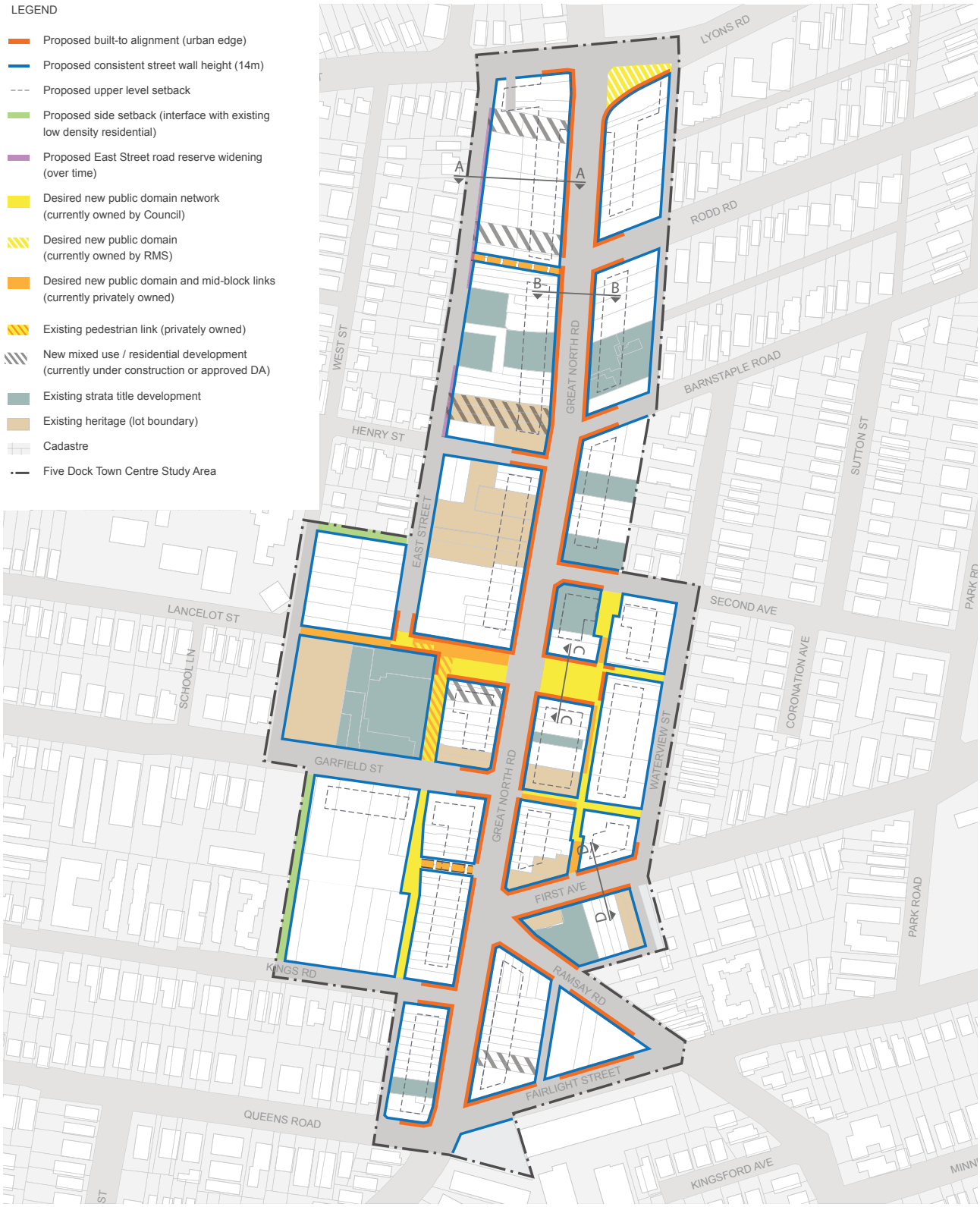
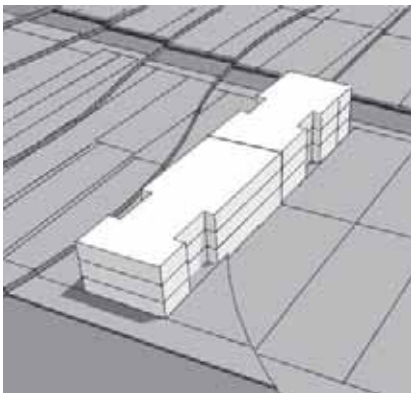
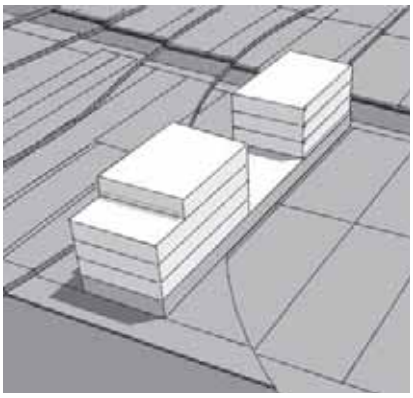


Figure 6. Proposed development controls



Undesirable bulky 'squat' built form as a result of current development controls



Recommended: taller, slimmer built form that improves access to sunlight and ventilation

Building Heights

Currently, the town centre has a 15m height limit. Assuming a 3m floor to floor height, this allows for buildings of up to 5 storeys. High quality ground level retail is better with higher ceiling height so this study recommends that the centre's height limit is altered to 16m, with a 14m street wall height and a requirement for 3.6m high ground floors.

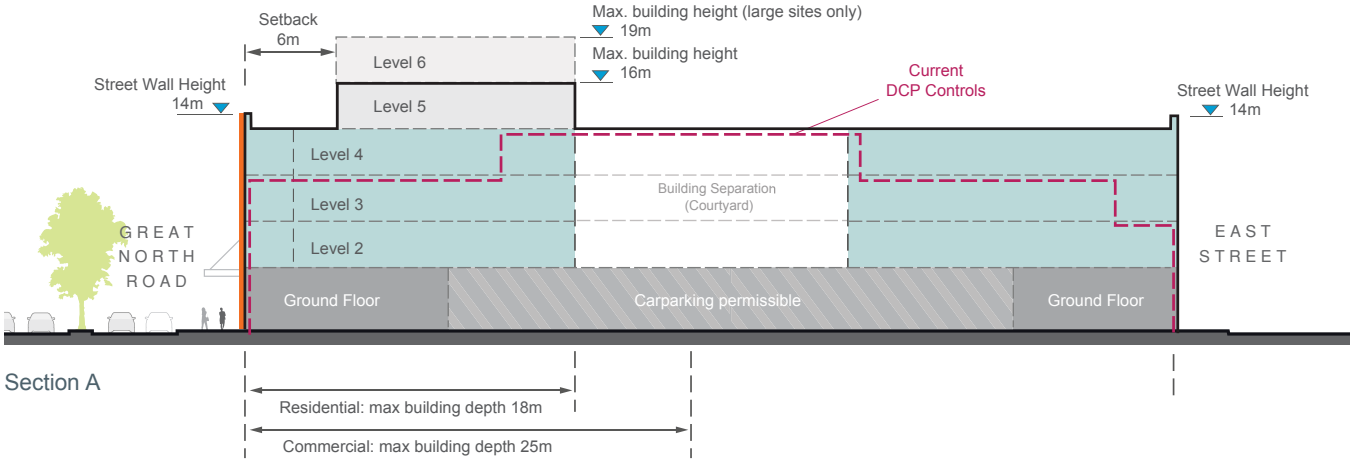
It is also suggested that on large sites (>2000sqm) an additional storey should be considered as the size of the site should enable the architect to provide the additional height (19m height limit) without adversely impacting on bulk and scale, privacy and overshadowing.

Basement carparking is expensive to build and often requires mechanical ventilation. It is recommended that Council considers allowing one level of parking on the ground level if it is sleeved to the street or lane with development. If the parking has a minimum 3m floor to floor height it could also be adapted to other uses in the future if demand for parking reduces.

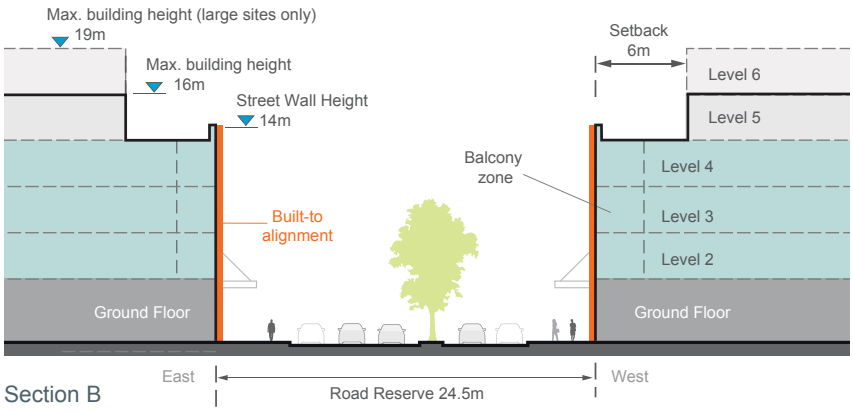
Setbacks

Setbacks control the building envelope and impact on the bulk and scale, overshadowing and the amenity within the building. The current DCP controls create bulky 3-storey buildings while the recommended controls create taller but slimmer buildings.

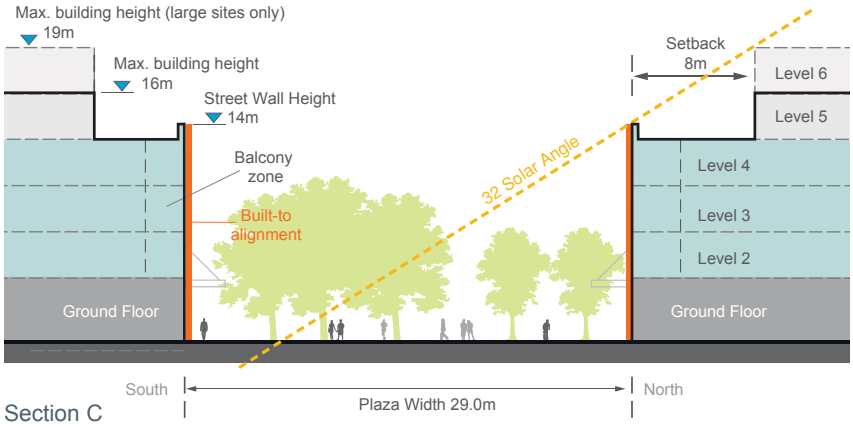
Additional storeys above the maximum street wall height of 14m should be set back a minimum of 6m from the street and be designed to recede (i.e. dark colour and/or lighter construction).



Section A

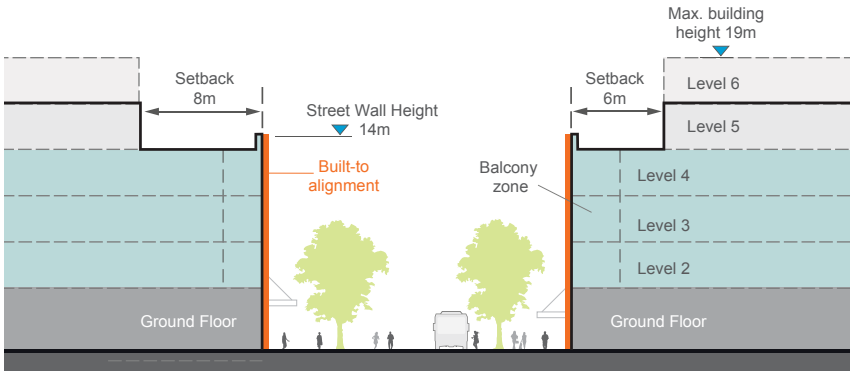


Section B



Section C

NEW TOWN SQUARE



Section D

Overshadowing

The majority of land parcels in the town centre run east-west and it is recommended that setback controls minimise the overshadowing of neighbouring lots and public spaces.

The creation of internal courtyards should reduce overshadowing and overlooking of neighbouring sites and allow natural light and ventilation into residential units.

Development on the northern side of any public open space (including all east-west streets) will need to be designed to reduce overshadowing of the public domain, for example through the use of an increased setback for upper levels of 8-12m.

4.2 CAPACITY FOR GROWTH

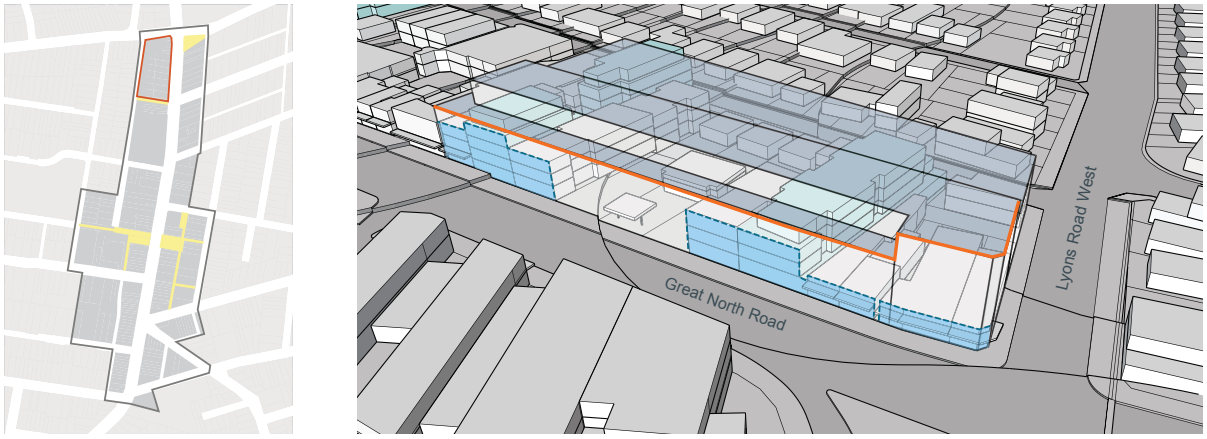
The building envelopes shown in this section are a 3D representation of the maximum extent of built form created by the recommended controls.

Building envelopes are not equivalent to buildings. Instead, they provide a framework that allows flexibility for building location, orientation and architectural articulation. Development will be smaller than the maximum envelope shown and further controlled by the floor space ratio (FSR), heritage considerations and other controls such as the Residential Flat Design Code and consideration of overshadowing and privacy of adjacent land.

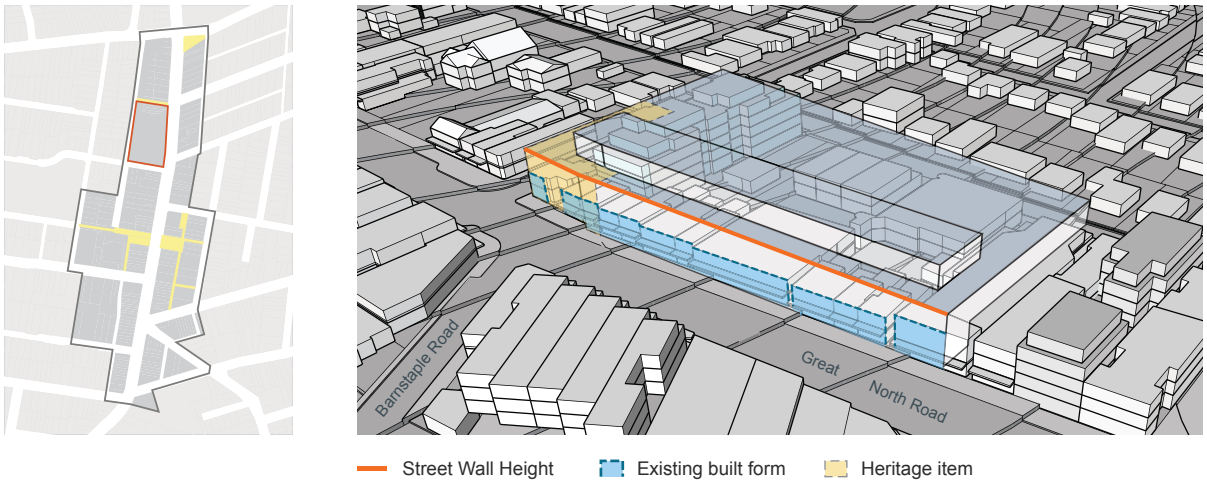
Where existing developments are built to the street alignment, facades are highlighted blue. The potential for change may be impacted by various considerations (i.e. heritage). Strata development sites are also unlikely to change in the immediate future.

To achieve a consistency in the character of the centre's streetscapes, the maximum street wall height is 14m (orange line). The exception to this rule is located at the intersection of Lyons Road and Great North Road (Block 01 and 03) where the street wall height is increased to 19m to allow for more significant 'gateway' buildings.

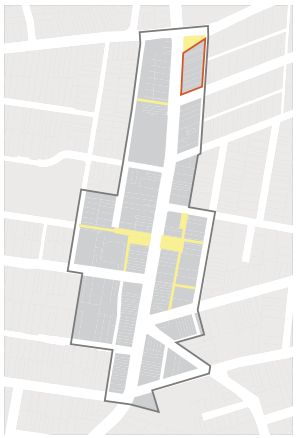
Zone 01 - Indicative building envelopes

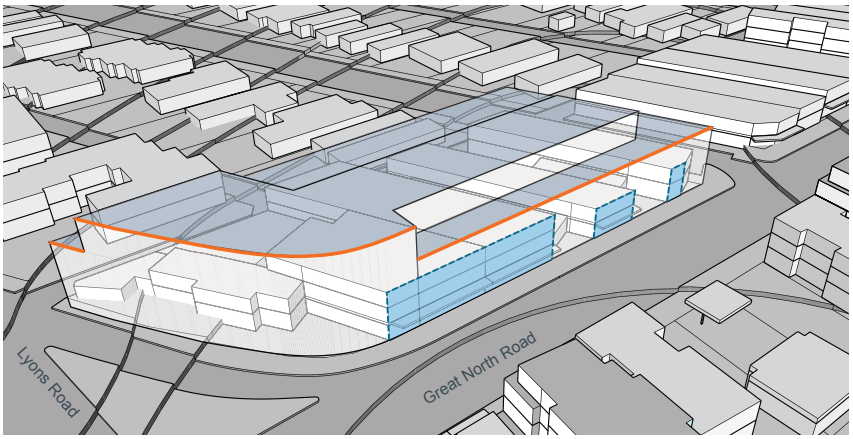


Zone 02 - Indicative building envelopes

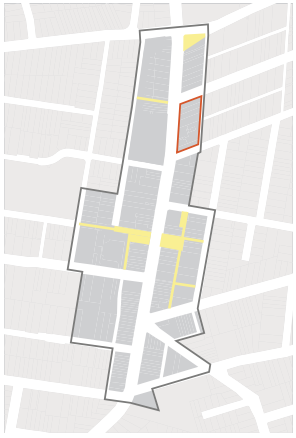


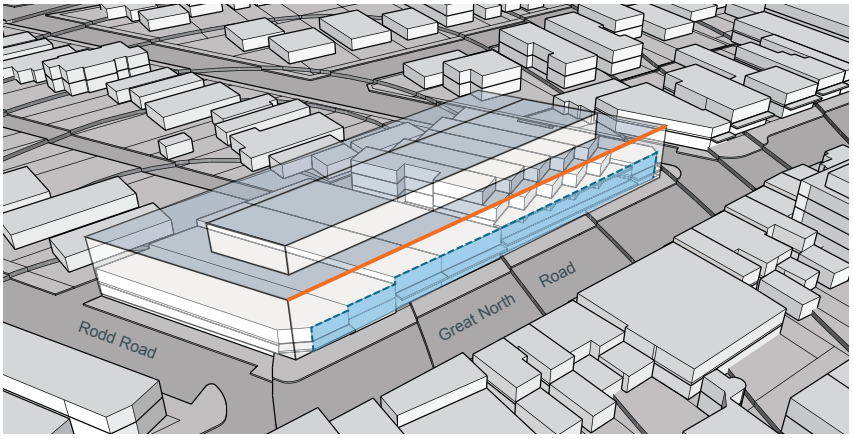
Zone 03 - Indicative building envelope



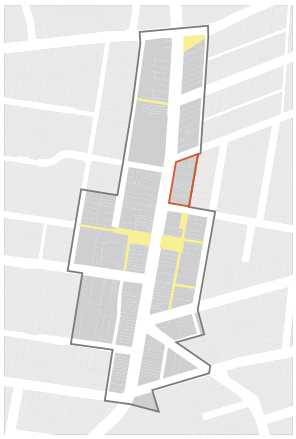


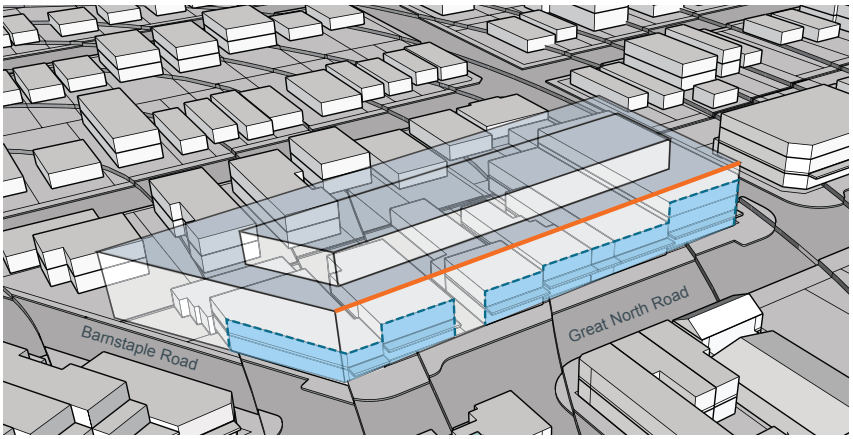
Zone 04 - Indicative building envelopes





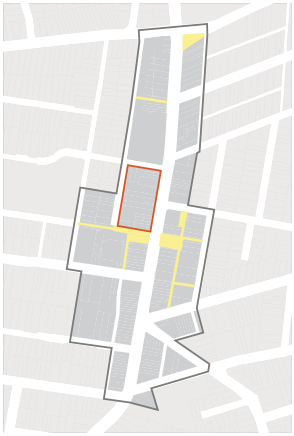
Zone 05 - Indicative building envelopes

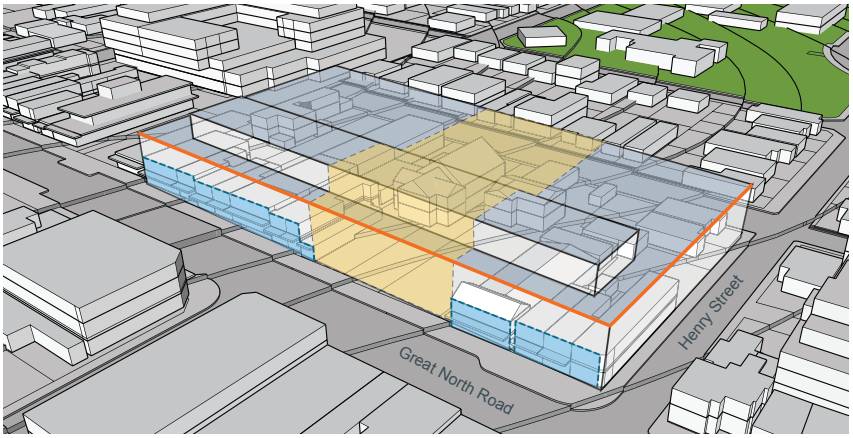




Street Wall Height Existing built form Heritage item

Zone 06 - Indicative building envelopes





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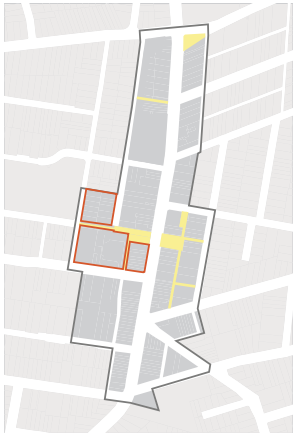
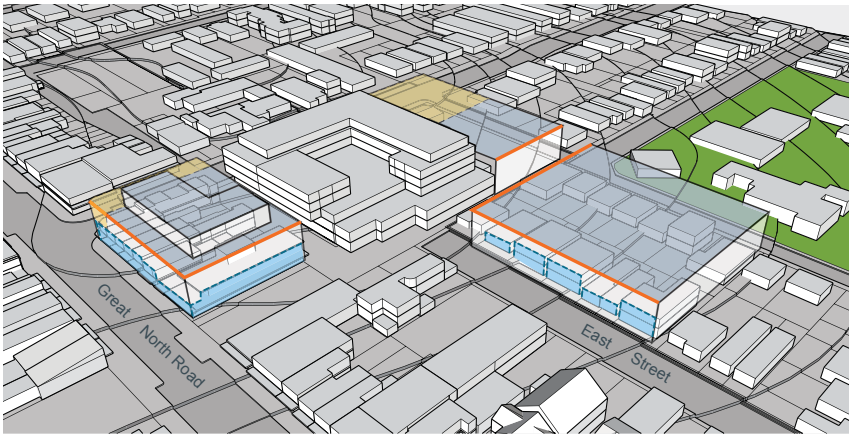
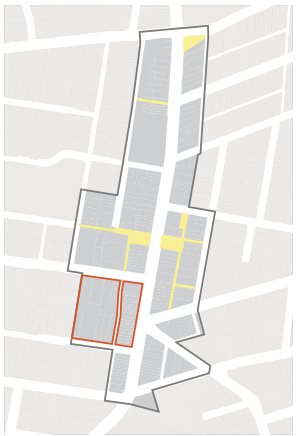
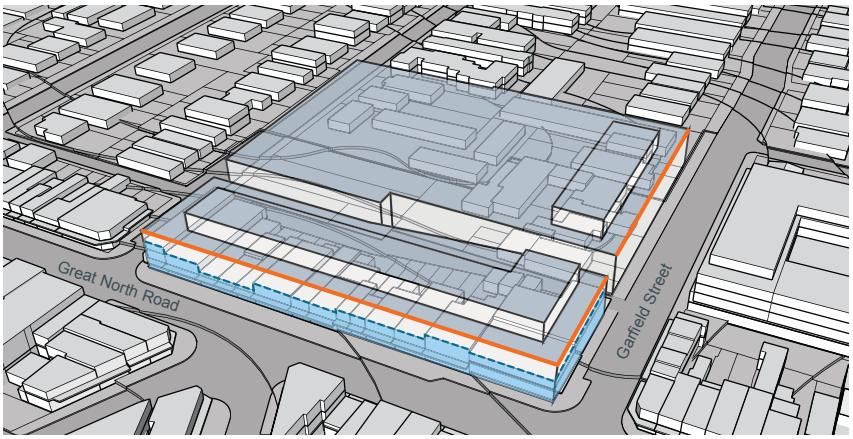




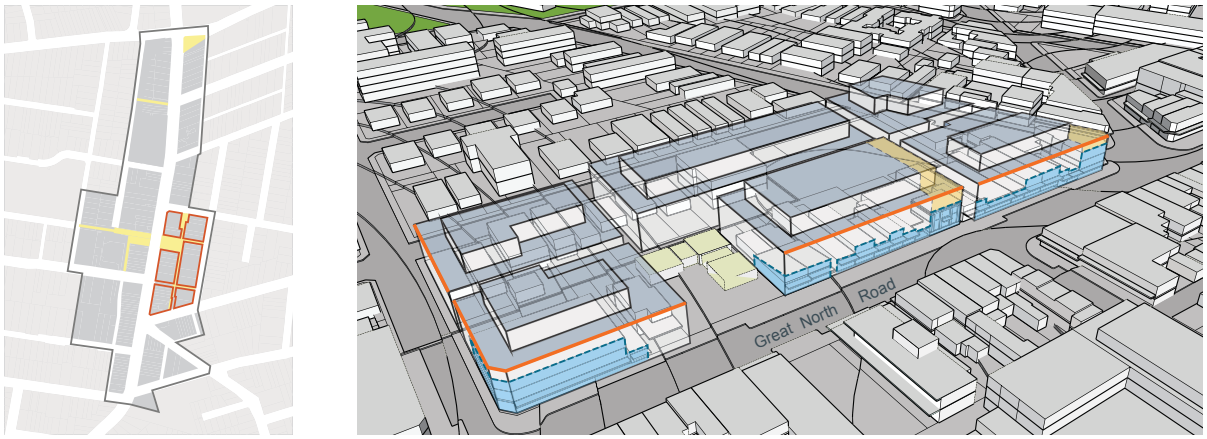
Zone 08 - Indicative building envelope



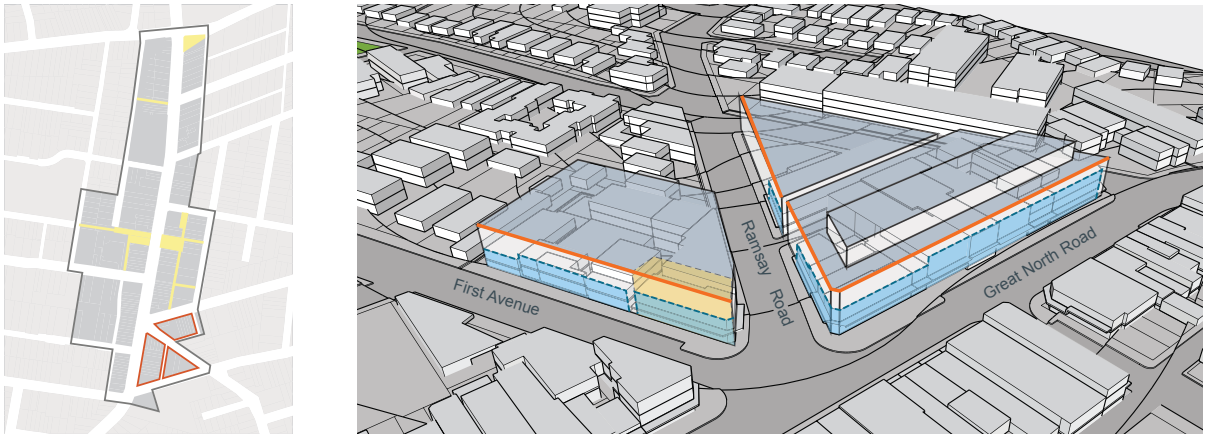


Street Wall Height Existing built form Heritage item

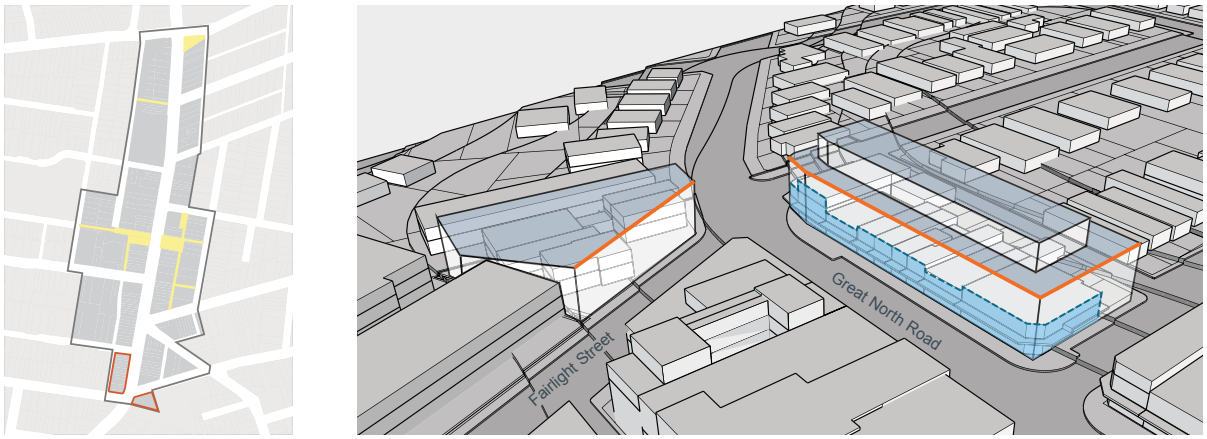
Zone 09 - Indicative building envelopes



Zone 10 - Indicative building envelopes



Zone 11 - Indicative building envelopes



Street Wall Height Existing built form Heritage item

Estimated capacity

The capacity for growth in the town centre has been analysed following a high-level methodology, which applies a theoretical maximum of floor space on 'unconstrained' sites (using an FSR of 2.5:1) and assumes an uptake of 40% over the longer term (15+ years).

The adjacent diagram illustrates constrained sites that have not been taken into account as part of this analysis. These include parcels with heritage listed buildings, strata developments (which are difficult to redevelop due to fragmented ownership), proposed or existing open spaces and laneways contained within this urban design study report, the recent mixed use 'library' development and sites that have an approved DA and/or are currently under construction.

The actual growth in floor area achieved over time is likely to be considerably less than the theoretical maximum amount as property owners may renovate/retain their existing building and/or wait until redevelopment becomes more economically viable.

This high-level yield analysis therefore assumes that 40% of 'unconstrained' sites will redevelop in the longer term

Dwelling sizes are in accordance with the Residential Flat Design Code plus 10% floor area to accommodate larger apartments. The dwelling sizes and proportion of the mix are as follows:

- One bedroom units: 55 sqm NSA, 30% of all dwellings
- Two-bedroom units: 77 sqm NSA, 60% of all dwellings
- Three bedroom units: 105 sqm NSA, 10% of all dwellings

The average dwelling size that results out of the parameters above is 73 sqm, which has been used to calculate the estimated number of new dwellings.

Figure 7. Table - Estimated potential for future growth (15+ years)

Zone	Total site area	'Uncon-strained land	% of uncon-strained land	Theoretical new GFA	New GFA (40% uptake)	New NSA (88% of GFA)	New retail NSA (5% of total)	New resi-dential NSA	Total new dwellings
01	6,800 sqm	5,000 sqm	74%	12,500 sqm	5000 sqm	4400 sqm	250 sqm	4,150 sqm	57
02	7,600	3,000	39%	7,500	3,000	1,200	150	1,050	14
03	3,700	3,700	100%	9,250	3,700	1,480	185	1,295	18
04	3,900	2,300	59%	5,750	2,300	920	115	805	11
05	3,800	2,400	63%	6,000	2,400	960	120	840	12
06	8,000	4,500	56%	11,250	4,500	1,800	225	1,575	22
07	8,500	5,200	61%	13,000	5,200	2,080	260	1,820	25
08	12160	11860	98%	29650	11860	4744	593	4151	57
09	11000	9500	86%	23750	9500	3800	475	3325	46
10	8,100	6,000	74%	15,000	6,000	2,400	300	2,100	29
11	3,500	3,100	89%	7,750	3,100	1,240	155	1,085	15
	77060	**56560**	**73%**	**141400**	**56560**	**25024**	**2828**	**22196**	**304**

Note: the indicative calculation above is provided to inform the urban design study and related discussions. It is not a detailed assessment.

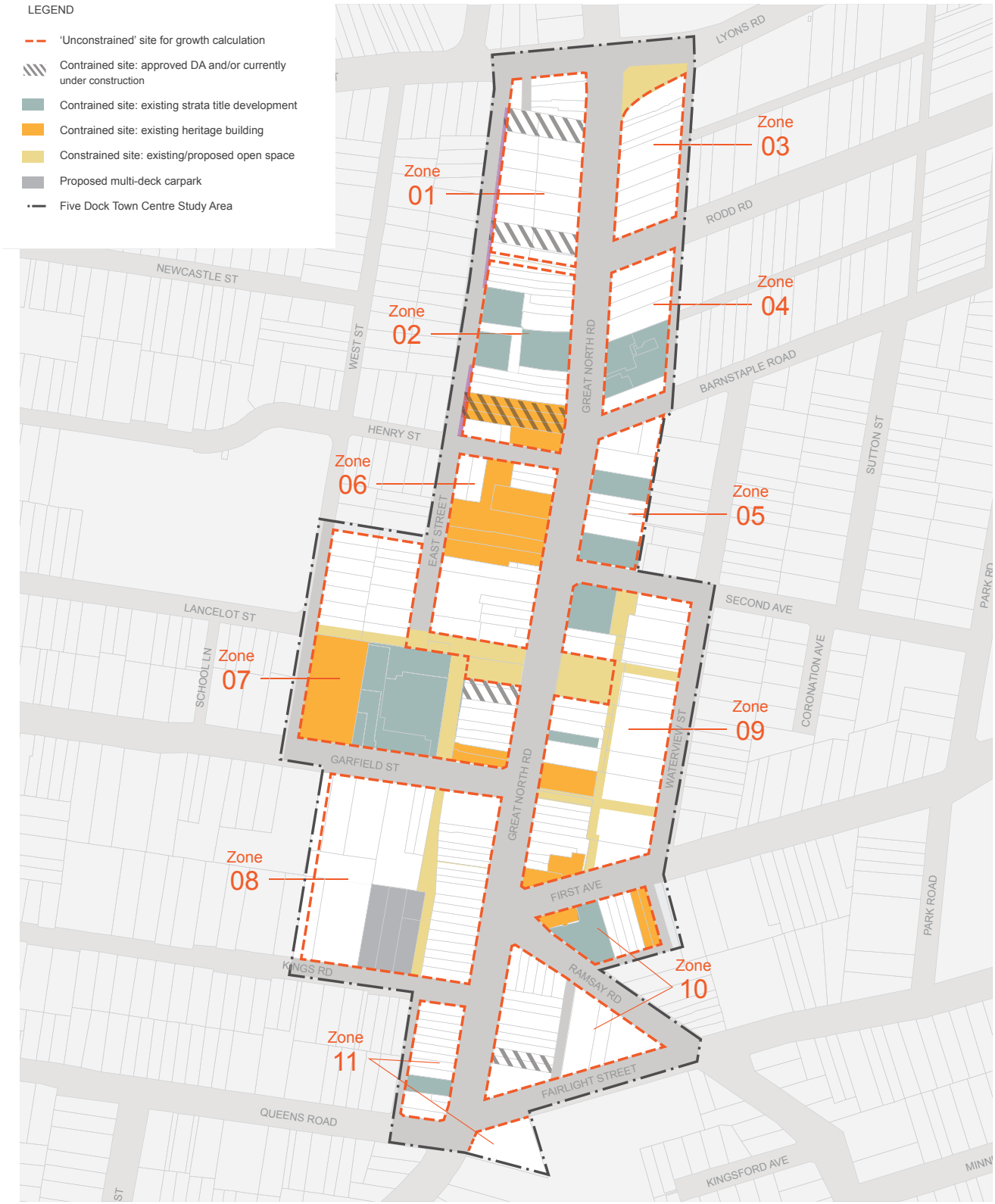


Figure 8. Future capacity analysis diagram

Overshadowing

The modelling on the following pages illustrates the overshadowing impact of the indicative built form envelopes on the surrounding public domain and adjoining areas.

Solar access is a key consideration when changing the density of an area and increasing building heights. A key aim for this study was to improve site feasibility while also limiting the impact on the surrounding context and key areas of public open space.

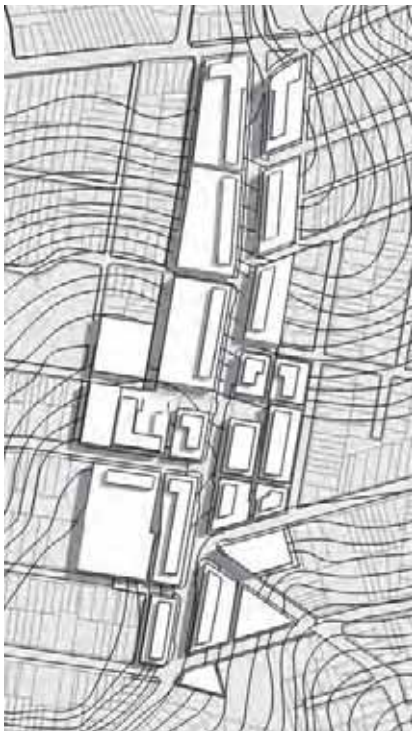
Factors influencing overshadowing and access to sunlight include street wall height, overall building height, the size of public open spaces, built form separation, orientation and topography.

The figures below represent over-shadowing of Fred Kelly Place and the new town square on 21 March/ September (Autumn/Spring Equinox) and 21 June (Winter Solstice).

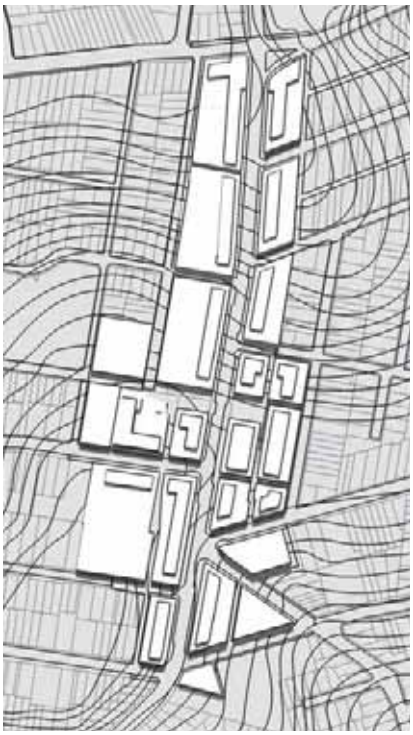
21 June is the shortest day of the year when the overshadowing impact is greatest due to the low solar altitude. The analysis illustrates that the recommended street wall heights, upper level setbacks and building heights ensure that these important public spaces have access to sunlight for the majority of the year. The adjacent diagrams show the whole of the study area and indicate that overshadowing impacts on public domain and surrounding residential areas is limited.

Figure 9. Shadows 21 March (Autumn) at 2pm - Fred Kelly Place (extended) and the new town square

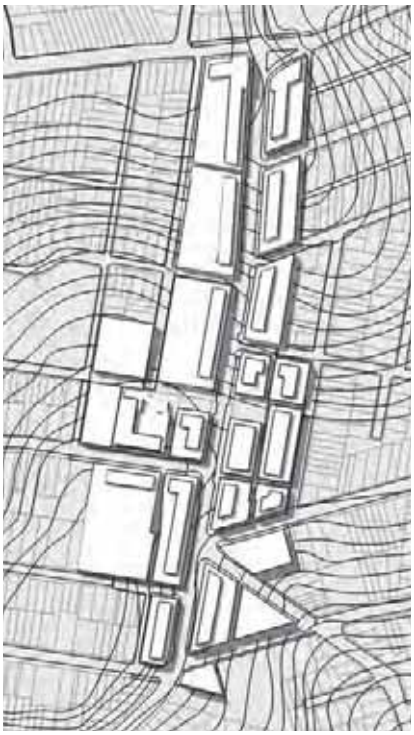
Figure 10. Shadows 21 June (Winter) at 2pm - Fred Kelly Place (extended) and the new town square



Autumn 21 March 9am



Autumn 21 March 12pm



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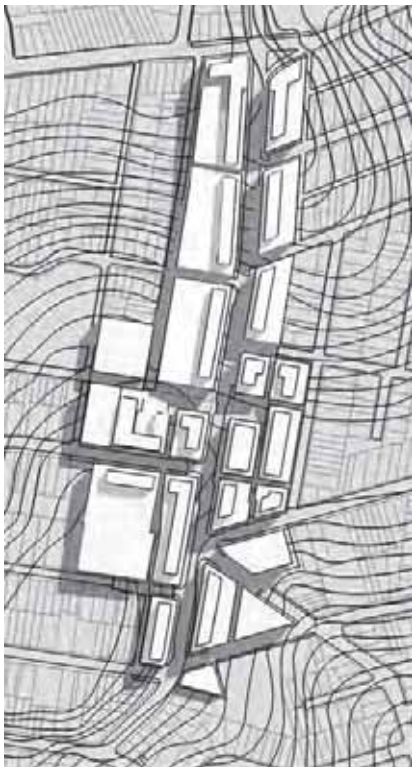
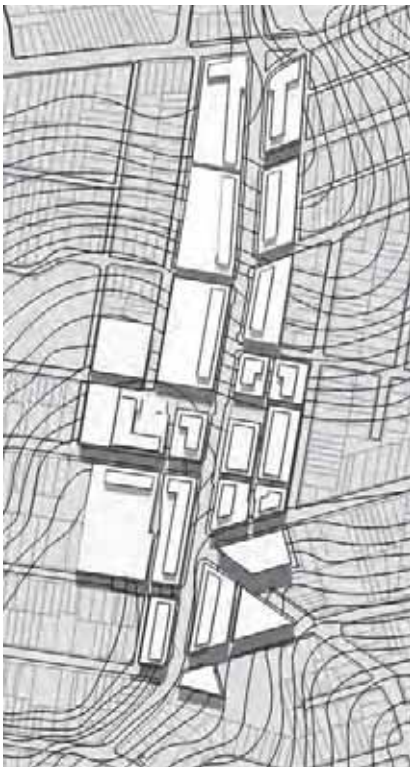
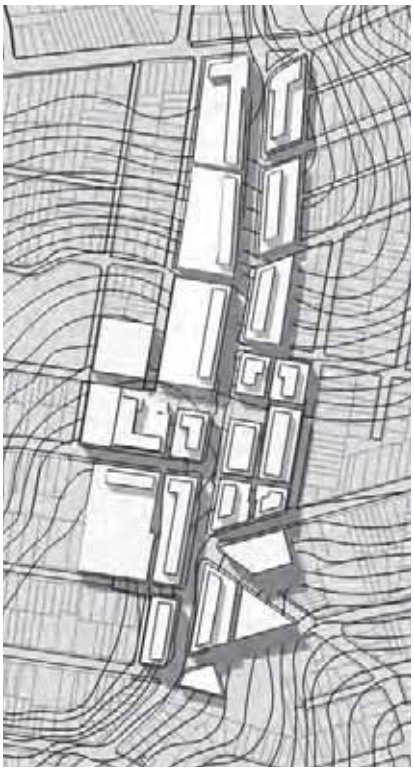


Winter 21 June 9am



Winter 21 June 12pm



Winter 21 June 2pm

4.4 OPPORTUNITY SITES

Figure 11. Opportunity sites in the core of the centre

Council-owned 'catalyst' land

As part of this study, the future development opportunities for a number of Council-owned land parcels in the core of the centre were explored.

Site 1 includes the Waterview Street public carpark, private landholdings to the south and north, land owned by the Department of Housing and Council land off Great North Road. The latter parcel is proposed to become the new town square. To make best use of the separate council sites a comprehensive redevelopment of the larger block is recommended requiring consolidation with other neighbouring sites.

Site 2 is the public carpark at Kings Road. The on-grade carpark currently has approximately 50 car spaces. A multi-deck carpark in this location would significantly increase this capacity to between 160-200 spaces depending on the height and how many other uses are incorporated into the building.

Each site is considered a catalyst for redevelopment and investment, with the aim to strengthen the performance and attractiveness of the entire centre.

The adjacent 3D views show indicative development options for Sites 1 and 2 within the recommended built form envelopes (see Section 4.3).

It is proposed that Site 1 is delivered as three separate developments, each up to six levels in height. Site 3A could also incorporate a retail anchor on the ground floor that activates the new town square, reinforcing the banks and services offering in this area and mirroring the success of the existing Supabarn opposite Great North Road, which opens to Fred Kelly Place.

The multi-deck carpark on Site 2 could be delivered as a split-level built form that responds to the natural topography along Kings Road and reduces visual impact of the carpark structure.

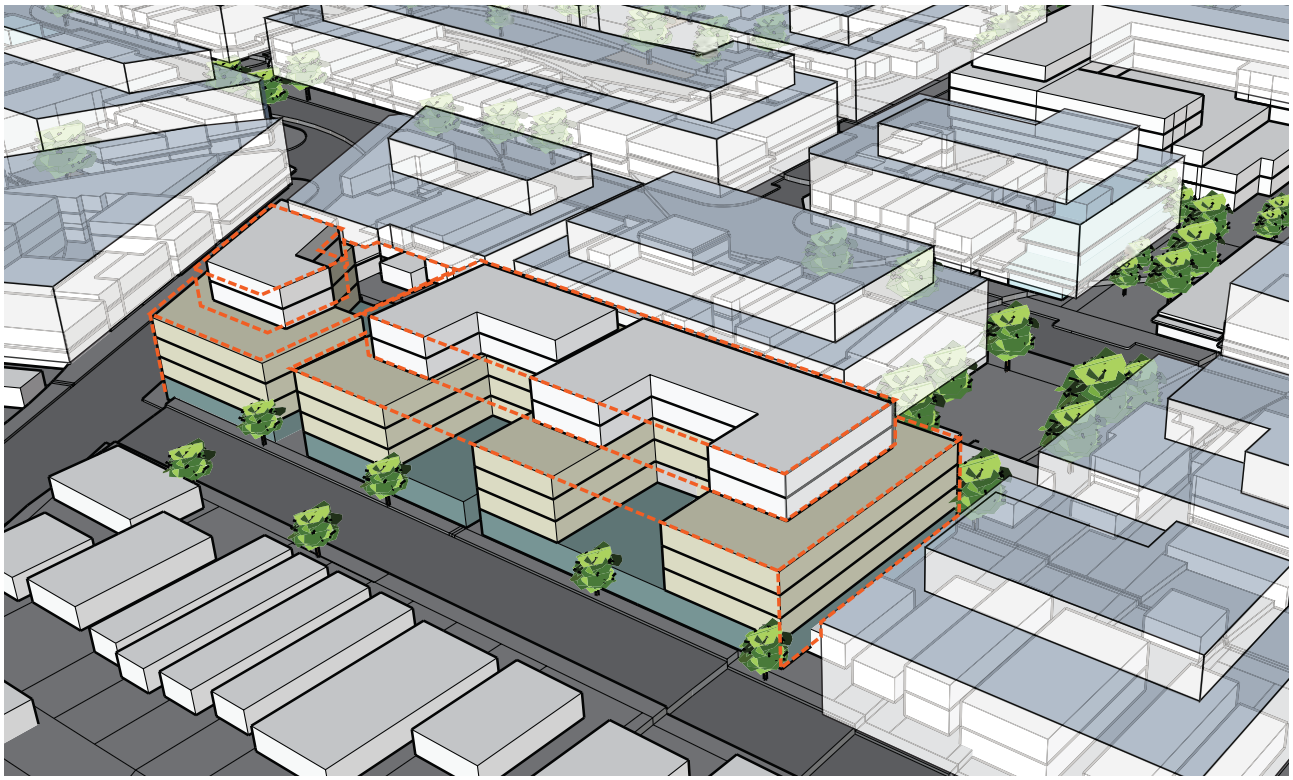


Figure 12. Indicative development option for SIte 1 (Waterview Street)

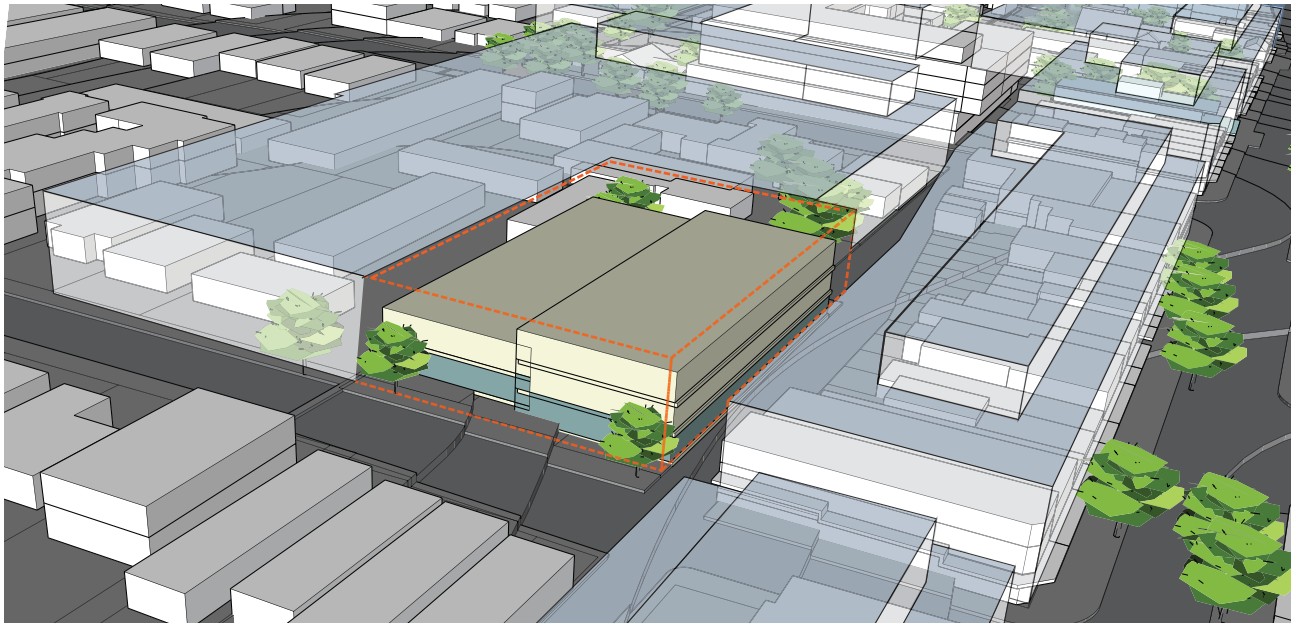


Figure 13. Indicative development option for Site 2 (Kings Road carpark)

FIVE DOCK TOWN CENTRE URBAN DESIGN STUDY

05 IMPLEMENTATION

5.1 OVERVIEW

The strategy outlined in the Five Dock Urban Design Report is expected to be realised over many years. To achieve the maximum benefits it becomes necessary to identify where and when to focus the efforts of Council and key stakeholders. Some strategies are also interrelated, dependent on an earlier actions and/or their ability to become a catalyst for subsequent changes.

Phasing and priorities

The phasing (Section 5.2) provides an overview of the recommended priorities to implement the strategy in the short, medium and long term. Each phasing diagram focuses on the most significant spatial changes. More detailed recommended actions are outlined in the action plan (Section 5.3).

Consultation

A comprehensive urban design strategy considers land in both public and private ownership. The resulting impacts therefore extend beyond land in public ownership to impacts on privately held land and on sites outside the original study boundary. The first phase of implementation will require discussion with those landowners, residents and business owner most affected. In particular;

- Landowners and residents along Waterview Street on both the western side (which are recommended to become part of the B4 Mixed Use zone with an increase in height and FSR) and the eastern side (as the changes will change the character of the street). Discussions with the two landowners between the Department of Housing site and the Council owned site will be particularly important.
- Landowners and residents to the west of the Council owned site between Garfield Street and Kings Road.
- Landowners and residents between East Street and West Street to the south of Henry Street and the NSW Police.
- Landowners and tenants in the vicinity of proposed public open spaces and links. These include the new northern open space, the link to the school between East Street and West Street, the Westpac site to the north of Fred Kelly Place, the link from the Henry Street carpark to First Avenue, the link from Second Avenue to First Avenue, the link between Great North Road and East Street and the widening of the link opposite Garfield Street.

It will be important that the community understand the proposed changes will only occur as part of future redevelopment of the area and that development incentives will be provided to encourage the proposed changes. Changes to the LEP and DCP will also provide an opportunity to consider impacts in greater detail.

Action Plan

The action plan (Section 5.3) outlines detailed steps for implementation. Actions are grouped by relevant framework layer, the priority level of the action due to its impact and or benefit, the estimated costs, likely timeframe, and who will be responsible for the change including Council, community groups, organisations and government bodies/authorities. The table also highlights quick wins which are highly visible changes in the centre that are less complex than other initiatives and achievable in the short-term with comparably low investment.

It is recommended that the implementation plan becomes a “live” document that changes over time as different opportunities arise in response to dynamic market conditions, new sources of funding and the sequencing effects gained from revitalisation projects and project timing.

5.2 PHASING AND PRIORITIES

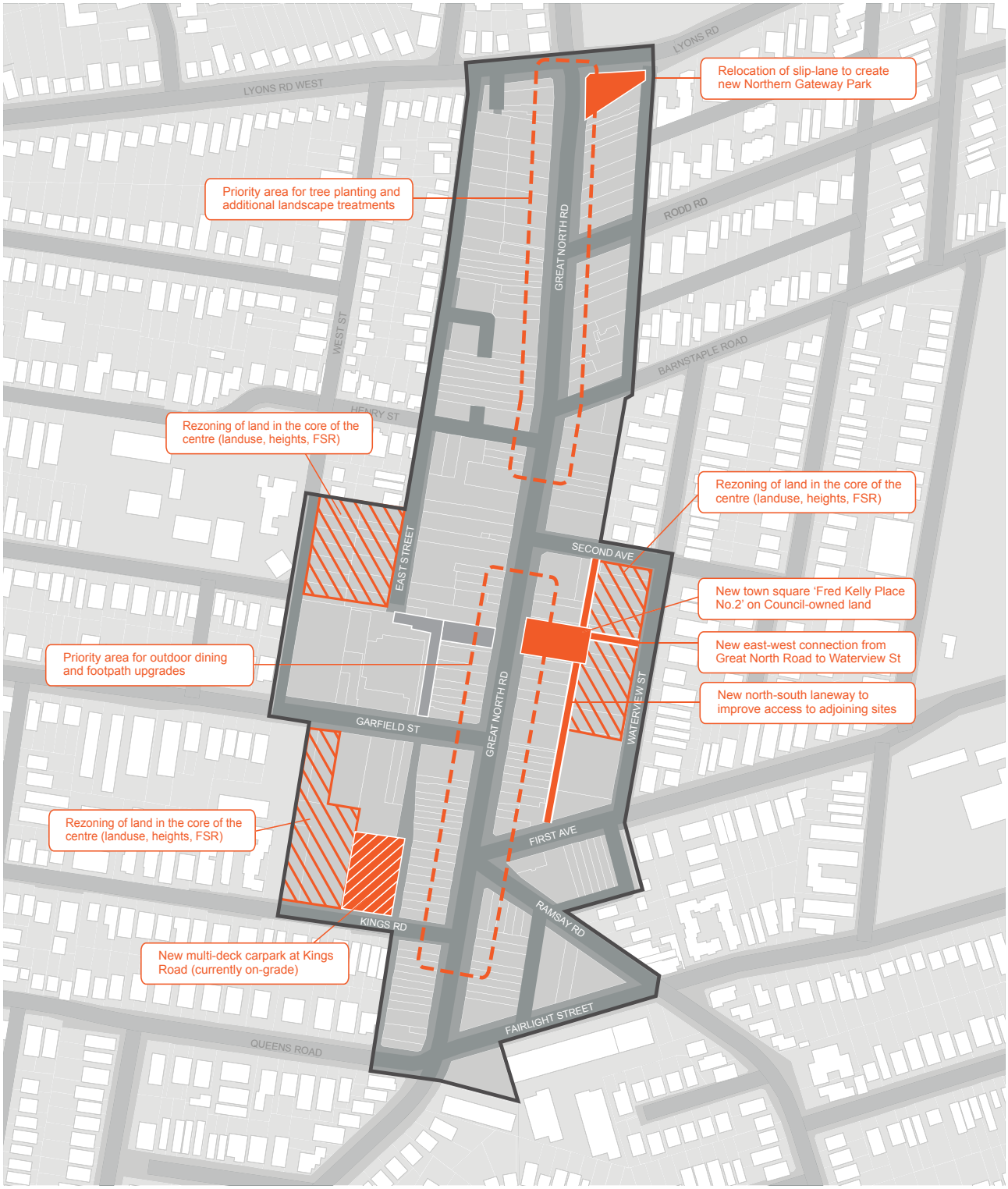


Figure 14. Key spatial initiatives - short-term

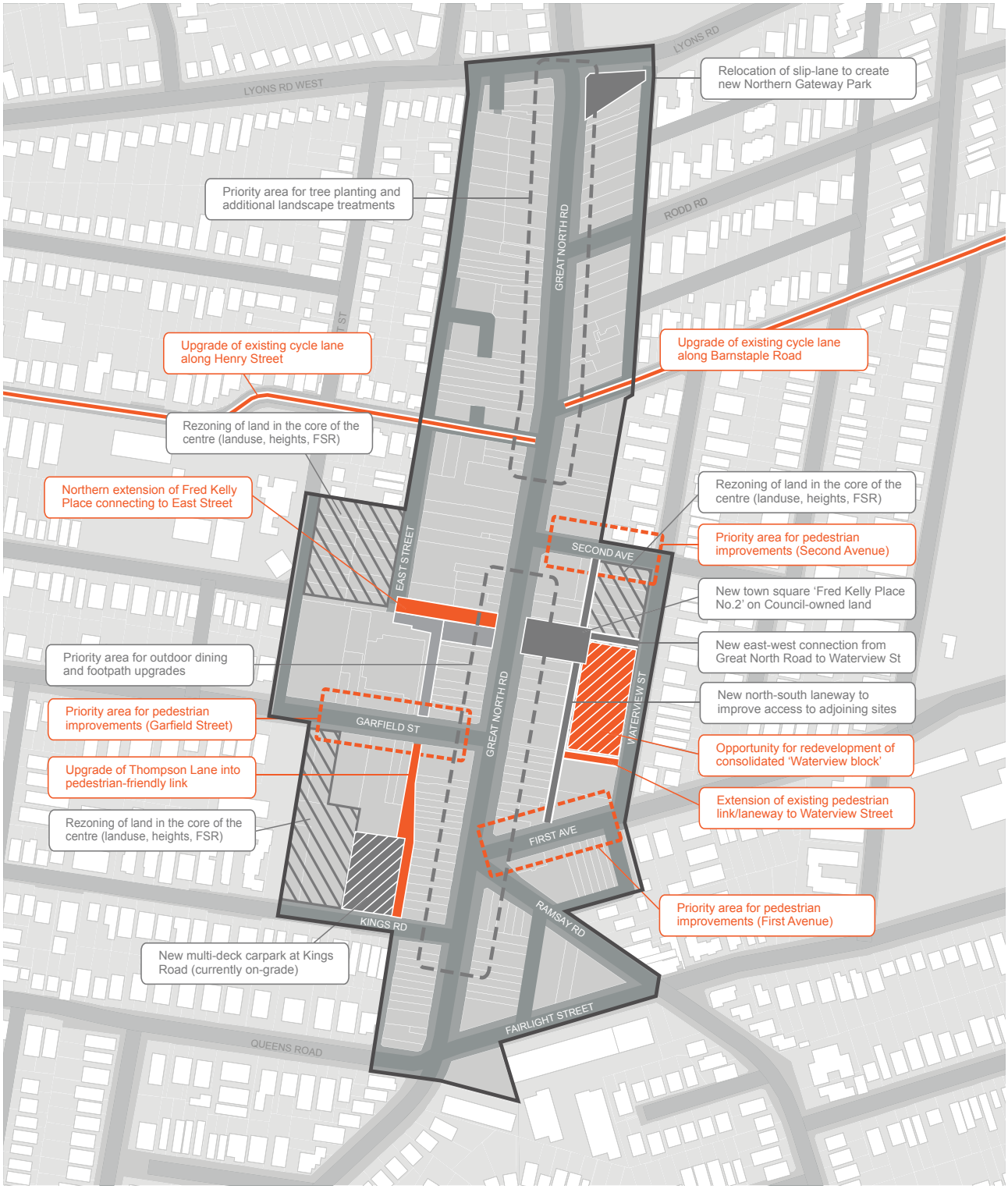


Figure 15. Key spatial initiatives - medium-term

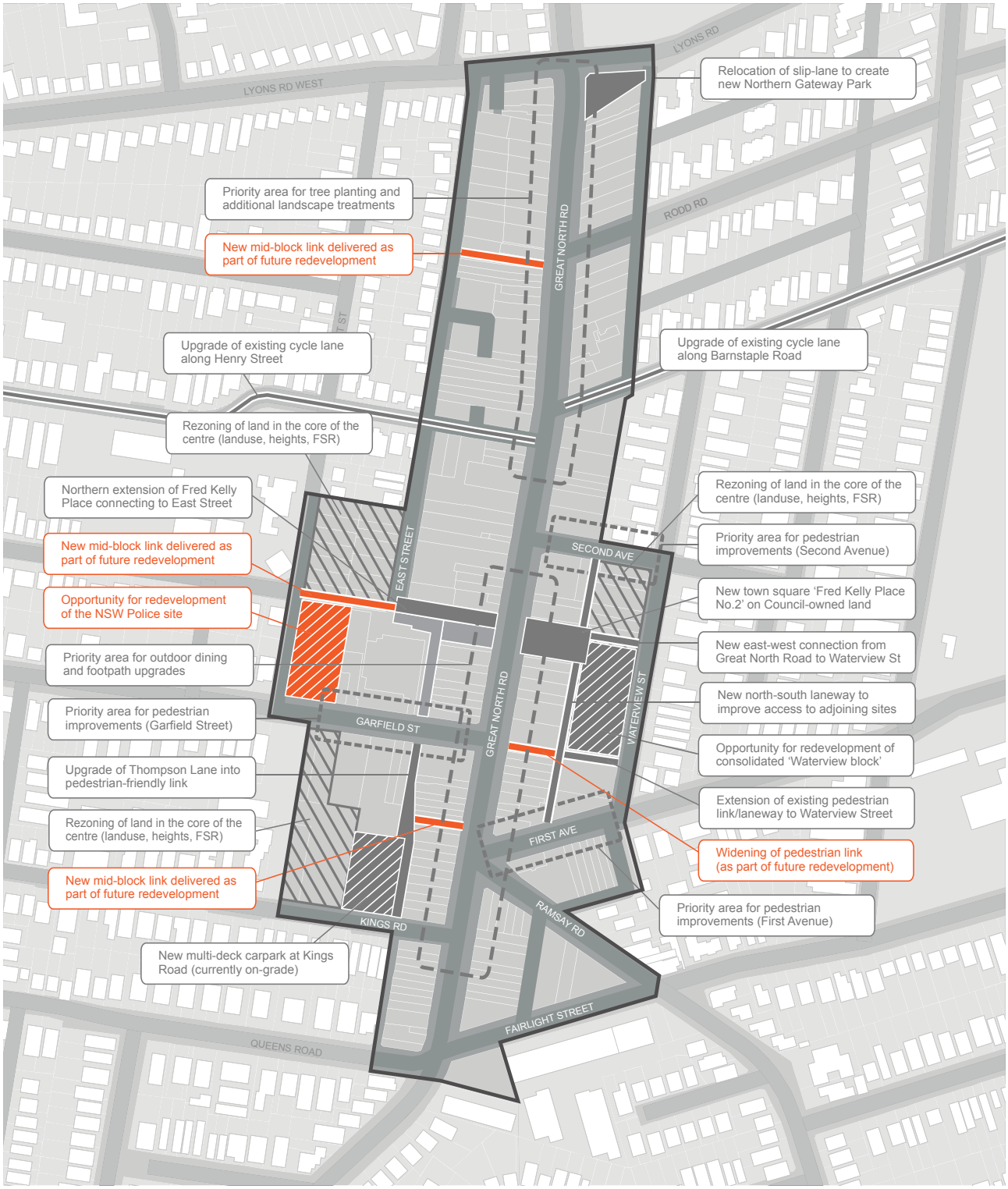


Figure 16. Key spatial initiatives - longer-term

5.3 ACTION PLAN

Priority level (impact/benefit): high /medium

Cost: costs to Council; estimated cost range - Low $ = <100K, Medium $$ = 100K - 500K, High $$$= 500K - 2Mil, Major $$$$=>2Mil

Timeframe: Short term (1-2 years), Medium term (3 - 5 years), Long term (6 - 20 years)

Responsibility: includes Council, community groups, organisations, government bodies/authorities

Quick win: visible changes in the centre; less complex than other initiatives and achievable in the short-term with comparably low investment

2.1 Public Places and Spaces

PS-01	Code	Actions	Priority	Cost	Timeframe	Responsibility
Improve the northern section of Great North Road by establishing street trees and landscape treatments along each side, with street trees within a potential central green median (if possible) and at prominent street corners.	PS-01-1	Investigate landscape and street tree planting with RMS (with a preference for a central green median) and develop a detailed design concept for the northern section of Great North Road	high	$	short term	Council, Road and Maritime Services (RMS)
	PS-01-2	Establish a central median (where possible) and plant mature street trees along Great North Road between Lyons Road and Henry Street.	high	$$	short term	Council, Road and Maritime Services (RMS)
	PS-01-3	Establish landscape treatments at the following existing street corners/kerb extensions: Rodd Road, Barnstaple Road, Henry Street (includes greening of existing pedestrian crossing) and Second Avenue.	high	$$	short term	Council, in coordination with Road and Maritime Services (RMS)
	PS-01-4	Create new kerb extensions/blister treatments at the following locations and street corners: Rodd Road north (extension), at new pedestrian crossing near Rodd Road on both sides, and Barnstaple Road north.	high	$$	short term	Council, in coordination with Road and Maritime Services (RMS)

PS-02	Code	Actions	Priority	Cost	Timeframe	Responsibility
Create a northern gateway for the town centre by relocating the slip-lane off Lyons Road and converting the triangular-shaped area into a Gateway Park or Plaza.	PS-02-1	Investigate the removal of the existing slip-lane off Lyons Road into Great North Road with RMS. Investigate whether this would require an additional left-turn lane at the intersection.	high	$	short term	Council, Road and Maritime Services (RMS)
	PS-02-2	Convert the remaining triangular-shaped area into a public open space, such as a park or urban (paved) space or a combination of both. Commission public art and investigate if part of the upgrade could be paid for through developer contributions (particularly if the land to the south was redeveloped in the medium term).	high	$$	medium term	Council, in coordination with RMS, in consultation with adjoining property owners
	PS-02-3	Consult with the community, local artists, cultural groups and landowners on their vision and aspirations for the gateway park/plaza.	high	$	medium term	Council, in consultation with the local community
PS-03	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Create a new square opposite the existing Fred Kelly Place on Council-owned land (aka 'Fred Kelly Place No.2') to increase public space provision in the centre and provide an uplift for surrounding sites.	PS-03-1	Develop a business case on the value/return to Council due to uplift of adjoining private and public land such as increased rates, developer contributions and the value uplift to the centre as a whole.	high	$	short term	Council
	PS-03-2	Consult with the community on the activities and facilities that should be provided in the new square e.g. children's play, shade structures, an entertainment stage, water features, public art, public toilets etc.	high	$	short term	Council, in consultation with the local community
	PS-03-3	Support the relocation of the post-office to a new central location within the centre before demolishing the existing single-brick building on Council-owned land	high	$$	medium term	Council
	PS-03-4	Deliver a new town square for Five Dock that would provide space for a range of activities including night-time events and markets, and integrate public art, seating facilities, tree planting and (informal) children's play.	high	$$$	medium term	Council

PS-04	Code	Actions	Priority	Cost	Timeframe	Responsibility
Increase the size of Fred Kelly Place to the north and connect with the new square to the east via a raised pedestrian crossing, creating a central and strong community space and focus for Five Dock.	PS-04-1	Acquire the block of land north of Fred Kelly Place, currently occupied by the Westpac bank. Support relocation of the bank into premises close-by within the core of the centre before demolishing the existing building.	medium	$$$	medium term	Council, property owners and/or tenants
	PS-04-2	Merge the northern block of land with Fred Kelly Place and one larger public open space with cohesive public domain treatment.	medium	$$	medium term	Council
	PS-04-3	Connect the extended Fred Kelly Place to East Street and apply cohesive public domain treatment; unless relocation is possible consider commissioning public art to conceal/sleeve existing substation and carpark ventilation stack.	medium	$$	medium term	Council, property owners and/or tenants
	PS-04-4	Connect the extended Fred Kelly Place with the new town square across Great North Road via a raised and widened pedestrian crossing with cohesive public domain treatment.	medium	$$	medium term	Council, Road and Maritime Services (RMS)
PS-05	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Develop a consistent design palette for the treatment of all public spaces, that focuses on the activities people want to perform/ experience such as walk, sit, watch, meet, talk, play, dine-out, shop, wait, interact, relax.	PS-05-1	Identify current treatments and elements that are used/applied in the Canada Bay LGA and elsewhere and select the ones that have proven to be good fit/ design and value for money	*refer to UF-07-2*			
	PS-05-2	Develop a 'hard' design palette/catalogue for street furniture, paving, bus shelters, information displays, signage, outdoor dining, materials and colours that will guide all future public domain improvement works, including potential links or spaces that are provided as part of private redevelopment (refer to Section 3.1 of the Urban Design study for guidance)	*refer to UF-07-2*			

PS-06	Code	Actions	Priority	Cost	Timeframe	Responsibility
Increase the (perceived) level of safety in the centre e.g. through good lighting levels after hours, clear sightlines along pedestrian routes and active/passive surveillance of public spaces and links.	PS-06-1	Increase lighting levels along key pedestrian routes, in particular along Thompson Lane between Kings Road and Garfield Street, and along the existing pedestrian link between Great North Road and Waterview carpark next to the former CBC Bank building (refer to Section 3.1 of the Urban Design Study for guidance).	high	$	short term	Council
	PS-06-2	Remove or relocate signs and other elements in the public domain that block sightlines and/or (desired) pedestrian routes. As an example, consider relocation of the public art sculpture in Fred Kelly Place to the edge of the square.	medium	$	medium term	Public signs: Council; Commercial signs: coordinate with business owners / Chamber of Commerce; Road signs: coordinate with RMS
	PS-06-3	Revise the DCP controls to ensure all new development addresses / overlooks adjoining public spaces, e.g. upper level balconies or 'active' ground floor frontages.	*refer to UF-02-2*			

PS-07	Code	Actions	Priority	Cost	Timeframe	Responsibility
Commission public art that is reflective of the various community/cultural groups in the area, adding to the centre's local character and identity; key locations include the new town square and the northern gateway.	PS-07-1	Consult with the local community; consider forming or supporting the formation of a committee (volunteers) to collate local stories and history (this would provide material that could inform the brief for artists).	high	$	short	Council, in coordination with the local community (arts committee)
	PS-07-2	Commission public art for the pedestrian link between Great North Road and Waterview carpark; consider interactive or light installations (temporary or permanent).	high	$	short	Council, in coordination with the local community (arts committee)
	PS-07-3	Commission public art for the following locations (as part of their delivery): Northern Gateway Park, Fred Kelly Place No.2; consider interactive or light installations (temporary or permanent).	medium	$$	medium term	Council, in coordination with the local community (arts committee)
	PS-07-4	Investigate opportunities to include art/artistic treatments into paving and street furniture (to be considered as part of the design palette, refer to PS-05).	*refer to UF-07-2*			
	PS-07-5	Investigate opportunities for temporary exhibitions in empty shopfronts.	medium	$	short term	Council, property owners/tenants, Chamber of Commerce
	PS-07-6	Establish a permanent display for art/installations along Kings Road as part of the new multi-level carpark.	medium	$	medium term	Council

PS-08	Code	Actions	Priority	Cost	Timeframe	Responsibility
Strengthen the emerging medical cluster to the north by creating a safer environment for pedestrians including a new zebra crossing, ample seating facilities, proximity to bus stops and safe drop-off / pick-up zones.	PS-08-1	Consider a new zebra crossing near the intersection of Great North Road and Rodd Road.	*refer to AM-01-1*			
	PS-08-2	Provide seating facilities and streetscape upgrades near front doors to existing medical facilities.	medium	$	short term	Council
	PS-08-3	Consider relocation of existing bus stops to be located closer to the medical cluster and proposed new zebra crossing.	*refer to AM-06-2*			
	PS-08-4	Create safe drop-off and pick-up areas along Great North Road and/or side streets and provide disabled parking spaces near front door of existing medical facilities.	medium	$	short term	Council
PS-09	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Focus on the core of the centre; recognise that centres are contested spaces that thrive on the synergies that are created when activities are located in close proximity to each other.	PS-09-1	Create a highly permeable, legible and connected public domain framework in the core of centre that links with existing lanes and public spaces and 'unlocks' the potential of adjoining land.	*refer to AM-03-2, AM-03-3, AM-03-4 and AM-04*			
	PS-09-2	Improve outdoor cafes and al-fresco dining between Second Avenue and Kings Road by redesigning/ replacing the current outdoor seating 'pods' (see Section 3.1 of the Urban Design Study for guidance).	high	$	short term	Council
PS-10	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Seek opportunities to open up private landholdings for community events and/ or public use, such as the forecourt of St. Albans Church or the terrace in front of Five Dock library.	PS-10-1	Consider conversations and seek agreement with St. Albans Church to open up forecourt in front of church for markets and other public events.	medium	$	short term	Council, St. Albans Church
	PS-10-2	Consider a Wi-Fi-hotspot near the public library. Seek an agreement to use the terrace outside the library (under strata-ownership) and provide tables/ chairs and shade sails/umbrellas.	high	$	short term	Council, strata management

2.2 Access and Movement

AM-01	Code	Actions	Priority	Cost	Timeframe	Responsibility
Continue to promote a low-speed, pedestrian-friendly environment along Great North Road (an RMS owned/managed road) by design initiatives such as kerb extensions, raised pedestrian crossings and landscaped medians.	AM-01-1	Establish new zebra crossings at following locations: Rodd Road, across Great North Road near Rodd Road intersection, Henry Street and Garfield Street near Thompson Lane; consider raised treatment similar to the existing crossing of Great North Road near Henry Street.	high	$	short term	Council, Road and Maritime Services (RMS)
	AM-01-2	Connect Fred Kelly Place and 'Fred Kelly Place No.2' across Great North Road via a raised and widened pedestrian crossing.	*refer to PS-04-4*			
	AM-01-3	Remove the existing slip-lane off Lyons Road to Great North Road to improve pedestrian safety in this area.	*refer to PS-02-1 and PS-02-2*			
	AM-01-4	Continue to extend kerbs at intersections to enable safer crossing by pedestrians; locations for improvements include most of the side streets off Great North Road.	*refer to PS-01-3 and PS-01-4*			
	AM-01-5	Plant additional street trees where possible and establish new or extend existing green medians; allow for 'flat' sections of medians to provide pedestrians with a 'stepping-stone' when crossing Great North Road.	*refer to PS-01-1 and PS-01-2*			
	AM-01-6	Reduce vehicular speed along Council-owned street, e.g. by changing surface material at intersections, introducing traffic-calming devices and establishing shared zones.	high	$$	short term	Council

AM-02	Code	Actions	Priority	Cost	Timeframe	Responsibility
Improve existing east-west connections (Council-owned roads) with a focus on upgrading the pedestrian environment of First and Second Avenue as important linkages between the centre and Five Dock Park.	AM-02-1	Plant additional street trees along First and Second Avenue, in particular towards Great North Road, to encourage walking trips from the centre to Five Dock Park.	high	$$	short term	Council
	AM-02-2	Investigate opportunities to improve pedestrian amenity at First Avenue near Great North Road; consider widening footpaths and investigate traffic movements in conjunction with a redeveloped Waterview site and resulting access needs.	high	$	short term	Council, in coordination with Road and Maritime Services (RMS)
	AM-02-3	Ensure safe and convenient walking routes by upgrading footpaths, widening footpaths, maintain paving/surface and consider footpath continuity treatments across existing driveways and threshold treatments at intersections, e.g. at the intersection of Second Avenue and Waterview Street, First Avenue and Waterview Street and Second Avenue carpark entry/exit.	high	$$	short term	Council
	AM-02-4	Extend the footpath on both sides of Garfield Street (through conversion of on-street parking) to improve pedestrian amenity and safety and to unlock the potential for outdoor cafes/dining and additional street tree planting on the southern side.	medium	$	medium term	Council

AM-03	Code	Actions	Priority	Cost	Timeframe	Responsibility
Create new east-west connections (including mid-block links and the central east-west spine through Fred Kelly Place); explore opportunities to deliver these links in cooperation with (and co-funding by) private developers.	AM-03-1	Northern mid-block link: as part of future redevelopment, deliver a mid-block connection in the northern part of the centre between Great North Road and East Street; align this link as close as possible with Rodd Road and the new proposed zebra crossing.	medium	$	medium term	Council, developer/ investor
	AM-03-2	School link: as part of future redevelopment to the north of the public library, deliver a link to the Five Dock Public School, connecting the school with the centre's main street and bus stops through Fred Kelly Place.	medium	$	medium to long term	Council, developer/ investor
	AM-03-3	Establish a new mid-block connection between Great North Road and Waterview Street on Council-owned land which aligns with the 'school link', creating a central east-west spine.	high	$	medium term	Council
	AM-03-4	Central mid-block link: as part of future redevelopment, deliver a mid-block link between Great North Road and Thompson Lane to connect with Kings Road multi-deck carpark.	medium	$	medium term	Council, developer/ investor
AM-04	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Establish a safe and fine-grain pedestrian network in the core of the centre, in particular through the 'Waterview' urban block (bound by Great North, Second Avenue, Waterview Street and First Avenue).	AM-04-1	Continue to deliver a north-south laneway (as per the current DCP) from Second Avenue to First Avenue to provide better access, unlocking the redevelopment potential of adjoining sites.	high	$$	short term	Council
	AM-04-2	Create a new link through Council-owned land, currently used as a public carpark; ensure the connection aligns with the existing pedestrian link next to the former CBC bank (heritage building, currently occupied by NAB) and Garfield Street.	high	$	medium term	Council
	AM-04-3	As part of future redevelopment to the south, increase the width of the CBC bank link to 4-5 metres (currently ~1.5m).	medium	$	medium term	Council, developer/ investor
	AM-04-4	Upgrade existing laneways, such as Thompson Lane south (leading to Kings Road carpark).	high	$$	short term	Council

AM-05	Code	Actions	Priority	Cost	Timeframe	Responsibility
Promote cycling to/from the centre and between destinations such as schools and parks by upgrading the existing central cycle link along Barnstaple Road and Henry Street and providing more cycle parking.	AM-05-1	Provide a safe, dedicated cycle facility along Barnstaple Road that connects to Five Dock Park to the east.	high	$$	short	Council
	AM-05-2	Provide a safe, dedicated cycle facility along Henry Street that connects to Five Dock Public School to the west; investigate if Henry Street would need to become one-way for vehicles (in parts) due to its narrow road reserve width.	high	$$	short	Council
	AM-05-3	Continue to provide highly-visible and convenient cycle parking near key destinations such as the public library, supermarkets and shops, bus stops and other key facilities such as medical centres and Five Dock Club. Consider converting on-street car spaces into 'cycle-parking-pods'.	high	$	short	Council
AM-06	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Promote public transport usage by providing convenient access, safe crossings and high-quality facilities such as bus shelters, signage, displays, seating, bins and high lighting levels at bus stops after dark.	AM-06-1	Review the condition of all bus stops in the centre and provide high-quality facilities that are coherent, robust/durable and well-maintained (seating facilities, bins, information and timetable displays); seek to provide a shelter at every stop and ensure high lighting levels and unobstructed sightlines for increased safety after dark. In addition to high-quality facilities, improve the amenity around bust stops for public transport users by planting street trees and landscape treatments.	high	$$	short	Council
	AM-06-2	Consider relocating the northern bus stop further south to a more central/convenient location near the emerging medical cluster at the intersection of Great North Road and Rodd Road; co-locate bus stops with pedestrian crossing points where possible.	medium	$	medium	Council, in coordination with Road and Maritime Services (RMS) and Sydney Buses

AM-07	Code	Actions	Priority	Cost	Timeframe	Responsibility
Improve wayfinding in and around the centre by consolidating signage, carefully placing new and relocating existing signs where appropriate.	AM-07-1	Audit all existing public signage and investigate in coordination with RMS opportunities to consolidate, relocate and/or reduce signage.	medium	$	short	Council, in coordination with Road and Maritime Services (RMS)
	AM-07-2	Develop designs for both public and commercial signage that is coherent with the centre's colour/ design palette.	medium	$	short	Council
	AM-07-3	Provide wayfinding signage in public places that includes a map of the centre and locates civic and public facilities; involve local businesses who could co-fund the signage.	medium	$	short	Council, in coordination with local businesses / Chamber of Commerce
AM-08	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Consolidate and seek to increase the overall car parking capacity of the centre. Consider the conversion of the Council owned on-grade carpark at Kings Road into a multi-level carpark.	AM-08-1	Consider the conversion of the Council owned on-grade carpark at Kings Road into a multi-level carpark; investigate opportunities for co-funding (e.g. through public-private partnership, leasing of car spaces/levels). Consider a split-level built form that responds to the natural topography along Kings Road and reduces visual impact of the carpark structure; also consider how the carpark would fit into a more comprehensive redevelopment as part of adjoining land (including land owned by the United Church). Alternatively, consider other opportunities to accommodate parking in the centre on the presumption that there should be no reduction in overall parking provision.	high	$$$	medium	Council
	AM-08-2	Provide access to the multi-level carpark off both Kings Road and Thompson Lane; consider how traffic impacts for residents along Kings Road can be minimised, e.g. by closing Kings Road for through traffic beyond the carpark.	high	$	medium	Council
	AM-08-3	Ensure safe and convenient connections for pedestrians to/from the multi-level carpark to other destinations, such as an upgraded Thompson Lane and a new mid-block link to Great North Road.	*refer to AM-03-4 and AM-04-4*			

2.3 Urban and Built Form

UF-01	Code	Actions	Priority	Cost	Timeframe	Responsibility
Highlight key heritage and character buildings in the centre, in particular those that are located at highly visible corners or termination of views such as the former CBC Bank, Five Dock Hotel and the former Post Office.	UF-01-1	Highlight key facades of heritage buildings after dark (up-lighting), including the Five Dock Hotel, the former CBC Bank (currently NAB) and the former Post Office; seek funding through heritage or public art funds and/or partner with property owners/ tenants, e.g. the NAB bank.	high	$	short	Council, property owners/tenants, Chamber of Commerce
	UF-01-2	Frame facades of heritage and character buildings that add to the streetscape by planting street trees each side (where possible).	high	$	short	Council
UF-02	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Safeguard the 'village character' of the centre through setting consistent street wall heights, creating a human scale (built form to street proportions) and locating active frontages along key streets and open spaces.	UF-02-1	Revise the DCP controls to establish a maximum, consistent street wall height of 4 storeys (subject to heritage and overshadowing considerations) with any additional storeys set back from the street.	high	$	short	Council
	UF-02-2	Revise the DCP controls to extend the requirement for 'active frontages' to key sections of sites that adjoin new and improved public open spaces; this would include a high level of transparency for ground level retail and a fine grain (small distance between front doors).	high	$	short	Council

UF-03	Code	Actions	Priority	Cost	Timeframe	Responsibility
Ensure new development in the centre enhances the overall visual appearance of the streetscape and integrates well with its surrounds, in particular when interfacing with existing low-density residential areas.	UF-03-1	Ensure new development creates a successful interface with existing residential low-density areas (e.g. along Waterview Street), including careful consideration of the bulk and scale, building height, setbacks, façade treatments, overshadowing and privacy impacts (revised DCP controls)	high	$	short	Council
	UF-03-2	Protect heritage buildings and their visual curtilage by controlling the bulk and scale of new adjacent development (revised DCP controls).	high	$	short	Council
UF-04	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Clearly define and reinforce the visual enclosure of public places and streetscapes through new development and street tree planting, with a focus on Great North Road and streets within the centre's core.	UF-04-1	Revise the DCP controls to include build-to alignments, continuous awnings and pedestrian priority along Great North Road (e.g. by minimising driveways) to ensure that new development activates and reinforces key streets and public spaces.	high	$	short	Council
	UF-04-2	Revise the DCP controls to establish a maximum, consistent street wall height and plant additional street trees to provide visual definition and continuity of streetscapes, in particular along Great North Road.	*refer to UF-02-1*			
	UF-04-3	Locate service and parking access away from key public places by creating access to sites from the side or rear, e.g. though the Waterview block laneways network.	*refer to AM-03 and AM-04*			

UF-05	Code	Actions	Priority	Cost	Timeframe	Responsibility
Support the creation of the centre as a 'memorable place' with well-designed and maintained development, in particular at highly visible corners and at the numerous termination of views along side streets.	UF-05-1	Identify highly visible locations in the DCP so that future development on these landmark sites reinforces the centre.	high	$	short	Council
	UF-05-2	Encourage the provision of new high quality retail spaces by increasing the maximum height from 15m to 16m and requiring the ground floor retail to have a minimum ceiling height of 3.5m.	high	$	short	Council
UF-06	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Apply ESD (ecologically sustainable development) design principles to create a pleasant microclimate of the public domain by greening the centre, minimising overshadowing during winter months, orientating new development to capture prevailing breezes and implementing WSUD (water sensitive urban design) measures.	UF-06-1	Revise the DCP controls to ensure taller developments do not severely overshadow key public open spaces such as Fred Kelly Place and the new town square, especially during lunchtime in winter.	high	$	short	Council
	UF-06-2	Establish additional street trees and landscape treatment (greening the centre) which would have a positive impact on local temperature and humidity, especially during hot summer days.	*refer to PS-01 and Section 3.1-3.2 of the Urban Design Study*			
	UF-06-3	Ensure new development is designed to capture prevailing breezes and minimise wind tunnels (e.g. in adjoining narrow lanes).	high	$	*ongoing*	Council
	UF-06-4	Implement water-sensitive urban design (WSUD) measures with a particular focus on key public spaces such as Fred Kelly Place, the new town square and the Northern Gateway park.	*refer to PS-02 to PS-04*			

UF-07	Code	Actions	Priority	Cost	Timeframe	Responsibility
In addition to revising the current Development Control Plan (DCP), update relevant other development and planning controls such as the Local Environmental Plan (LEP), design guidelines and/or design codes to facilitate better quality and more sustainable development.	UF-07-1	Amend the LEP and associated development standards for some areas within the centre to provide incentives for increased permeability and improved access to the town centre (refer to Section 4.1 of the Urban Design Study for further guidance).	high	$	short term	Council
	UF-07-2	Develop a consolidated design code/catalogue for the centre, which would include public domain treatments (paving/surface treatments, street trees and landscape treatments), public domain elements (street furniture and signage) and a colour and material palette for both private development and the public domain (refer to Section 3.1 of the Urban Design Study for further guidance).	high	$	short term	Council
	UF-07-3	Use setback and height controls in the LEP and DCP to encourage development that meets the requirements of the residential flat design code including separation distances and narrow floor plates which allow natural light and ventilation (refer to Section 4.1 of the Urban Design Study for further guidance).	high	$	short term	Council
	UF-07-4	Amend the Development Contributions Plan applicable to the Five Dock Town Centre to ensure that public domain improvements and community facilities can be appropriately funded.	medium	$	short term	Council

UF-08	Code	Actions	Priority	Cost	Timeframe	Responsibility
Lead by example when redeveloping key sites in the centre that are owned in full or parts by Council to set clear expectations to the quality and sustainability of new development by private investors.	UF-08-1	Consider an architectural design competition for the redevelopment of the Kings Road carpark into a multi-level carpark. Focus on sustainable design such as use of local materials, application of sustainable construction methods and incorporation of renewable energy production (solar cells, wind turbines) etc.	high	$$$$	medium term	Council, potential private development partners (public-private partnership)
	UF-08-2	Consider an architectural design competition for the redevelopment of the Waterview Street site into a mixed-use complex. Pay particular attention to the bulk and scale and appropriate integration of the development into its context, such as built form massing, building gaps and facade separation.	high	$$$$	medium term	Council, private developer/investor
	UF-08-3	For the redevelopment of the NSW Police site at Garfield Street ensure careful integration of new built form with the heritage building fronting Garfield Street. Note that redevelopment of this site relies on the delivery of the 'school link' (see AM-03-2) to the north of the site to ensure a public frontage for new development and good access to the centre.	medium	$$$$	medium to long term	Council, private developer/investor

2.4 Catalysts and Renewal

CR-01	Code	Actions	Priority	Cost	Timeframe	Responsibility
Continue to improve the quality of the public domain across the entire centre, with a focus on green streetscapes and attractive public spaces that provide a 'catalyst' to attract redevelopment of surrounding properties.	CR-01-1	Improve the overall look and feel of the centre (visual appeal) by planting additional street trees and landscape treatments, focussing on northern section of Great North Road in the short term.	*refer to PS-01*			
	CR-01-2	Deliver a new public space on Council-owned land opposite Fred Kelly Place that will act as a catalyst/ incentive for surrounding land to redevelop by increasing land value (including adjacent public land); maximise return for Council from private redevelopment, e.g. through rates and contribution to (further) public domain improvements.	*refer to PS-03*			
	CR-01-3	Deliver a Northern Gateway park/plaza at the intersection of Lyons Road and Great North Road (by relocating the slip-way) to stimulate redevelopment of land to the south (improved amenity).	*refer to PS-02*			
CR-02	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Create additional public connections throughout the centre to provide improved access to properties, 'unlocking' the land value and incentive for redevelopment and investment.	CR-02-1	Deliver the 'school link' from East Street to Lancelot Street as part of redevelopment of amalgamated private landholdings to the north (or alternatively acquisition of two private properties); the link would also provide access to the NSW Police site to the south and 'unlock' its redevelopment value.	*refer to PS-02-3*			
	CR-02-2	Deliver two new east-west mid-block connections in the northern part of the centre (opposite Rodd Road) and in the centre's core (between Kings Road and Garfield Street).	*refer to AM-01 and AM-03*			

CR-03	Code	Actions	Priority	Cost	Timeframe	Responsibility
Encourage a thriving night-time economy that attracts a wide range of people by increasing the (perceived) level of safety e.g. through good lighting levels, clear sightlines and both active and passive surveillance.	CR-03-1	Increase lighting levels along key pedestrian routes, in particular along Thompson Lane between Kings Road and Garfield Street, and along the existing pedestrian link between Great North Road and Waterview carpark next to the former CBC Bank building (refer to Section 3.1 of the Urban Design Study for guidance).	*refer to PS-06-1*			
	CR-03-2	Remove or relocate signs and other elements in the public domain that block sightlines and/or (desired) pedestrian routes. As an example, consider relocation of the public art sculpture in Fred Kelly Place to the edge of the square or another public location to increase useability of the open space for events and other activities.	*refer to PS-06-2*			
	CR-03-3	Develop development controls (DCP) that require new development to overlook public spaces and lanes and locate 'active frontages' at the ground floor level to increase surveillance levels.	*refer to UF-xx*			

CR-04	Code	Actions	Priority	Cost	Timeframe	Responsibility
Increase activity levels in the centre after dark by extending opening hours, attracting small licenced premises (e.g. wine bars and restaurants) and by holding evening events such as Friday "pasta markets".	CR-04-1	Encourage business and shop owners/tenants in the centre to extend opening hours into the evening, e.g. every Thursday, to attract more people and activity into the centre (also see Action No.14-16 Hill PDA Town Centre Strategy).	high	$	short term	Council, Chamber of Commerce
	CR-04-2	Encourage licenced premises (small venues, such as restaurants and wine bars) to open up in the centre to increase the choice for visitors and residents of things to do after dark, e.g. through active marketing, speeding up DA approvals and/or granting rent-free periods (1-2 years) of outdoor seating areas on footpaths (also see Action No.19 and 31, Hill PDA Town Centre Strategy). As an example, investigate how to support sale/investment into former Post Office as an opportunity for a small bar/restaurant.	high	$	medium term	Council, business and property owners, potential investors and/or business tenants
	CR-04-3	Ensure existing public spaces are 'fit-for-purpose' (e.g. flexible, clutter-free) to hold evening and night-time events, such as markets, concerts and art events (also see Action No.17, 18 and 41, Hill PDA Town Centre Strategy).	medium	$	short term	Council
CR-05	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Stimulate broader investment and improve the centre's service offering by developing key strategic sites, including Kings Road carpark (additional parking spaces), Waterview Street carpark and the NSW Police site.	CR-05-1	Consider the redevelopment of Kings Road on-grade carpark into a multi-deck carpark, potential public-private partnership with land continuing to be in Council ownership. Alternatively, consider other opportunities to accommodate parking in the centre on the presumption that there should be no reduction in overall parking provision.	*refer to UF-08-1*			
	CR-05-2	Redevelop the consolidated Waterview site into a mixed-use development, incorporating a retail anchor at ground floor; potential sale of Council-owned land.	*refer to UF-08-2*			
	CR-05-3	Redevelop the NSW Police site at Garfield Street into mixed-use development (predominantly residential apartments).	*refer to UF-08-3*			

CR-06	Code	Actions	Priority	Cost	Timeframe	Responsibility
Create the opportunity for a comprehensive development within the Waterview block by consolidating Council's landholdings through incorporation of government land (state-owned) and purchase of private properties.	CR-06-1	Incorporate Waterview Street (lot No.11) owned by the NSW Department of Housing into consolidated landholdings with Waterview carpark site and the 'post-shop' parcel; liaise with the Department and investigate the opportunity for a land-swap or partnership arrangement.	high	$$$	medium term	Council, in coordination with NSW Department of Housing
	CR-06-2	Acquire two private land parcels along Waterview Street (lots No.15 and17) and integrate with Council's current landholdings.	high	$$$	medium term	Council
	CR-06-3	Attract a retail anchor to be part of a mixed-use development that would activate the new town square and create synergies (dumbbell effect) with the existing Supabarn at Fred Kelly Place.	high	$	short term	Council
CR-07	**Code**	**Actions**	**Priority**	**Cost**	**Timeframe**	**Responsibility**
Increase the feasibility of redevelopment in the centre by amending current development controls, supporting site amalgamation and incentivising development of smaller sites, e.g. reduction of carparking requirements.	CR-07-1	Revise current planning and development controls, including the LEP and DCP with a focus on feasibility and gradual urban renewal of private landholdings in the centre.	*refer to UF-07*			
	CR-07-2	Support site amalgamations, in particular of sites that are only accessible off Great North Road (no rear lane); consider granting an increase of height for larger sites that can prove that the additional density and building height does not have an adverse effect on adjoining properties and public spaces (privacy, overshadowing).	high	$	short term	Council
	CR-07-3	For smaller sites in particular, consider to apply reduced carparking requirements; for sites only accessible off Great North Road consider having no carparking (to avoid driveways crossing the footpath).	high	$	short term	Council

CR-08	Code	Actions	Priority	Cost	Timeframe	Responsibility
Make it more affordable to live, work and visit the centre by supporting active and public transport, increasing the diversity of accessible local services and applying ESD design principles for new development.	CR-08-1	Encourage more walking trips to/from the town centre by improving the pedestrian environment, including pavement/footpaths upgrades, increased pedestrian safety and additional street tree planting and landscape treatments.	*refer to PS-01 to PS-09, AM-01 to AM-04,*			
	CR-08-2	Promote cycling to/from the centre by improving cycling facilities, in particular along the existing key east-west connection along Barnstaple Road and Henry Street which connects the Five Dock Park to the Grammar school and beyond.	*refer to UF-01, AM-05*			
	CR-08-3	Encourage public transport usage by improving bus stops (shelters, seating, street trees) and safe pedestrian crossings.	*refer to AM-01 and AM-06*			
	CR-08-4	Attract more people into the centre at day and night through various measures including increased safety and surveillance, events and a greater diversity of shops and (community) facilities.	*refer to AM-08, PS-06, CR-04 and CR-06-3*			
	CR-08-5	Apply ESD principles to public spaces (improved microclimate) and new built form to minimise resource usage (saving water, electricity, reliance on mechanical ventilation and climate control).	*refer to UF-06 and UF-08*			

5.4 PUBLIC DOMAIN IMPROVEMENTS - HIGH-LEVEL COSTINGS

3.2.1	Northern Gateway				
	Item	Approx. Quantity	Unit	Rate	Cost estimate
a	**Excavation & Site preparation**				
	- Break up and remove bitumen paving and base layers	750	m2	$4	$3,000
	- Clearance of vegetation and removal from site	750	m2	$1	$750
	- Cut down trees (20cm girth), excavate roots and remove from site	1	no.	$460	$460
	- Cut down trees (10cm girth), excavate roots and remove from site	6	no.	$170	$1,020
	- Excavate for paving subsurface layers (approx 250mm deep)	212	cu. 3	$20	$4,240
b	**Subsurface Treatment**				
	- Sub-base crushed rock filling (approx 125 deep)	94	cu.m	$91	$8,554
	- Compaction	750	m2	$3	$2,438
	- Cast in situ concrete kerb including reinforcement, formwork and surface finishes	80	lin. m	$80	$6,400
c	**Paving**				
	- Slab paving (urban shot blast finish paving 400 x 400 x 40mm)	750	m2	$115	$86,250
d	**Planting of 6 new mature trees**				
	- Topsoil spread and tree pit preparation	6	m3	$18	$105
	- Tree grilles (cast iron and frame set in position)	6	no.	$540	$3,240
	- Tree guard (prefinished steel tree guard)	6	no.	$850	$5,100
	- 6no. mature trees	6	no.	$300	$1,800
e	**Relocation of slip-way to the north of the Gateway Park (new left-turning lane into GNR)**				
	- Clearance of vegetation and removal from site	135	m2	$1	$135
	- Cut down trees (10cm girth), excavate roots and remove from site	5	no.	$170	$850
	- Sub-base crushed rock filling (approx 125 deep)	68	cu.m	$91	$6,188
	- Compaction	68	m2	$3	$221
	- Kerb realignment - cast in situ concrete kerbs including reinforcement, formwork and surface finishes	45	lin. m	$80	$3,600

	- Relocation of traffic lights and signals (cable installed underground (buried direct incl. mech. protection)) Allowance for 30m	30	lin. m	150	$4,500
f	**Gateway Park street furniture allowance (say 6-8 seating facilities, bollards, drinking water fountain, lighting poles, other)**				
	- Seating - cast aluminium framed with powdercoast finish with bases set into paving (timber slats)	8	no.	$1,185	$9,480
	- Bollards - stainless steel bollards (925mm) at 1.5m centres	50	no.	$585	$29,250
	- Drinking water fountain	1	no.	$900	$900
	- Lighting poles (allowance for 5no.)	5	no.	$1,000	$5,000
g	**- Public art allowance (provisional sum)**	-	-	-	$50,000
	Subtotal				**$233,481**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$116,740
	Total (high-level estimate)				**$350,221**

3.2.2	Great North Road (north)				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	**Central green median, landscaped, width ~1.5m, length: approx 120m**				
	- Break up and remove bitumen paving and base layers	180	m2	$4	$720
	- Cast in situ concrete kerb including reinforcement, formwork and surface finishes	245	lin m.	$80	$19,600
	- Topsoil and subsoil spread and levelled	90	cu. M	$58	$5,175
b	**Planting of 6 new trees in median**				
	- Topsoil and tree pit preparation	6	m3	$18	$105
	- 6no. mature trees	6	no.	$300	$1,800
c	**Additional on-street parking (lineworks, kerb re-alignment)**				
	- Kerb realignment - cast in situ concrete kerbs including reinforcement, formwork and surface finishes	24	lin. m	$80	$1,920
	- Parking road markings - one coat road marking paint on bitumen paving	24	lin. m	5	$120

d	**Allowance for additional street furniture (say 3 benches, 3 bins, 1 bus shelter)**				
	- Bins - Refuse Bin, Supply and Install incl. slab etc.	1	no.	$1,200	$1,200
	- Bus shelter	1	no.		$15,000
e	- Seating - cast aluminium framed with powdercoast finish with bases set into paving (timber slats)	8	no.	$1,185	$9,480
	Subtotal				**$55,120**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$27,560
	Total (high-level estimate)				**$82,680**

3.2.3	**Rodd Road**				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	**Kerb extension & realignment on both sides of intersection with Great North Road (35 15) LENGTH - 25,10**				
	- Cast in situ concrete including reinforcement, formwork and surface finishes	50	lin m.	$80	$4,000
	- Bitumen paving - crushed rock/blue metal base course including grading, rolling and consolidating to receive paving	35	m2	$35	$1,225
b	**New zebra crossing - one coat road marking paint on bitumen paving**	25	m	$5	$125
c	**Dropped kerb with tactile paving**	2	no.	$1,500	$3,000
d	**Landscape treatment**				
	- Topsoil spread and tree pit preparation	5	m3	$18	$88
	- Tree grilles (cast iron and frame set in position)	5	no.	$540	$2,700
	- Tree guard (prefinished steel tree guard)	5	no.	$850	$4,250
	- 5no. mature trees	5	no.	$300	$1,500
	Subtotal				**$16,888**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$8,444
	Total (high-level estimate)				**$25,331**

3.2.4	New pedestrian link to East Street (60m x 5m wide)				
	Item	Approx. Quantity	Unit	Rate	Cost estimate
a	**Excavation & Site preparation**				
	- Excavate for paving subsurface layers (approx 250mm deep)	75	cu.m	$20	$1,500
	- Sub-base crushed rock filling (approx 125 deep)	38	cu.m	$91	$3,458
	- compaction	850	m2	$3	$2,763
b	**Paving**				
	- Level ground surface uner paving	300	m2	3.25	$975
	- Bitumen paving - crushed rock/blue metal base course including grading, rolling and consolidating to receive paving	95	m2	$35	$3,325
c	**Kerb realignment (blister treatment) on eastern side where link meets Great North Road**				
	- Kerb realignment - pre cast concrete kerb	60	lin. m	$45	$2,700
	- Bitumen paving - crushed rock/blue metal base course including grading, rolling and consolidating to receive paving	65	m2	$35	$2,275
d	**Allowance for landscape treatment**				
	- Top soil spread in layers over ground (300mm)	20	m2	18	$360
	- hedge planting	20	m2	35	$700
	- 1no. mature tree	1	no.	$300	$300
e	**Allowance for street furniture**				
	- Bins - Refuse Bin, Supply and Install incl. slab etc.	2	no.	$1,200	$2,400
	- Seating - cast aluminium framed with powdercoast finish with bases set into paving (timber slats)	3	no.	$1,185	$3,555
	- Lighting poles	5	no.	$1,000	$5,000
f	**Planting of 3 new trees**				
	- Break up and remove bitumen paving and base layers	1	m2	$4	$4
	- Topsoil spread and tree pit preparation	3	m3	$18	$53
	- Tree grilles (cast iron and frame set in position)	3	no.	$540	$1,620

	- Tree guard (prefinished steel tree guard)	3	no.	$850	$2,550
	- 3no. mature trees	3	no.	$300	$900
	Subtotal				**$29,311**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$14,655
	Total (high-level estimate)				**$43,966**

3.2.5	Henry Street				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	**New two-way dedicated cycle link**				
	- one coat paint on bitumen paving	60	m2	$10	$600
b	**New zebra crossing - one coat road marking paint on bitumen paving**	25	m	$5	$125
c	**Widening of footpaths on northern side (1.5m)**				
	- Break up and remove bitumen paving and base layers	90	m2	$4	$360
	- Compaction	90	m2	$3	$293
	- Kerb realignment - pre cast concrete kerb	60	m	$45	$2,700
	- Bitumen paving - crushed rock/blue metal base course including grading, rolling and consolidating to receive paving	90	m2	$35	$3,150
d	**New pocket park on northern side (conversion of small piece of public lane)**				
	- Clearance of vegetation and removal from site	90	m2	1	$90
	- Topsoil spread and tree pit preparation	45	m3	$18	$788
e	- Planting of 2 new trees in pocket park	2	no.	$300	$600
	Subtotal				**$8,705**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$4,353
	Total (high-level estimate)				**$13,058**

3.2.6	Barnstaple Road				
	Item	Approx. Quantity	Unit	Rate	Cost estimate
a	**New two-way dedicated cycle link**				
	- one coat paint on bitumen paving	60	m2	$10	$600
b	**Kerb extension/realignment (blister treatment) on intersection with Great North Road**				
	- Break up and remove bitumen paving and base layers	60	m2	$3	$189
	- Cast in situ concrete including reinforcement, formwork and surface finishes	35	lin m.	$80	$2,800
	- Compaction	60	m2	$3	$195
	- Bitumen paving - crushed rock/blue metal base course including grading, rolling and consolidating to receive paving	60	m2	$35	$2,100
c	**Allowance for landscape treatment**				
	- Top soil spread in layers over ground (300mm)	20	m2	18	$360
	- hedge planting	20	m2	35	$700
d	**Allowance for street furniture**				
	- Bins - Refuse Bin, Supply and Install incl. slab etc.	1	no.	$1,200	$1,200
	- Seating - cast aluminium framed with powdercoast finish with bases set into paving (timber slats)	2	no.	$1,185	$2,370
e	**Planting of 4 new trees on northern side**				
	- Break up and remove bitumen paving and base layers	1	m2	$4	$4
	- Topsoil spread and tree pit preparation	4	m3	$18	$70
	- Tree grilles (cast iron and frame set in position)	4	no.	$540	$2,160
	- Tree guard (prefinished steel tree guard)	4	no.	$850	$3,400
	- 4no. mature trees	4	no.	$300	$1,200
f	**Planting of 3 new trees at existing zebra crossing, Great North Road**				
	- Break up and remove bitumen paving and base layers	1	m2	$4	$4
	- Topsoil spread and tree pit preparation	3	m3	$18	$53
	- Tree grilles (cast iron and frame set in position)	3	no.	$540	$1,620

	- Tree guard (prefinished steel tree guard)	3	no.	$850	$2,550
	- 3no. mature trees	3	no.	$300	$900
	Subtotal				**$22,474**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$11,237
	Total (high-level estimate)				**$33,710**

3.2.7	Second Avenue				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	**Planting of 5 new trees**				
	- Break up and remove bitumen paving and base layers	5	m2	$4	$18
	- Topsoil spread and tree pit preparation	5	m3	$18	$88
	- Tree grilles (cast iron and frame set in position)	5	no.	$540	$2,700
	- Tree guard (prefinished steel tree guard)	5	no.	$850	$4,250
	- 5no. mature trees	5	no.	$300	$1,500
b	**New zebra crossing**				
	- New zebra crossing - one coat road marking paint on bitumen paving	25	m	$5	$125
	Subtotal				**$8,680**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$4,340
	Total (high-level estimate)				**$13,020**

3.2.8	Second Avenue carpark				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	**Excavation & Site preparation**				
	- Break up and remove bitumen paving and base layers	750	m2	$4	$2,625
	- Clearance of vegetation and removal from site	750	m2	$1	$750

	- Cut down trees (20cm girth), excavate roots and remove from site	1	no.	$460	$460
	- Cut down trees (10cm girth), excavate roots and remove from site	6	no.	$170	$1,020
	- Excavate for paving subsurface layers (approx 250mm deep)	212	cu. 3	$20	$4,240
b	**Demolition**				
	- Single storey brick and tile property	120	m2	60	$7,200
c	**Paving / shared zone treatment**				
	- Slab paving (urban shot blast finish paving 400 x 400 x 40mm)	750	m2	$115	$86,250
d	**Planting of 5 new trees**				
	- Break up and remove bitumen paving and base layers	5	m2	$4	$20
	- Topsoil spread and tree pit preparation	5	m3	$18	$88
	- Tree grilles (cast iron and frame set in position)	5	no.	$540	$2,700
	- Tree guard (prefinished steel tree guard)	5	no.	$850	$4,250
	- 5no. mature trees	5	no.	$300	$1,500
	Subtotal				**$111,103**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$55,551
	Total (high-level estimate)				**$166,654**

3.2.9	Fred Kelly Place - northern extension				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	**Demolition (Westpac bank) note: excludes cost of purchase/acquisition**				
	- Single storey retail premises. Reinforced ground slab, brick walls, metal roof	600	m2	90	$54,000
b	**Subsurface Treatment**				
	- Sub-base crushed rock filling (approx 125 deep)	52.5	cu.m	$91	$4,778
	- compaction	600	m2	$3	$1,950

c	**Paving**				
	- Level ground surface under paving	600	m2	3.25	$1,950
	- Slab paving (urban shot blast finish paving 400 x 400 x 40mm)	600	m2	$115	$69,000
d	**Planting of 10 new mature trees**				
	- Topsoil spread and tree pit preparation	10	m3	$18	$175
	- Tree grilles (cast iron and frame set in position)	10	no.	$540	$5,400
	- Tree guard (prefinished steel tree guard)	10	no.	$850	$8,500
	- 10no. mature trees	10	no.	$300	$3,000
e	**Allowance for street furniture**				
	- Bins - Refuse Bin, Supply and Install incl. slab etc.	4	no.	$1,200	$4,800
	- Seating - cast aluminium framed with powdercoast finish with bases set into paving (timber slats)	5	no.	$1,185	$5,925
	- Street lighting columns	5	no.	$1,000	$5,000
	Subtotal				**$54,000**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$27,000
	Total (high-level estimate) excludes cost of acquisition				**$81,000**

3.2.10	New Town Square ('Fred Kelly Place No.2')				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	**Demolition (post office and shops)**				
	- Single storey retail premises. Reinforced ground slab, brick walls, metal roof	420	m2	$90	$37,800
b	**Excavation & Site preparation (assumed approx 35% bitumen surface, 65% soft) 1200m2**				
	- Break up and remove bitumen paving and base layers	420	m2	$4	$1,470
	- Clearance of vegetation and removal from site	780	m2	$1	$780
	- Cut down trees (20cm girth), excavate roots and remove from site	3	no.	$460	$1,380

	- Cut down trees (10cm girth), excavate roots and remove from site	5	no.	$170	$850
	- Excavate for paving subsurface layers (approx 250mm deep)	212	cu. 3	$20	$4,240
c	**Subsurface Treatment**				
	- Sub-base crushed rock filling (approx 125 deep)	150	cu.m	$91	$13,650
	- compaction	1200	m2	$3	$3,900
d	**Paving**				
	- Level ground surface under paving	1200	m2	3.25	$3,900
	- Slab paving (urban shot blast finish paving 400 x 400 x 40mm)	1200	m2	$115	$138,000
e	**Planting of 10 new mature trees**				
	- Topsoil spread and tree pit preparation	10	m3	$18	$175
	- Tree grilles (cast iron and frame set in position)	10	no.	$540	$5,400
	- Tree guard (prefinished steel tree guard)	10	no.	$850	$8,500
	- 10no. mature trees	10	no.	$300	$3,000
f	**Allowance for street furniture**				
	- Bins - Refuse Bin, Supply and Install incl. slab etc.	2	no.	$1,200	$2,400
	- Seating - cast aluminium framed with powdercoast finish with bases set into paving (timber slats)	3	no.	$1,185	$3,555
	- Street lighting columns	5	no.	$1,000	$5,000
g	**Public Art**				
	- Public art allowance (provisional sum)	-	-	-	$50,000
h	**Public toilets and baby change room (6m x 4m)**				
	- Single storey, standard construction and basic finishes, male, female and disabled facilities	24	m2.	$2,500	$60,000
i	**Planting of 10 new street trees**				
	- Topsoil spread and tree pit preparation	10	m3	$18	$175
	- Tree grilles (cast iron and frame set in position)	10	no.	$540	$5,400

	- Tree guard (prefinished steel tree guard)	10	no.	$850	$8,500
	- 10no. mature trees	10	no.	$300	$3,000
j	**Raised Pedestrian Crossing - (330m2)**				
	- Break up and remove bitumen paving with base cource (200mm)	330	m2	4	$1,320
	- Excavate for paving subsurface layers (approx 125mm deep)	42	cu. 3	$20	$840
	- Concrete slab (delivery, handling and placing). Assume 200mm deep	67	cu. 3	$290	$19,430
	- Mortar bed	330	m2	$6	$1,881
	- Slab paving (urban shot blast finish paving 400 x 400 x 40mm)	330	m2	$115	$37,950
k	**Planting of 4 new street trees at all four corners of raised crossing**				
	- Topsoil spread and tree pit preparation	4	m3	$18	$70
	- Tree grilles (cast iron and frame set in position)	4	no.	$540	$2,160
	- Tree guard (prefinished steel tree guard)	4	no.	$850	$3,400
	- 4no. mature trees	4	no.	$300	$1,200
	Subtotal				**$429,326**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$214,663
	Total (high-level estimate)				**$643,989**

3.2.11	**School link**				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	Demolition (1x single storey 1x two storey) note: excludes cost of purchase/acquisition				
	- Single storey/two storey, brick and tile	450	m2	56	$25,200
b	Excavation & Site preparation				
	- Break up and remove bitumen paving and base layers	450	m2	$4	$1,575
	- Excavate for paving subsurface layers (approx 250mm deep)	300	cu. 3	$20	$6,000

c	Subsurface Treatment				
	- Sub-base crushed rock filling (approx 125 deep)	150	cu.m	$91	$13,650
	- compaction	450	m2	$3	$1,463
d	Paving				
	- Level ground surface under paving	450	m2	3.25	$1,463
	- Slab paving (urban shot blast finish paving 400 x 400 x 40mm)	450	m2	$115	$51,750
e	Planting of 10 new mature trees				
	- Topsoil spread and tree pit preparation	5	m3	$18	$88
	- Tree grilles (cast iron and frame set in position)	5	no.	$540	$2,700
	- Tree guard (prefinished steel tree guard)	5	no.	$850	$4,250
	- 8no. mature trees	5	no.	$300	$1,500
f	Allowance for street furniture				
	- Bins - Refuse Bin, Supply and Install incl. slab etc.	2	no.	$1,200	$2,400
	- Seating - cast aluminium framed with powdercoast finish with bases set into paving (timber slats)	2	no.	$1,185	$2,370
	- Street lighting columns	2	no.	$1,000	$2,000
	Subtotal				**$116,408**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$58,204
	Total (high-level estimate)				**$174,611**

3.2.12	Garfield Street				
	Item	Approx. Quantity	Unit	Rate	Cost estimate
a	**Widening of footpath on both side (1.5m)**				
	- Break up and remove kerb line, bitumen paving and base layers	97.5	m2	$4	$390
	- Cast in situ concrete including reinforcement, formwork and surface finishes	65	lin m.	$80	$5,200
	- Bitumen paving - crushed rock/blue metal base course including grading, rolling and consolidating to receive paving	97.5	m2	$35	$3,413
b	**New zebra crossing - one coat road marking paint on bitumen paving**	25	m	$5	$125
c	**Planting of 5 new street trees**				
	- Topsoil spread and tree pit preparation	5	m3	$18	$88
	- Tree grilles (cast iron and frame set in position)	5	no.	$540	$2,700
	- Tree guard (prefinished steel tree guard)	5	no.	$850	$4,250
	- 5no. mature trees	5	no.	$300	$1,500
	Subtotal				**$17,665**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$8,833
	Total (high-level estimate)				**$26,498**

3.2.13	First Avenue				
	Item	Approx. Quantity	Unit	Rate	Cost estimate
a	**Raised Pedestrian Crossing**				
	- Break up and remove bitumen paving and base layers (200m deep)	97.5	m2	$4	$390
	- Concrete slab (delivery, handling and placing) (Assume 200mm deep)	745	m2	3.15	$2,347
	- Mortar bed	186	cu. 3	$20	$3,725
	- Slab paving (urban shot blast finish paving 400 x 400 x 40mm)	149	cu. 3	$115	$17,135

b	**Paving**				
	- Level ground surface under paving	745	m2	3.25	$2,421
	- Slab paving (urban shot blast finish paving 400 x 400 x 40mm)	745	m2	$115	$85,675
c	**Public Art**				
	- Public art allowance (provisional sum)	-	-	-	$50,000
d	**Allowance for street furniture**				
	- Bins - Refuse Bin, Supply and Install incl. slab etc.	2	no.	$1,200	$2,400
	- Street lighting columns	5	no.	$1,000	$5,000
	- Information signage	1	no.	$900	$900
	- Bus shelter	1	no.		$10,000
e	**Planting of 8 new street trees**				
	- Topsoil spread and tree pit preparation	8	m3	$18	$140
	- Tree grilles (cast iron and frame set in position)	8	no.	$540	$4,320
	- Tree guard (prefinished steel tree guard)	8	no.	$850	$6,800
	- 8no. mature trees	8	no.	$300	$2,400
	Subtotal				**$161,693**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$80,847
	Total (high-level estimate)				**$242,540**

3.2.14	Kings Road				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	**Planting of 5 new street trees**				
	- Topsoil spread and tree pit preparation	5	m3	$18	$88
	- Tree grilles (cast iron and frame set in position)	5	no.	$540	$2,700
	- Tree guard (prefinished steel tree guard)	5	no.	$850	$4,250
	- 5no. mature trees	5	no.	$300	$1,500

b	**Widening footpath along southern side (1.5m wide)**				
	- Break up and remove kerb line, bitumen paving and base layers	37.5	m2	$4	$150
	- Cast in situ concrete including reinforcement, formwork and surface finishes	25	lin m.	$80	$2,000
	- Bitumen paving - crushed rock/blue metal base course including grading, rolling and consolidating to receive paving	37.5	m2	$35	$1,313
	Subtotal				**$12,000**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$6,000
	Total (high-level estimate)				**$18,000**

3.2.15	Ramsay Road				
	Item	**Approx. Quantity**	**Unit**	**Rate**	**Cost estimate**
a	**Planting of 2 new street trees**				
	- Topsoil spread and tree pit preparation	5	m3	$18	$88
	- Tree grilles (cast iron and frame set in position)	5	no.	$540	$2,700
	- Tree guard (prefinished steel tree guard)	5	no.	$850	$4,250
	- 5no. mature trees	5	no.	$300	$1,500
b	**Allowance for street furniture**				
	- Bins - Refuse Bin, Supply and Install incl. slab etc.	2	no.	$1,200	$2,400
	- Street lighting columns	5	no.	$1,000	$5,000
	- Seating - cast aluminium framed with powdercoast finish with bases set into paving (timber slats)	2	no.	$1,185	$2,370
	Subtotal				**$18,308**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$9,154
	Total (high-level estimate)				**$27,461**

3.2.16	Fairlight Street				
	Item	Approx. Quantity	Unit	Rate	Cost estimate
a	**Planting of 4 new street trees**				
	- Topsoil spread and tree pit preparation	4	m3	$18	$70
	- Tree grilles (cast iron and frame set in position)	4	no.	$540	$2,160
	- Tree guard (prefinished steel tree guard)	4	no.	$850	$3,400
	- 4no. mature trees	4	no.	$300	$1,200
	Subtotal				**$6,830**
	Contingency for design/planning fees and variations in the volumes, quantity and rates (detailed design phase)			50%	$3,415
	Total (high-level estimate)				**$10,245**

Assumptions & Limitations

High level cost estimates: source Rawlinson Australian Construction Handbook Edition 30 2012

Costs of have been prepared based on initial concept design drawings with reference to Rawlinson's 2012.

Cost have been prepared to provide a high level indication on potential design components and have not been prepared by a Quantity Surveyor.

Rawlinson's provides an indicative average price for projects in excess of $1,500,000 with average site conditions. The Five Dock project is unlikely to be in excess of $1,500,000 and as a result item costs are likely to be higher.

Project setup & site establishment have not been included

No allowance has been made for Preliminaries such as site establishment, supervision, notices and fees etc

Costs exclude the Goods and Services Tax (GST)

Cost estimate does not include design fees (landscape architect, civils, drainage electrical) geotechnical investigations or survey work

In the absence of electical design information, lighting requirements have not been priced. Costs are limited to providing lighting columns and exclude electrical cabling

Design treatments will require a detailed understanding of site conditions, including drainage channels and existing services. Costs do not include drainage design and this stage

Excludes work associated with underground services

ARUP Hill PDA STUDIO GL

City of Canada Bay