

DRURY CENTRE

12-Dec-2019

PRIVATE PLAN CHANGE REQUEST

URBAN DESIGN ASSESSMENT

PREPARED FOR:
KIWI PROPERTY LIMITED

B&A
Urban & Environmental

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Appendix 1 – Drury Metropolitan Centre 2048 Masterplan Report

EXECUTIVE SUMMARY

This report provides an Urban Design Assessment of a Private Plan Change to the Auckland Unitary Plan Operative in Part by Kiwi Property Group Limited. The Plan Change seeks to apply new zones and a precinct to approximately 95 hectares of greenfield land at 120 Flanagan Road adjacent to the existing Drury settlement currently zoned 'Future Urban'.

The purpose of the Plan Change is to facilitate the development of a new centre at an intensity and scale that capitalises on its proximity to planned public transport infrastructure in the form of the new Drury Central Rail Station. A number of bespoke precinct provisions are also proposed to enable greater building height, provide for increased residential amenity within the mixed-use zone and requiring the development of high-quality public spaces and streets through the site.

Whilst the provisions represent a significant change in scale and intensity from the existing rural character of the area, the Site is centrally positioned within an expansive area of greenfield land identified as suitable for future urban development through the Auckland Unitary Plan and subsequent Drury-Opāheke structure planning processes. In combination with the proximity to the Drury Central Rail Station, the Site features many characteristics from an urban design perspective that make it suited to becoming a dense, vertical node that acts as the focal point for the emerging Drury/ Opāheke community.

An assessment of the Plan Change provisions has been undertaken against the urban design themes set out within the Neighbourhood Design Statement prepared in support of the Drury-Opāheke Structure Plan. These themes are:

1. Neighbourhoods that vary in density and mix of uses according to their locational attributes.
2. Neighbourhoods with many safe choices of movement with good access to services and amenity.
3. Neighbourhoods with many choices of use and activity that reflect the needs of the community and the sub-region.
4. Neighbourhoods that celebrate their unique identity and are attractive, safe and easily understood.
5. Neighbourhoods that protect and enhance the natural environment while enabling urbanisation.

In my opinion, the proposed zonings and precinct-specific provisions set out within the Plan Change address these themes and associated anticipated outcomes. They are also well designed to achieve the Masterplan vision and are consistent with the strategic policy direction (as it relates to urban design) of both Central Government and Auckland Council. Overall, the Plan Change provisions are considered appropriate from an urban design perspective.

1.0 INTRODUCTION

1.1 PURPOSE

This report provides an Urban Design Assessment of a Private Plan Change ("the Plan Change") to the Auckland Unitary Plan Operative in Part ("AUP"). The Plan Change seeks to apply new zones and a precinct to approximately 95 hectares of greenfield land at 120 Flanagan Road adjacent to the existing Drury settlement currently zoned 'Future Urban' ("the Site").

This assessment:

- reviews the characteristics of the site and its surrounding area;
- provides an overview of both the strategic and AUP planning contexts;
- considers the urban design outcomes that are desirable in development of the site; and
- undertakes an urban design assessment of the Plan Change provisions.

This assessment is also supported by the "Drury Metropolitan Centre 2048 Master Plan Report" ("the Masterplan") prepared by Canadian based urban design firm Civitas (refer to Appendix 1). The Masterplan was developed concurrently with the Drury-Opāheke Structure Plan which establishes Auckland Council's aspirations for the site. The Masterplan contains:

- photographic and diagrammatic analysis of the site and its context;
- a conceptual masterplan for the site; and
- representative cross sections and 3d massing models showing potential development envelopes.

In undertaking this review, I have also had regard to the Integrated Transport Assessment Report ("ITA") prepared by Stantec, in so far as the accommodation of vehicles and vehicle movement has the potential to affect design outcomes across the site.

I have visited the Site. The assessment undertaken in this report is informed by this visit, a desk-top analysis of the area, and a review of relevant Auckland Council documents, including the AUP.

1.2 REPORT STRUCTURE

Sections 2 to 4 of this report set out the existing site context and the strategic context for change from an urban design perspective. Sections 5 and 6 then provide the urban design assessment of the plan change provisions.

1.3 SCOPE OF INVOLVEMENT IN PROJECT

My involvement in development of the proposed Drury Metropolitan Centre has been:

- An independent review of the Civitas Masterplan;
- Development of and input into precinct specific urban design related provisions, reflecting the intent of the Civitas Masterplan within the AUP framework; and
- Attendance at Auckland Council pre-lodgement meetings.

2.0 CIVITAS MASTERPLAN

2.1 BACKGROUND

Civitas was engaged by the applicant to undertake a masterplanning exercise for their landholdings to inform and guide future development decisions over a 30-year timeframe for the site. This Masterplan focussed primarily on the applicant's contiguous landholdings (approximately 51 ha) within the wider Plan Change area. However, consideration was also had to the wider plan change areas to ensure a coherent and rationale design response for the site was obtained.

The Masterplan sets out a vision for Drury being:

> *"Drury Town Centre is a sustainable TOD, master planned new metropolitan centre organised around a Main Street. The Drury Town Centre Master Plan envisions a local community hub as well as regional destination, with a range of retail, dining, and leisure activities that integrate with a diverse portfolio of housing and commercial spaces."*

At its most general, the Masterplan concept (as shown on Figure 1 overleaf) seeks to utilise existing streams as a structuring element for new open spaces with a new centre focused around a pedestrian focused "main street" leading directly from the proposed Drury Central Rail Station towards a new park – Homestead Park – which capitalises on a prominent ridgeline and incorporates the historic homestead located on the site. Provision was included for large format retail to the south of the site with the balance of the land to be predominantly high-density residential in use supported by ground

floor retail or commercial. There is also an aspirational desire to support a new medical precinct/ hospital to support the growing population in this sub-region.

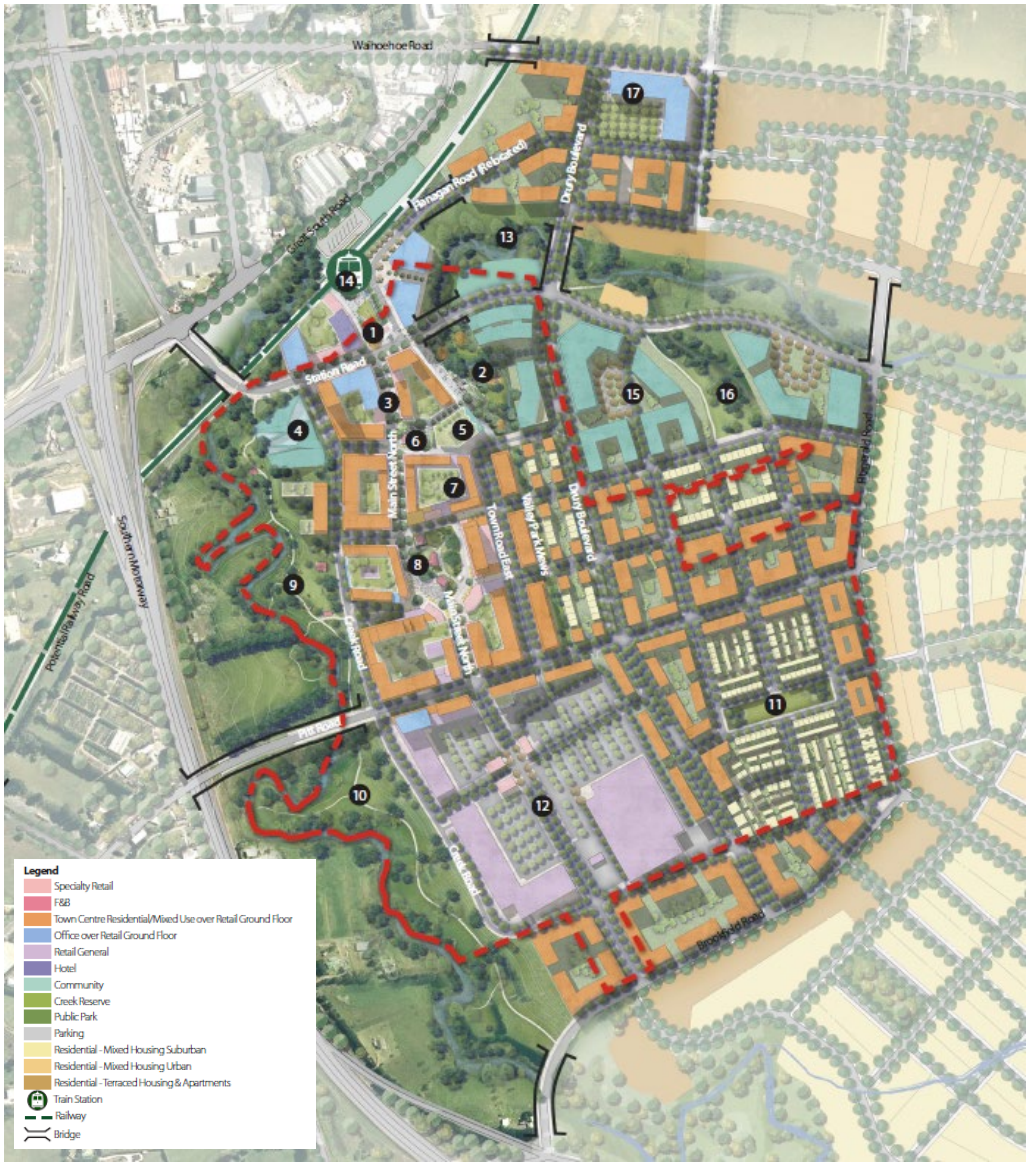

Figure 1 – Indicative 2048 Masterplan (Civitas, pg.8)

2.2 URBAN DESIGN PRINCIPLES

Several urban design principles were developed to help inform and guide the Masterplan. These included the following:

- Ensure mixed uses and public transport supportive density, including diverse housing choices and built forms.
- Ensure a walkable place to live/work and play that also integrates civic/community and cultural needs for identity.

- Along with passive activation, ensure compelling day and evening activities that enable vibrancy, sociability, and 18 hour 7 days a week activation at key locations to create a unique food and leisure destination.
- Ensure a Drury-wide jobs and household balance to enable everyday walkability and public transport usage to lessen private vehicle trips.
- Ensure a highly connected public realm with distinct landscape settings that has a variety of public experiences and amenities.
- Ensure great streetscapes for all roads, boulevards and laneways.
- Be climate and land responsive not only for environmental sustainability but to reinforce cultural values by Te Aranga Māori Design Principles.

3.0 SITE DESCRIPTION

3.1 THE SITE

The Plan Change area applies to an approximately 95-hectare site comprised of several land parcels bounded by the Hingaia Stream to the west, Brookfield Road to the south, Fitzgerald Road to the east and Waihoehoe Road/ North Island Main Trunk Line to the north.

The Site is located approximately 35km south of Auckland's City Centre and 20km from Auckland Airport. The largest established centres in proximity to the Site include the Papakura Metropolitan Centre, some 5km to the north, and Pukekohe, 10km to the south-west. In terms of access, the Site is adjacent to the Southern Motorway with direct access coming via the Drury interchange as well as the North Island Main Trunk Line. The nearest train station is currently located in Papakura.

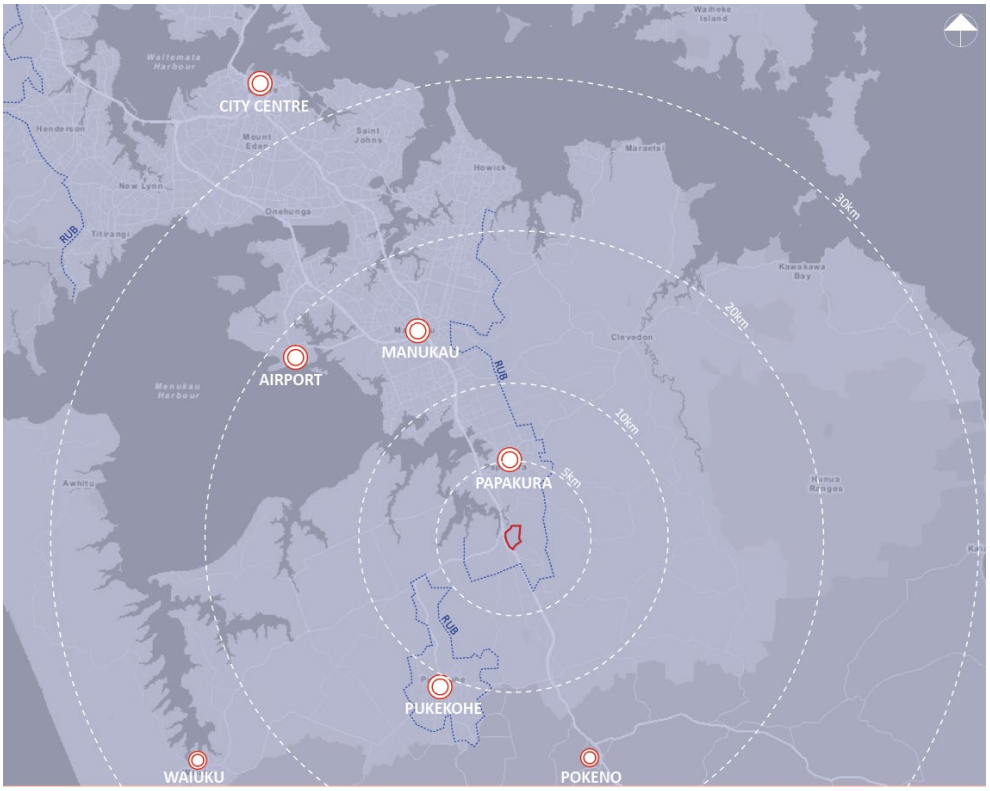

Figure 2 - Regional Context

3.2 IMMEDIATE CONTEXT

The majority of the Site is currently in rural use, predominantly pasture. The north-western part of the Site closest to Drury Village features some peri-urban residential lots along with several large green houses and buildings associated with horticultural land uses. Pockets of lifestyle blocks are also located across the Site. The western-most portion of the Site is also characterised by the presence of the Hingaia Stream

along with an overhead electricity transmission corridor. This site character is typical of the wider Drury East area which has been described in the Landscape & Visual Assessment report as having a strongly rural landscape character:

> "*The rural land uses and dominant pasture cover in the south and central parts of Drury East creates a strongly rural landscape character. Towards the northern and western edges, this character gives way to the influences of residential settlement patterns to become more urban in nature*."[1]



Figure 3 - Site Context

In terms of landform, the Site is defined by two dominant ridgelines and stream valleys as shown in Section 2.5 of the Masterplan. The Site is predominantly elevated above the existing Drury village and Southern Motorway and rises towards the Hunua Ranges east of the site. There are a number of shelter belt planting and stands of mature exotic vegetation spread across the site typical of the rural character of the area.

3.3 ACCESS & TRANSPORT

Access to the Site is primarily road based from Flanagan Road, Waihoehoe Road, Fitzgerald Road and Brookfield Road (via Great South Road). The Drury motorway

[1] Drury Structure Plan – Landscape & Visual Assessment Report (2017) Opus, pg 23-24.

interchange provides close access from the site to Auckland's southern motorway and strategic road network.

The Site is currently served by a single bus route, the 376, providing infrequent connections to Papakura from stops located adjacent to 237 Great South Road (200m from the closest point of the Site). The Site also sits adjacent to the North Island Main Trunk Line ("NIMTL"), however no station currently exists between Papakura and Pukekohe. However, a new station - 'Drury Central' (as shown in Figure 4 below) - is proposed and will provide access to northbound and southbound Southern Line rail services.[2] The majority of the Site would be located within 800m of the proposed station, with the most remote sections still within 1.2km of the station as the crow flies.



Figure 4 - Proposed Drury Central Rail Station (indicative location)

3.4 NEIGHBOURING PROPERTIES

With the exception of properties opposite the NIMTL in Drury Village, all neighbouring properties are in rural uses consistent with what currently exists on the site. All properties are also zoned Future Urban with private plan changes being sought concurrently to enable a range of residential zonings on properties immediately east of Fitzgerald Road ("the Fulton Hogan site") and north of

[2] https://www.supportinggrowth.govt.nz/assets/2019-Launch-Website/a650516cb0/South-Auckland-Indicative-Strategic-Transport-Network.pdf

Waihoehoe Road ("the Oyster site") as identified in Figure 5 below. The proposed zoning patterns for the Fulton Hogan and Oyster sites provides for more intensive residential development immediately adjacent to the Kiwi site in the form of the Terraced Housing & Apartment Building ("THAB") zone, reducing in intensity as these sites move away from the proposed Metropolitan Centre and Drury Central Rail Station. Existing development within Drury Village has a typically industrial feel with predominant uses relating to warehousing, storage and distribution. The site is also located in close proximity to the Light Industry zoned sites within the 'Drury South Precinct'.

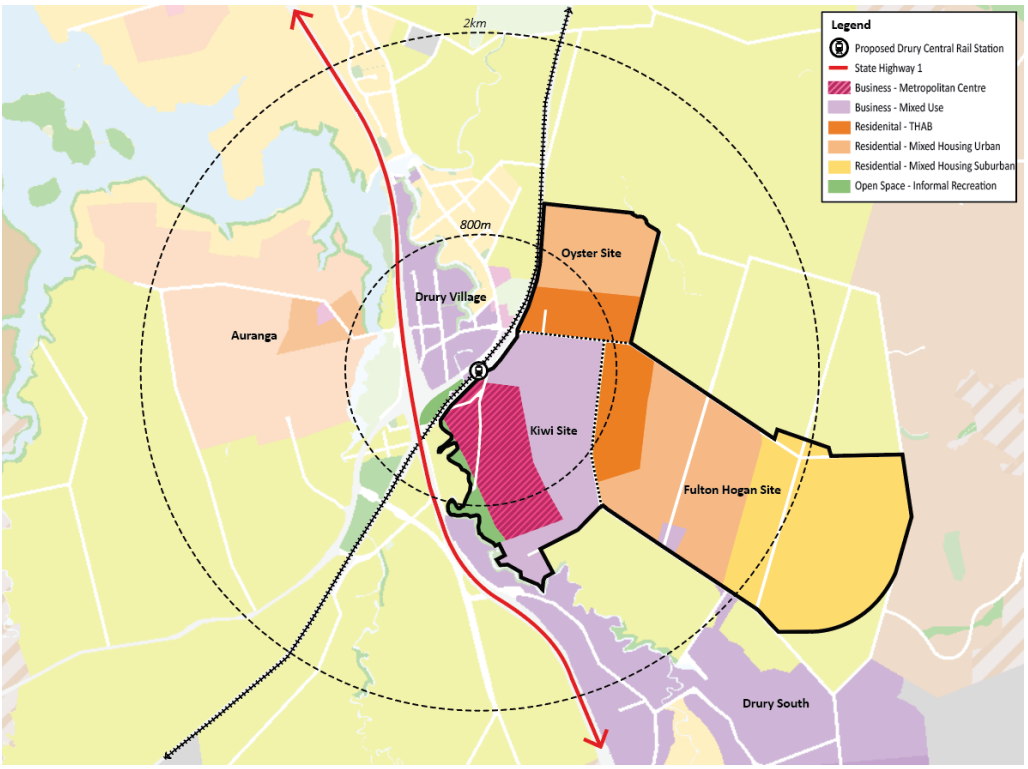

Figure 5 - Neighbouring Context

Longer term the Drury-Opāheke Structure Plan, as discussed further in Section 4.6, sets out Council's aspirations for how urban development will occur in the vicinity of the site. The indicative zoning pattern set out within the Structure Plan in the context of the Site is shown overleaf on Figure 6. This envisages a significant expansion of industrial land west of State Highway 1 (south and west of the site), a new centre and THAB zoning in the vicinity of the proposed Drury West Rail Station with the balance of land made up with lower intensity residential zones.

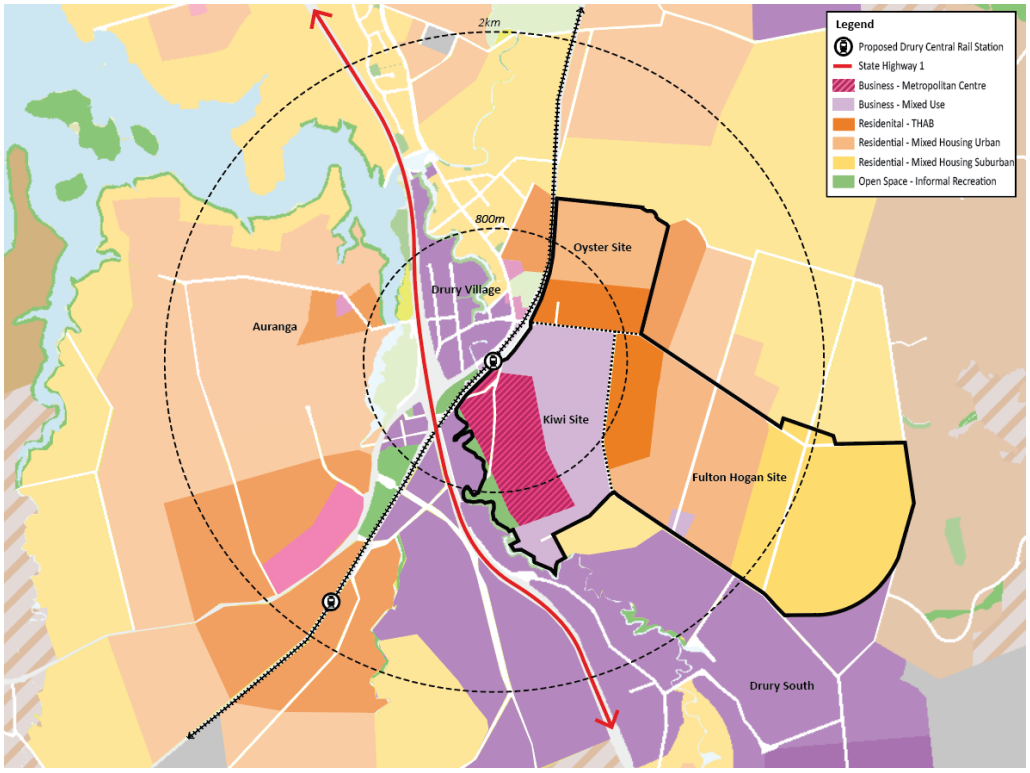

Figure 6 - Neighbouring Context (Long term aspirations)

3.5 DEVELOPMENT OPPORTUNITIES & CONSTRAINTS

The high-level urban design opportunities and constraints that the site presents to development are:

- Existing transport infrastructure is insufficient to sustainably support significant intensification of the site.
- The proposed Drury Central Rail Station, combined with the Sites proximity to the Drury interchange mean it is well located to become a major transport node in South Auckland.
- The Site is centrally located within a wider area signalled as suitable for greenfield development.
- Existing permanent and intermittent streams provide the potential to integrate with the wider area and provide amenity to support future development.
- Parts of the site are identified as falling within the 1 in 100-year ARI flood plain.
- Existing transmission lines limits urban development opportunities along the western portion of the Site and could adversely impact on-site amenity.
- The Hingaia Stream and Southern Motorway forms a strong physical and visual barrier to the west of the site.

- The majority of the Plan Change site is under single ownership which can enable a comprehensive and structured development of the site.

4.0 RELEVANT PLANNING CONTEXT

4.1 RESOURCE MANAGEMENT ACT

Part 2 of the Resource Management Act ("RMA") sets out the purpose and principles of the Act. Section 5 states that the purpose of the RMA is to promote the sustainable management of natural and physical resources.

Key matters under the RMA of direct relevance to this urban design assessment are also contained within Section 7 and include:

(b) the efficient use and development of natural and physical resources;

(c) the maintenance and enhancement of amenity values; and

(f) maintenance and enhancements of the quality of the environment.

4.2 NATIONAL POLICY STATEMENT – URBAN DEVELOPMENT CAPACITY

The National Policy Statement on Urban Development Capacity ("NPS-UDC") provides direction on planning for urban environments under the RMA. The NPS-UDC recognises the national significance of well-functioning urban environments, with particular focus on ensuring that local authorities, through their planning, both:

- enable urban environments to grow and change in response to the changing needs of the communities, and future generations; and
- provide enough space for their populations to happily live and work. This can be both through allowing development to go "up" by intensifying existing urban areas, and "out" by releasing land in greenfield areas.

The NPS-UDC sets outs objectives to apply to planning decisions that affect an urban environment. Key objectives of relevance to this urban design assessment include:

- OA1: Effective and efficient urban environments that enable people and communities and future generations to provide for their social, economic, cultural and environmental wellbeing.
- OA2: Urban environments that have sufficient opportunities for the development of housing and business land to meet demand, and which provide choices that will meet the needs of people and communities and future generations for a range of dwelling types and locations, working environments and places to locate businesses.

- OA3: Urban environments that, over time, develop and change in response to the changing needs of people and communities and future generations.

4.3 PROPOSED NATIONAL POLICY STATEMENT – URBAN DEVELOPMENT

A discussion document on the proposed National Policy Statement on Urban Development ("NPS-UD") was released by MfE in August 2019. The NPS-UD is intended to replace the NPS-UDC. While not yet a statutory document, the policy direction set out within the discussion document of relevance to this urban design assessment includes:

- enable higher-density development where best use can be made of existing or planning infrastructure;
- zoning land within close proximity to public transport stops or centres for high density residential activity; and
- provision for a greater density of development in greenfield areas.

4.4 AUCKLAND PLAN 2050

The Auckland Plan 2050 is a long-term spatial and strategic plan for Auckland and its communities and was adopted by Auckland Council in June 2018. The plan sets the strategic direction for managing growth and change in Auckland over the next 30 years, and is focused on six outcomes: Belonging and Participation, Maori Identity and Wellbeing, Homes and Places, Transport and Access, Environment and Cultural Heritage, Opportunity and Prosperity. Of particular relevance to this urban design assessment are the directions and focus areas relating to Homes and Places, and Transport and Access, specifically:

Homes and Places

- Direction 1 Develop a quality compact urban form to accommodate Auckland's growth
- Direction 2 Accelerate the construction of homes that meet Aucklanders' changing needs and preferences
- Direction 4 Provide sufficient public places and spaces that are inclusive, accessible and contribute to urban living
- Focus Area 1 Accelerate quality development at scale that improves housing choices
- Focus Area 5 Create urban places for the future.

Transport and Access

- Direction 1 Better connect people, places, goods and services

- Direction 2 Increase genuine travel choices for a healthy, vibrant and equitable Auckland
- Focus Area 1 Make better use of existing transport networks
- Focus Area 4 Make walking, cycling and public transport preferred choices for many more Aucklanders
- Focus Area 5 Better integrate land-use and transport.

4.5 AUCKLAND UNITARY PLAN

4.5.1 Regional Policy Statement

Chapter B2 of the AUP(OP) sets out the Regional Policy Statement ("RPS") as it relates to urban growth and form. It establishes a strategic goal for a "quality compact urban form" in Auckland. Implicit within this goal is the need to support residential and commercial intensification.

The policies in the RPS, particularly those policies contained in Section B2.3, include the following issues relevant to this Plan Change:

- Providing for the re-zoning of Future Urban zoned land to urban zoned land where it supports a quality compact urban form and a range of housing typologies.
- Enabling higher levels of intensification and growth along public transport corridors and near open space.
- Subdivision and development respond to the physical characteristics and intrinsic qualities of the site.
- Ensuring that infrastructure is in place or can be provided to support new development.
- Promotes the efficient use of land and enables a range of built forms to support choice for a diverse and growing population.

4.5.2 Zoning & Overlays

The AUP provides the key regulatory framework to manage Auckland's natural and physical resources. Under the AUP, the entire site falls within the Future Urban Zone. The only other relevant provisions covering the site from an urban design perspective is the National Grid Corridor Overlay in terms of potential impacts on amenity and future activities on site.

4.6 DRURY-OPĀHEKE STRUCTURE PLAN

The Drury-Opāheke Structure Plan ("Structure Plan") sets out Council strategic direction for growth within future urban zones across south Auckland and was adopted in August 2019. Plan changes to the AUP are required to give effect to the Structure Plan.

The Structure Plan sets out key outcomes for various areas including the main centre, along Frequent Transit Network ("FTN") corridors and other residential areas. Of particular relevance to this urban design assessment are the following outcomes:

- Provide high densities aiming to achieve at least 110 persons per ha within a walkable distance of the railway station
- Provide for vertical mixed-use, i.e. business on the ground floor and residential above, along the:
    - Waihoehoe Road part of the FTN corridor
    - area between the town centre core and residential areas to the east
- Provide an attractive, well-connected, walkable street environment with emphasis on pedestrian and cycle connectivity
- Provide an attractive mixed-use urban environment with a high standard of design
- Residential high-density areas within 500m of the FTN corridors should be designed, zoned and serviced to:
    - provide medium to high densities aiming to achieve at least 60 persons per ha within a walkable distance of the FTN routes
- Provide an attractive urban environment with a high standard of design
- Provide for affordable housing
- Protect and enhance the blue-green network that supports the area including through water sensitive design, tree planting, parks, greenways and riparian enhancement margins

4.7 SOUTHERN STRUCTURE AREA – NEIGHBOURHOOD DESIGN STATEMENT

To support the Structure Plan, Auckland Council developed a Neighbourhood Design Statement ("NDS") for the Southern Structure Area. The NDS (August 2019) is intended to provide "guidance for developers and land owners undertaking plan change and resource consent applications within the Southern Structure Planning Area through illustrations and descriptions in words, to help achieve a mix and

pattern of different land uses, integration with transport, and built form design in order to create distinctive and liveable neighbourhoods."

Five overarching themes were developed to influence the NDS outcomes and provide overarching, multidisciplinary principles to guide plan changes and development. The key themes aim to achieve the visions set out in the Structure Plan as well as the outcomes of the Auckland Plan, specifically:

1. Neighbourhoods that vary in density and mix of uses according to their locational attributes.
2. Neighbourhoods with many safe choices of movement with good access to services and amenity.
3. Neighbourhoods with many choices of use and activity that reflect the needs of the community and the sub-region.
4. Neighbourhoods that celebrate their unique identity and are attractive, safe and easily understood.
5. Neighbourhoods that protect and enhance the natural environment while enabling urbanisation.

These outcomes are used as basis for assessing the proposed Plan Change provisions in section 7.

5.0 PROPOSED PLAN CHANGE PROVISIONS

5.1 ZONING

The Plan Change seeks to rezone approximately 92.6 hectares of Future Urban zoned land for urban development, and will comprise (refer also Figure 6 overleaf):

- 35 ha Business - Metropolitan Centre Zone;
- 51.5 ha Business – Mixed Use Zone; and
- 8.5 ha Open Space – Informal Recreation Zone.

5.2 PRECINCT PROVISIONS

In addition to the zoning changes, the Plan Changes seeks to apply the 'Drury Centre Precinct' to the Plan Change area. The purpose of the precinct is to alter the provisions of the underlying Business – Mixed Use zone and Business – Metropolitan Centre zone to promote, amongst other things, urban design outcomes appropriate for the site context. The precinct is comprised of four sub-precincts as follows:

- Sub-precinct A is zoned Business - Metropolitan Centre Zone and contains the primary retail area, Main Street and civic and green open spaces. The sub-precinct is the focal point for intensive retail, commercial and civic development and pedestrian activity;
- Sub-precinct B is zoned Business – Metropolitan Centre Zone and is intended to be the primary location for large format retail, although other activities provided for in the Metropolitan Centre zone are not precluded, to provide flexibility to incorporate a wide range of activities over time. Development in this sub-precinct should ensure that a quality street environment is achieved;
- Sub-precinct C is zoned Business - Mixed Use Zone and provides for high density residential and a range of commercial activities that will complement the core retail and mixed use and maximises the efficient use of land close to the rapid transport;
- Sub-Precinct D is zoned Business – Metropolitan Centre Zone and provides for the establishment of the Drury East train station and associated Park-and-Ride and transport interchange. A public plaza is provided for that will integrate the train station with the centre and will provide a high-quality pedestrian experience.

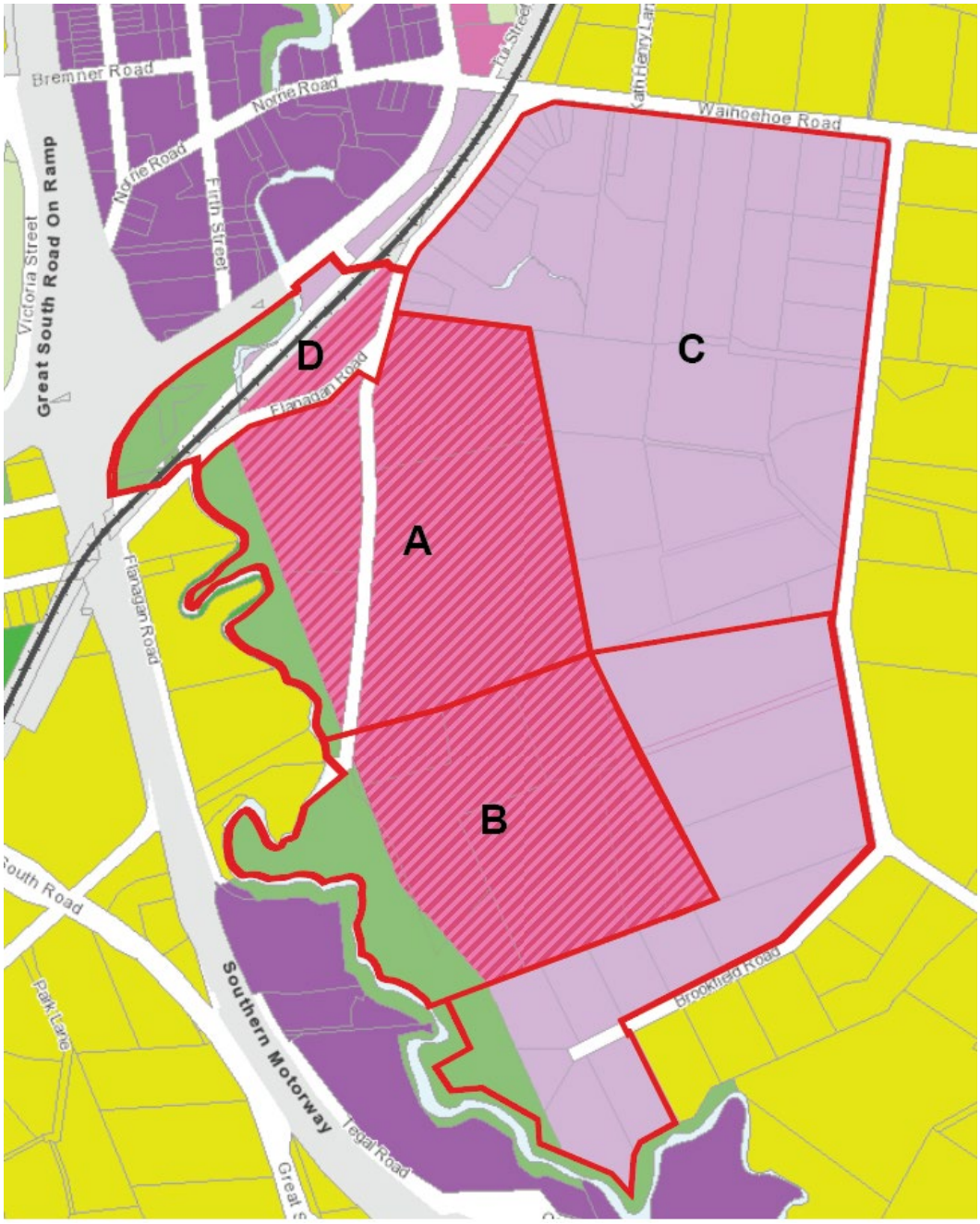

Figure 7 - Proposed Zoning/ Sub-precinct Areas

Where relevant to this urban design assessment, specific objectives, policies and methods applicable to each sub-precinct will be addressed in Section 6 of this report.

6.0 ASSESSMENT

6.1 ASSESSMENT METHODOLOGY

This section assesses the proposed Plan Change provisions under the desired urban design themes referred to in Section 4.6 for development within the Structure Plan area, where relevant. These design themes are supported by a number of 'sub-themes', which set out the expected urban design outcomes for development within the Structure Plan area.

Urbanisation of the site along with a general strategy featuring a "main" centre surrounded by predominantly residential uses is not considered in any depth as part of this urban design assessment. The existing Future Urban Zone and adopted Structure Plan was subject to extensive analysis and public consultation. As such, the focus of the assessment will be on how best to achieve the strategic intent of the Structure Plan as it relates to urban design within the regulatory framework established by the RMA and AUP.

6.2 THEME 1: NEIGHBOURHOODS THAT VARY IN DENSITY AND MIX OF USES ACCORDING TO THEIR LOCATIONAL ATTRIBUTES

6.2.1 Sub-theme 1.1: Provide uses and densities that are appropriate to their location and role within each neighbourhood

At a neighbourhood level, the discipline of urban design considers the optimal spatial arrangement of land uses relative to each other that results in the most efficient use of land, supports community and commercial centres, and maximises use of public transport networks. The Plan Change has proposed three different zonings in various locations across the site – Business - Metropolitan Centre, Business - Mixed-Use and Open Space - Informal Recreation, which I consider individually below.

Metropolitan Centre

The Structure Plan establishes the principle of a "main centre" over the Site. From an urban design perspective, the use of a Metropolitan Centre zoning across the area indicated on the Plan Change Map is appropriate on a number of grounds, including:

- The site is at the centre of a large area of land signalled for future urban development and is strategically located in terms of access to the Southern Motorway and NIMT. The site is also located around an existing nodal point of key roads to the surrounding future urban areas in the east, south and west (e.g. Waihoehoe, Fitzgerald and Great South roads).
- Future transport infrastructure (e.g. Drury Central Rail station) has the potential to transform the area into a key public transport interchange

serving the wider southern Structure Plan area and support further intensification of residential, commercial and civic uses. The majority of the land zoned Metropolitan Centre is located within an approximate 10-minute walk (800m) from the proposed Drury Central Rail Station and is therefore well suited to a potential TOD style development.[3]

- The majority of areas zoned Future Urban in the southern Structure Plan areas are located within approximately 10 minutes by bike (2.4km). Provided suitable cycling infrastructure is provided with roading upgrades, the Centre has the potential to service a wide catchment of people and be accessed principally via sustainable transport modes.
- The Metropolitan Centre zoning provides for the highest intensity of uses under the AUP outside of the City Centre and can be provide more convenient access to goods and services associated with Metropolitan Centres for the wider Franklin area than currently is available. This could have additional benefits in reducing the need to travel to Metropolitan Centres further afield such as Manukau and help address associated effects such as traffic congestion on the Southern Motorway.
- The Metropolitan Centre zoning enables taller buildings of up to 72m in height which will differentiate Drury as a distinct and identifiable node of built form amongst the broader swathe of medium-rise and low-rise mixed-use and residential zonings envisaged within the Structure Plan. These building heights can also provide a point of differentiation from adjacent industrial zones which enable buildings up to 20m in height and contribute to the legibility of urban Auckland.

Mixed-Use

A Mixed-use zone is proposed across the majority of the site, principally to the east and south of the Metropolitan Centre zone (refer to Figure 6). This contrasts with the Structure Plan but is consistent with the intent of the Masterplan as well as the zone description contained within the AUP:

> *"The Business – Mixed Use Zone is typically located around centres and along corridors served by public transport. It acts as a transition area, in terms of scale and activity, between residential areas and the … Business – Metropolitan Centre Zone …"*

[3] The distance people will walk is influenced by numerous factors, particularly how inviting the journey is and what the alternatives are. It also varies based on factors such as health and the weather. 800m is regarded as acceptable average walking distance to access rapid public transport services, although there is evidence that people are willing to accept longer walks depending on speed and frequency of services.

From an urban design perspective, I consider that a Mixed-use zoning is more appropriate than alternative residential zonings such as the Terraced Housing & Apartment Building ("THAB") zone for the following reasons:

- Typical residential densities obtainable through the Mixed-use zone provisions are considerably higher than that obtainable under the THAB zone provisions due to more flexible standards around building coverage, setbacks, private open space, and Height-in-relation-to-boundary. This is consistent with the Structure Plan aspirations seeking to maximise density in proximity to the FTN, rail services and centres as well as RPS objectives of a quality, compact urban form.
- The Mixed-use zone's activity emphasis on high density housing and smaller scale commercial uses will enable more street level activation and vitality throughout the day promoting safer, more amenable and inviting routes through to the Centre and public transport services.
- The Mixed-use zone, as with the centre zones and most large-scale development within the Terraced Housing and Apartment Buildings zone, requires resource consent to be obtained as a restricted discretionary activity for new buildings. This is to ensure that built form outcomes achieve a suitable quality. Although 'urban design' is not mentioned, many of the zone policy outcomes are plainly urban design-related.
- The proposed zoning provides flexibility for the expansion of commercial activities outside of the Metropolitan Centre should demand arise.
- The proposed zoning also affords opportunities for smaller scale commercial uses to establish around the periphery of the Site to support the immediate needs of surrounding areas such as the Fulton Hogan and Oyster Capital site which have been earmarked for solely residential zonings.

Informal Recreation

8.5ha of land adjacent to the Hingaia Stream is proposed to be set aside for Open Space. There are a number of challenges to potential urban development within this area including the presence of two transmission lines, proximity to the Southern Motorway, the 1 in 100-year flood plain and steep topography adjacent to the stream. The proposed zoning will help to provide a buffer between development and the Hingaia Stream and provides the opportunity to link into existing open space zones and future esplanade reserves on the eastern banks of the Hingaia Stream extending down to Drury South. The retention of this land in an open space zoning also provides for the opportunity to provide a tangible element linking back to the Site's rural character following the build out of the Site.

Summary

On the basis of the above, I consider that the proposed zones for the site are appropriate for their location and will promote positive built form and urban design effects across the Site.

6.2.2 Sub-theme 1.2: Promote high-intensity residential, retail and employment uses, and community services, around new centres and public transport corridors

In addition to the provision of a Metropolitan Centre zoning, the Plan Change seeks to introduce Sub-precinct specific provisions that promotes higher-intensity uses and building heights. The Precinct provisions provide a coherent height strategy in response to the locational attributes of the site. This strategy can be summarised as:

- Within Sub-precinct A and D the standard 72m height limit of the Metropolitan zone is retained reflecting its location in immediate proximity to the proposed rail station and its prominent visual position within the wider catchment.[4]
- Within Sub-precinct B a 40.5m height limit within the Metropolitan Centre is proposed in recognition of the distance from the proposed rail station (500m – 1km) and transition towards lower intensity industrial and residential uses neighbouring the Site;
- Within Sub-precinct C an additional height limit of 25m over the underlying Mixed-use zone is proposed in recognition of the Site's proximity to the proposed rail station and FTN corridor along Waihoehoe Road.
- The remainder of the site retains the existing AUP provisions related to the Mixed-use zone of an 18m building height limit of which 16m is occupiable and provides a transition between Sub-precinct B and neighbouring sites.

In urban design terms, this height strategy encourages a higher intensity of use around the centre and near public transport and has wider benefits of contributing to the creation of an identifiable vertical node around the rail station, assisting with the legibility of the wider urban area. In addition, the strategy contributes to a quality compact urban form, including by way of a high-quality built environment, a more efficient use of the land and infrastructure including public transport and open space.

[4] The 72.5m height limit along the western boundary of the proposed Metropolitan Centre zone would also be impacted by height-in-relation-to-boundary controls for sites adjoining open space zones. The effect of this would be that the 72.5m height limit is not achievable within 56m of the proposed open space zones (ignoring the effects of contours).

6.2.3 Sub-theme 1.4: Promote higher intensity of uses along the frequent transit networks (FTN) routes in order to respond to public transport provision

As set out in Sections 6.2.1 and 6.2.2 above, the Plan Change proposes to introduce a Mixed-use zone with al height variation control along a proposed FTN route(s) along Waihoehoe Road as indicated within the Structure Plan.

6.3 THEME 2: NEIGHBOURHOODS WITH MANY SAFE CHOICES OF MOVEMENT WITH GOOD ACCESS TO SERVICES AND AMENITY

6.3.1 Create safe, attractive, and accessible rail station settings

Achieving this outcome will principally be the role of government authorities such as Auckland Transport and Kiwirail. However, it has been acknowledged within the Masterplan and the Precinct provisions that delivery and use of the proposed Drury Central Rail Station will be critical in creating a vibrant and sustainable Drury Centre.

The key measures the Plan Change proposes to ensure a safe, attractive and accessible rail station relates to the proposed 'Station Plaza' which in turn connects with the 'main street', the Site's key retail street which moves from north/south through the proposed Metropolitan Centre zone, and a new east/ west collector road linking to the wider Structure Plan area (refer to Figure 8 overleaf). The Precinct provisions ensure Council will retain discretion over the design and development of parcels within the Site adjacent to the rail station through the resource consent process. In addition, of particular relevance is assessment criteria I1.7.2(2)(e) which states:

> *(e) Whether Station Plaza is designed as a civic open space which will act as a major entrance way to Drury Centre, integrating the train station with the Drury Centre*

Overall, I believe the Plan Change provides sufficient direction to both Council and future applicants to ensure the creation of a safe, attractive and accessible Drury Central Rail Station.

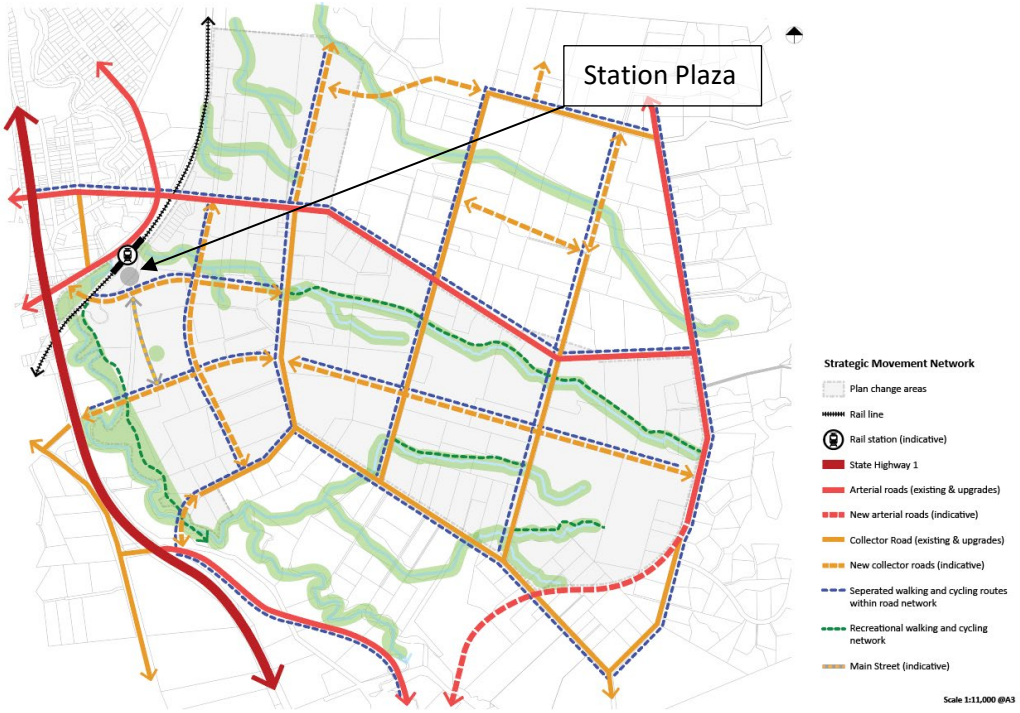

Figure 8 - Drury East Movement Network (indicative)

6.3.2 Design development along frequent transit network (FTN) routes that ensures they efficiently serve their catchments while promoting safety, amenity and pedestrian/ cycle access

As set out in Section 6.2 above, the Plan Change provisions seek to maximise density of both residential and commercial uses along the FTN. Safety and amenity is supported both through the promotion of a mix of uses throughout the Site, facilitating use throughout the day, and through Precinct specific provisions which promote a positive built form addressing the street edge. Within the provisions, Council retains discretion for all new buildings across the Precinct, which includes the following matters:

For Sub-precincts A, B and D, provision I1.7.2(3) states:

> *(a) The design and appearance of buildings and development as it relates to all the matters set out in H9.9.8.1(2)(a)-(i) and the future amenity values of Drury*

For Sub-precinct C, provision I1.7.2(4):

> *(a) The design and layout of buildings and development insofar as it affects the existing and future residential amenity values and the amenity values of public streets and open spaces*

The Precinct also includes a number of specific policies which address issues around amenity and safety of streets in general, not just limited to the FTN. Policies 10 through 13 are of particular relevance:

(10) Ensure that Sub-Precinct A is the compact, pedestrian orientated retail core of the precinct with a comprehensively planned mix of large and small-scale retail activities integrated with other commercial and office activities, leisure, tourist, cultural, residential, community and civic services with streets that are open to the sky.

(11) Ensure that development in Sub-Precinct A positively addresses and engage with the street by:

a) Maximising street activation, building continuity along the frontage, pedestrian amenity and safety and visual quality on the Key Retail Street.

b) Achieving a reasonable level of street activation, building continuity along the frontage, pedestrian amenity and safety and visual quality on other local roads in Sub-Precinct A.

(12) Recognise that residential at ground floor may be appropriate on some local roads in Sub-Precinct A away from the Key Retail Street, including where residential adjoins public open space.

(13) Require large format retail activities in Sub-Precinct B to provide an attractive frontage to streets, public places and adjoining sites, having regard to the functional requirements of that activity.

The policy framework proposed for the Precinct sets a clear expectation that development will interface positively with the street. This is a key requirement to facilitating street environments that are safe, varied, interesting and inviting for a wide range of users. These policies will support the provision of safe routes to and from key public transport routes and nodes throughout the Precinct which in turn will help to promote the development of an urban environment where travel via sustainable modes is encouraged.

6.3.3 Provide a well-connected street network which accommodates all forms of movement, with streets that are designed to reflect their function within the hierarchy

Policies 6 and 7 of the Precinct give effect to this design outcome sought within the NDS. This then flows through the Plan Change in terms of activity status and relevant assessment criteria.

(6) Ensure that development provides a local road network that achieves a highly connected street layout and integrates with the collector road network within the precinct, and the surrounding transport network.

(7) Require streets to be attractively designed to appropriately provide for all modes of transport by:

a) providing a high standard of amenity for pedestrians in areas where high volumes of pedestrians are expected; and

b) providing for safe separated access for cyclists on arterial and collector roads that link key destinations; and

c) providing a level of landscaping that is appropriate for the function of the street;

d) providing for the safe and efficient movement of vehicles.

The ITA prepared by Stantec in support of the Plan Changes sets outs cross-sections for various street typologies across the Site and wider area and are included within Appendix 1 of the Plan Change. On the major vehicular routes through and around the Site, provision has been made for segregated cycle facilities with physical buffers. Footpath widths vary depending on location and function of the road.

Resource consent for the development of public or private roads within the Site is a restricted discretionary activity within the Precinct. Matters over which Council will retain its discretion include:

(a) the location and design of the collector streets, local streets and connections with neighbouring sites to achieve an integrated street network; and
(b) Provision of cycling and pedestrian networks

In addition, provision I1.7.2 of the Plan Change proposes a number of assessment criteria to provide further guidance to both Council and an applicant as to how the street network should be established across the site:

Location of roads

(a) The extent to which the collector road network achieves a safe and highly connected street layout that integrates with the surrounding transport network, having regard to the following functional matters:

(i) A collector road (Drury Boulevard) provides access into the precinct from Waihoehoe Road;

(ii) Collector roads provide access into the precinct from Brookfield Road and two connections on Fitzgerald Road;

(iii) Collector Roads should generally be located at approximately 400m intervals;

(iv) The presence of natural features, natural hazards or contours and how this impacts the placement of roads;

(v) The need to achieve an efficient block structure and layout within the precinct suitable to the proposed activities; and

(vi) The constructability of roads and the ability for it to be delivered by a single landowner.

(b) Whether a high quality and integrated network of local roads is provided within the precinct that provides a good degree of accessibility and supports a walkable street network.

(c) Whether subdivision and development provides for collector roads and local roads to the site boundaries to coordinate with neighbouring sites and support the integrated completion of the network within the precinct over time;

Design of roads

(d) Whether the design of collector and local roads are generally in accordance with the road cross sections provided in IX.11 Drury Centre: Appendix 1;

(e) Whether the layout of the street network provides a good degree of accessibility and support a walkable street network. As a general principle, the length of a block should be no greater than 180m and the perimeter of the block should be no greater than 500m;

(f) Whether the street network provides safe and legible pedestrian and cycle connections to the train station.

Collector Roads and are proposed to be spaced at around 400m intervals through the Site. This is consistent with the spacing of collector roads in early tram suburbs such as Mt Eden and Balmoral and are regarded as providing good urban environments which support walking. The cross-sections of collector roads have also been designed to support future bus routes meaning access to local bus services can provided within a 5-minute walking distance. A more fined grained urban block structure conducive to walking is encouraged through assessment criteria (e) above which sets out approximate maximum block dimensions. Although there is no optimal dimension for block sizes, a rule of thumb is that smaller block sizes are more conducive to walking as it enables shorter journeys (by foot) between points 'A' and 'B'. The block sizes promoted within the Plan Change are comparable to block sizes seen in Newmarket (around Teed/ Kent streets) as well as parts of emerging precincts within Hobsonville.

Overall, I am satisfied that the Plan Change provisions ensure that a well-connected street network that accommodates all forms of movement will be obtained for Drury consistent with sound urban design practice.

6.3.4 Provide safe, universally accessible, and well-connected pedestrian and cycle routes to all amenity and services destinations

On main vehicular routes through and around the Site (arterials and collectors) provision is made for segregated cycle lanes with physical buffers in acknowledgement of the higher traffic flows anticipated along these routes. These

will be progressively developed as development of the Site is undertaken, with Council retaining discretion as to their exact form and location.

In terms of the provisions of safe and well-connected pedestrian routes, the Plan Change supports this through the proposed Metropolitan Centre and Mixed-use zonings. These zonings will enable the development of a range of smaller scale retail and service activities across the Site which will play an essential part in the success of Drury. Such uses will contribute to the vibrancy of the Precinct through the promotion of multiple reasons to walk within and from places of employment or residence and also contribute to the convenience and amenity for residents and workers. This will help to support a level of activity and use throughout the day to provide inviting environments and natural surveillance of streets and space across the Precinct.

6.3.5 Provide arterials and transport corridors which reconcile movement functionality with the quality of place

The principle area that the Plan Change can contribute towards achieving this outcome relates to built-form and activities enabled along arterials and transport corridor.

The future streetscape of Waihoehoe Road and Fitzgerald Roads (as the key arterial/ transport corridors past the site) will be formed, in part, by the bulk, scale, height, placement, and visual appearance of buildings relative to the street. These factors are governed by zone development standards, such as maximum building coverage, building height, front yard depth, and also by assessment criteria.

The Mixed-use zone and Sub-precinct C provisions enable a continuous built-edge along arterial roads and transport corridors by not requiring any minimum side yards or front yards. This is an important urban design element helping to define the public realm and provides the opportunity to create a distinctive urban identity within Drury and a more memorable sense of place. The opportunity to develop onto the street edge also enables a direct interface between the building (window) and footpath which provides a strong visual connection between passing pedestrians and the goods and/ or activities inside. This contributes to the vitality and attraction of these key routes in and around the Site.

Further additional building height sought within Sub-precinct C will also support better spatial enclosure of key arterials and transport corridors. Waihoehoe Road is earmarked to be widened to 32m while Fitzgerald Road is proposed to be approximately 23.5m in width. The proposed 25m height limit within Sub-precinct C could therefore enable street enclosure ratios of between 1: 0.8-1.3. A building height to street width ratio of 1:1 is generally recognised to provide an optimum level

of enclosure at a human scale.[5] This is important, as streets with width ratio's approaching or exceeding 1:1 tend to attract more pedestrian activity, and more small-scale, innovative, and experimental economic uses which cater to pedestrians.

In terms of activities the Mixed-use zone provides a wide range of potential activities that can help activate these key corridors and can contribute to the quality of streets. The focus in Sub-precinct C of smaller, more intensive commercial uses (against, for example, warehousing) will also contribute to a more amenable, pedestrian focused street as envisaged by the Structure Plan.

6.4 THEME 3: NEIGHBOURHOODS WITH MANY CHOICES OF USE AND ACTIVITY THAT REFLECT THE NEEDS OF THE COMMUNITY AND THE SUB-REGION

6.4.1 Provide communities with a wide range of choices and experiences

The proposed Plan Change zonings provide the widest range of choices and experiences possible within the AUP zoning framework. As indicated by the Structure Plan, Auckland Council envisages the majority of the future urban zoned land to be set aside solely for residential zoning (THAB, MHU and MHS). In practice, these are exclusionary zones where non-residential activities are difficult to establish and different experiences afforded to communities would be limited.

6.4.2 Co-locate areas of higher density residential where there are a concentration of services, employment and public transport options

As I have discussed in Sections 6.2 and 6.3, the Metropolitan Centre and Mixed-Use zones in combination with proposed height variation controls would enable a greater dwelling yield than standalone residential zones on the land within 1.2km of the proposed train station and 400m from proposed frequent transit routes along Waihoehoe Road. In light of the increased flexibility and robustness of these zonings in supporting non-residential uses, this will help to promote an urban environment where concentrations of residential dwellings are located in the immediate proximity of services, amenities, employment opportunities and public transport. Therefore, in my opinion, the proposed zoning and Precinct specific development standards are consistent with good urban design practice and the aspirations sought by Auckland Council.

6.4.3 Provide for a range of housing choices and respond to housing needs

Dwellings, Integrated residential development, Supported residential care, and Visitor accommodation and Boarding houses are all provided for as permitted activities within both the Business-Metropolitan Centre and Mixed-use zones. The

[5] https://at.govt.nz/media/1980686/urban-street-and-road-design-guide.pdf

predominant typology envisaged within these zones is apartments, although a wider range of typologies are possible under the zone provisions. This contrasts with majority of the Structure Plan area which indicates detached or semi-detached typologies will dominate the area. When viewed within the context of the entire Structure Plan area, the Plan Change will support a variety of housing choices for future residents.

The increased flexibility for housing provision enabled by the existing Mixed-use zone provisions will be maintained on the balance of the Site outside of the Sub-precincts. In addition, the Precinct Provisions include additional development standards for dwellings within Sub-precinct C to ensure a more amenable, higher quality residential offer than the existing Mixed-use zone provisions enable in light of the increase height being sought. These include a requirement to conform within Rule H6.6.14 Daylight and a new clause related to I1.6.5 related to outdoor living space:

> *(1) Buildings which include dwellings, supported residential care and boarding houses must have an outdoor living space in the form of a balcony, patio or roof terrace that:*
>
> *(a) is at least 5m² for studio and one-bedroom dwellings and has a minimum dimension of 1.8m; or*
>
> *(b) is at least 8m² for two or more bedroom dwellings and has a minimum dimension of 1.8m; and*
>
> *(c) is directly accessible from the dwelling, supported residential care unit or boarding house; and*
>
> *(d) except that, a balcony or roof terrace is not required where the net internal floor area of a dwelling is at least 35m² for a studio and 50m² for a dwelling with one or more bedrooms.*

The proposed outdoor living space provisions provides flexibility for future residential development to respond to the needs of residents without undermining some of the key characteristics and benefits afforded by the Mixed-use zone such as a continuous street edge and ground level activation. In addition to the above, assessment criteria I1.7.2(4) for new dwellings are also particularly relevant:

> *(a) Whether dwellings:*
>
> *(i) orientate and locate windows to optimise privacy and encourage natural cross ventilation within the dwelling;*
>
> *(ii) optimise sunlight access based on orientation, function, window design and location, and depth of the dwelling floor space;*
>
> *(iii) provide secure and conveniently accessible storage for the number and type of occupants the dwelling is designed to accommodate;*

(iv) provide the necessary waste collection and recycling facilities in locations conveniently accessible and screens from streets and public open spaces.

6.4.4 Ensure compatibility between uses

The Business-Mixed use zone provides for a transition in scale and intensity of use between the Metropolitan Centre zoning and adjacent residential zonings proposed on the Fulton Hogan and Oyster Capital sites. For Sub-precinct C this is achieved through precinct specific changes to activity statuses and development standards.

The Business-Mixed Use zone affords permitted activity status to Drive-through restaurants, Department stores, Trade suppliers, Industrial laboratories, Light manufacturing and servicing, Repair and maintenance services, and Warehousing and storage. Service stations are restricted discretionary activities. These uses are typically associated with increased effects on residential amenity such as noise. The Plan Change Activity Table within Sub-precinct C specifies all these activities have non-complying status. The exception to this is Industrial laboratories and Light manufacturing and servicing which are provided for as discretionary activities and for service stations with a frontage onto an arterial road which is provided for as a restricted-discretionary activity.

In terms of development standards, Sub-precinct C includes provision for additional height up to 25m providing a more logical transition between the 72.5m height limit and the neighbouring THAB zones (16m permitted height limit) north of Waihoehoe Road and east of Fitzgerald Road. Additionally, Rule H13.6.3.1 would also apply to sites within Sub-precinct C. This would require a 6m building setback above 18m in height affording a further transition in scale and intensity of use to surrounding residential zonings proposed.

These changes in activity status are consistent, in my opinion, with a key intent of the Sub-precinct C, to create a high-quality mixed-use environment with a focus on residential uses. Should such activities be proposed, discretionary and non-complying activity statuses would enable a comprehensive assessment of their potential effects on future residential activities. This would include assessment against the Precinct objectives and policies. Read as a whole, these objectives and policies set out that the planned future environment within Sub-precinct C is one that has a residential focus with good levels of on-site amenity provided for. Proposed policy 14 is particularly relevant:

> *'Enable residential activities at high densities in Sub-Precinct C that provide quality on-site amenity for residents, including privacy and outlook, outdoor living space and access to daylight.'*

The southern half of the Site retains the standard Mixed-use provisions in terms of both activities and development standards. The urban design rationale for retaining

the standard Mixed-use zone provisions in this location is the interface with Light Industry zoned sites to the south/ south-east and the Structure Plan's indication for a Mixed-Housing Suburban zone south of Brookfield Road. This is a common zoning strategy evidence across Auckland.

6.4.5 Ensure retail contributes to an active public realm and helps in enabling other community and employment activities

The principle means for ensuring retail contributes to an active public realm within the majority of the Plan Change area is through activity statuses and development standards. This includes the policy focus within Sub-precincts A, C and D towards smaller scale retail activities which are typically more suited to a pedestrian scaled environment (e.g. a café as opposed to warehousing). These retail activities are a vital part of the mix of uses required for urban places to succeed, as they contribute to the vibrancy and a place. These types of activities provide an essential service in supporting other uses such as offices and also promote multiple reasons to walk around a place. This contributes to the convenience and amenity for residents and workers and helps to make an area more attractive for potential investment for other activities.

Based on the above and the outcomes set out within the NDS, it is considered that the combination of the Metropolitan Centre and Mixed-use zones is appropriate from an urban design perspective. The zoning framework and development standards applicable to higher density residential zones such as the THAB zone are not conducive to the establishment of small-scale retail activities.

6.4.6 Design neighbourhood parks which are fit for purpose and safe, in the appropriate locations

No specific designs for new parks form part of the Plan Change. However, in addition to the large area proposed to be zoned as Open Space – Informal recreation, the Plan Change identifies two important areas of open space to support the Masterplan vision on Precinct Plan 2. These are Homestead Park and the Station Plaza. These two spaces are linked by the proposed "main street' which is intended to form the focus of retail and commercial activity within the Site. Guidance as to how these spaces are intended to be developed is provided by assessment criteria identified under provision I1.7.2(2):

a. *Whether Homestead Park and Station Plaza are provided in locations generally consistent with their indicative locations shown on IX.10.X Drury Centre Precinct Plan 2;*

b. *Encourage the existing Homestead building to be retained, repurposed and incorporated into a high amenity open space for informal recreation, which forms a focal point of the Drury Centre;*

c. *Whether existing indigenous trees are retained within Homestead Park where possible.*

d. *Whether Station Plaza is designed as a civic open space which will act as a major entrance way to Drury Centre, integrating the train station with the Drury Centre;*

e. *Whether any buildings or kiosks which locate in the Station Plaza are designed to ensure they do not compromise or dominate the use of the space for public recreational use.*

f. *Whether the subdivision or development provides for the recreation and amenity needs of residents by providing suitably sized open spaces that are prominent and accessible to pedestrians within a neighbourhood;*

g. *Encourage the location and design of open spaces to integrate with surrounding natural features including the network of permanent and intermittent streams.*

In addition, for new buildings within Sub-precincts A, B and D, provision I1.7.2(3): provides an assessment criterion stating:

(b) *Whether the height and form of buildings provides for four hours of sunlight access to over 75% of the net site area of Station Plaza and Homestead Park between the hours of 10am-4pm during the Equinox (22 September). Demonstrating this may require the height of buildings to be reduced below that allowed by Rule IX6.1 Building Height.*

The above criterion would be read cumulatively as development is brought forward around the location of Homestead Park and Station Plaza when these details are finalised. Without yet knowing the exact configuration, location and size of these key open spaces, I believe the above criterion provides a well-balanced guide to both developers and Council as to the quality of these spaces (in part) and likely development potential in their vicinity. If these key parks are developed and zoned space prior to the full build-out of the Site, the existing height-in-relation-to-boundary provisions of the Metropolitan Zone would also apply.

These criteria, along with the discretion reserved to Council for the development of Open Spaces over 1000m^2 in size within the Precinct and existing subdivision requirement of the AUP should ensure the development of safe, fit for purpose neighbourhood parks in appropriate locations to support the future residential and commercial population of the Site.

6.5 THEME 4: NEIGHBOURHOODS THAT CELEBRATE THEIR UNIQUE IDENTITY AND ARE ATTRACTIVE, SAFE AND EASILY UNDERSTOOD

6.5.1 Design legible, safe, inclusive and accessible environments for all ages and abilities that offer privacy and security

These elements are generally imbedded into proposed Precinct policies (4), (6), (7), (10), (11) and (13). Many of the elements can then be delivered via individual resource consents that will be subject to the discretion of Auckland Council.

6.5.2 Display a strong local identity and appropriate visual character while emphasising visual and function character differences between nodes and communities

The Precinct uses a range of provisions to enable a strong local identity and appropriate visual character whilst emphasising differences between nodes and communities. Read as a whole, the Precinct provisions envisage a strong 'urban' visual character. The primary means for how this will be achieved is through the use of the Metropolitan Centre zoning and the associated underlying height limit of 72m. This will enable the development of an identifiable vertical node around a key transportation hub within a landscape setting. This is consistent with the provisions and physical/ landscape settings of comparable existing Metropolitan Centres such as Westgate and Botany.

By enabling buildings up to this height, the Plan Change facilitates the development of a compact and legible urban form. In addition, as it is still a largely greenfield area, with existing urban uses largely confined to industrial activities there will be less sensitivity to taller buildings than in locations already developed and occupied for residential use. The distance of approximately 400m between an established residential zone boundary (off Cameron Place) and the closest point where a 72m tall building could eventuate on site is substantial and, in my view, sufficient to mitigate bulk, scale and form effects from taller buildings and ensure that development of the site will not detract from the character of established neighbourhoods. In addition, the Metropolitan Centre zone development standards contain a number of provisions which control the potential visual impacts from building height (e.g. bulk and dominance) and these remain applicable to the site.

Similarly to the above, allowing additional height in Sub-precinct C immediately adjacent to the Metropolitan Centre, rail station and FTN makes good urban design sense. The proposed 25m height limit responds to the locational characteristics of the Sub-precinct and also creates a logical transition down in building heights from the Metropolitan Centre (72m) to proposed THAB zonings north of Waihoehoe Road and east of Fitzgerald Road (16m), whilst reinforcing the Drury centre as the key transport, economic and social node around of the Southern Structure Plan area.

The proposed building heights within the Precinct also provides the opportunity for a greater variety of building heights across the Site and a more interesting skyline when contrasted against more monotonous residential development enabled through the MHU or MHS zones and signalled for much of the Structure Plan area.

6.5.3 Protect historic heritage and existing character

As set out in Section 3 of this report, the existing character of the Site is predominantly rural. Significant changes to this character have already been signalled by the Future Urban zoning and Structure Plan. The proposed open space zoning adjacent to the Hingaia Stream does afford some opportunity to acknowledge and retain some of the existing rural attributes of the site as the remainder of the site is developed.

With regard to built historic heritage, separate historic heritage assessments have been prepared for the wider Plan Change area (Clough & Associates) and the Flanagan Homestead at 120 Flanagan Road (Matthews & Matthews). Although not scheduled, the Matthews & Matthews report concludes that the Flanagan Homestead has some heritage value in the Drury area. The Masterplan also identified the potential for a major public open space around the refurbished Homestead as a major anchor linked to the proposed rail station via the main street.

In addition to the objectives, policies and methods controlling subdivision within Chapter E38 of the AUP, development of open spaces greater than 1000m^2 requires resource consent as a restricted discretionary activity within the Precinct provisions. Matters of discretion include the location and design of the indicative open spaces shown in Precinct Plan 2 which identifies Homestead Park. This is further supported by assessment criteria identified under provision I1.7.2(2):

> *h. Whether Homestead Park and Station Plaza are provided in locations generally consistent with their indicative locations shown on IX.10.X Drury Centre Precinct Plan 2;*
>
> *i. Encourage the existing Homestead building to be retained, repurposed and incorporated into a high amenity open space for informal recreation, which forms a focal point of the Drury Centre;*
>
> *j. Whether existing indigenous trees are retained within Homestead Park where possible.*

In my opinion, these provisions provide appropriate discretion to Council and guidance for future sub-division and development of the Site to ensure existing character and heritage elements of the site as it exists today can be protected whilst acknowledging the significant changes envisaged for the site through the existing Future Urban zone and proposed Metropolitan/ Mixed-Use zones.

6.6 THEME 5: NEIGHBOURHOODS THAT PROTECT AND ENHANCE THE NATURAL ENVIRONMENT WHILE ENABLING URBANISATION

In addition to the application of regional rules covering matters around stormwater, earthworks etc., the Precinct provisions do provide for additional controls that enhance the natural environment. As set out in Section 3 of this report, the Site is a highly modified urban environment characterised by pasture, exotic vegetation, formed drainage channels and exposed waterways. The Precinct promotes the protection and enhancement of riparian margins throughout the Site. Development standard I1.6.3 is particularly relevant:

> *(1) Riparian margins of permanent or intermittent streams shown on Precinct Plan 4 must be planted either side to a minimum width of 10m measured from the bank of the stream. This rule shall not apply to road crossings over streams.*
> *(2) Any planting required, will be implemented in accordance with a council approved landscape plan and must be use eco-sourced native vegetation, be consistent with local biodiversity and planted at a density of 10,000 plants per hectare.*

Street cross sections contained within Appendix 1 also contain provision for street tree planting and raingardens to help mitigate adverse effects associated with urbanisation, such as stormwater generation/ pollution, and increased ambient temperatures. Precinct provisions such as I1.7.2(2) also set an expectation around the development and design of new open spaces within the Site to support prominent landscape features such as permanent streams:

> *(f) Whether the subdivision or development provides for the recreation and amenity needs of residents by providing suitably sized open spaces that are prominent and accessible to pedestrians within a neighbourhood;*
>
> *(g) Encourage the location and design of open spaces to integrate with surrounding natural features including the network of permanent and intermittent streams.*

7.0 CONCLUSION

In conclusion, the Site offers the opportunity for development of a new centre at an intensity and scale that capitalises on its proximity to planned public transport infrastructure and expansive areas of greenfield land previously identified as suitable for future urban development through the Auckland Unitary Plan process.

In my opinion, the proposed zonings and precinct-specific provisions set out within the Plan Change are well designed to achieve the Masterplan vision and are consistent with the strategic policy direction (as it relates to urban design) of both Central Government and Auckland Council.

Tha Plan Change provisions, as drafted, will enable Council to assess resource consent applications for development of the site with a sufficient level of discretion reserved to it to ensure that a vibrant, compact, and mixed-use centre is achieved and is supported by high-quality, well-connected public open spaces and streets. Overall, in my opinion, the Plan Change provisions are considered appropriate from an urban design perspective.

AUTHOR:



Cam Wallace

Associate (Urban Design)
Date: 12/12/2019

REVIEWED BY:



Matt Riley

Senior Associate (Urban Design)
Date: 12/12/2019

Appendix 1 - Drury Metropolitan Centre 2048 Masterplan Report

Drury Metropolitan Centre 2048 Master Plan Report

A New Town for Auckland

Kiwi Property

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1.0 Introduction

Overview

The Drury Metropolitan Centre master plan has been developed on behalf of Kiwi Property Group Ltd (Kiwi), who has a significant and contiguous landholding that encompasses the majority of the area designated as a future major centre within the Drury Future Urban Zone.

The master plan blends a unique location and pastoral setting with plans for a complete and moderately-scaled new metropolitan centre for Drury and the Opaheke area. With regionally significant landmarks and features such as the Hunua Ranges, Southern Motorway and main railway line, as well as locally significant features such as Hingaia Creek, the site is well-situated to play a central role in defining a new heart and centre for the future communities within the Future Urban Zone. Sited strategically at the confluence of motorway, arterial roads and railway, the site is an ideal location for a living and working metropolitan centre.

As such, the vision for the centre is for a sustainable transit-orientated development that capitalizes on and integrates with its location.

This report, for the purposes of a plan change submission, is an overview document that describes the vision, principles, aspirations, and character of the master plan, including design decisions and assumptions, for a new metropolitan centre at Drury.

It outlines urban design principles, describes land uses, transportation and pedestrian corridors, the locations for parks and plazas, the distribution of retail, commercial, community, and residential uses, and defines the infrastructure necessary to support the community.

This report also outlines the relationships between buildings, public realm character, architectural massing, and sense of place are described both graphically and in narrative form to enable a clear understanding of the design intent.

It is intended that this report will be used, in conjunction with any built form and public realm guidelines, by land owners, governance bodies, and environmental designers to produce a consistent and cohesive development outcome for the Drury metropolitan centre.

Limitations of this Report

The master plan is a living document, as it will be reviewed, updated, and enhanced through the development process in response to market conditions, community requirements, and new development opportunities.

In this regard, this report is limited to the information available at the time of publication. And drawings that depict plot locations, land uses, street locations, and street types, the graphics contained in this report are intended to illustrate general concepts and principles or implementation alternatives. They are not intended to mandate development in exact accordance with the images shown.

Moreover, at the time of publication the design concepts has been tested and verified at a high-level to achieve a degree of comfort. Therefore, these concepts should be subject to additional modelling and testing as they progress into detailed design development stages.

Report Structure

This report is organised according to the following structure:

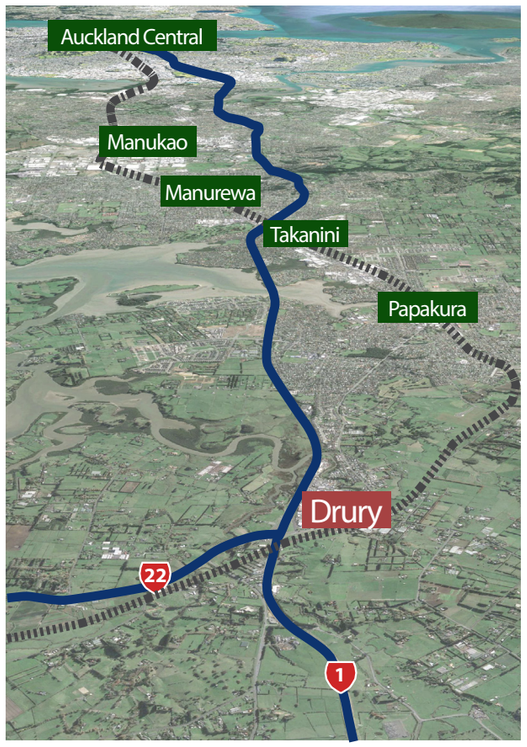
- The various master plan layers and rationale are organised into three overarching chapters: context and site analysis, master plan framework, mobility strategy, public realm, and sustainability;
- Within each of these chapters are the relevant summaries of the master plan layer as well as detailed information on specific subjects such as pedestrian access network etc., and;
- Within each master plan layer are graphics that illustrate and support the proposition.
- In regards to how this report relates to the Plan Change report, the Plan Change report generally consists of the first level (e.g. 3.0) and second level (e.g. 3.1) information only. For this master plan report, intended as an internal report for Kiwi Property, a third level (e.g. 3.1.1) has been added to document the various options, alternative design directions/decisions, and additional detailed and baseline information that could be commercially sensitive and not for public release. This information is complementary and organised according to the first and second levels.
- The relevant consultants' studies that support this master plan report are collated in a separate document called Master Plan Supporting Studies.

1.1 Executive Summary

Background

The Drury Metropolitan Centre master plan has been developed on behalf of Kiwi Property Group Ltd (Kiwi), who has a significant and contiguous landholding that encompasses the majority of the area designated as a future major centre within the Drury Future Urban Zone.

Sited generally at the center of the Future Urban Zone as well as located strategically at the confluence of motorway (SH1), arterial roads (Great South Road, Waihoehoe Road), and railway (Southern Line) corridors, the site is an ideal location for a living and working metropolitan centre.



The Site & Master Plan Area Extent

Located approximately 35km south of downtown Auckland, New Zealand, the site comprising of Kiwi's ownership is currently pastoral, has rolling topography with valleys and ridges, and has adjacency with Hingaia Creek to the west and northwest as well as Fitzgerald Stream to the northeast. The site also has a summit where an existing homestead and softscape has been established and has visual prominence from SH1.

While the primary focus of the master plan is on Kiwi's land, broader areas have been considered. Consistent with good spatial and urban design/ planning practice for centres, these broader study areas helps identify opportunities to reinforce open space and ecological connectivity, access, and land use compatibility to ensure a successful centre. These broader study areas are:

- The Plan Change Area - encompassing Kiwi's landholdings as well as the lands bound by SH1, Great South, Waihoehoe, Fitzgerald, and Brookfields roads.
- Urban Design Framework (UDF) Area - encompassing the Plan Change Area as well as a land portions north of Waihoehoe, east of Fitzgerald to Fielding Road, south of Brookfield to Fielding Road, and existing Drury Village.

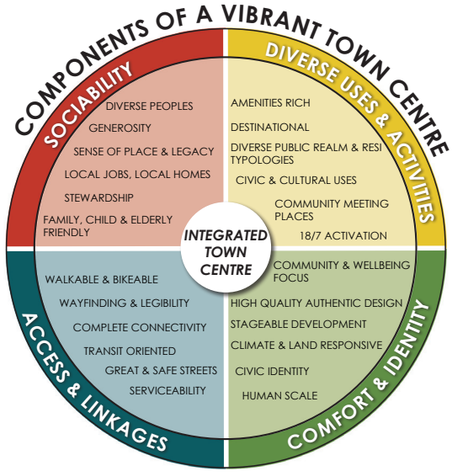
Guiding Aspirations & Objectives

Master plans are created with the consideration of starting aspirations and objectives. These guiding aspirations and objectives are:

- Aspire to become a world-class centre and recognised as NZ's best;
- A staged and scalable development over 20+ years to coincide with population growth and economic demand. And so builds in flexibility to address inevitable market changes;
- An Auckland-scaled, high quality transit-orientated development;
- Retail-focused but integrates all uses within its site and its context;
- Commercially viable and future-proofed for expansion and transport disruption;
- Attracts people to live, work and play safely, and;
- Is great from day one and has a sustainable point of difference (environmental, retail, transportation, community).

Creating Vibrant Towns

To achieve these aspirations and objectives, consideration has been given to best practice guides for components of creating vibrant towns. These components are outlined in the diagram below, and together with the aspirations and objectives generate a master plan vision.



The 2048 Vision

The vision is for a sustainable metropolitan centre TOD, master planned around a civic and mixed use Town Heart. The master plan envisions a local community hub as well as regional destination, with a significant range of retail, dining, and leisure activities that integrate with a diverse portfolio of housing and commercial spaces.

This new metropolitan centre TOD will also:

- Be developed by respecting context in its street and town square life, and being pedestrian and public transport oriented. Business and merchant vitality, and broad social interactions, are brought together in a contemporary context by creating a new sense of place and identity;
- Aspire to be an independent centre that also appeals to Auckland and Waikato markets;
- Be master developed by Kiwi with an integrated planning and development approach, in partnership with carefully chosen partners as required;
- Aspire to be a high quality urban and natural environment for residents, workers, shoppers, and visitors;
- Incorporate leading edge sustainable technologies that account for existing infrastructure and resource constraints while offering reduced operational costs;
- Engage the broader community and local government through economic development and job creation, infrastructure planning, and social responsiveness to adjacent local and regionally significant amenities;
- Be operated and managed under Kiwi Property management to provide guests and residents with the highest level of comfort and quality community service; and,
- Position Kiwi as a distinguished mixed use Master Developer.

Urban Design Principles

To ensure the built form applicability of the vision to the site, of the components that creates a vibrant town centre, a set of Urban Design Principles has been established to underpin and drive the design content of the master plan. These principles are summarized as follows:

- Ensure mixed uses and public transport supportive density, including diverse housing choices and built forms.
- Ensure a walkable place to live/work and play that also integrates civic/community and cultural needs for identity.
- Along with passive activation, ensure compelling day and evening activities that enable vibrancy, sociability, and 18 hour 7 days a week activation at key locations to create a unique food and leisure destination.
- Ensure a Drury-wide jobs and household balance to enable everyday walkability and public transport usage to lessen private vehicle trips.
- Ensure a highly connected public realm with distinct landscape settings that has a variety of public experiences and amenities.
- Ensure great streetscapes for all roads, boulevards and laneways.
- Be climate and land responsive not only for environmental sustainability but to reinforce cultural values by Te Aranga Māori Design Principles.

Development Program

The 2048 development program for the Plan Change Area consists of:

- General Retail: approximately 100,000sm total GFA is organised along a retail main street spine of the Town Heart and a Homemaker Precinct. A majority mix of mini majors, anchors, specialty retail and food and beverage (F&B) is envisaged to be located in the Town Heart while bulky goods retail are located further south in the Homemaker Precinct. All are envisaged to be sleeved with active uses (i.e. residential or fine-grain retail) where possible and desirable.
- Commercial Office: approximately 50,000sm total GFA is located predominantly within Station Plaza precinct to capitalize on the future transportation hub. Some office space is intended within the Town Heart and in the upper storeys only.
- Community Facilities: approximately 16,000sm total GFA is envisage in two facilities within the Town Heart and in close proximity to Station Plaza to capitalize on the transportation hub. One facility is envisaged on Town Square and is intended for a library, art gallery, childcare, digital hub, performing arts, council offices, and community meeting rooms. Another facility is envisage adjacent to Hingaia Creek in the northwest and is intended as a regional aquatic centre with childcare.
- Residential: approximately 3,000+ households in apartment, terraced, and mixed urban typologies. It is envisioned that each block within the Town Heart will contain a vertical mix of residential apartments over ground floor retail, while the areas east and southeast of the Town Heart will be predominantly residential.
- Medical: a potential 300+ bed regional hospital is envisaged in the area between the Town Heart and Fitzgerald Road. This hospital is anticipated to be staged over time and in concert with the urbanization stages of the broader Drury-Opaheke area.
- Hotel: a potential hotel could be located around Station Plaza to provide rooms for visitors to the region and the hospital.
- Drury Rail Station/Public Transport Hub: located on the Southern Line, this hub is envisoned to be a nexus or interchange of multiple modes of mobility that spatially integrates with the end of Main Street of the Town Heart, routes from the eastern medical precinct and residential neighbourhoods, as well as Great South Road and Drury Village beyond. A park & ride is also envisage as part of this public transport hub.
- Parks and Plazas: approximately 10ha total and with a significant portion dedicated to the Hingaia Creek for ecological restoration and amenity. The balance consists of urban plazas (Town Square, Station Plaza), urban parks (Homestead Park, Valley Park), and local residential neighbourhood parks.
- Parking: the existing topography enables a predominantly undercroft parking strategy with average two-levels within the Town Heart and Station Plaza precincts. For the Homemaker precinct, one-level undercroft parking is complemented with at-grade parking. For other residential areas, undercroft and/or basement parking is complemented with at-grade parking where topography allows and dependent on residential typology.

Staging

There are three stages proposed and generally follows a strategy of being car-orientated in the short term while being more transit-orientated and development towards Drury Rail Station in the future.

Moreover, Stage 1 is about establishing an identity and a destination; establishing Town Heart with its Homestead Park, residential and local retail, and establishing Homemakers Precinct with its regional retail. Stage 2 reinforces and builds upon Stage 1, developing towards the rail station. Stage 3 reinforces previous stages of development and fully establishes the metropolitan centre TOD.

Residential dwellings are developed concurrently within these stages and as market dictates.

Built Form

The master plan layers generates an overall urban form that is appropriate for Drury, and that is low-rise within the residential areas and mid-rise within the Town Heart and around the station. The low-rise built form within residential areas are appropriate for their residential park-like character and for which is likely to be consistent with the residential character of the broader context. The mid-rise built forms is appropriate to Town Heart and Station Plaza character precincts owing to their higher density TOD purpose and gives visual prominence and identity from SH1.

Public Realm

The public realm consists of a hierarchy of public open spaces, streets, plazas, squares, and parks that is integrated with land uses to create a rich sense of public amenity and identity. These are organized into distinct character zones: Hingaia Creek Reserve, Homestead Park, Town Square, Station Plaza, Valley Park, Southeast Park. The plan allows for residents and visitors to experience a significant park or plaza on each block, or a two minute walk in any direction. This results in a plan with strong visibility and accessibility to diverse openspace amenity and experiences at a pedestrian scale.



The 2048 Master Plan

The following list is a summary of the notable features of the 2048 Master Plan. Each of the features, and the relationship between them, are detailed in the subsequent chapters of this Report. The following numbered list corresponds to the numbered annotations in figure 1.

Within Kiwi Property lands:

1. Station Plaza
2. Valley Park
3. Main Street
4. Community/Aquatic Centre
5. Local Civic Centre
6. Town Square
7. Cinema
8. Homestead Park
9. Hingaia Creek Reserve
10. Creekside Recreational Route
11. Pocket Park
12. LFR and Bulky Goods

Within lands not under Kiwi Property ownership:

13. Fitzgerald Stream
14. Railway Station
15. Potential Medical Precinct
16. Neighbourhood Park
17. Local convenience centre

Legend

- Specialty Retail
- F&B
- Town Centre Residential/Mixed Use over Retail Ground Floor
- Office over Retail Ground Floor
- Retail General
- Hotel
- Community
- Creek Reserve
- Public Park
- Parking
- Residential - Mixed Housing Suburban
- Residential - Mixed Housing Urban
- Residential - Terraced Housing & Apartments
- Train Station
- Railway
- Bridge



Figure 1: 2048 Master Plan

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Plan Change Boundary

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2.0 Context & Site Analysis

The Site

Located approximately 35km southeast of Auckland's CBD, and approximately 14km southeast of Manukau and 6km from Papakura, the Drury Metropolitan Centre Master Plan will transform the greenfield lands adjacent to the existing Drury Village into a modern and next-generation New Zealand town.

The Plan Change area (approximately 100ha) that this report references encompasses Kiwi's landholdings (approximately 50ha) as well as the lands bound by SH1, Great South, Waihoehoe, Fitzgerald, and Brookfields roads. Kiwi's lands are the primarily focus of this report as it represents the majority of the uses that define a metropolitan centre. Kiwi's lands are currently operating as a small-scale dairy farm. Much of the lands within the Plan Change area are also pastoral/agricultural with a mix of large rural residential lots.

Urban Design Framework (UDF) Area encompassing the Plan Change Area as well as a land portions north of Waihoehoe, east of Fitzgerald to Fielding Road, south of Brookfield to Fielding Road, and existing Drury Village. The UDF is approximately 200ha.

Local Climate

The climate of Drury is moderate sub-tropical with average annual temperature of 15C, relative humidity of 82%, and annual rainfall of 1210 mm.

With an agreeable climate overall, the main climatic consideration for the master plan are the wind effects. During the winter months (June-August) most of the coldest winds are from the south and southwest at an average speed of approximately 6-8 m/s and as high as 16m/s. During summer (December-February), the favourable cooler winds comes from southwest and north-northwest at an average speed of approximately 6m/s. During autumn (March-May), most of the winds comes from the southwest and some from North. During spring (September-November), most of the winds come from the southwest.

2.1 Context & Site

Urban Context

Located approximately 35km southeast of Auckland's CBD, and approximately 14km southeast of Manukau and 6km from Papakura, the Drury Metropolitan Centre Master Plan will transform the greenfield lands adjacent to the existing Drury Village into a modern and next-generation New Zealand town.

Currently pastoral and agricultural, the area is set to urbanize following the establishment of the Drury-Opaheke Future Urban Zone. The Plan Change area is poised to be located at the center of this zone.

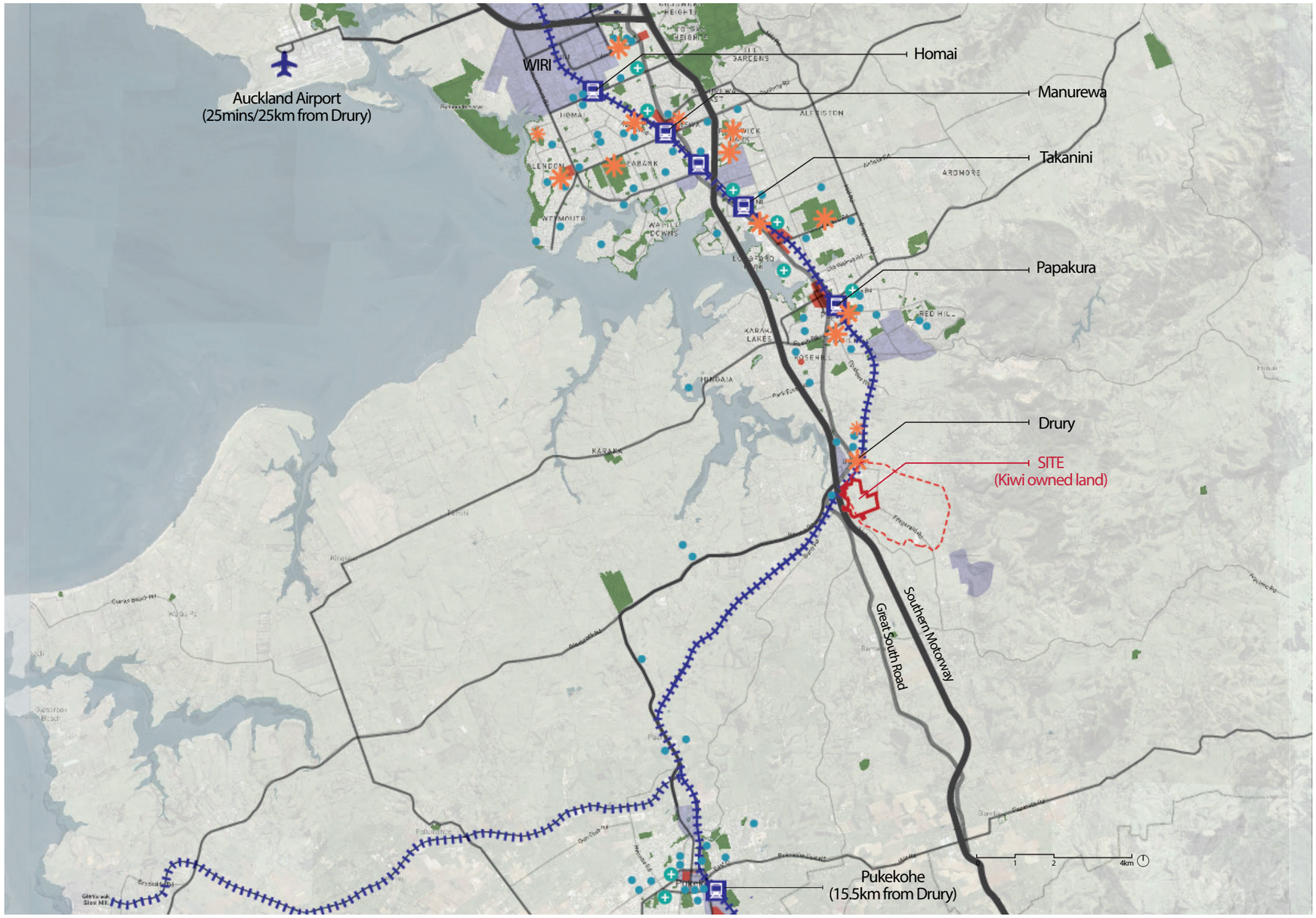
While the immediate term focus will be to capture the South Auckland market, the longer term focus should also consider North Waikato communities. The locational opportunity is illustrated by figure 2 and 3.

Location & Access

Located strategically at the confluence of motorway (SH1), arterial roads (Great South Road, Waihoehoe Road), and railway (Southern Line) corridors the site has inherent proximity advantages yet they also represent challenges due to the topographical features such as Hingaia Creek and the railway itself.



Figure 2: Auckland - Waikato Context Plan



Legend

- Site Boundary
- Major Retail
- Employment Area
- Park
- Motorway
- Major Road
- Arterial Road
- Medium Road
- Railway
- Rail Station
- School (Daycare/Primary School/Main School/College/ University)
- Community/Rec Centre/Library
- Hospital

Figure 3: Drury Context Plan

2.2 Context Influences

Adjacent Activity Drivers

In addition to the activites implied by the designation of a Future Urban Zone, the master plan is influenced by the following adjacency drivers:

- Existing Drury Village: This light industrial area is a key workplace zone for the existing communities and likely to be remain so into the future. The master plan seeks to integrate and reinforce this area by enabling walkability to new amenities, homes and transportation links of the new metropolitan centre.
- Location of Future Workplaces and Residential: The master plan area is located centrally to the substantial zoning for new work places to the south and southeast of our site as well as residential zones to the west and east.

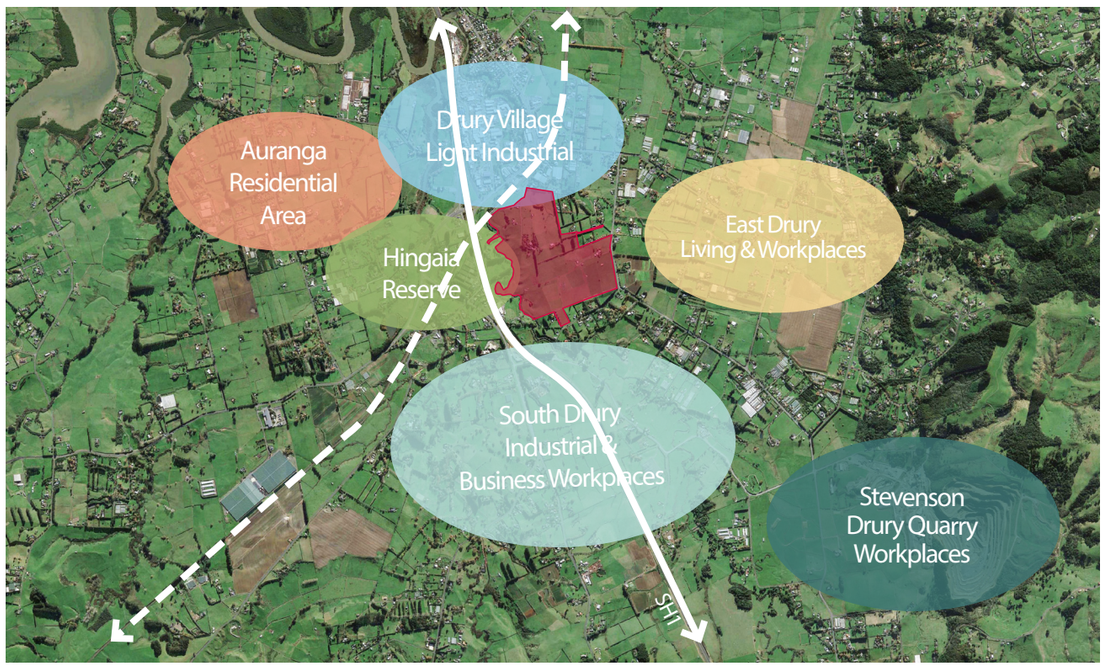


Figure 4: Adjacent Activity Drivers

Views and Heritage

In addition to the adjacent activity drivers, there are views and heritage (natural and manmade) drivers too. These are:

- Views from busy SH1 looking towards the site is an opportunity to create a new identity for Drury.
- Distant views to the Hunua Ranges from both the site and SH1 are opportunities to imbue the metropolitan centre with a sense of placemaking that is related to this major regional natural asset.
- The existing pastoral and agricultural landscape consisting of grass and windrow trees are opportunities to be carried forth as a form of heritage placemaking in the master plan.
- Hingaia Creek, and to a certain extent the transmission lines within it, is a distinctive natural asset that will define and drive the western edge condition of the metropolitan centre' urban form.









2.3 Context Urban Planning Structure

Drury Structure Plan & Centre Location

At time of publication, Auckland Council's final draft Structure Plan for the Drury-Opaheke Future Urban Zone has designated our site as the primary centre. This designation is very much aligned with the analysis, aspirations and desired outcomes of the master plan, with the exception of the rail station. Its location is indicated to be further north than the desired location of the master plan so further work with Council is essential to ensure the desired location for the station.

As a TOD, the Structure Plan's intent further reinforces the appropriateness of the location due to the adjacency of a rail station and as a metropolitan centre the location is appropriately at the center of the future urban zone.

Density Analysis & Assumptions

And as a TOD, transit-supportive residential density plays a critical role. The initial analysis of the Structure Plan density indicated the following:

- Decade One: 16 upha gross
- Decade Two: 14 upha gross
- Culmulative Total: 15 upha gross

Yet, global best practice has found that residential densities could be higher than this, where:

- 30 upha gross supports local bus hub, and;
- Minimum 85 upha gross supports commuter rail.

This conclusion indicates that the main opportunity for higher densities is within the metropolitan centre to ensure a successful TOD. The master plan assumes the higher densities as guides rather than absolute targets.

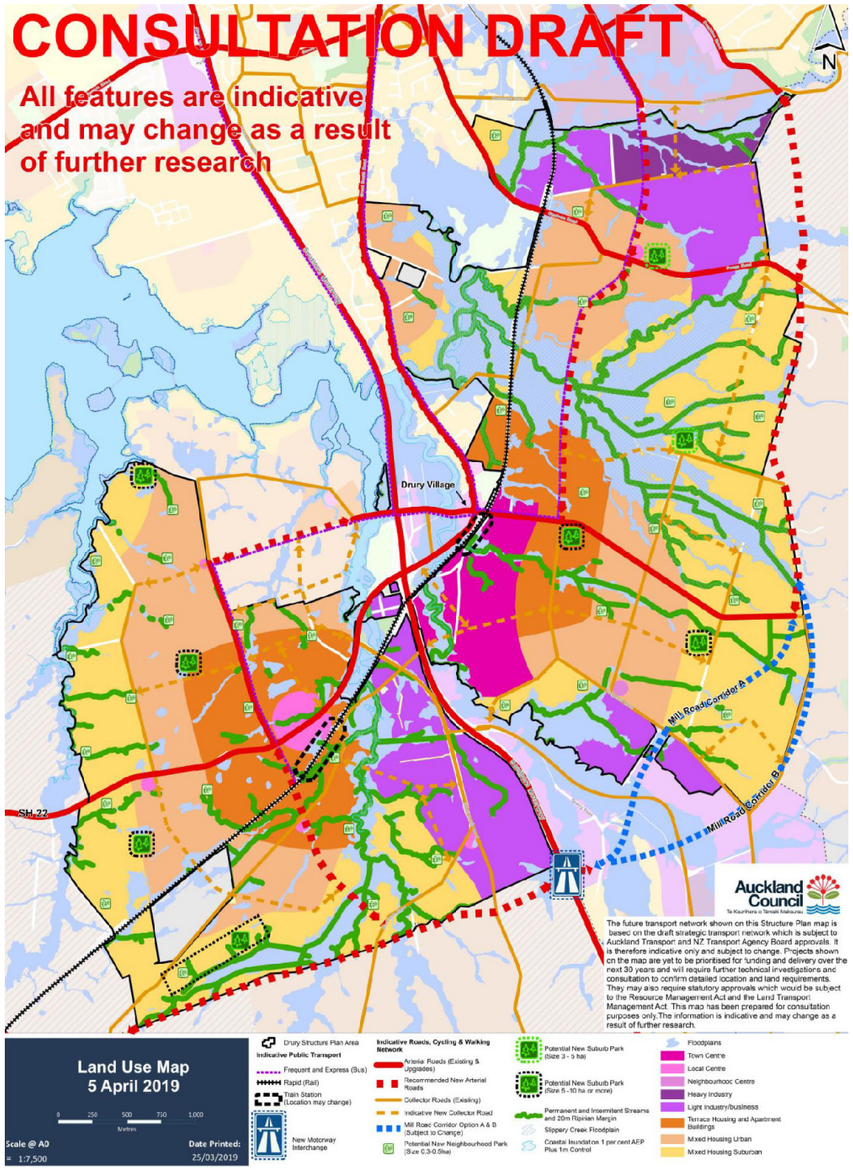


Figure 5: Structure Plan (2019)

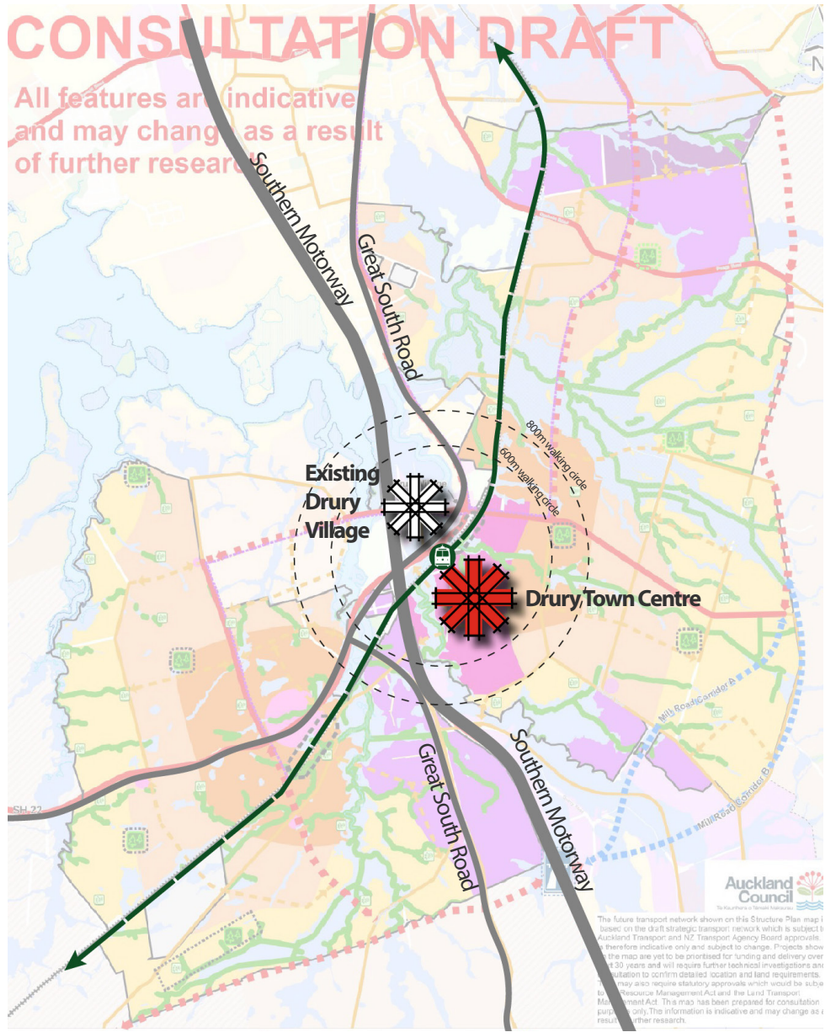


Figure 6: Diagram of Transportation Infrastructure Convergence

2.4 Existing Site Features

The Site Today

In addition to the grass pastures and windrow trees evident in the aerial image of figure 7, the following are the notable features of the site as it is today and for which the master plan seeks to integrate. The following numbered list corresponds to the numbered annotations in figure 7:

1. Hingaia Creek: is a defining feature of the site and has a local and regional stormwater and ecological role.
2. Fitzgerald Stream: has a local context stormwater and ecological role.
3. Small Watercourse: has a localized stormwater and ecological role.
4. Homestead: a dwelling sitting on a notable summit, is characteristic of a farm property that has notable softscape.
5. Hill Tops: notable summits within the rolling topography.
6. Ridges: notable feature that ascends towards hill tops.
7. Valleys: notable feature that descends from ridges and hilltops.
8. Transpower transmission lines: critical regional utilities infrastructure.
9. Dual railway - Southern Line / North Island Main Trunk: on which a Drury Rail Station is proposed.
10. Watercare water pump station
11. Historic dairy rail station remnants: consisting of a steel structure and stone stock loading platform.
12. Kiwi Property Boundary



Figure 7: Existing Site Features Diagram

2.5 Existing Site Constraints

Watercourses, Topography & Infrastructure

Of the existing site features, the followings are the most significant, and will have a role in shaping the built form of the master plan:

- The Hingaia and Fitzgerald Stream watercourses;
- Topography of ridges, hill top and valleys, and;
- Infrastructure such as the transpower transmission lines and railway.

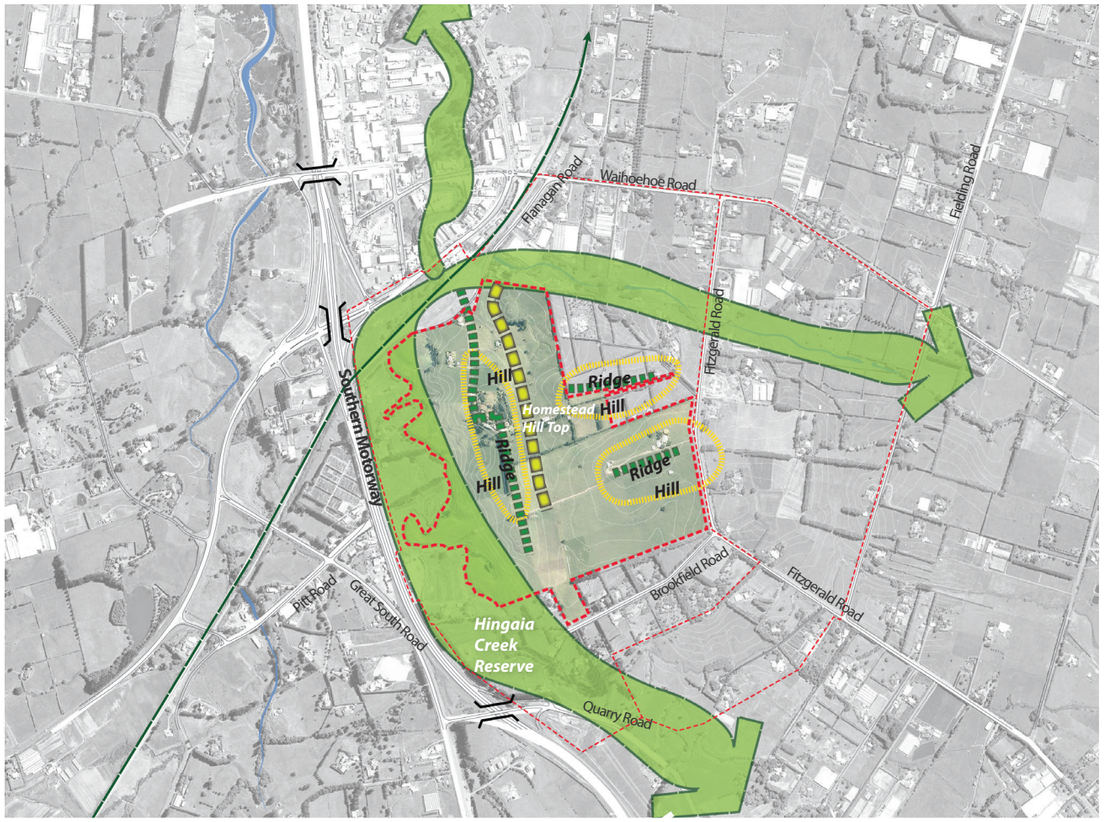


Figure 8: Existing Significant Site Features Diagram

Site Access

It is notable that the site has less site access from the west than from other locations. A metropolitan centre's success is also underpinned by high connectivity so this westerly deficiency will be addressed in the master plan. The existing site access locations are:

- Flanagan Road: a local road which has limited capacity as is;
- Fitzgerald Road: a rural connector road which offers the most property frontage, and;
- Brookfield Road: a rural local road which currently serves large residential lots.

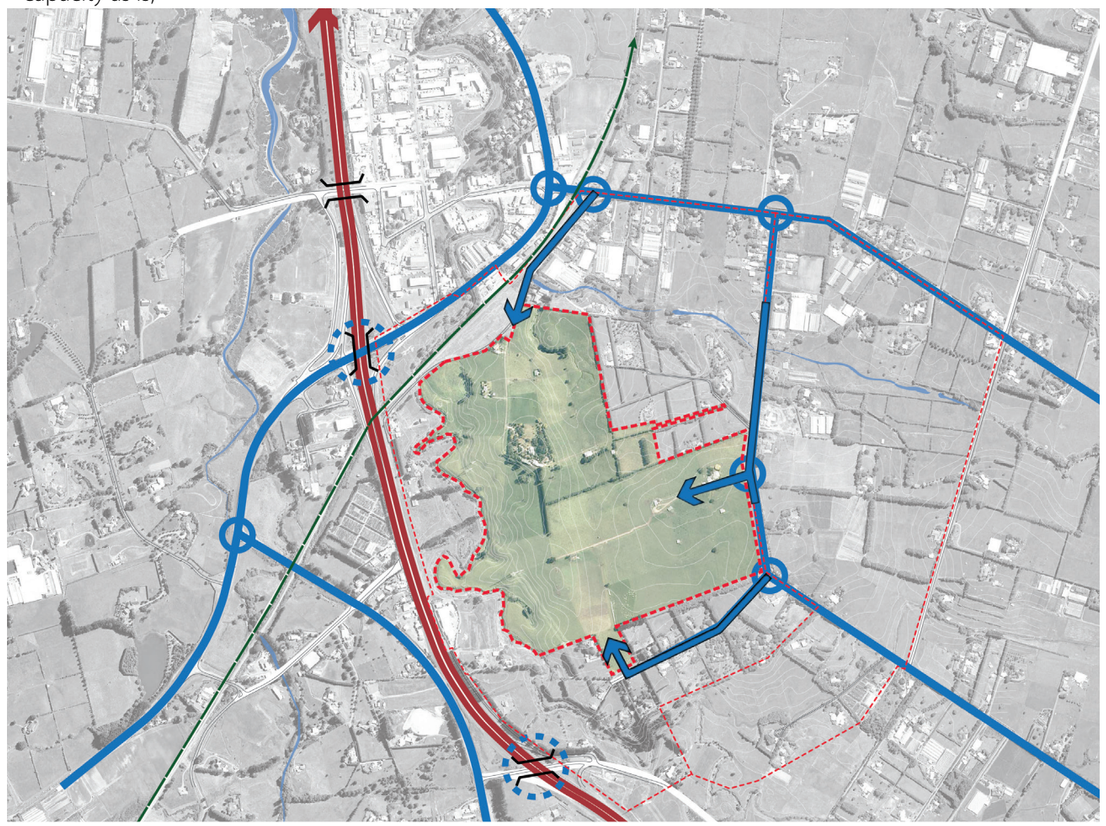


Figure 9: Existing Site Access Diagram



3.0 Master Plan Vision

The 2048 Vision

The vision is for a sustainable metropolitan centre TOD, master planned around a civic and mixed use Town Heart. The master plan envisions a local community hub as well as regional destination, with a significant range of retail, dining, and leisure activities that integrate with a diverse portfolio of housing and commercial spaces.

This new metropolitan centre TOD will also:

- Be developed by respecting context in its street and town square life, and being pedestrian and public transport oriented. Business and merchant vitality, and broad social interactions, are brought together in a contemporary context by creating a new sense of place and identity;
- Aspire to be an independent centre that also appeals to Auckland and Waikato markets;
- Be master developed by Kiwi with an integrated planning and development approach, in partnership with carefully chosen partners as required;
- Aspire to be a high quality urban and natural environment for residents, workers, shoppers, and visitors;
- Incorporate leading edge sustainable technologies that account for existing infrastructure and resource constraints while offering reduced operational costs;
- Engage the broader community and local government through economic development and job creation, infrastructure planning, and social responsiveness to adjacent local and regionally significant amenities;
- Be operated and managed under Kiwi management to provide guests and residents with the highest level of comfort and quality community service; and,
- Position Kiwi as a distinguished mixed use Master Developer.

The following pages describe the master plan vision in detail and according to the following sequence:

The Urban Design Principles which underpin and drive the design content of the various master plan layers that are specific and applicable to the site.

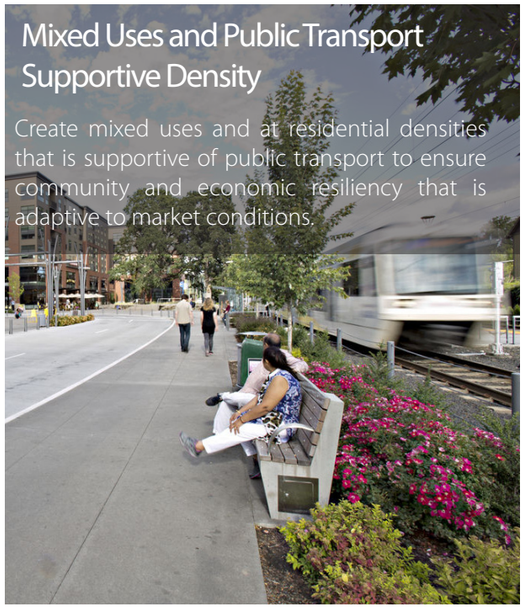
The Master Plan Structure which describes how the master plan layers are integrated together to form the master plan.

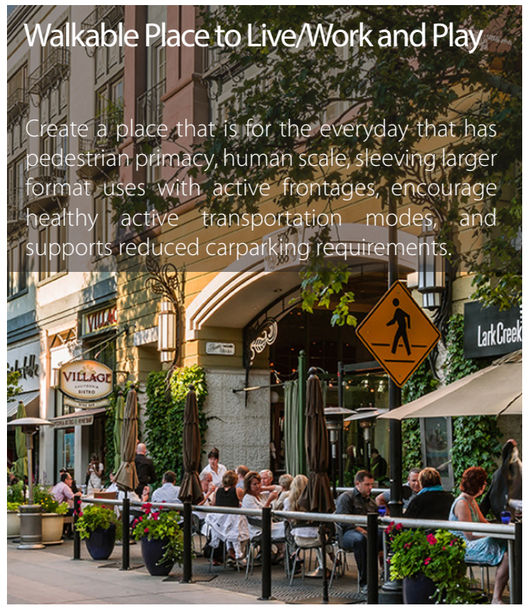
The Urban Design Concept is a high-level diagram that describes the defining features of the urban design that is generated by the master plan.

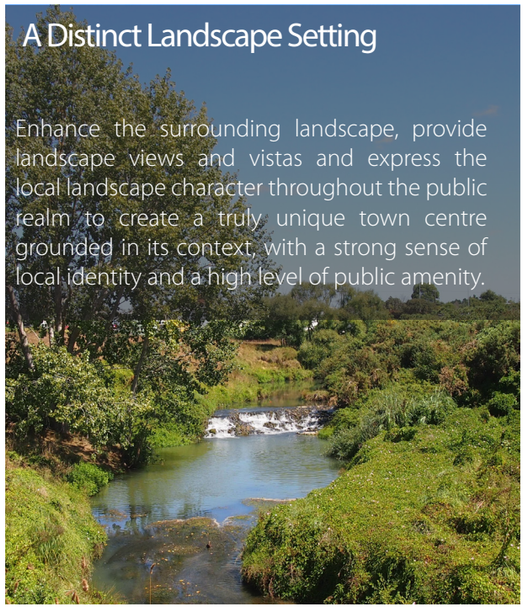
The detailed technical layers of the master plan are organized in its own chapter following.

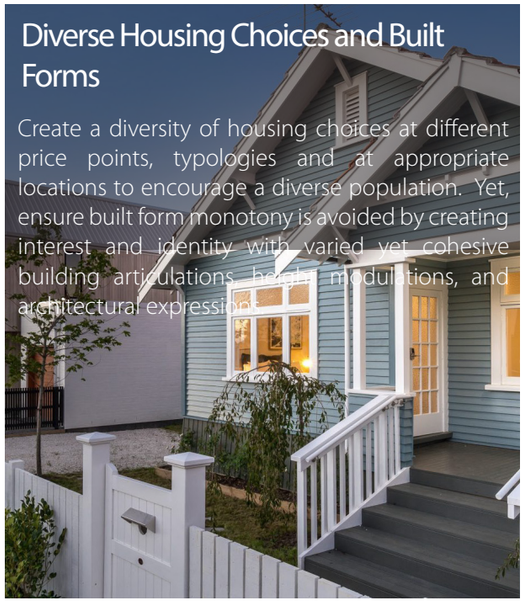
3.1 Urban Design Principles

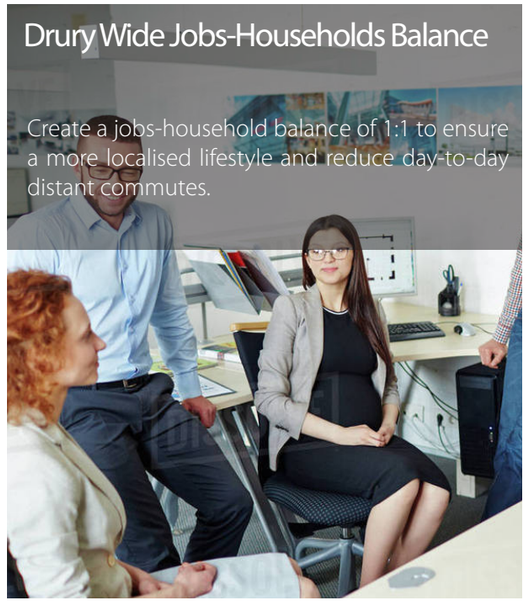
To ensure the built form applicability to the site, of the components that create a vibrant town centre, a set of Urban Design Principles needs to be established to drive the design content of the Drury Master Plan. These principles are outlined as follows:













A Highly Connected Public Realm

Create a highly connected, legible and permeable network of high quality open spaces and streets that supports a walkable town centre through wayfinding, pedestrian scale and amenity, and adds interest and variety to everyday journeys throughout the town centre.



A Variety of Public Experiences and Amenity

Ensure the public realm promotes and enhances the everyday activities and interactions of a town centre, from individual experiences through to small gatherings and large scale planned events, with enough variety and amenity to cater for all ages, abilities and circumstances.



Climate Responsiveness

Create environmental resiliency by tempering the shocks and mitigating the risks while maintaining a connection to the nature to ensure awareness.



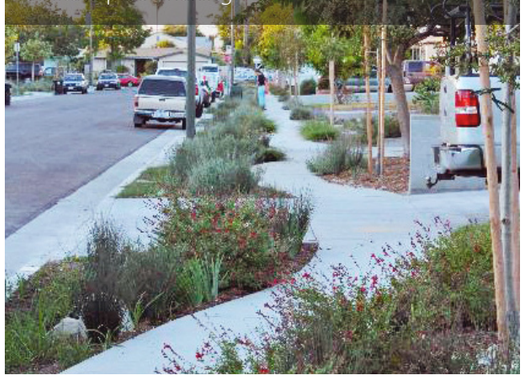
Compelling Day-Evening Activity - A Unique Food & Leisure Destination

Along with passive activation, facilitate destinational identity to enable vibrancy, sociability, and 18 hour 7 days a week activation at key retail locations.



Great Streets, Boulevards and Laneways

Create great streetscapes with high visual and ecological amenity, that is balanced with appropriate transportation functionality, to facilitate placemaking.



Land Responsiveness

Integrate with and adapt to the landform not only for environmental sustainability but to reinforce the cultural values of Te Aranga Māori Design Principles.



3.2 Master Plan Structure

The purpose of a master plan structure is to establish the key physical design elements (or master plan layers) for the site, and in response to it, in a considered and mutually supportive manner as underpinned by the urban design principles and Te Aranga Māori Design Principles. As such, the structure establishes the master plan concept. The rationale of the key physical structure elements, and how they are integrated together, are described as follows:

Topography

The design intent to respect and utilize the existing topography enables a structure whereby:

- The existing ridges and valleys are incorporated to inform the overall built form of the centre;
- The overall built form and topography features, such as the prominent summit landscape, informs the potential for varied character areas that enhances livability and identity throughout the site;
- Utilizing the existing topography and it's flood zones aids in the integration of existing stormwater strategy with the future strategy;
- Affords greater earthworks flexibility to minimize off-site disposal of potential surplus fill, and;
- It underpins the strategy to protect, maintain, and enhance mauri.

Access & Street Hierarchy

Informed by the topography and existing regional transportation links, the access and street hierarchy creates a connectivity structure whereby:

- The centre's main retail street (Main Street) runs north-south along an existing ridge, linking a prominent summit landscape with the future Drury Rail Station;
- Streets located at lower topographical elevations and at the periphery of Main Street enables access to the centre's core parcels and undercroft parking spaces, and;
- These peripheral streets connects with the existing access network at various locations (i.e. Great South Road, Waihoehoe, Fitzgerald, Brookfield) to ensure cross-connectivity through the site and beyond.

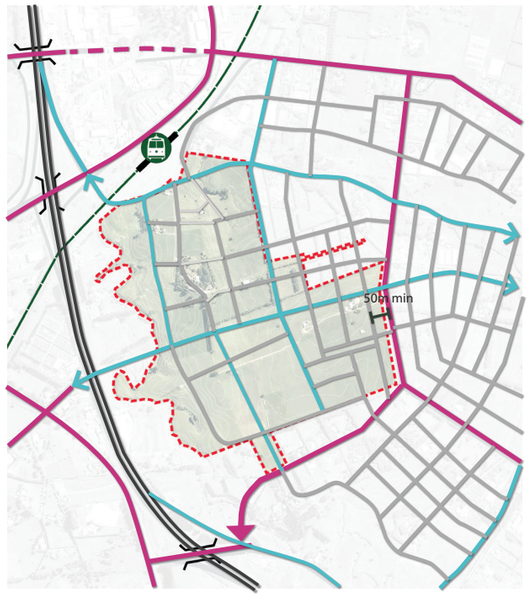
Block Pattern

To ensure a fine grain, highly permeable block structure, the design intends to create a structure whereby:

- The blocks are sized 50m by 90m at a minimum to balance development efficiency and programmatic resiliency with maximizing pedestrian connectivity;
- Local roads, pedestrian mews and lanes provide the required access between the blocks and the broader network, and;
- The majority of blocks are orientated along the north-south axis to enable versatility of control to enhance solar gain and mitigate wind effects.







Open Space Strategy

To ensure a centre that remains connected with and enhances nature or taiao, the design intends to establish an open space strategy whereby:

- The topography, access and street, and block pattern are integrated to inform the location of regional, precinct, and local openspaces;
- The regional open spaces, such as Hingaia Creek, protects contextually important watercourse;
- The precinct open spaces, such as neighbourhood parks, imbues an important natural identity and public destination for people, enhancing a sense of kaitiakitanga, and;
- The local openspaces, such as mews, streets, and courtyards, enables the opportunity to create streetscapes and more intimate natural experiences.

Civic/Community Spaces

Complementary and integrated with the open space hierarchy, the civic/communities spaces structure intends to:

- Foster shared cultural activities and located at key open spaces to create a sense of civic/community identity and translate iwi/hapu cultural narratives to enhance mana whenua ahi ka;
- Further adds a layer of activation and social desirability that creates a vibrant centre, and;
- Enable a network of spaces that allows for artistic expression and facilitates its integration with the centre's identity over time.

Active and Public Transport

To ensure a livable centre that supports the wellbeing of residents, the design intends to establish an active and public transport structure whereby:

- Residents and visitors have transportation options that are effective and not car-dependant;
- Pedestrians and bikes have safe, legible and integrated routes to/from homes and day-to-day activities, and;
- Local public transport integrates with the broader Drury and regional network, linked at the Drury Rail Station and Public Transport Hub, to enable connectivity with workplaces and homes elsewhere.

Land Uses

Integral with all the other framework elements, the land use framework underpins the TOD, and intends to:

- Ensure the mix of uses are mutually supportive of living, working and playing in a safe and walkable place organized around the mixed-use centre and Drury Rail Station, and prioritizes active frontages;
- Ensure residential choices and densities of land uses to be supportive of public transport;
- Appropriately integrate with the diversity of public spaces and civic/cultural needs to create community identity and sense of place;
- Facilitate commerce, services and sociability that are necessary for the day-to-day while creating a compelling destination with 18/7 activation, and;
- Enable resiliency to adapt to future socio-economic conditions.

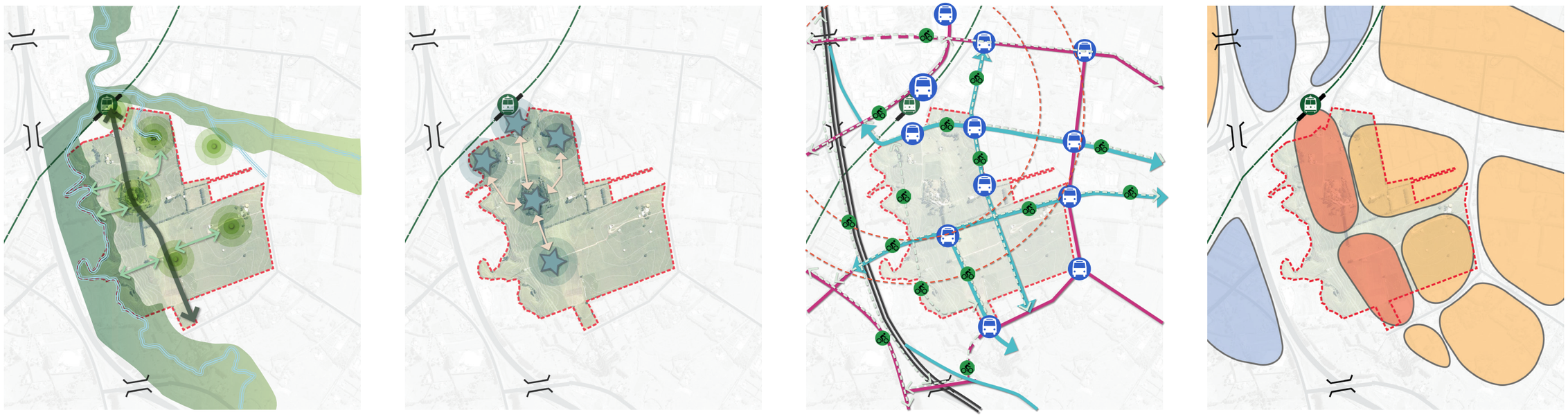


Figure 10: Master Plan Structure Concept Diagrams

3.3 Urban Design Concept

The multitude of master planning layers can be distilled into an urban design concept as illustrated by figure 11.

The urban design concept is to create a vibrant metropolitan centre that is characterised by a mixed use heart, future rail station and public transportation hub, wide range of housing and job opportunities within a unique landscape and topographical settings that is integral to its identity and sense of place.

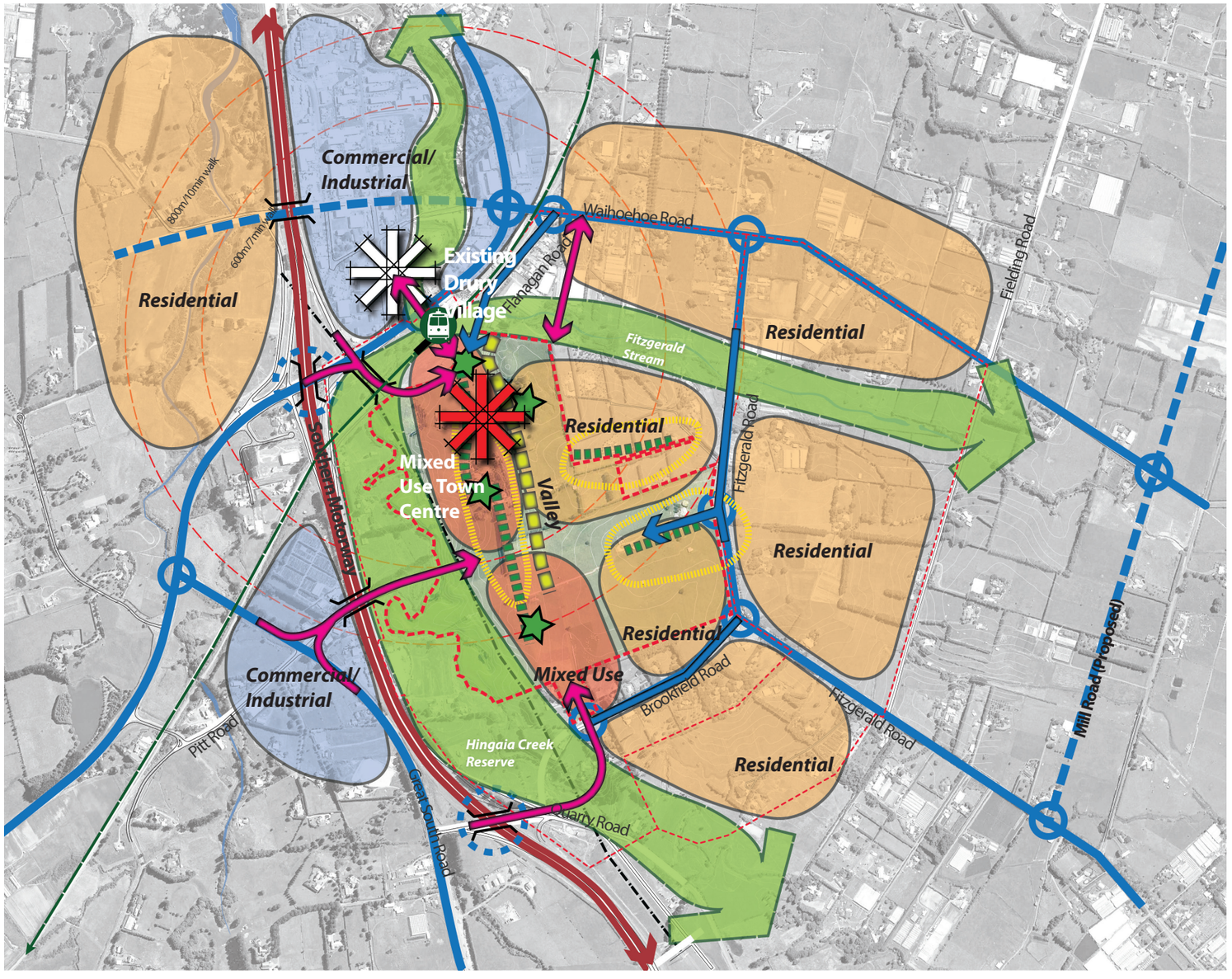


Figure 11: Urban Design Concept Diagram

Context Urban Design Framework (UDF)

While the primary focus of the master plan is on Kiwi's land, a broader area or UDF has been considered. Consistent with good spatial and urban design/ planning practice for centres, the broader study area helps identify opportunities to reinforce open space and ecological connectivity, access, and land use compatibility to ensure a successful centre. The main opportunities identified are:

- Restoration of Fitzgerald Stream for district-level placemaking as well as stormwater, ecological, and recreational amenity that is complementary to Hingaia Creek.
- Focus on and provide for east-west connectivity to ensure access to the amenities and work places of the metropolitan centre with the additional residential dwellings and potential school in East Drury.
- Reinforce connectivity to existing Drury Village as its current and future workplaces help underpin the success of the rail station and the TOD.

Legend

- Community
- Business Park
- Creek Reserve
- Public Park
- Parking
- Mixed Use
- Mixed Housing Suburban
- Mixed Housing Urban
- Terraced Housing & Apartments
- Train Station
- Bridge

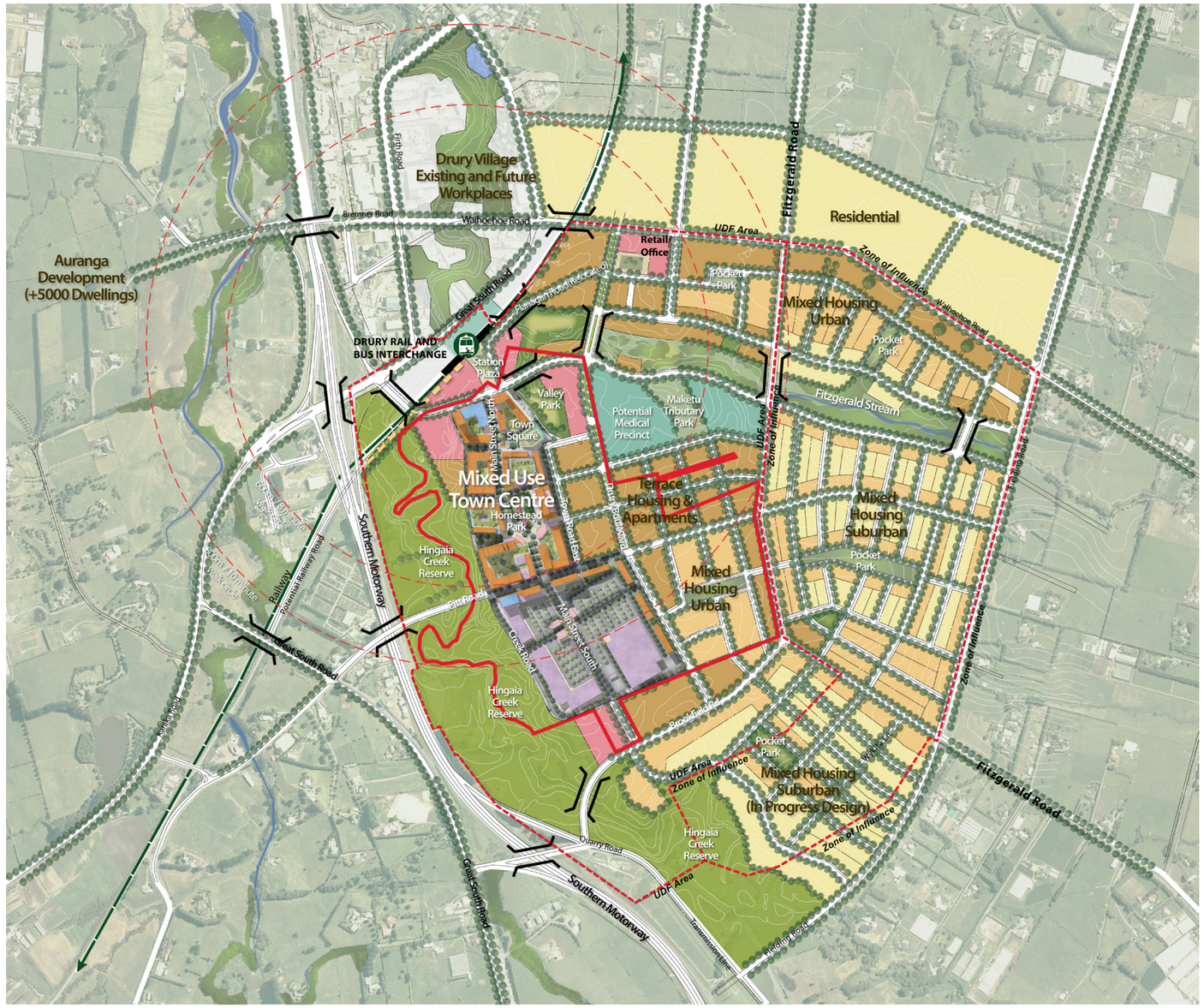


Figure 12: Urban Design Framework Plan

3.3.1 UDF Population-Jobs Yields

As part of the study of the UDF area, yields were derived to give an indication of the potential 2048 population that is within the vicinity of Kiwi's lands.

The indicative total yields of the UDF shown in figure 13 are as follows:

- Approx. 19,500 residents, or 7,100 households
- Approx. 5,000 jobs
- 1:1.42 jobs-to-household ratio
- Residential net density 78upha
- Residential gross density 35upha

Of these yields, the Plan Change area represents:

- Approx. 11,700 residents, or 4,300 households
- Approx. 6,500 jobs
- 1.5 : 1 jobs-to-household ratio

Assessed against the best practice assumption of 1:1 jobs-to-household ratio, both the UDF and Plan Change areas indicates the potential to meet this desired jobs-household balance.

These yields were derived by a combination of GFA modelling within Kiwi lands, per land hectare area basis for non-Kiwi lands, and the following assumptions:

- Average 2.75 residents per household
- Average 100sm GFA per household within Town Heart.
- Average 110sm GFA per household outside of Town Heart.
- Mixed housing suburban 13upha, mixed housing urban 15upha, Mixed use housing 30upha.
- Fulton Hogan lands assumes average 10upha
- Average 3.0 jobs per 100sm GFA of retail or office

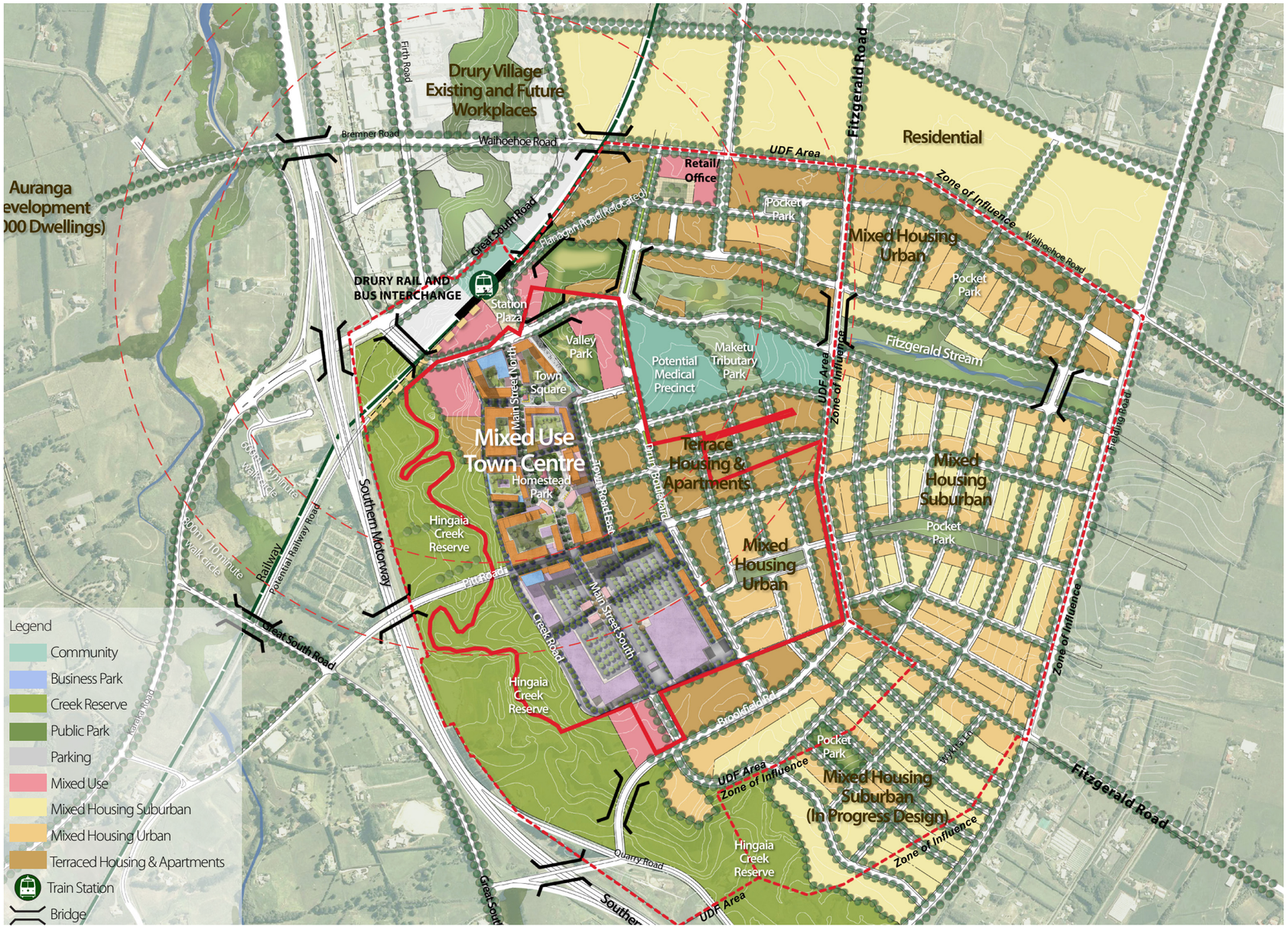
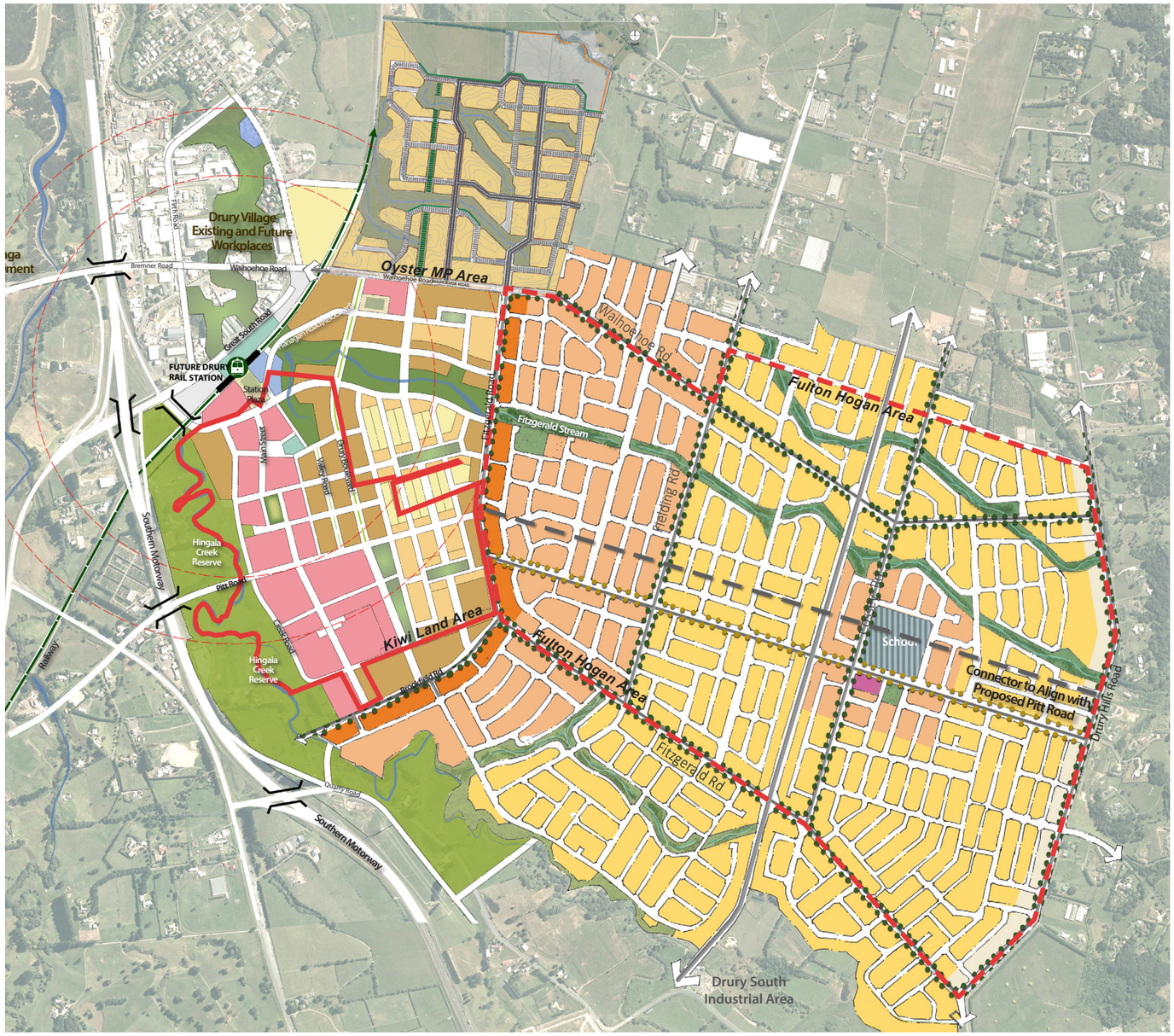


Figure 13: Urban Design Framework Plan

3.3.2 Combined Developers' Master Plan

In tandem with the UDF study, the concept was shared with surrounding developers/landowners to start dialogue to ensure integration of roads, district wide open space network, and alignment of land use configurations and expectations. At the time of publishing, the follow lists the current status of the dialogue:

- Combined concept plan is at draft status as of April 2019.
- Fulton Hogan future design iterations will align their Pitt Road with Kiwi's.
- All roads should facilitate east-west connectivity to enable direct movement to/from the centre's amenities and Drury Rail Station.
- Provides a working indication of the scale and intensity of East Drury urbanisation that the metropolitan centre is at the center of.



LEGEND

Oyster Master Plan Area

LAND USES / ACTIVITY
- Residential
- Public Open spaces
- Public Road network

MOBILITY -STREET HIERARCHY-
- Primary Circulation
- Park Edge
- Local road
- Minor Local Road
- Existing Tree Avenue

Fulton Hogan Area
- Residential- Terrace and Apartment
- Residential- Mixed Housing Urban
- Residential- Mixed Housing Suburban
- Residential- Single Housing
- Local Centre
- Mixed Use
- General Business
- Connector to Align with Proposed Pitt Road

CIV Kiwi Land Area

Proposed
- Mixed Housing Suburban
- Mixed Housing Urban
- Terrace Housing & Apartments
- Mixed Use
- Education
- Business Park
- Creek Reserve
- Public Park
- Parking
- Train Station
- Bridge

Figure 14: East Drury Master Plan Diagram (April 2019)

4.0 Master Plan Layers

The following pages describe the technical layers of master plan vision in detail and according to the following outline sequence:

- Land uses and character precincts;
- Typical ground floor, upper floor and basement uses;
- Building heights and envelopes, public-private interfaces;
- Potential development program and staging;
- Solar and wind analysis, and;
- Utilities and infrastructure concepts

Mobility and public realm layers follow this chapter.

The relevant consultants' studies that support these layers are collated in a separate document called Master Plan Supporting Studies.

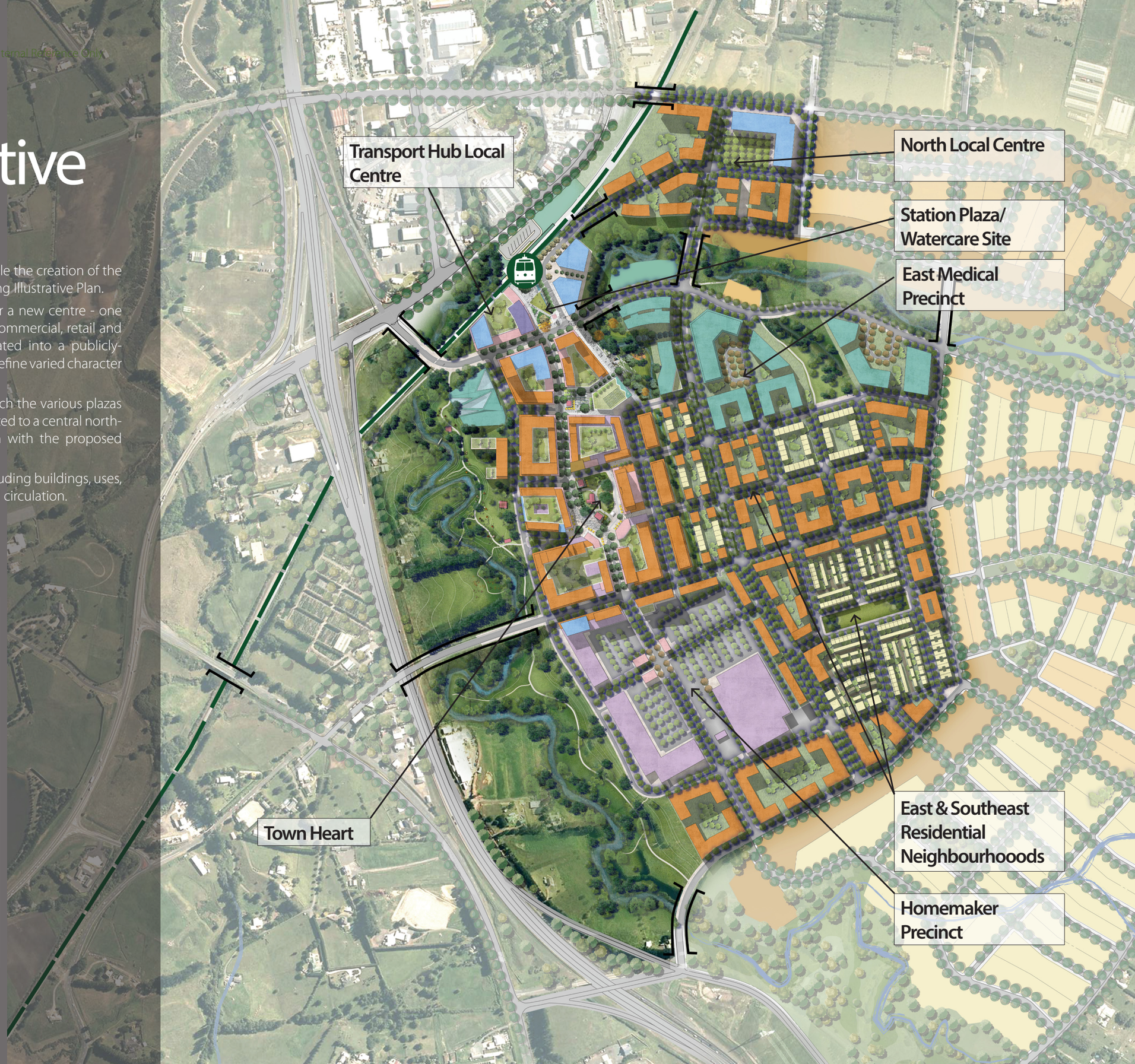
4.1 Illustrative Plan

All the components of the master plan which enable the creation of the metropolitan centre are summarized in the following Illustrative Plan.

The Illustrative Plan proposes an exciting vision for a new centre - one that has a dynamic mixed use environment with commercial, retail and residential, and community uses that are integrated into a publicly-accessible network of plazas and open spaces that define varied character precincts.

This network follows a open space strategy by which the various plazas and open spaces are organised around and connected to a central north-south Main Street which also affords connection with the proposed Drury Rail Station and existing Brookfield Road.

The following pages describe the plan in detail, including buildings, uses, heights, parking strategy, open spaces strategy and circulation.



Legend

- Specialty Retail
- F&B
- Town Centre Residential/Mixed Use over Retail Ground Floor
- Office over Retail Ground Floor
- Retail General
- Hotel
- Community
- Creek Reserve
- Public Park
- Parking
- Residential - Mixed Housing Suburban
- Residential - Mixed Housing Urban
- Residential - Terraced Housing & Apartments
- Train Station
- Railway
- Bridge

4.2 Character Precincts

Town Heart

The heart of the metropolitan centre is a destination for visitors and residents, providing a mixed-use experience within an interconnected and walkable street environment. Orientated along a Main Street of local and regional retail, food and beverage, commercial, residential, entertainment, and community facilities and spaces, the Town Heart encourages people to engage on a daily basis and contribute towards 18/7 activities, gatherings and recreation.

In addition to Main Street activation, the side streets of the Town Heart are activated by some retail but predominantly residential dwellings that sleeve larger retail uses, and have their individual entries on the street. Also, Town Square is located on Main Street and adjacent to community spaces to create a focus for civic uses.

At the center of the Town Heart precinct is Homestead Park with the refurbished former Homestead and its existing grove of trees.

All are integrated with the ridge and summit topography to create authentic placemaking, and distinctive landmark.

Station Plaza / Watercare Site

Located at the northern end of Main Street and the Town Heat, Station Plaza is a place of public transport arrival and departure to the Drury metropolitan centre; its front door. Due to its integration with the rail station public transport hub, it is envisaged to have significant work places and retail organised around the plaza, as well as a potential hotel for visitors to the region and the adjacent East Medical Precinct. Its location at the nexus of transportation modes, high walkability and direct adjacency with the Town Heart amenities as well as existing Drury Village makes for a prime TOD site and potential JV with current landowners.

Homemaker Precinct

Located at the southern end of Main Street towards existing Brookfield Road, this precinct is envisaged to be for regional retail such as bulky goods stores. Due to these more car/truck-orientated uses, its location is appropriate as it reduces the conflicts with the more pedestrian and public transport focused Town Heart, Station Plaza and immediate surrounds.

East Medical Precinct

To add to and reinforce the mix of uses of the centre, a potential medical precinct can be located east of the Town Heart and Station Plaza. This precinct is envisaged to consists of a 300+ bed hospital as well as allied uses and is anticipated to be staged overtime. Its location has the advantage of being within easy walking distance to the rail station and public transport hub while having direct access to existing Fitzgerald and Waihoehoe (via proposed Drury Boulevard) roads. All set within a creek environment defined by Valley Park and Fitzgerald Stream.

East and Southeast Residential Neighbourhoods

In contrast to the Centre, this residential neighbourhood grid provides a more standardised layout of lots and streets and allows for a level of repetition that aids in cost efficiencies as well as design legibility. Within this grid structure, there is a range of different housing typologies possible as well as clear visual and physical connections to the surrounding context through the layout of streets and open spaces.

Transport Hub Local Centre

Envisaged as a small local centre that is focused primarily on servicing the convenience market of travellers along Waihoehoe Road. This is a more car-orientated centre and its size and offering does not compete with the commercial viability of the Town Heart.



Artist's Impression of Homestead Park within Town Heart



Artist's Impression of Station Plaza



Artist's impression of Town Square



Artist's Impression of retail Main Street

4.2.1 Medical Precinct Options

The possibility of a medical precinct to accommodate a new hospital for the south of Auckland and north of Waikato was encouraged by the Ministry of Business, Innovation and Enterprise (MBIE). At the time of publication, discussions with MBIE and relevant District Health Boards (DHBs) were ongoing and positively in favour of a site close to the metropolitan centre. The assumptions from these discussions regarding the appropriateness of a site are:

- Capacity for a staged development with a requirement for 350-400 beds at final build out;
- DHBs are assuming a more traditional and larger site area requirement but are open to a more compact, campus-style development (approx. 6.0ha gross site area according to MBIE);
- Walkable proximity to, but not necessarily adjacent, rail station access and the desirability of rail connection with other major medical precincts i.e. Middlemore Hospital, and;
- Walkable and public transport access proximity to workplaces to facilitate patients and visitors convenience during business hours.

Therefore, the two locations for a hospital site, and corresponding pros/cons are:

Kiwi's Preferred Location:

+ Stage 1 can be facilitate on Kiwi's lands and located around Valley Park amenity.
+ Adjacent roading and other communities amenities can be facilitated by Kiwi.
+ Dual access routes; from existing Fitzgerald Rd and future Drury Boulevard
+ High walkability to Town Heart amenities
+ High walkability to Rail Station/Public Transport Hub
+ Proximity to Town Heart promotes allied uses within Town Heart.
+ Outlook into Valley Park and Fitzgerald Stream.
− Access to GSR and SH1 not as strong as Waihoehoe location in the initial stages.

Waihoehoe Alternative/Additional Location:

+ Existing access to existing and future communities.
+ Existing/Future east-west connectivity to GSR and SH1
+ Flat grade
+ Easily access to Rail Station/Public Transport Hub
+ Walkability to Town Heart amenities
+ Proximity to Town Heart promotes allied uses within Town Heart.
+ Potential horizontal capacity for future expansion.



Example of 370 bed, 3ha site hospital (Bendigo Hospital, VIC, Australia)

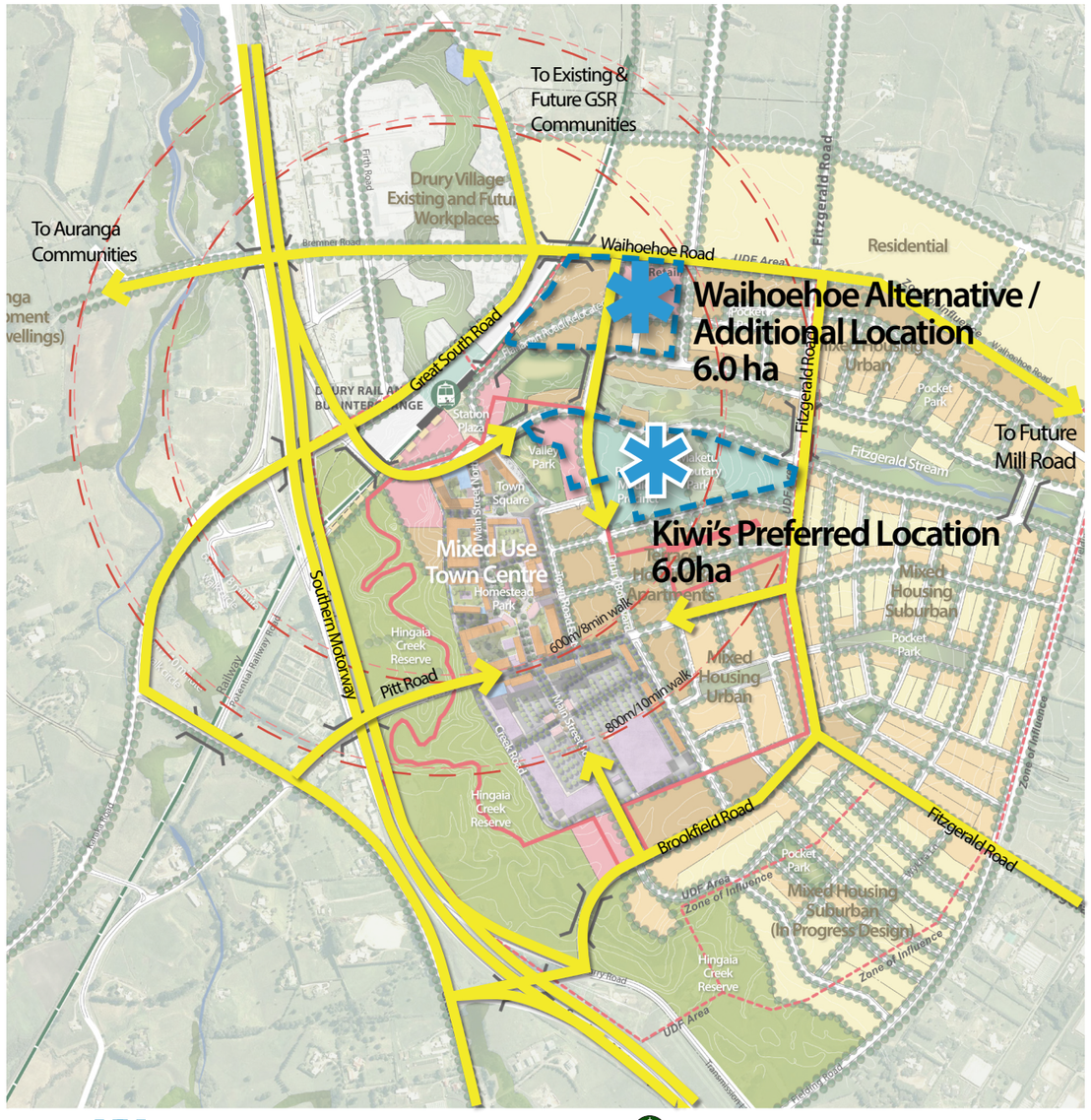


Figure 15: Medical Precinct Location Options Diagram

4.2.2 Homemaker Precinct Options

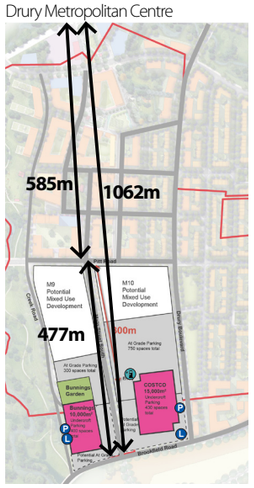
In addition to Kiwi's landholdings at the time of publication, and as an outcome of the UDF study that identified the southern site entry from Brookfield, options were explored under the assumption of potential future land acquisitions that would strengthen the southern gateway.

The options are illustrated in figure 16, with accompanying pros/cons.

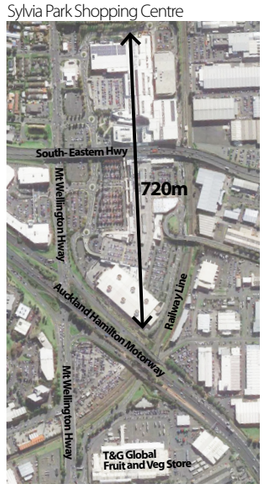
A key advantage is providing greater independence to accommodate bulky goods stores' design parameters of today, while reducing impact of its restrictions on adjacent parcels north and east.

A key disadvantage is that the distance to the Town Heart (see comparison with Sylvia Park centre below) effectively means it is a separated precinct yet it is a precinct that can be distinct and independent.

Drury Metropolitan Centre



Sylvia Park Shopping Centre

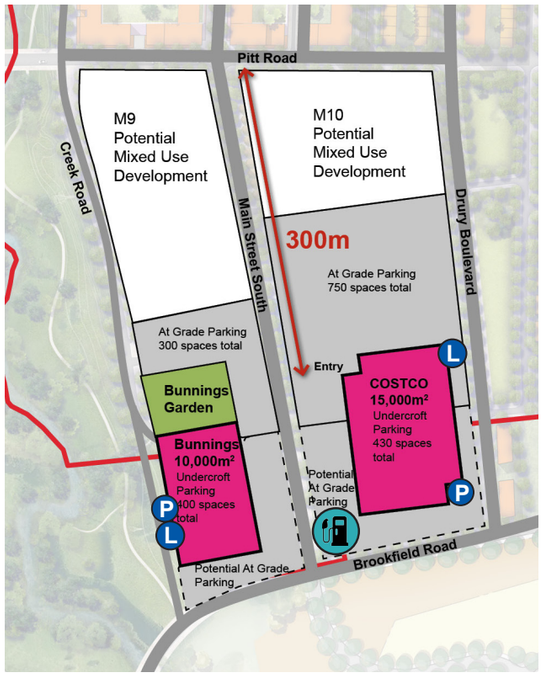


OPTION 1 - Current MP



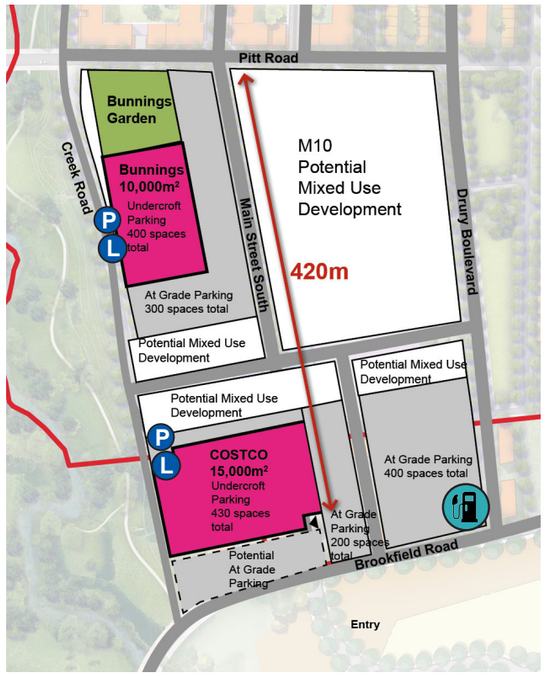
+ Plenty of sleeving opportunities.
+ Position of Bulky Goods enables flexibility of future development on at-grade carparks north/ south of site.
+ Not dependant on land acquisition along Brookfield.
+ Walkable to Town Heart.
– Longer facade frontage to SE Resi neighbourhood.
– South gateway defined by at-grade parking.

OPTION 2 - Brookfield Acquisition



+ Plenty of sleeving opportunities.
+ Bulky Goods defines a strong south gateway placemaking.
+ Opportunity for a distinct retail destination that's car-orientated for the short term.
+ Future mixed-use development integrates towards and reinforces the Town Heart.
– Longer facade frontage to SE Resi neighbourhood.
– Dependant on land acquisition along Brookfield.
– Not as walkable to Town Heart

OPTION 3 - Hybrid



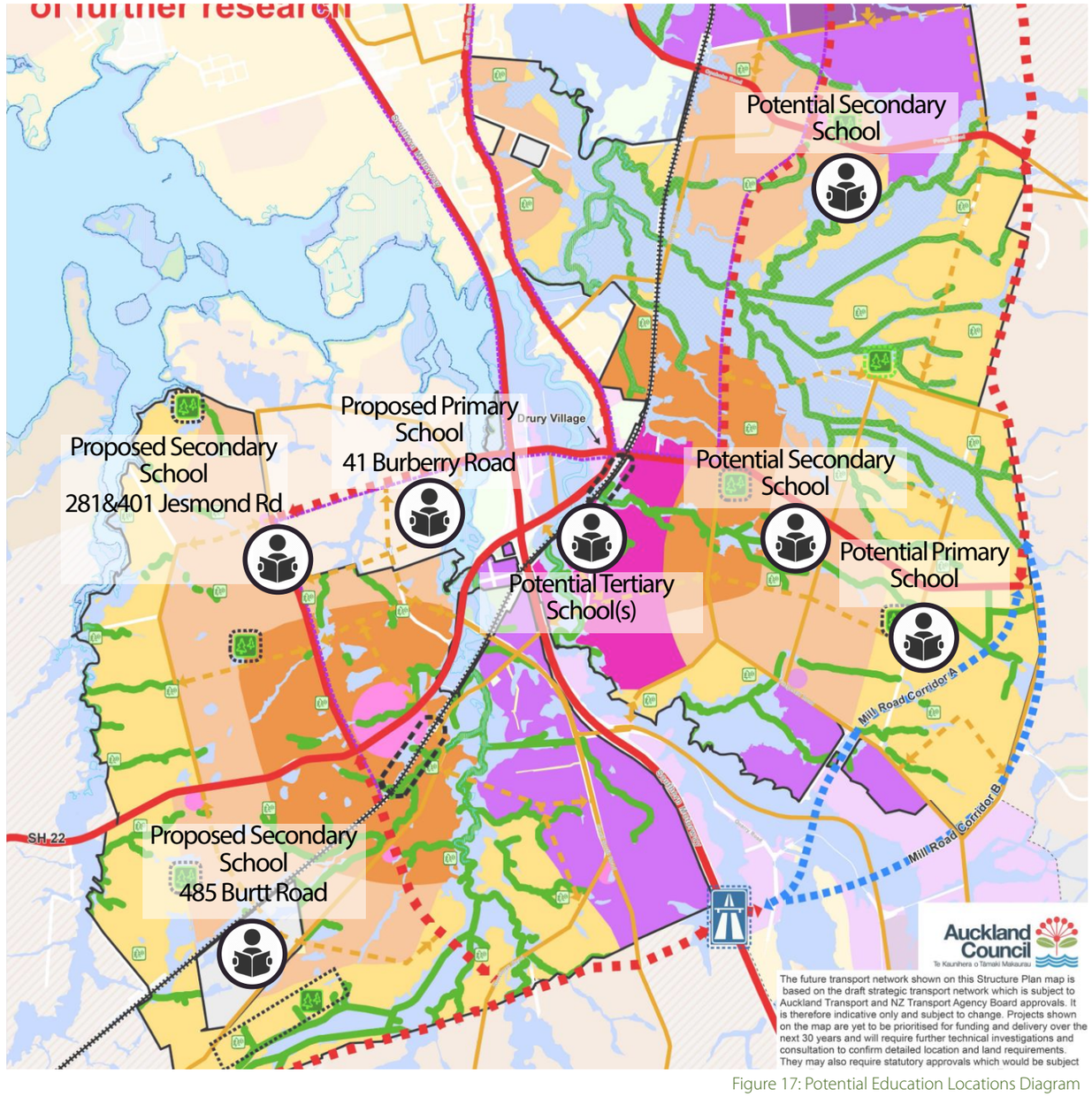
+ Plenty of sleeving opportunities.
+ Bulky Goods defines south gateway.
+ Opportunity for a distinct retail destination that's car-orientated for the short term.
+ Future mixed-use development integrates reinforces the Town Heart and towards east resi.
+ Bulky Goods SH1 exposure
+ Shorter facade frontage to east MU and Resi
– Dependant on land acquisition along Brookfield.
– Not as walkable to Town Heart

Figure 16: Homemaker Precinct Options Diagrams

4.2.3 Potential Education Locations

An important component of the wider Drury area, the metropolitan centre intends to establish a relationship with the network of schools by accommodating tertiary or post-secondary education institutions only. This is due to its proximity to transportation hub and services, as well as limited land availability for larger uses such as playing fields associated with primary (3ha typical gross site area) and secondary schools (13ha typical gross site area; 16ha combined secondary-primary school).

At the time of publication, and due to the ongoing complexity of design and stakeholder engagement, the master plan assumes the potential locations of primary, secondary, and tertiary education location as shown in the following figure 17. West Drury proposed school locations as known as of April 2019. East Drury potential school locations as identified during masterplanning as of April 2019. And northeast Drury potential school location as identified in B&A draft structure plan April 2018.



Legend



Figure 17: Potential Education Locations Diagram

4.2.4 Potential Tertiary Education Locations

Locations of tertiary or post-secondary education institutions within the metropolitan centre are driven by the following criteria:

- Legible and multiple access routes from existing and future housing, communities and public transport.
- Within center of population catchment areas of existing and future population density, growth areas.
- Walkable proximity to community and recreation amenities, open spaces, homes.
- Walkable and/or public transport proximity to retail and services (local and major centre).
- Option for GFA expansion that contributes and reinforces sense of place and identity.
- After-hours safety considerations.
- Tertiary Education potential technical requirements - flexibility to fit within commercial office spaces, purpose-built specialist facilities TBD.

With the above criteria the pros/cons of the three locations within the metropolitan centre are as follows:

Station Plaza:

+ Primarily upper floor tenancies
+ Prominent presence at GSR and SH1
+ Existing access
+ Existing/Future east-west connectivity to GSR and SH1
+ Easily access to Rail Station/Public Transport Hub
+ Walkability to Town Centre amenities
+ Proximity promotes allied uses within TC
+ Potential ~ 33,000sm GFA

Town Centre:

+ Primarily upper floor tenancies
+ Fully integrated with Town Centre
+ High walkability to Town Centre amenities
+ High walkability to Rail Station/Public Transit Hub
+ Potential ~8,300 sm GFA

Pitt Street

+ Primarily upper floor tenancies
+ High Walkability to Town Centre amenities
+ Proximity promotes allied uses within TC
+ Potential horizontal capacity for future expansion
+ Potential ~ 3,500sm GFA
– Just walkable to Rail Station/Public Transit Hub through Town Centre

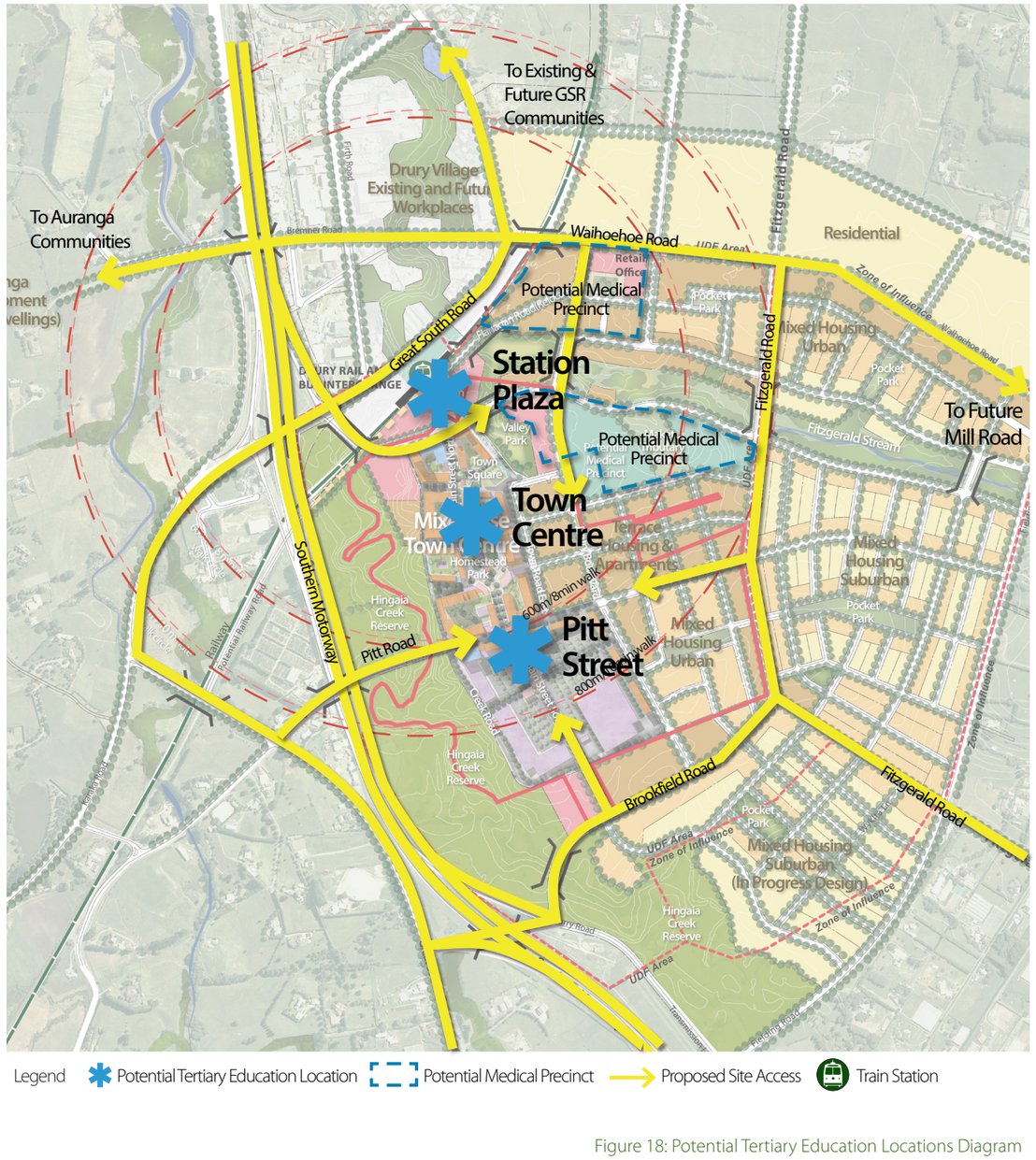


Figure 18: Potential Tertiary Education Locations Diagram

4.3 Land Use & Parcel Plan

The master plan envisages a predominantly mixed use Town Heart with dedicated open spaces, plazas, and pedestrian greenways. Mixed use is also dominant in the Homemaker precinct, and the remainder of the site is Terrace Housing and Apartment with limited Mixed housing Urban.

These land uses are organized by the following design principles and assumptions:

- TOD: Mixed use designations caters to a variety and flexibility of uses that creates and reinforces a vibrant TOD metropolitan centre. Residential designations complement and supports the viability of Mixed use centre but needs to be within a walkable catchment to it and the transportation hub.
- Openspaces: Plazas, parks, creeks, and green lane designations are located within mixed use and residential areas to create significant public realm identity for each precinct.
- Topography: Mixed use designations are located along the existing ridge and homestead summit to incorporate that topography to create the Town Heart. Openspace areas are designated in locations that incorporate existing watercourses. Other openspace areas are in locations of varied topography associated with residential land uses.
- Access, active frontages, and interfaces: All parcel designations have at least one road frontage. And the landuses are organized so that adjacent parcels have complementary interfaces such as mixed use with residential, and residential with openspace.
- Parcel dimensions: To allow appropriate dimensionality for residential and specialty retail sleeving of large format retail within the Town Heart the minimum parcel depth is approx. 58m. For residential parcels, the minimum depth is 50m to allow for varied typologies. Residential sleeving parcels with single-loaded apartments are 30m min.



Figure 19: Land Use Plan

4.3.1 Land Use Metrics & Yields

The land use statistics for Kiwi Lands shown in figure 21 gives an indication of the potential distribution and efficiencies of the land use concept. The Watercare site yields are excluded from the statistics but are listed below:

- Mixed Use Area - 1.35ha
- Open Space - 0.45ha
- Road - 0.3ha
- Total Watercare Development Area - 2.1ha

Refer to Potential Development Program chapter to a summary of potential GFA for specific uses. Refer to Appendix 8.3 for potential GFA and/or resi unit yield specific to each parcel.



Figure 20: Key Diagram of Precincts

Total Kiwi Development Area excluding Hingaia Creek Reserve

Uses	Area (Hectares)	Percentage
Mixed Use Area	19.25	42%
Terrace Housing & Apartment	7.18	15%
Mixed Housing Urban	4.7	10%
Open Space	3.09	7%
Road	11.93	26%
Total Development Area	46.15	100%

Total Kiwi Development Area

Uses	Area (Hectares)	Percentage
Mixed Use Area	19.25	37%
Terrace Housing & Apartment	7.18	14%
Mixed Housing Urban	4.7	9%
Open Space	3.09	6%
Road	11.93	22%
Hingaia Creek	6.52	12%
Total Development Area	52.67	100%

Kiwi Development Area by Precinct excluding Hingaia Creek Reserve

Precinct	Uses	Area (Hectares)	Percentage
Town Heart	Mixed Use Area	7.7	16.8%
	Terrace Housing & Apartment	-	-
	Mixed Housing Urban	-	-
	Open Space	1.28	2.7%
	Road	2.5	5.5%
	Sub Total Development Area	11.48	25%
Homemakers	Mixed Use Area	10.4	22.5%
	Terrace Housing & Apartment	0.55	1.2%
	Mixed Housing Urban	-	-
	Open Space	-	-
	Road	2.43	5.3%
	Sub Total Development Area	13.38	29%
SE Resi Superblock	Mixed Use Area	-	-
	Terrace Housing & Apartment	1.06	2.3%
	Mixed Housing Urban	4.7	10.2%
	Open Space	0.46	1.0%
	Road	3.63	7.8%
	Sub Total Development Area	9.85	21.3%
East Resi	Mixed Use Area	1.1	2.4%
	Terrace Housing & Apartment	5.57	12.0%
	Mixed Housing Urban	-	-
	Open Space	1.35	3.0%
	Road	3.37	7.3%
	Sub Development Area	11.39	24.7%
	Total Development Area	46.1	100%

Figure 21: Land Use Distribution Summary Tables

4.4 Ground Floor Uses

A key characteristic of the master plan is a strong and active ground plane. As such the ground floor uses are:

- Retail focused (specialty retail, F&B, mini majors, anchors, entertainment) within the Town Heart along Main Street.
- Main Street is composed of fine grain retail, cafe, and dining uses to create a lively and active urban retail streetscape.
- A grocery store anchors at the strategic midpoint Main Street between Town Heart and Homemaker precinct. Refer to Retail Strategy chapter for additional information regarding other strategic retail locations.
- Residential uses at ground floor sleeve retail uses where appropriate to ensure active frontages are prioritized.
- Integration of residential lobby access and amenities areas at ground level creates a 'living' community that is safe and used by residents throughout the day and year.
- Squares and plazas provide a diversity of gathering places and acts as a retail, and food and beverage activity anchors, as well as community nodes.
- In the Homemaker precinct some bulky goods retail frontages are not sleeved but screened by softscape due to topographical and undercroft parking access constraints.
- The residential neighbourhoods are envisaged to be street responsive and have front doors and windows facing the street to enable passive surveillance.



Figure 22: Ground Floor Uses Plan



Mixed Use with Ground Floor Retail Example

Legend

- Specialty Retail
- F&B
- Building - Apartment
- Building - Garden Apartment/Town House
- Building - Flex
- Office/Tertiary/Allied Medical
- Retail General
- Community
- Creek Reserve
- Public Park
- Parking
- Residential - Mixed Housing Suburban
- Residential - Mixed Housing Urban
- Residential - Terraced Housing & Apartments
- Underground Parking Entrance
- Loading Area
- Train Station
- Bridge
- Power Line Centreline with Exclusion Zone

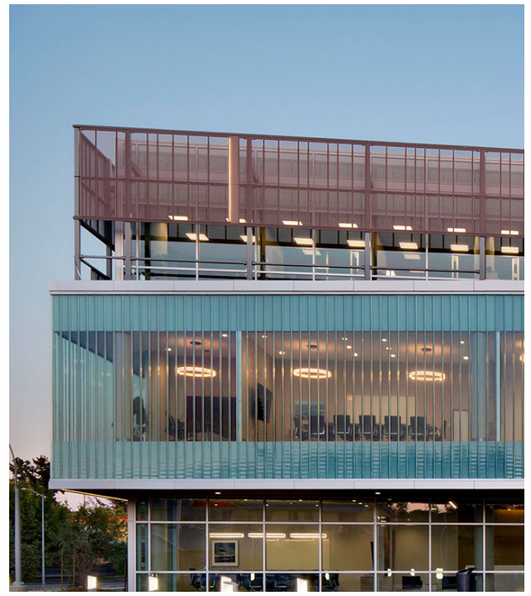
4.5 Typical Upper Floor Uses

Upper floors of multi-level developments are envisaged to be predominantly residential. Yet within the podium levels, there could be non-residential uses that require little to no active frontages but may benefit from easy access and visibility from street level. Primarily envisaged as commercial offices or office-type uses like tertiary education, these upper floor uses are organized in the master plan to reduce adjacent conflicts (such as visual privacy) and to be complementary to the ground floor uses below them. More specific details are:

- Town Heart: upper floor of the podium takes advantage of visibility and access from Main Street. Ideal tenancies are offices as well as first-floor retail at viable and strategic locations only. Refer to Retail Strategy chapter for additional information.
- Station Plaza: capitalizing on the close proximity and high connectivity to the rail/public transport hub, the upper podium floor uses such as offices are encouraged. Hotel uses are a possibility as well as first-floor retail.
- Homemakers Precinct: although this precinct is predominantly single-level, the portion of the site adjacent to Pitt Road could have multi-level developments to capitalize on the close proximity of commercial and community amenities within Town Heart. Ideal tenancies are offices.
- Residential apartment units are oriented to capture views and reduce overlook by offices by their vertical separation. Residences are generally located away from high traffic volume streets to minimize the effects of noise pollution.
- Residential apartment units are also orientated to capture solar exposure while the overall building envelope is configured to ensure adequate solar exposure to the streets and open spaces.
- Roof gardens screen large format retail roofs, provide a green outlook from taller buildings, and assist in passive cooling by reducing urban heat island effect.



Figure 23: Typical Upper Floor Uses Plan



Mixed Use with Upper Level Office Example

Legend

- Specialty Retail
- F&B
- Town Centre Residential/Mixed Use over Retail Ground Floor
- Office/Tertiary/Allied Medical
- Retail General
- Hotel
- Community
- Entertainment
- Roof Garden
- Residential Lobby
- Public Lobby
- Potential Upper/First Floor Retail or Entertainment

4.6 Typical Undercroft Uses & Parking Strategy

With the desire to work with the topography, initial testing has indicated that significant undercroft spaces can be created. These spaces are ideal for uses such as carparking, servicing, storage, and waste management.

Parking

The rationale of the parking strategy ensures that parking does not unduly dominate the urban fabric and public realm. Initial testing indicates that the master plan can be predominantly parked in undercroft spaces with complementary at-grade spaces. If necessarily, above-ground multi-storey car park structures (MSCPs) can be utilized but is undesirable as they take up space within a permissible building envelope that could be of higher use/ value and potentially increase building heights to compensate. Any MSCPs must be enveloped with habitable built form and screened from above by roof gardens.

Residential parking areas should be convenient to private access cores as well as secure and legibly configured and separate from non-residential parking. Tandem/stacked parking should be utilized where appropriate for residential parking only.

Non-residential structure parking spaces should be secure and convenient to public access cores to the street-level.

Vehicular parking access should be carefully located to ensure that entry ways do not disrupt streetscape visual continuity or present hazards to pedestrians.

If required, potential areas for extra carparking are typically under open space areas, Town Square and Station Plaza being examples.

For the Town Heart it is envisaged that the parking is accessed from the peripheral roads which are at lower elevations, thus enabling access to the undercroft spaces while the more valuable frontages dominates and reinforces the Main Street which is at a higher elevation. On average, two levels of undercroft parking is required for the Town Heart and Station Plaza precincts, and one-level within the residential areas. For the Homemaker precinct, one-level undercroft parking is complemented with at-grade parking.

In general, parallel street parking shall be provided where appropriate and is sensitive to building uses, street frontages and interfaces, and road typology.

As parking needs to take account of the greater use of public transport in the future, the parking requirement strategy is generally being car-orientated in the short term (e.g 5.0 spaces per 100sm retail GFA) while being more transit-orientated as the development builds towards Drury Rail Station in the future (e.g. 3.0 spaces per 100sm retail GFA).

With the above assumptions, the overall parking required (excluding general street parking) are as follows:

- Total Kiwi Lands Parking Spaces Required: 7,710
- Total Kiwi Lands Parking Space Provided: 7,825
- Non-Kiwi Lands Parking Spaces Required: 5,090
- Non-Kiwi Lands Parking Spaces Provided: 5,090

The balance of undercroft and at-grade spaces requires further testing based upon uses (i.e. bulky goods retailers, residential typologies), and existing/ proposed topography of each parcel.

Refer to Appendix 8.1 for additional information.

Servicing/Loading & Waste Management Strategy

Generally, the Town Heart will be serviced/loaded from undercroft spaces within each individual parcels. And the loading is accessed from periphery roads to

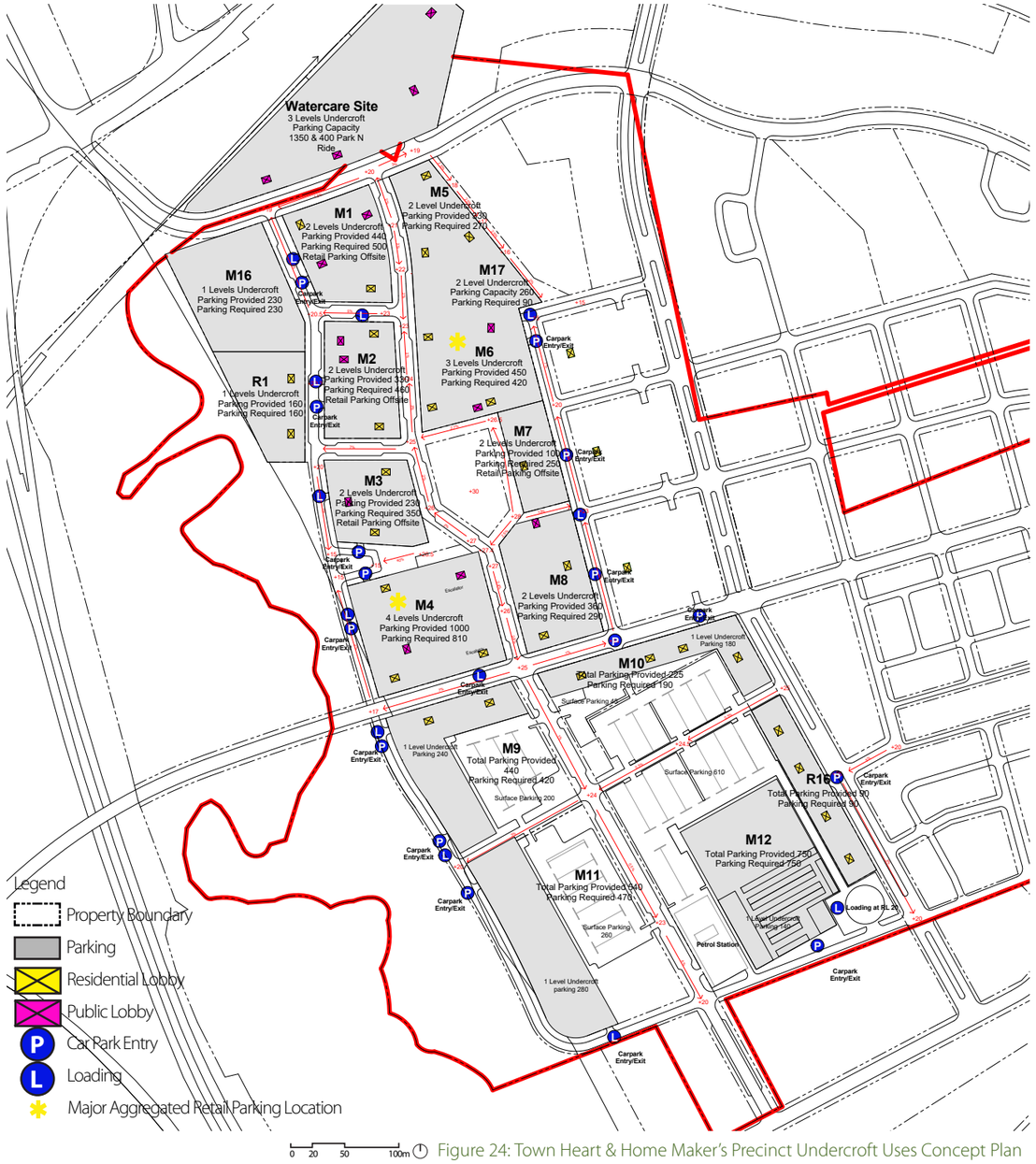


Figure 24: Town Heart & Home Maker's Precinct Undercroft Uses Concept Plan

ensure retail and pedestrian primacy of Main Street and streets running from it. There is an opportunity to provide for a same-grade loading dock (with on-site truck maneuvering area) as retail trading floor for M4 parcel and accessed from Pitt Road.

In other precincts, the intent and rationale for each parcel's servicing/loading is similar to Town Heart but has more opportunity for same-grade loading due to the topography.

Within each parcel, all servicing/loading and waste management facilities and areas shall be aggregated together and shared with all uses where possible to minimize footprint, odours, noise, and visual clutter as well as the number and extent of access penetrations.

Stage 1 Retail Parking

It is anticipated that the development will be more car-orientated in the initial stages due to the location of Drury and lack of walkable residential density. Therefore, interim at-grade/surface parking should be provided within future development parcels that are adjacent to Stage 1 development.

- Total Retail GFA: 72,600 sm
- Total Retail Parking Spaces Required: 2,760
- Total Parking Space Provided: 5,050

These parking yields are based on the following assumptions:

- Bulky Good retail parking ratio 5.0 per 100sm GFA.
- Other retail parking ratio 3.0 per 100sm GFA.
- Average 35sm per parking space.

The parking surplus in early stages is intended to accommodate demand overflow and reconfiguration due to future development stages such as reassignment to residential parking.

Refer to Development Staging chapter for additional information about specific uses.



Figure 25: Stage 1 Interim Surface Parking Diagram

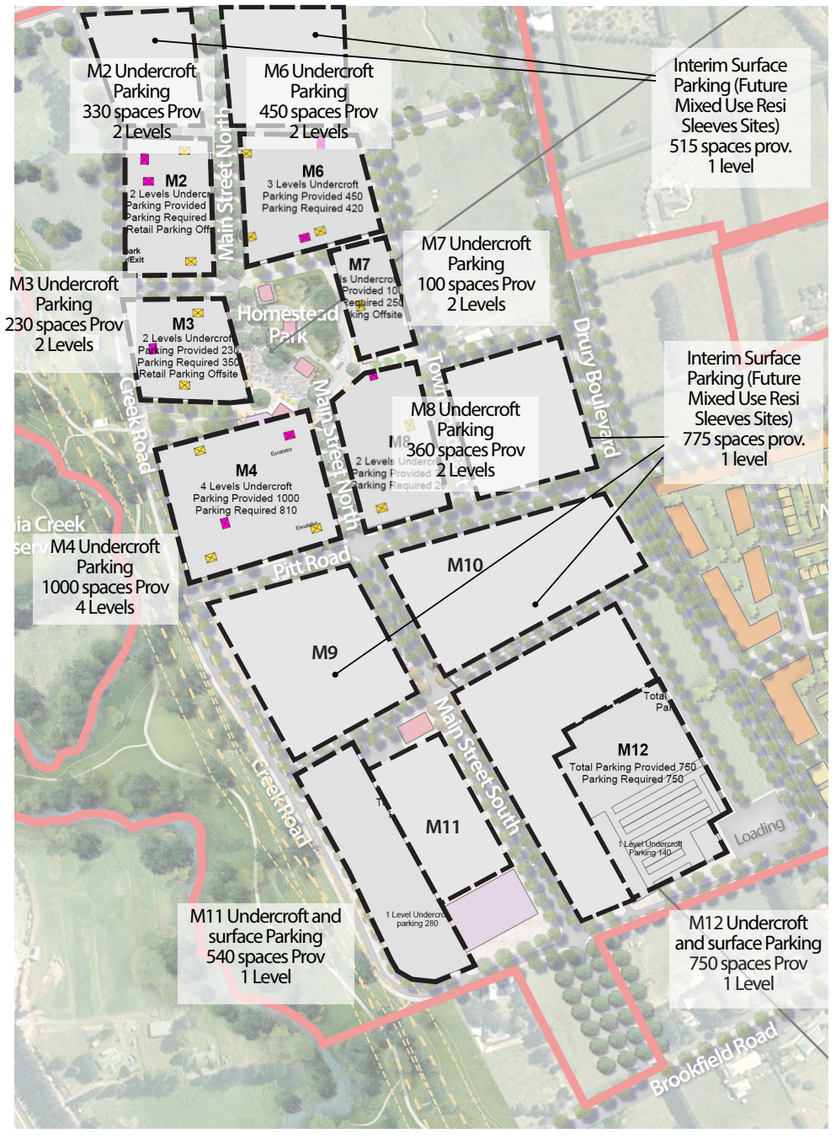


Figure 26: Stage 1 Retail Parking Plan

4.7 Community Uses

One of the defining components of a metropolitan centre are its community uses and the associated civic spaces and buildings. The general principles and aspirations for community uses are:

- Synergistic
- Identity/pastoral
- Digital hub
- Double duty
- Educational
- Multi-age group appeal
- Adaptable
- School hall extension
- Consider digital communities i.e. e-sports.

The master plan earmarks two locations for community/civic buildings. Their GFA, locations, and potential use are as follows, and derived from the perspective of a desirable urban design outcome and should be subject to additional study:

- 7,100sm at Town Square, multi-storeyed and comprise of potential childcare, rec-centre/ wellness, council offices, library, digital hub, small theatre, and limited F&B retail.
- 9,100sm adjacent or near Station Plaza, single storey and comprised of potential swimming pool, childcare, and limited F&B retail.



Childcare on rooftop of community centre and library.

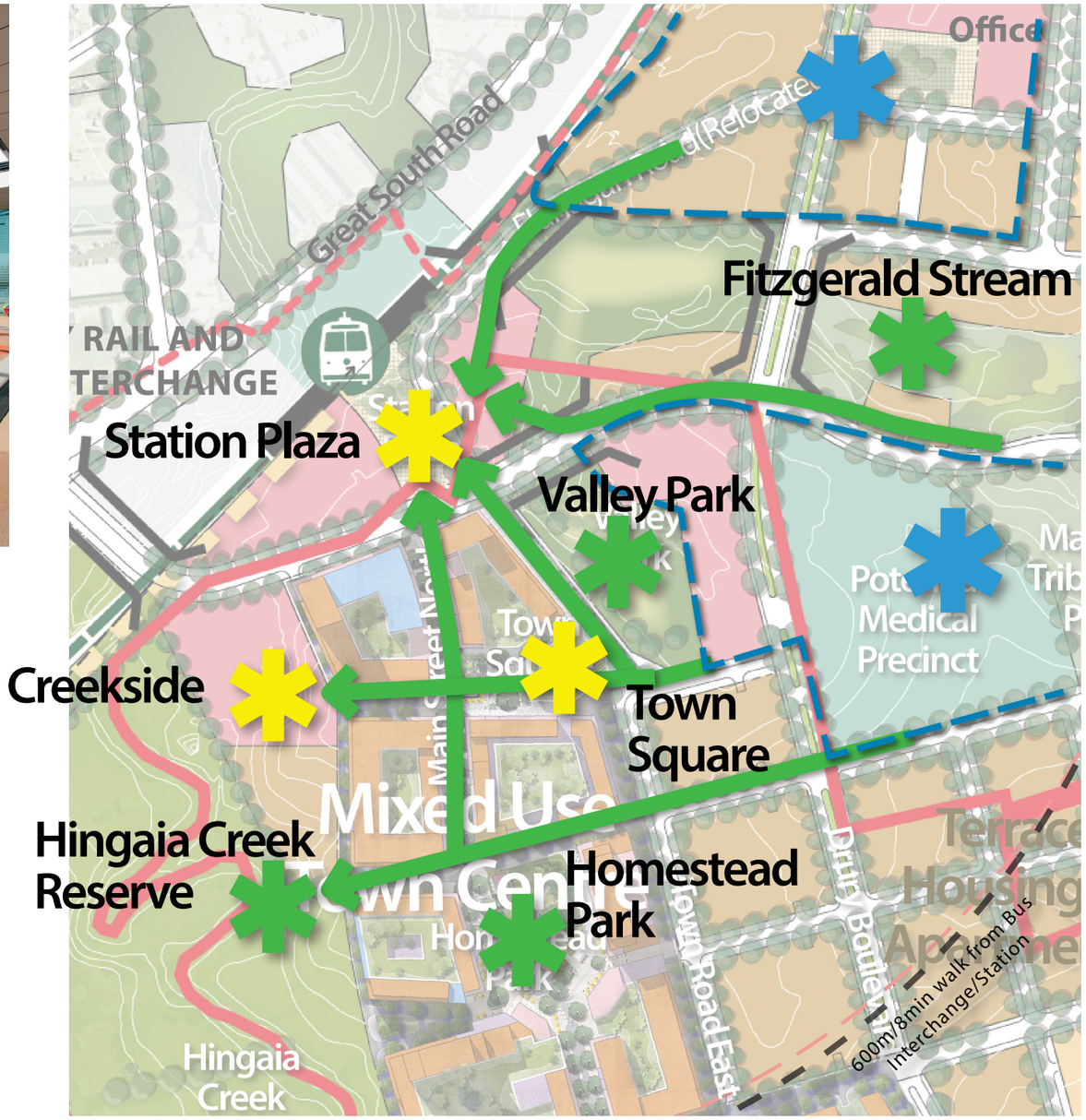


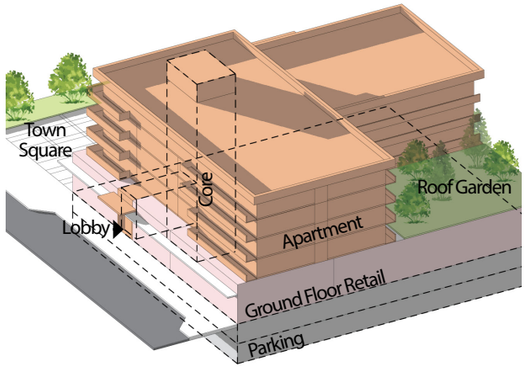
Figure 27: Community Uses Locations & Connections Diagram

4.8 Residential Typologies

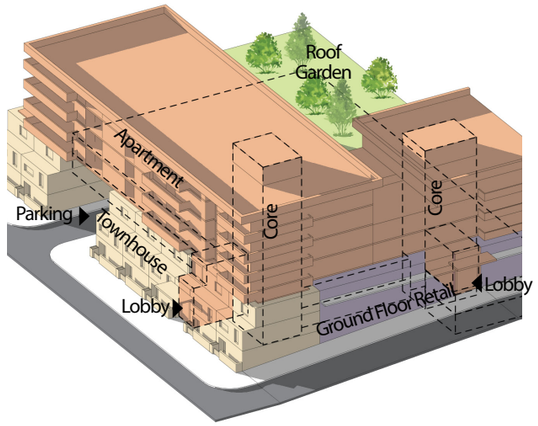
Of the approximate total of 3,430 units within Kiwi lands, 50% of units are distributed in the mixed use Town Heart and 50% of units are distributed outside of the Town Heart within the Terrace Housing and Apartments/Mixed Housing Urban areas.

The typologies that the master plan envisages are:

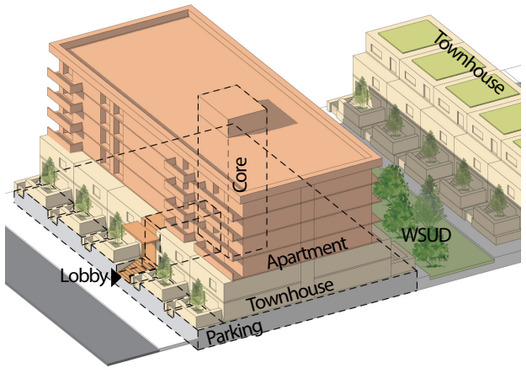
- Multi-storey apartments over retail ground floor within the Town Heart;
- Multi-storey terrace units with individual, street-facing private entries. These units are intended to sleeve ground floor large format retail within the Town Heart to maximize active frontages;
- 4-6 storey apartment buildings with terrace units on the ground floor, and;
- 2-3 storey terrace housing.
- Where possible, dependent on typology, and existing/proposed topography, parking is encouraged to be undercroft with complementary at-grade spaces that are accessed from side locations to ensure maximum residential frontages.



A. Mixed-use Resi Block Example - Resi over Retail

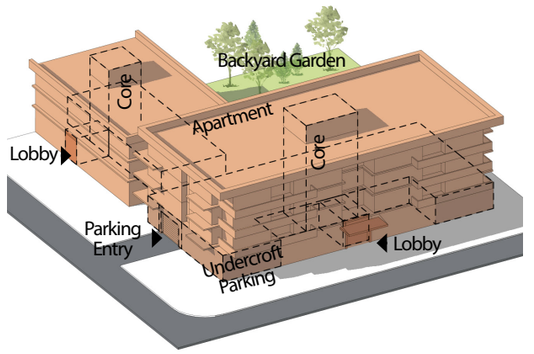


B. Mixed-use Resi Block Example - Resi over/sleeving Retail

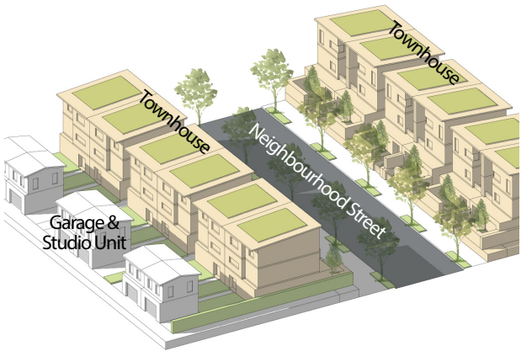


C. Apartment with Townhouse Block Example





D. Apartment Block Example



E. Townhouse Block Example

Figure 28: Residential Typologies Diagram

4.9 Building Heights

A range of building heights are established to meet a number of interrelated objectives that reinforces the urban design principles. These objectives are:

- To ensure adequate solar access adjacent streets and open spaces;
- To shape an appropriate human scale to the urban form of the adjoining public streets and public realm open spaces and character precincts;
- To create vertical landmark elements in visually significant locations, such as at gateways, to aid in placemaking and wayfinding;
- To enable an appropriate mix of densities, built form typologies, and market products, and;
- To ensure there is flexibility when considering the topography as an integral part of the centre's overall built form.

These objectives result in a Master Plan that creates a predominantly mid-rise built form, with heights in the various character precincts as listed below and illustrated by the following diagram:

- Town Heart:
  Generally has a maximum height of 6 storeys.
- Station Plaza:
  Generally has a maximum height of 8 storeys.
- Homemaker Precinct:
  Generally has 4-6 storeys sleeving the 1-2 storey LFR.
- East/Southeast Residential Neighbourhoods:
  Generally has a maximum height of 6 storeys.
- Waihoehoe Precinct:
  Generally has a maximum height of 6 storeys.
- Gateways and Landmarks:
  Up to total of 10-storeys in limited locations within the Town Heart and Station Plaza Precincts.

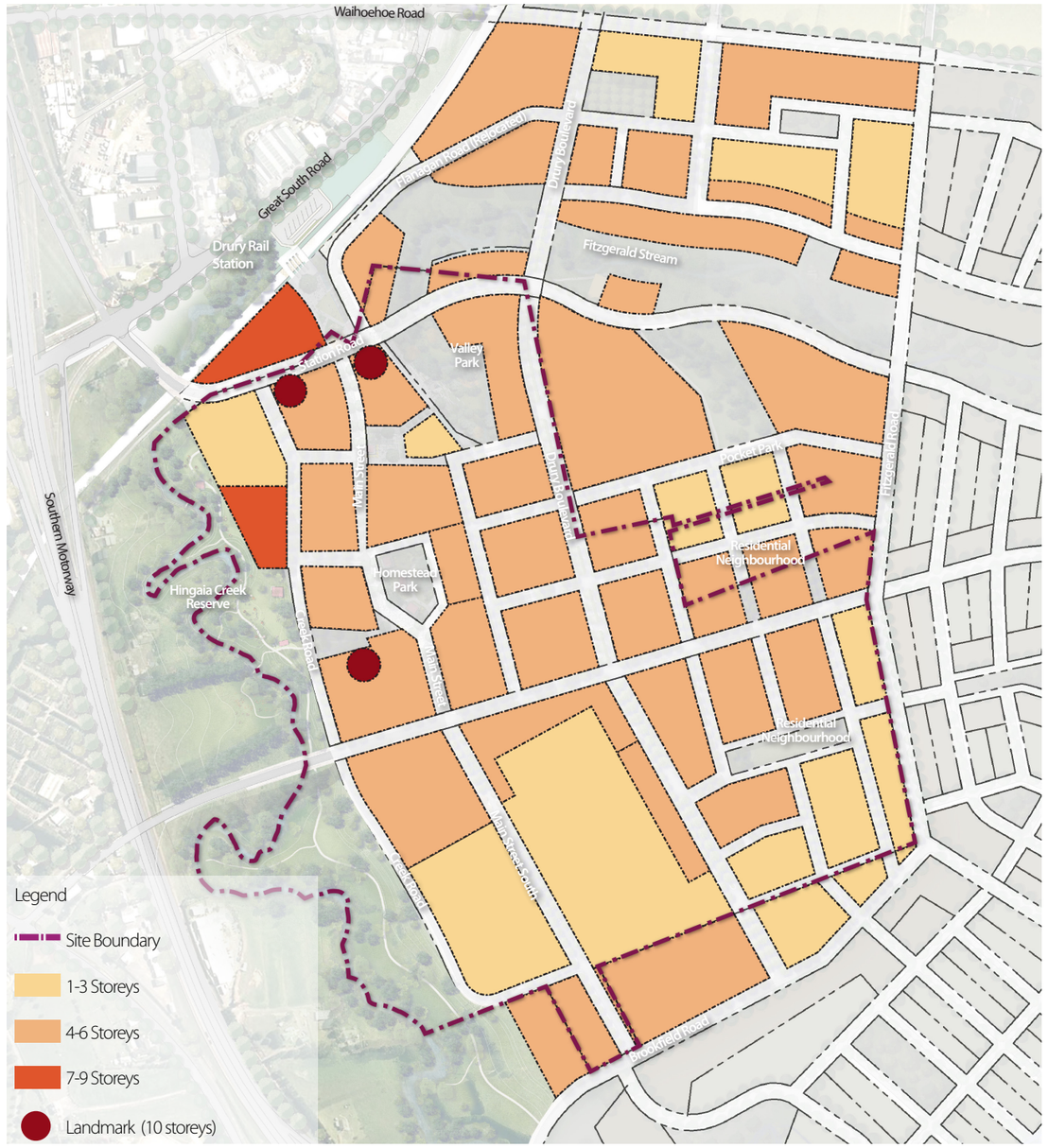


Figure 29: Building Height Plan

4.9.1 Building Envelopes

In addition to the outline building heights, the master plan envisages building envelopes that are defined by:

- Testing solar exposure to openspaces and streets while balancing with per parcel yields to identify potential bulk and location envelopes;
- Overall metropolitan centre urban form analysis to ensure the principles of being land responsiveness and its physical expression, and;
- Building bulk distribution to aid built form placemaking landmarks and centre prominence.
- Creating and reinforcing a street wall definition to the streetscape while balancing appropriate solar exposure to the street and buildings, and parcel yield.
- Enabling resi sleeving of large format retail to achieve the desirable outcome of minimizing blank and inactivated street frontages. Resi sleeving strategies are illustrated in figure 31.

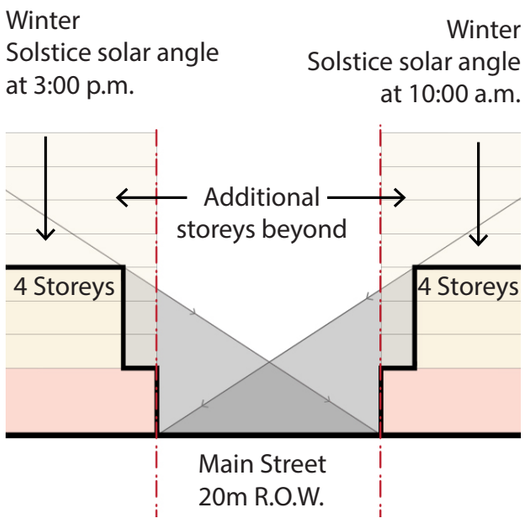
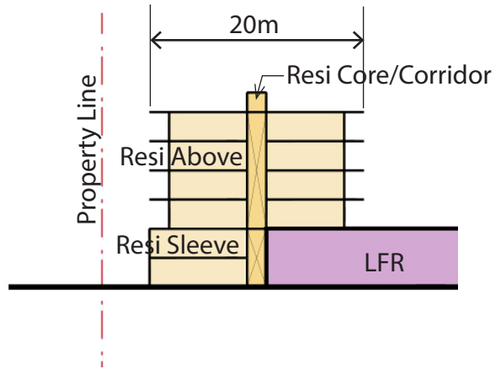


Figure 30: Sun Angle Section Diagram of Builtform to Street



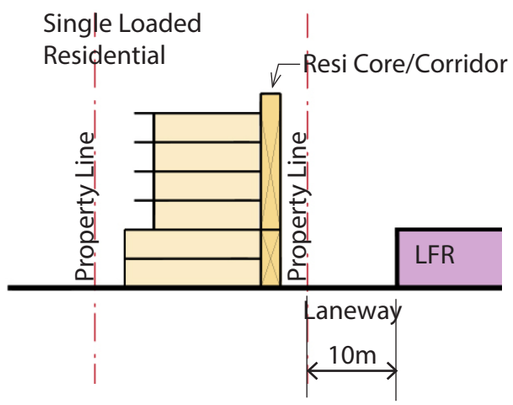


Figure 31: Cross Section of Alternative Resi Sleeving LFR

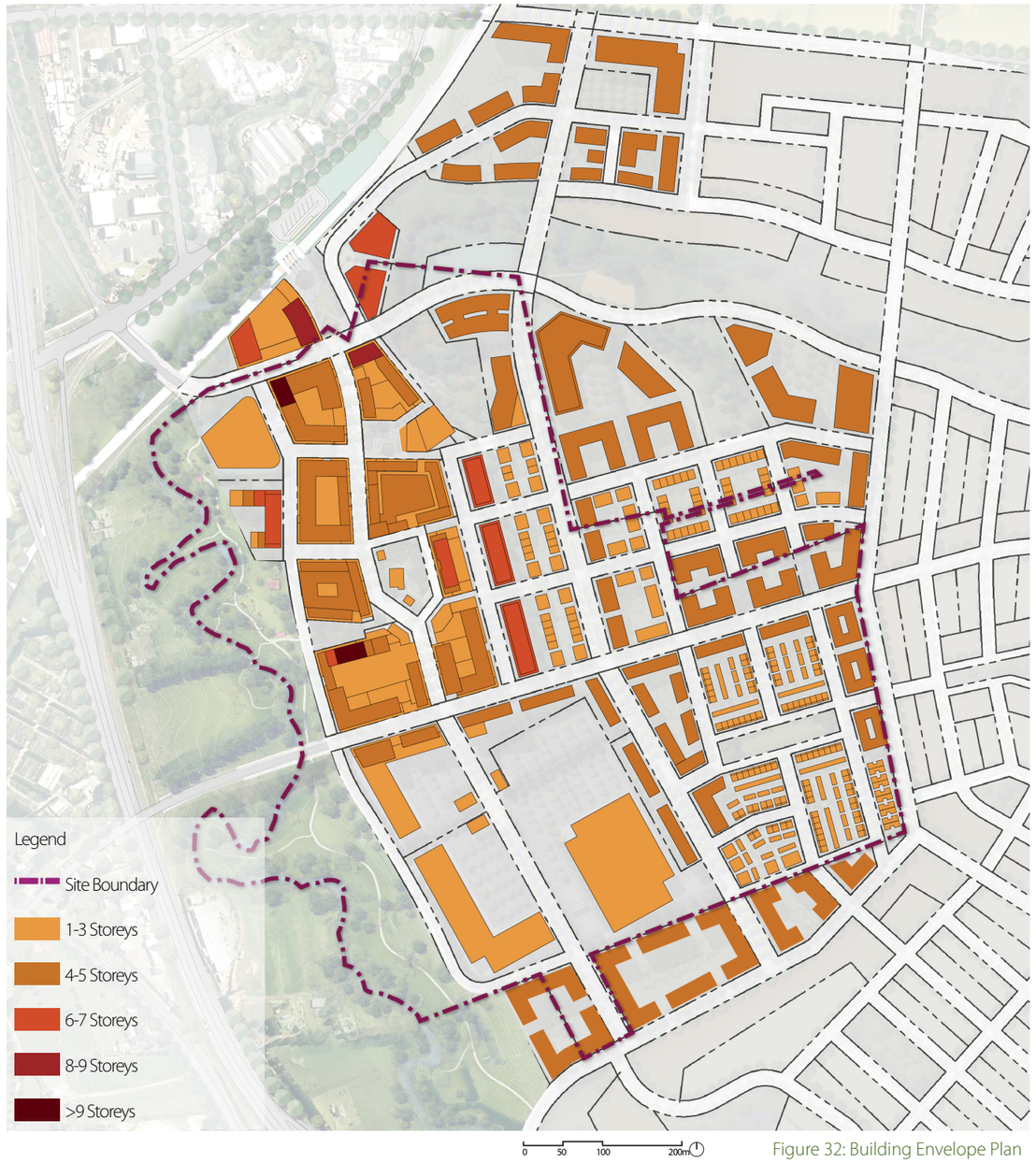


Figure 32: Building Envelope Plan

4.10 Private-Public Interfaces

Street-orientated, active frontages are established to ensure that the ground-level interface between private uses and the public realm is appropriately integrated and reinforces the urban design principles. The characteristics of these frontages are listed below and illustrated by the following diagram:

- Retail Street Frontage: Fine-grain frontages of predominantly specialty retail uses with some F&B, commercial retail, and LFR uses. This frontage is located along Main Street within the Town Heart and Homemaker Precinct.
- F&B Street Frontage: Fine-grain frontages of predominantly F&B uses such as restaurants, pubs, bars and cafes, with street edge outdoor dining areas. This frontage is street and open space orientated and is located around Town Square and Homestead Park within the Town Heart.
- General Commercial Frontage: Fine-grain frontages of commercial office or commercial retail with limited uses for specialty retail and F&B. This frontage is present within the Town Heart and Homemaker Precinct.
- Residential Frontage: Fine-grain frontages of residential uses. This frontage is street and open space orientated and is located in the East and Southeast Neighbourhoods.
- Community Frontage: Active frontages associated with community facilities uses such as library, swimming pools etc., with limited uses for specialty retail and F&B. This frontage is present within the Town Heart.
- Service Frontage: These frontages allows building penetrations necessary for carpark and loading access to parcels. These frontages shall be de-emphasized and/or screened with landscaping where possible and are located in the Town Heart and Homemaker Precinct.
- Residential Lobby Access: Locations of lobbies to access the residential upper floors from street level.
- Parking Access: Locations of vehicular access to carparking to be situated generally away from Retail and F&B street frontages.
- Continuous weather protection canopies shall be provided along high foot traffic areas such as Main Street. Discontinuous weather protection canopies shall also be provided at specific locations such as at individual street front residential entries.



Active Retail & F&B Street Frontage Example



Residential & Parking Frontage Example

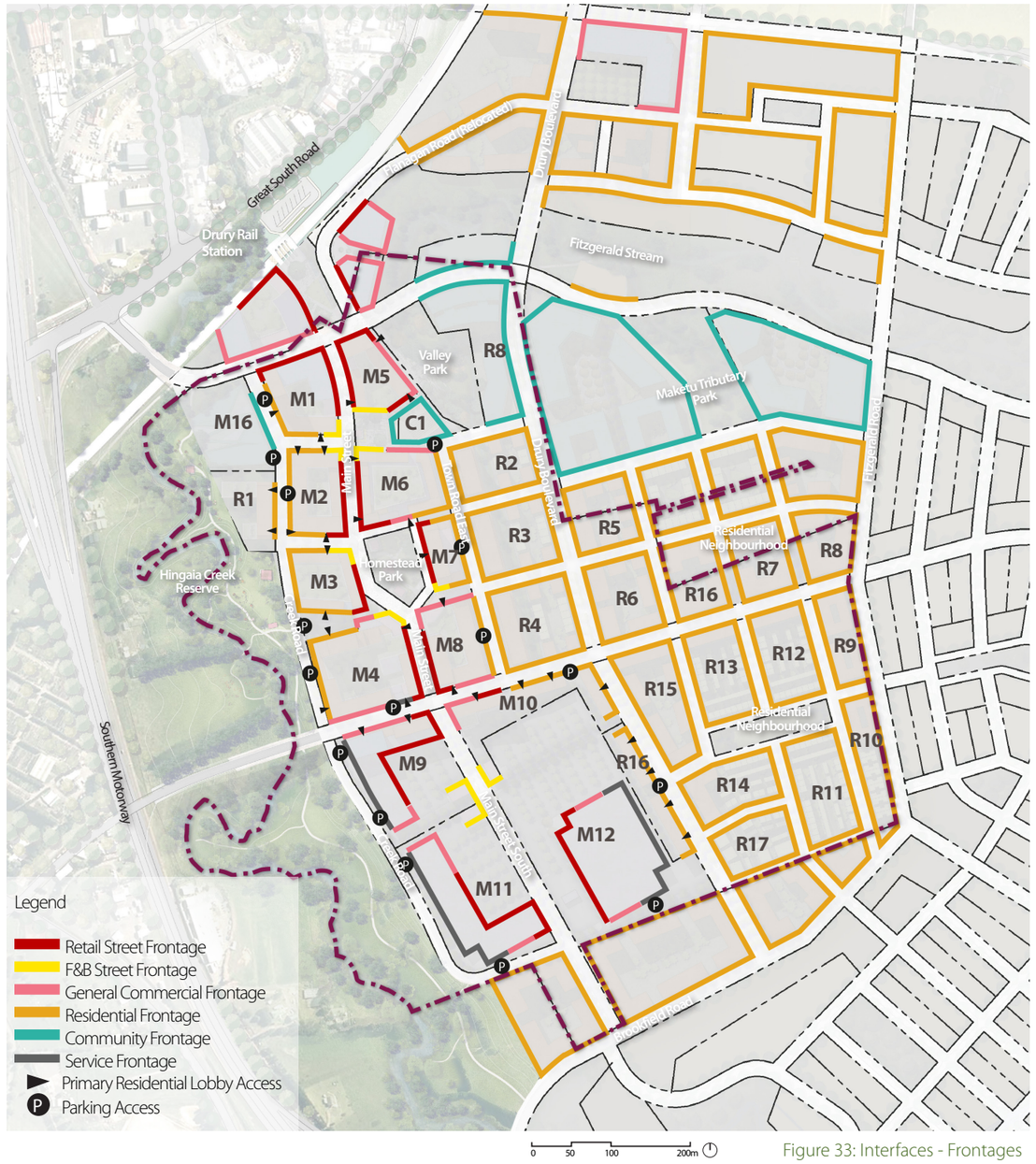


Figure 33: Interfaces - Frontages

4.10.1 Frontage Setbacks

To ensure that each parcel and its yield generated is accurate and which is also integrated with the streetscape and public-private interfaces are considered, built form setbacks are envisage where:

- Retail street frontages are generally assumed to have 0m setback along Main Street to ensure a consistent retail frontage. Side street retail frontages could have 1m setbacks to allow for minor outdoor seating edges.
- F&B Street frontages are generally assumed to have 0-1m setback for outdoor seating and should utilize additional space afforded by adjacent open spaces. Side street frontages could have 1m setbacks to allow for minor outdoor seating edges.
- Residential frontages are generally assumed to have 3-5m setbacks to allow for private landscape frontyards.
- Commercial frontages are generally assumed to have 1m setbacks to allow for landscaping and footpath/verge amenity.
- Community frontages are generally assumed to have 0m setbacks on interfaces with squares and plazas and should utilize these open spaces.
- Service frontages and other frontages are generally assumed to have 1m min setbacks to allow for landscaping and footpath/verge amenity.
- Minor insets as part of facade articulation are not considered as part of setbacks.

The above setbacks are indicative only and subject to further testing of a detailed master plan for the program, streetscape, and street and openspace network.



Example of F&B frontage with open spaces



Example of residential frontage setback



Example of service frontage with landscaped setback

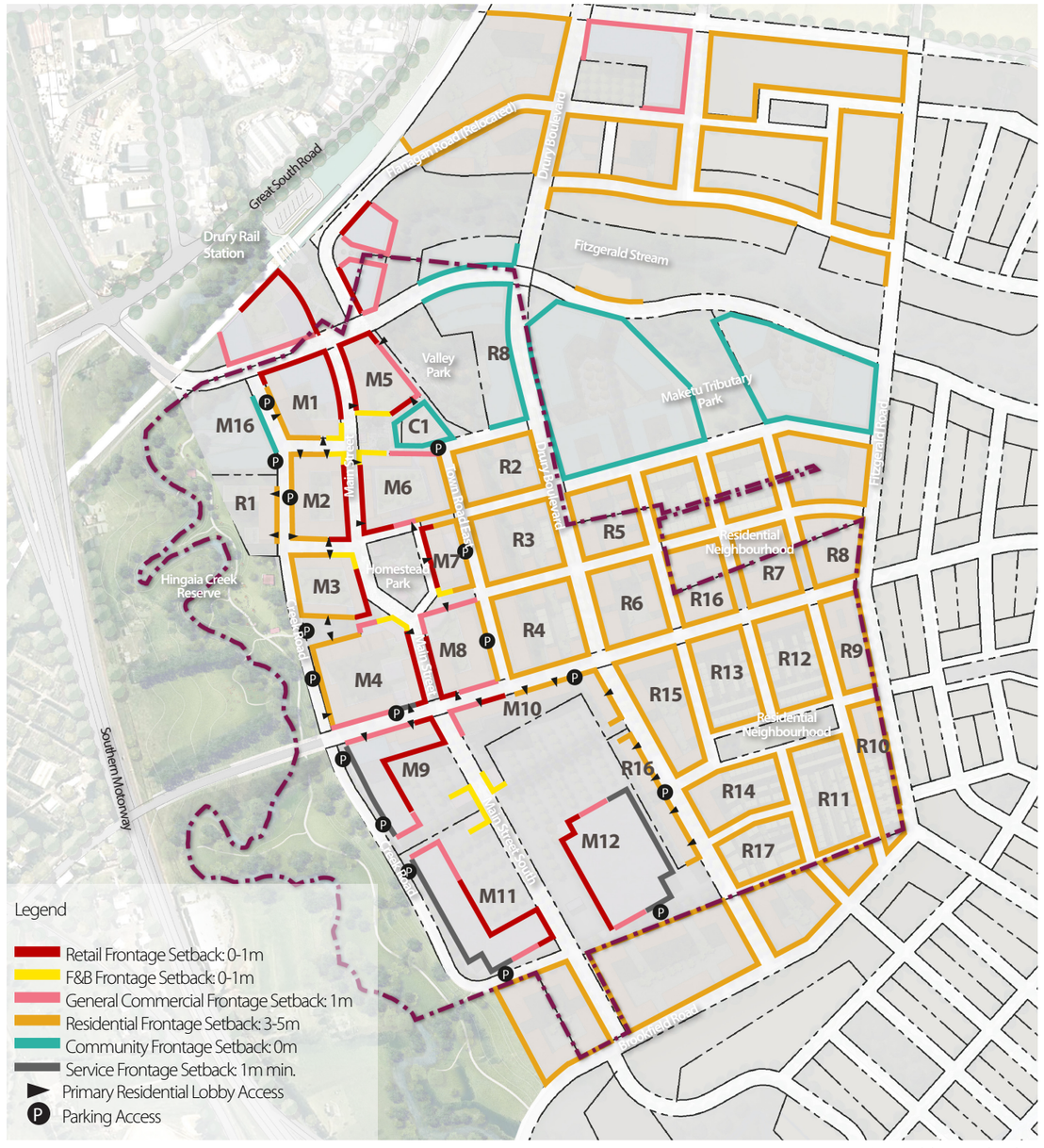


Figure 34: Building Setbacks

4.11 Potential Development Program

A development program has been outlined in order to guide feasibility decisions and define the strategic construction of buildings, public realm, and infrastructure uses be phased properly and based upon market conditions. The following targets, yields and assumptions are indicative only and should be confirmed during the course of future design work and as appropriate to market conditions.

The 2048 development program for the Plan Change Area consists of:

- General Retail: approximately 100,000sm total GFA is organised along a retail main street spine of the Town Heart and a Homemaker Precinct. A majority mix of mini majors, anchors, specialty retail and food and beverage (F&B) is envisaged to be located within the Town Heart while bulky goods retail are located in the Homemaker Precinct. All are envisaged to be sleeved with active uses (i.e. residential or fine-grain retail).
- Commercial Office: approximately 50,000sm total GFA is located predominantly within Station Plaza precinct to capitalize on the transportation hub. Some office space is intended within the Town Heart and in the upper storeys only.
- Community Facilities: approximately 16,000sm total GFA is envisage in two facilities within the Town Heart and in close proximity to Station Plaza to capitalize on the transportation hub. One facility is envisaged on Town Square and is intended for a library, art gallery, childcare, digital hub, performing arts, council offices, and community meeting rooms. Another facility is envisage adjacent to Hingaia Creek in the northwest and is intended as a regional aquatic centre with childcare.
- Residential: approximately 3,000+ households in apartment, terraced, and mixed urban typologies. It is envisioned that each block within the Town Heart will contain a vertical mix of residential apartments over ground floor retail, while the areas east and southeast of the Town Heart will be predominantly residential.
- Medical: a potential 300+ bed regional hospital is envisaged in the area between the Town Heart and Fitzgerald Road. This hospital is anticipated to be staged over time and in concert with the urbanization stages of the broader Drury-Opaheke area.
- Hotel: a potential hotel could be located around Station Plaza to provide rooms for visitors to the region and the hospital.
- Drury Rail Station/Public Transport Hub: located on the Southern Line, this hub is envisioned to be a nexus or interchange of multiple modes of mobility that spatially integrates with the end of Main Street of the Town Heart, routes from the eastern medical precinct and residential neighbourhoods, as well as Great South Road and Drury Village beyond. A park & ride is also envisage as part of this public transport hub.
- Parks and Plazas: approximately 10ha total and with a significant portion dedicated to the Hingaia Creek for ecological restoration and amenity. The balance consists of urban plazas (Town Square, Station Plaza), urban parks (Homestead Park, Valley Park), and local residential neighbourhood parks.
- Parking: the existing topography enables a predominantly undercroft parking strategy with average two-levels within the Town Heart and Station Plaza precincts, and one-level within the residential areas. For the Homemaker precinct, 1-2 level undercroft parking is complemented with at-grade parking.

Assumptions:

- Town Heart residential 100sm GFA per unit; others 110sm GFA per unit; avg 2.75 residents per unit.
- Kiwi lands town house residential 225sm GFA per unit; others 325sm GFA per unit;
- Retail jobs generation are approximate and calculated by avg. 3 jobs per 100sqm GFA.
- Office jobs generation are approximate and are calculated by avg. 4 jobs per 100sqm GFA.
- Medical jobs generation are approximate and are calculated by 4 jobs per bed.
- Hotel avg. unit size is 60sm, 1 bed per room, jobs generation are approximate and are calculated by 1 job per 3 beds.
- Parking requirements per 100sm GFA are: 3.0-5.0 spaces retail, 3.0 spaces office, 2.0 spaces community, and; 1.0 spaces per residential unit.
- Parking requirements for medical is approximate and are calculated by 1 per 1 staff, plus 1.5 per 1 bed.

Kiwi Lands Summary Uses	GFA (sm)	No. Units	Jobs	Residents	Parking Required
Office / Flex	11,900		480		360
Retail Specialty	10,860		325		330
Retail F&B	3,800		115		110
Retail Major	23,500		705		710
Retail Mini Major	19,900		600		650
Retail LFR	12,050		360		600
Bulky Goods	14,050		420		750
Entertainment - Cinema	4,000		120		120
Entertainment - Bowling	2,450		75		80
Residential	355,660	3,190 units	-	8,770	3,190
Community Facilities	16,200		80		320
Medical	24,700		240		490
Total	499,070	3,190 units	3,520	8,770	7,710
Watercare Lands Summary					
Office / Flex	33,410		1,000		1,000
Retail F&B	2,750		85		80
Retail Mini Major	9,645		290		290
Hotel	12,630		70		380
Total	58,435		1,445		1,750
Non-Kiwi Lands Summary					
Office / Flex	12,780		510		380
Retail Specialty	3,000		90		90
Residential	129,400	1,080 units	-	2,970	1,080
Medical	89,200		960		1,780
Total	234,380	1,080 units	1,560	2,970	3,340
GRAND TOTAL	**791,885**	**4,270 units**	**6,525**	**11,740**	**12,800**

Figure 35: Potential Overall Development Program

4.11.1 Retail Brief, Strategy & Staging

Retail Brief

The master plan process assumes the following brief (fig. 36) in order to guide and test design, feasibility, and development staging decisions (inclusive of Watercare site).

The difference between the Dec brief and June yield represents the evolution of the brief. Namely, the reduction in international big-box retailers (Ikea, Decathalon), increase in LFR mini majors, specialty and F&B, and potential upper/first floor retail. The June yield indicates the potential ultimate retail yield; removing some of the upper/first floor retail GFA brings the yield back in alignment with the Dec brief.

While there is comfort in these yields and assumptions, they are indicative only and subject to change during the course of future design work and as appropriate to market conditions.

	Dec Brief (sm)	June 2019 Yield (sm)
Internationals	28,000	14,050
DIY	10,000	-
Supermarket	4,000	4,460
DDS	5,000	19,070
LFR	10,500	19,650
Specialty/Services	2,000	6,050
F&B	1,500	3,120
Cinema	3,500	4,000
Bowling	-	2,430
Stage 1 Total GFA	64,500	72,830
Internationals	-	-
DDS	10,000	-
LFR	10,500	21,920
Specialty/Services	5,000	4,810
F&B	3,500	3,440
Stage 2-3 Total GFA	29,000	30,170
Grand Total GFA	93,500	103,000

Figure 36: Potential Retail Brief and Concept Yield Summary Table

Retail Strategy & Staging

The retail strategy is defined by the organization of three precincts along a retail main street. This strategy enables desirable long term resiliency and optionality while creating distinct retail precinct identities where:

- Town Heart: majority mix of mini majors and anchors that are sleeved by specialty retail and food and beverage (F&B). A and some B grade retail organised along Main Street; some C grade retail in the side streets; strategic positioning of majors/attractors to draw footfall to/from the rail station; and limited upper/first floor retail.
- Homemaker Precinct: car-dependant retail such as bulky goods and large format retail with small quantum of specialty and convenience F&B.
- Station Plaza: additional mini majors and anchors sleeved by specialty and F&B that could be orientated towards the public transportation convenience e.g. urban grocer.

To create these precincts, an overarching staging strategy aims to facilitate the more car-orientated demands of the short term while designing for the expectation of a more balanced private/public transport and walkable future. The anticipated retail stages (and as illustrated by fig. 37) are:

- Stage 1A: Homemaker Precinct linked to bulky goods offerings and expectations of the immediate future.
- Stage 1B: Town Heart precinct linked to the placemaking establishment of Homestead Park and the start of the metropolitan centre's identity.
- Stage 2 & 3: Retail expansion flexibility according to market conditions and rail station commissioning. Development generally occurs on parcels and sleeving sites with interim at-grade parking for Stage 1.

Strategic Retail Location
- Less than 5mins walk to Station
- Adjacent to major community centre and rail station.
- Adjacent to major access gateway.
- Potential TOD residential high density.
- High visibilty from SH1, GSR and railway.
- Ideal for Majors/Anchors, and upper/first floor retail.

Strategic Retail Location
- Less than 5mins walk to Station
- Adjacent to two major community centres
- Mid-point of Town Heart residential high density.
- High visibilty between stages.
- Ideal for Majors/Anchors, upper/first floor retail, and upper/first floor Cinema

Strategic Retail Location
- Due to existing topography and proposed roading, a potential 4-level undercroft carpark provides significant retail parking capacity.
- Adjacent to Homemaker Precinct and key east-west Pitt Road.
- Potential superdock loading that is at same-grade as retail trading floor.
- Ideal for Majors/Anchors such as supermarket, potential upper/first floor department store.

Potential Bulky Goods Locations
- These parcels are sized to allow for additional bulky goods retailers should future market conditions allow.
- Ideal for IKEA, Decathlon, Bunnings, Costco etc.

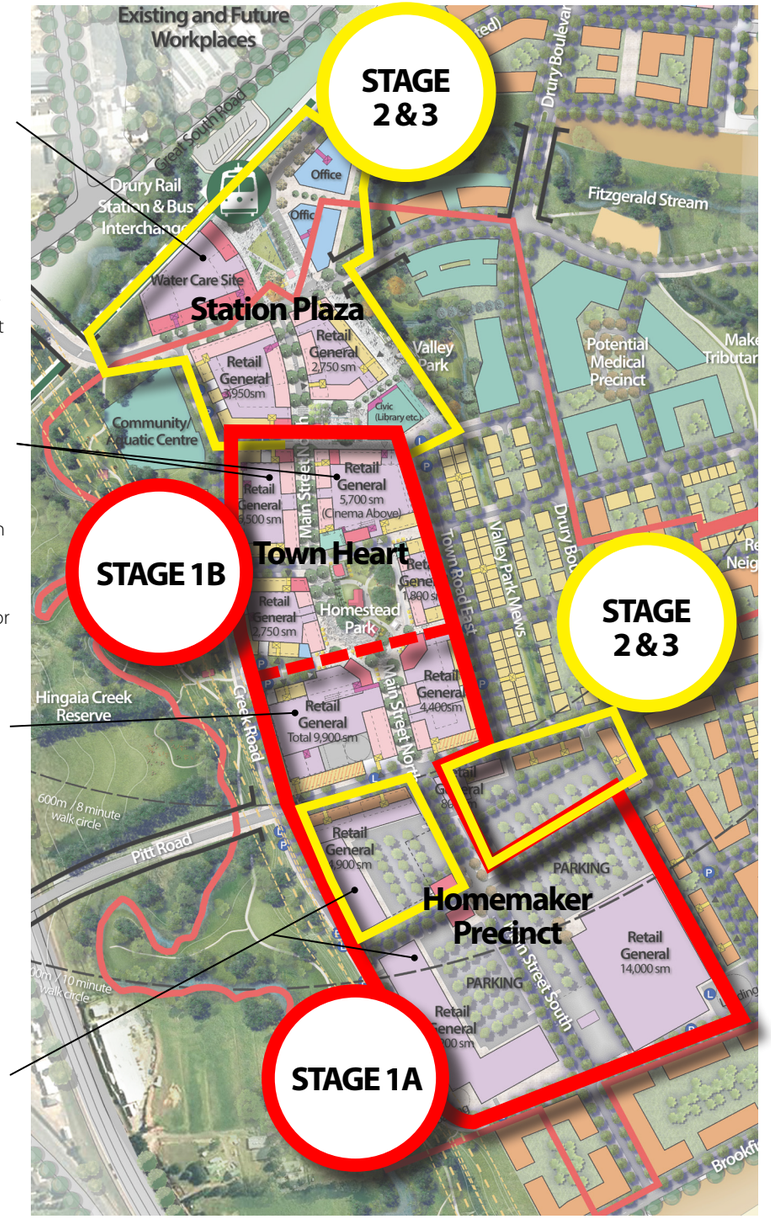


Figure 37: Retail Staging Diagram

4.11.2 Potential Development Staging

There are three stages proposed::

- Stage 1A/1B - initial road connections into the Town Heart and Homemaker precinct parcels to initiate local and large format retail, interim at-grade parking, as well as a small (or larger) number of residential dwellings. Establishment of Homestead Park and the start of Main Street. Minor creek restoration in Hingaia Creek occurs with temporary pedestrian and cycle links.
- Stage 2 - development starts to build towards Drury Rail Station while reinforcing Stage One. Further road connections for growth of non-residential uses to support the increased number of residential dwellings both locally and beyond. Other public spaces such as Town Square, Valley Park and Hingaia Creek are embellished.
- Stage Three - full build out with development around the Drury Rail Station. Station Plaza is materialized while Valley Park and Fitzgerald Stream are embellished as development extends north to the station.

The staging for the major site access are as follows:

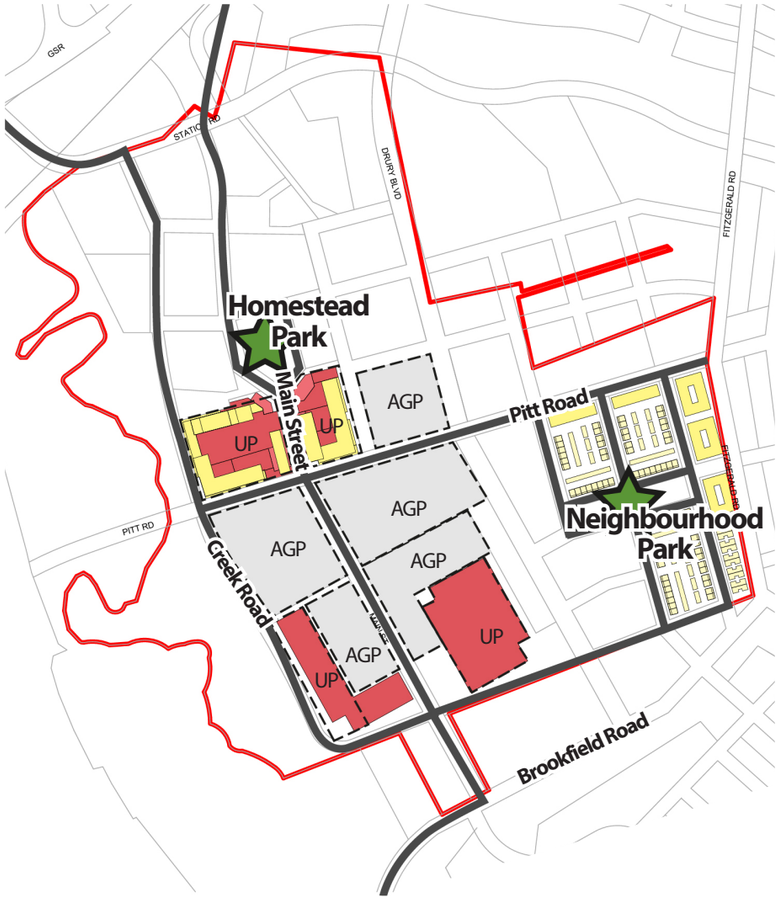
- Stage One - Station Rd overpass connection to SH1 and Great South Rd. And Drury Boulevard connection to Waihoehoe.
- Stage One/Two - Brookfield-Quarry Rd connection to SH1.
- Stage Three - Pitt Rd Overpass.

In the event that the rail station is commissioned earlier, there could be a small retail component in the Station Plaza precinct in conjunction with the Park and Ride. Then the development staging around the commissioned rail station will be dictated by market demand and conditions.

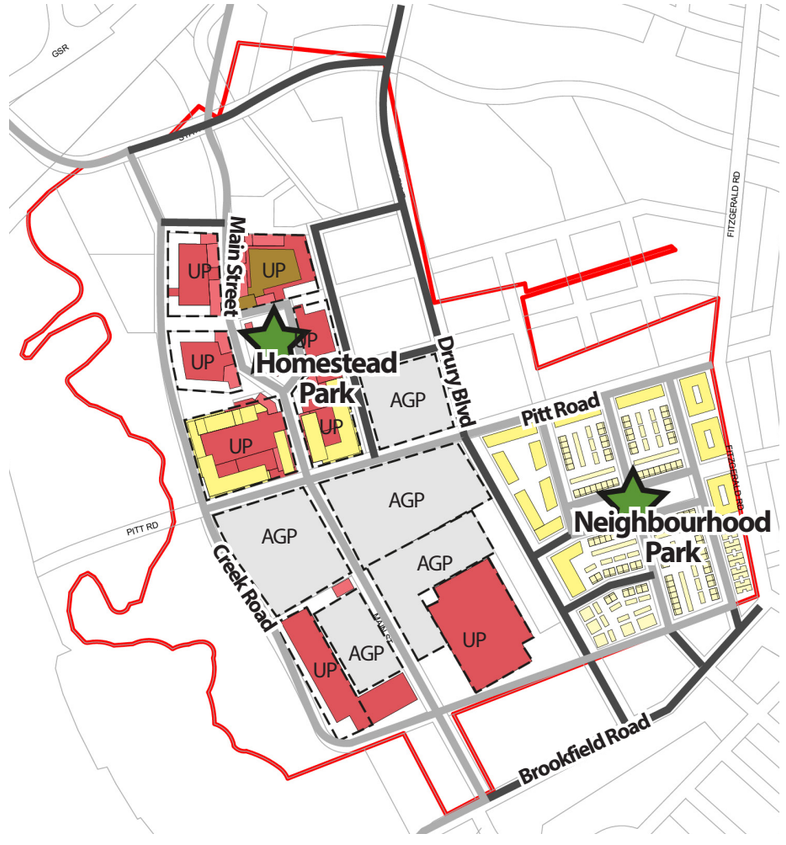
The timeframes noted in the diagrams are indicative only. Flexibility is intended and enables concurrent development of different sectors of the site during each stage if market conditions are amiable.

Refer to Appendix 8.2 for Staging Summary Program.

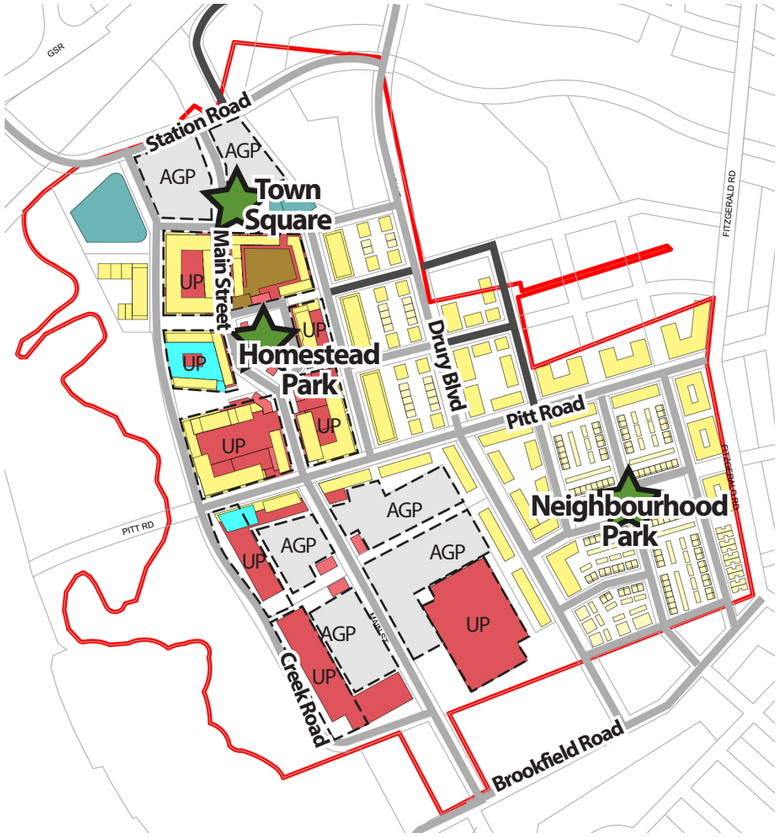
STAGE 1A (starting 2022, operational 2023/24)



STAGE 1B (starting 2022-2023, operational 2024/25)
Residential integrated with Town Heart retail could occur during this stage and Stage 2.



STAGE 2 (starting 2023-2025)
Residential integrated with Town Heart retail could occur during this stage and earlier in Stage 1B.



STAGE 3 (starting 2024-2030)



Legend

- Residential
- Retail
- Office
- Community
- Hotel
- Road to be Built
- Road been Built
- Major Open Spaces
- UP = Undercroft Parking
- AGP = At Grade Parking

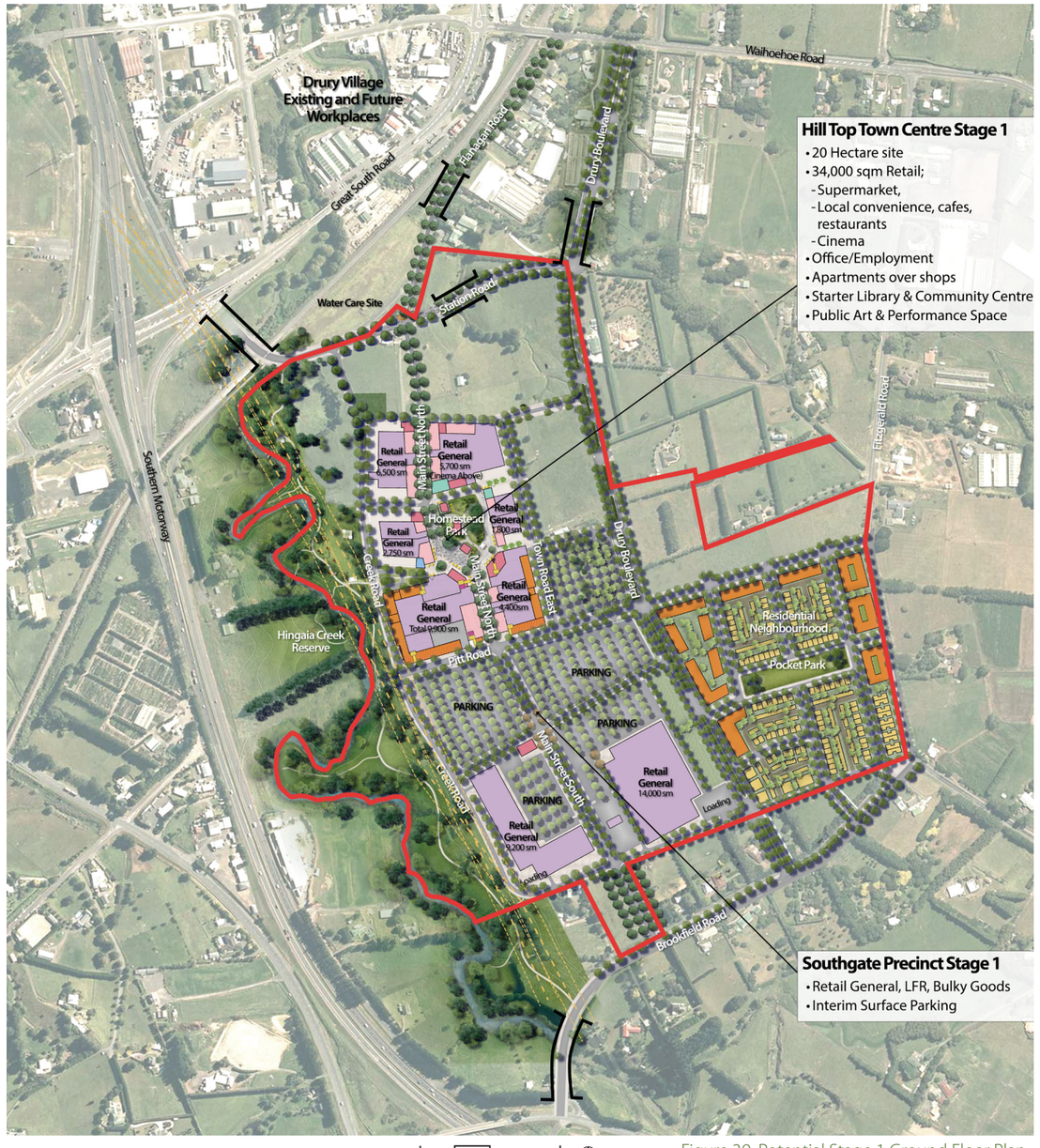
* Assumes 1 Level of Residential Parking for Each Parcel

Figure 38: Potential Development Staging Diagrams

4.11.3 Potential Stage One - Illustrative Plan

The following illustrative plan intends to convey a sense of what Stage One could look like. It incorporates initial road connections into the Town Heart sites, initial local and large format retail, interim at-grade parking, as well as a small number of residential dwellings in the southeast.

Creating a distinctive and unique sense of place from day one is critical, and the establishment of Homestead Park and its retail precinct with the start of Main Street is a core component of this. Other placemaking strategies for Stage One are the start of creek restoration in Hingaia Creek, and temporary pedestrian and cycle links through the pastoral setting , to natural features, and viewpoints.



Legend

- Specialty Retail
- F&B
- Building - Apartment
- Building - Garden Apartment/Town House
- Building - Flex
- Retail General
- Creek Reserve
- Public Park
- Parking
- Train Station
- Bridge
- Power Line Centreline with Exclusion Zone

Figure 39: Potential Stage 1 Ground Floor Plan

4.12 Architectural Character & Articulation

Architectural Character

The architectural character of the buildings should convey a modern/contemporary/vernacular New Zealand expression yet it is an opportunity to create a Drury-specific style, where:

- The use of local materials is encouraged;
- Materials should be of high quality and low maintenance;
- The use of screens, shading devices, and roof overhangs complements fenestration patterns;
- Architectural facades should respond in a manner that enriches the street and open space character.
- Transparency is maximized where possible to enable daylight exposure and distant views from the interior;
- Architectural styles are diverse yet cohesive to define the specific character precincts, and;
- Reference iwi and historic architectural expressions where appropriate.

Building Articulation

To convey a diverse yet cohesive architectural character, the built forms should utilize architectural design elements such as:

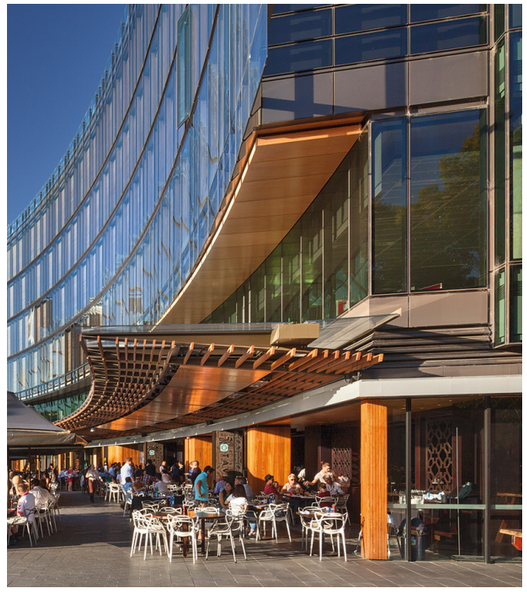
- Podiums with setbacks to the higher forms to transition the bulk between the street and overall building to aid in creating a human scale.
- Building Height Modulation to be integrated with setbacks as a strategy to reduce bulk, allow greater sun exposure and enable roof-top uses.
- Building Length Modulation such as projections and insets to reduce and break down the bulk length of a building.
- Street-level setbacks to enable a zone for front yards, balcony overhangs, entry stoops and weather-protection canopies as well as outdoor-dining areas.
- Projections and insets enables finer-grain architectural articulations at street-level as well as upper levels to highlight entries, balconies and facade treatments.
- Overhead weather protection canopies should be provided over the ground-level perimeter of buildings for the climatic comfort of pedestrians.
- Allow passive and active sun shading components for the climatic comfort of pedestrians, residents and visitors.
- Residential lobby entrances utilizes a combination of overhead weather protection canopies, projections or insets so that they are legible. Within the Town Heart these lobbies should not dominate the retail and F&B frontages. There should also be a hierarchy of lobby entrance articulation to convey the difference between a primary and a secondary entrance.
- Providing corner architectural articulation at key corners to convey the sense of a location-specific identity marker or a gateway.
- Screen vehicle entrances or blank walls with vegetation and/or artistic components.
- Locating vehicle entrances within secondary edges.



Example of community building character



Example of residential character



Example of retail character



Example of commercial building character

4.12.1 Cultural Value Assessment & Place Naming

As part of the master planning process, and through a cultural value assessment (CVA) process in association with B&A Planners, local iwi groups were engaged to identify and recommend cultural themes of importance for the master plan to incorporate. The following figure is a summary of the key themes and recommendations of each iwi group's CVA. This table is not to be taken as complete summary but rather as an overview and recommendations should also be taken in consideration with other topics and recommendations suggested at huis.

The recommendations of the CVAs are generally accommodated in the master plan and specific responses are noted in the table.

Place and Street Naming

The place and street names used in the master plan and this report are intended to be generic placeholders and only for the purposes of design and planning orientation and reference. Final names shall be determined and assigned in due course and incorporate culturally and historically valued names that is specific to the site to further enrich the sense of place.

In addition, the ownership transfer agreement stipulates requirement for vendor family recognition, whereby:

"In the event that Lynton develops the Property in the future, and such development will result in the creation of new roads, reserves or squares, Lynton or any person or entity to whom it sells the Property will endeavour to procure that a road/s, reserve/s or square/s within the development is/are named after the Flanagan and Holmes families, the former World War II Army Camp (farm name Camp Hill) and ancient Maori trail in recognition of the historic ownership/ occupation of the Property."

For additional information, refer to the sale and purchase agreement for the Holmes land.

Matrix of Reoccurring Themes and Recommendation in Mana Whenua CVA's (CIVITAS Masterplan Responses 15 April 2019)

Recommendations	Ngati Te Ata	Ngai Tai Ki Tamaki	Ngati Tamaoho Trust	Te Akitai	CIVITAS Masterplan Responses
Protection of streams/wetlands/swamps	✓	✓	✓		Easy to accommodate as we have already allocated the zones and the overall MP to respects, and celebrates, this principle.
Historical naming and landmarks	✓	✓		✓	Easy to accommodate as our current names are only working names to help with orientation and convey proposed land use character during design discussions.
20m riparian setback	✓		✓		Already accommodated. We've assumed min 25m setback from centreline of streams to building edge so there's enough dimension in between for pedestrian cycle paths and other public realm amenities, ecological restoration, as well as room to adjust parcel boundaries before finalization.
Park edge road design	✓		✓		Already accommodated in majority of the MP. In the limited location where this edge condition doesn't occur we've assigned uses like the Swimming pool or Valley park promenade so that it still enables the overarching outcome of being publicly accessible amenity.
Specialist reports to be submitted including geotech, archeology, water quality, ground water, archeology and watercourse, etc.	✓	✓		✓	Easy to accommodate as we are already aligned with T&T's survey and geotech due diligence. Distribution of specialists' reports to iwi is at Kiwi's discretion.
"Treatment Train" approach for dealing with stormwater	✓		✓		The masterplan assumes utilization of at-source devices such as raingardens, bioretention swales etc. as well as downstream stormwater management measures such as green outfalls and other non-structural management approaches as part of a site-wide stormwater treatment strategy. Specific treatment train elements are subject to further analysis and design during schematic design stage.
Undertake tree surveys	✓				Easy to accommodate but consideration should be given to avoid blanket protection at the expense of the opportunity to create healthier and more plantings. And we're already accommodating notable trees for Homestead Park.
15-year tree planting programme	✓				Easy to accommodate.
The use of native trees/plants	✓	✓	✓	✓	Easy to accommodate.
6-star level from NZ Green Building Council 'Homestar' for new housing	✓				Easy to accommodate. The masterplan assumes sustainability of housing design. Design and compliance of specific housing typologies are subject to further analysis and design during schematic design stage.
Te Aranga Maori Design Principles	✓		✓	✓	Already accommodated. The masterplan was designed according to best-practice principles which are aligned with Te Aranga principles.
Request copies of consent conditions and monitoring records	✓	✓		✓	n/a
Consideration of new/additional redoubt post markers acknowledging iwi mana whenua		✓			Easy to accommodate. The masterplan welcomes cultural and artistic community markers as a core component of civic and public realm placemaking.
Roof water for reuse and groundwater recharge			✓		Easy to accommodate. The masterplan assumes sustainability of waters. Design and compliance of 3-waters systems are subject to further analysis and design during schematic design stage.
MOU to be prepared and adopted			✓		n/a
Incorporation of iwi design				✓	Easy to accommodate. The masterplan welcomes cultural and artistic community markers as a core component of civic and public realm placemaking.

4.13 Overall Built Form Analysis

The design parameters as described by the preceding chapters generates an overall urban form that is appropriate for Drury, and that is low-rise within the residential areas and mid-rise within the Town Heart and around the station. The low-rise built form within residential areas are appropriate for their residential park-like character and for which is likely to be consistent with the residential character of the broader context. The mid-rise built forms is appropriate to Town Heart and Station Plaza character precincts owning to their higher density TOD purpose and gives visual prominence and identity from SH1.



Figure 40: 3D Massing View from SH1 Looking South



Figure 41: 3D Massing View from South Looking North



Figure 42: 3D Massing View from SH1 Looking Northeast



Figure 43: 3D Massing View from South Looking at Main Street

4.13.1 Solar Analysis

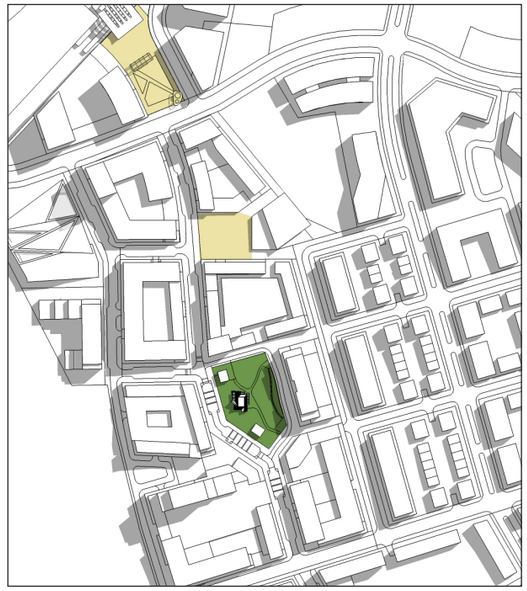
In general, the master plan performs well in terms of:

- Good solar exposure even during winter solstice to main public parks and plazas.
- Good solar exposure even during winter solstice to main street retail.
- Good solar exposure even during winter solstice to courtyards, mews and private yards.

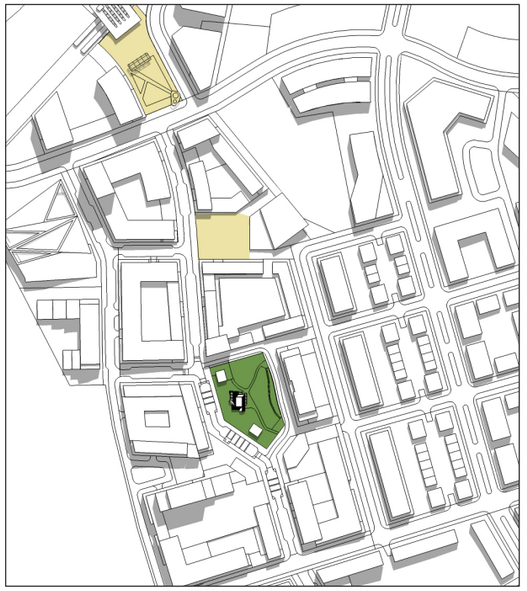
Additional solar testing should be undertaken on a per parcel basis during detailed design development stages. This testing should also inform the opportunities to adopt passive solar design principles in individual buildings as part of a integrated sustainability strategy.

This additional solar testing should also be conducted for public open spaces.

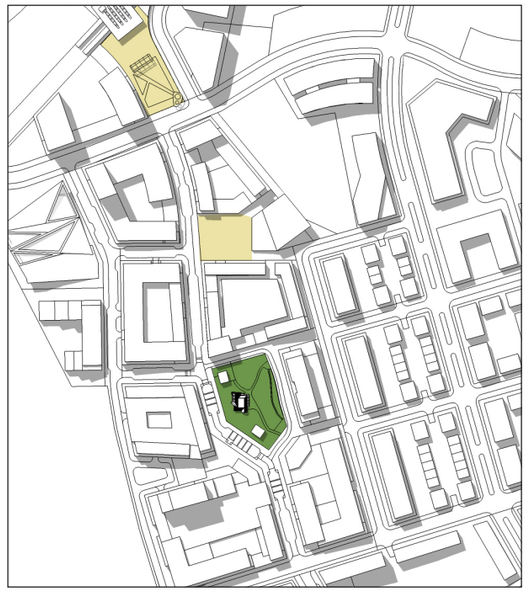
Refer to Supporting Studies (GWTS chapter) for additional information.



Spring / Autumn Equinox at 10am



Spring / Autumn Equinox at 12pm

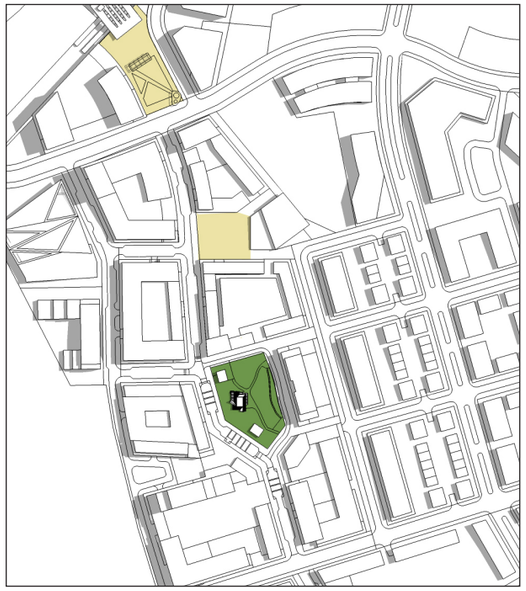


Spring / Autumn Equinox at 2pm

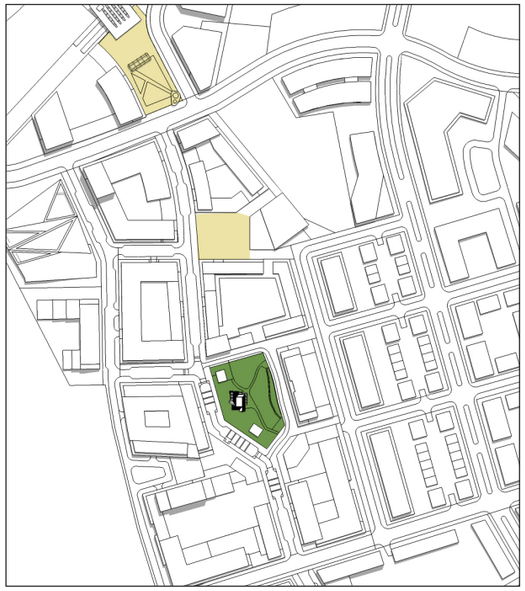


Spring / Autumn Equinox at 4pm

Figure 44: Solar Analysis Diagram



Summer Solstice at 10am



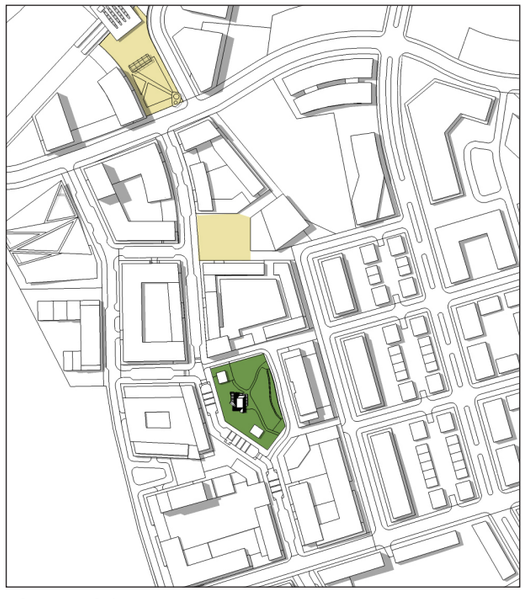
Summer Solstice at 12pm



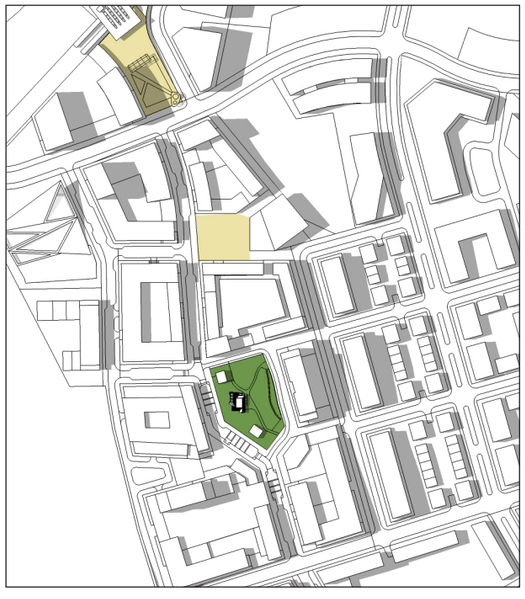
Winter Solstice at 10am



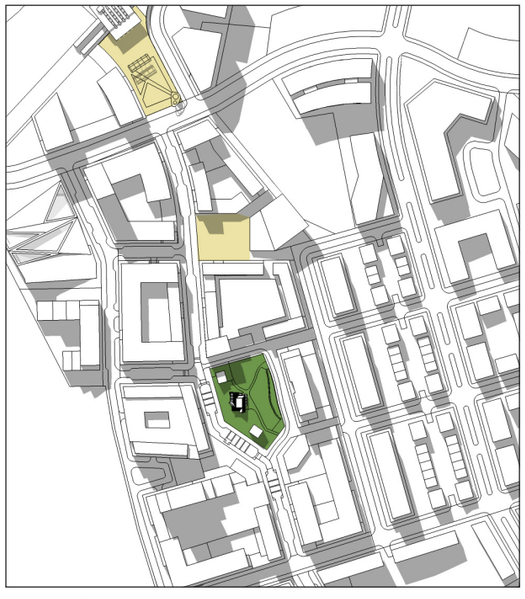
Winter Solstice at 12pm



Summer Solstice at 2pm



Summer Solstice at 4pm



Winter Solstice at 2pm



Winter Solstice at 4pm

4.13.2 Wind Analysis

With an agreeable climate overall, the main climatic consideration for the master plan are the wind effects. During the winter months (June-August) most of the coldest winds are from the south and southwest at an average speed of approximately 6-8 m/s and as high as 16m/s. During summer (December-February), the favorable cooler winds comes from southwest and north-northwest at an average speed of approximately 6 m/s. During autumn (March-May), most of the winds comes from the southwest and some from North. During spring (September-November), most of the winds comes from the southwest.

GWTS consultants derived the above data and their recommendations are as follows, and for which have been incorporated into the master plan:

- Station Plaza is affected by all the simulated wind directions, it is recommended that vegetation or the use of wind ameliorating landscape/artwork features be implemented in the areas shown in the following diagrams, where it is practically possible. It is also recommended that the garden area be used to maximise the use of vegetation in the Square.
- It is recommended that large trees be introduced along the median strip on Drury Boulevard to disrupt channelling wind flows.
- It is recommended that large trees be introduced along the southern side of the Fitzgerald Stream along Station Road.
- It is recommended that trees be introduced to reduce the likelihood of channelling through the alleyway to the Town Square.
- It is recommended that the areas highlighted in green within the 'Pocket Parks' densely populated with vegetation so as to effectively mitigate the dominant channelling wind flows through the area.
- It is recommended that the areas highlighted in green in Figure 45 and 46 be maximised for high density vegetation to ameliorate northerly and north-easterly winds flowing into the Station Plaza and Station Road.
- It is recommended that large trees be introduced in along the northern and southern boundaries of the Drury Town Centre, as illustrated in the following diagrams to ameliorate the stronger northerly, north-easterly and south-westerly winds away from the streetscape and public realm areas.

It should be noted that the version of the master plan that GWTS test is an earlier iteration yet the overall master plan structure that generates the wind effects outcomes are still applicable and have not been materially changed.

Additional testing should be undertaken on a per parcel basis during detailed design development stages.

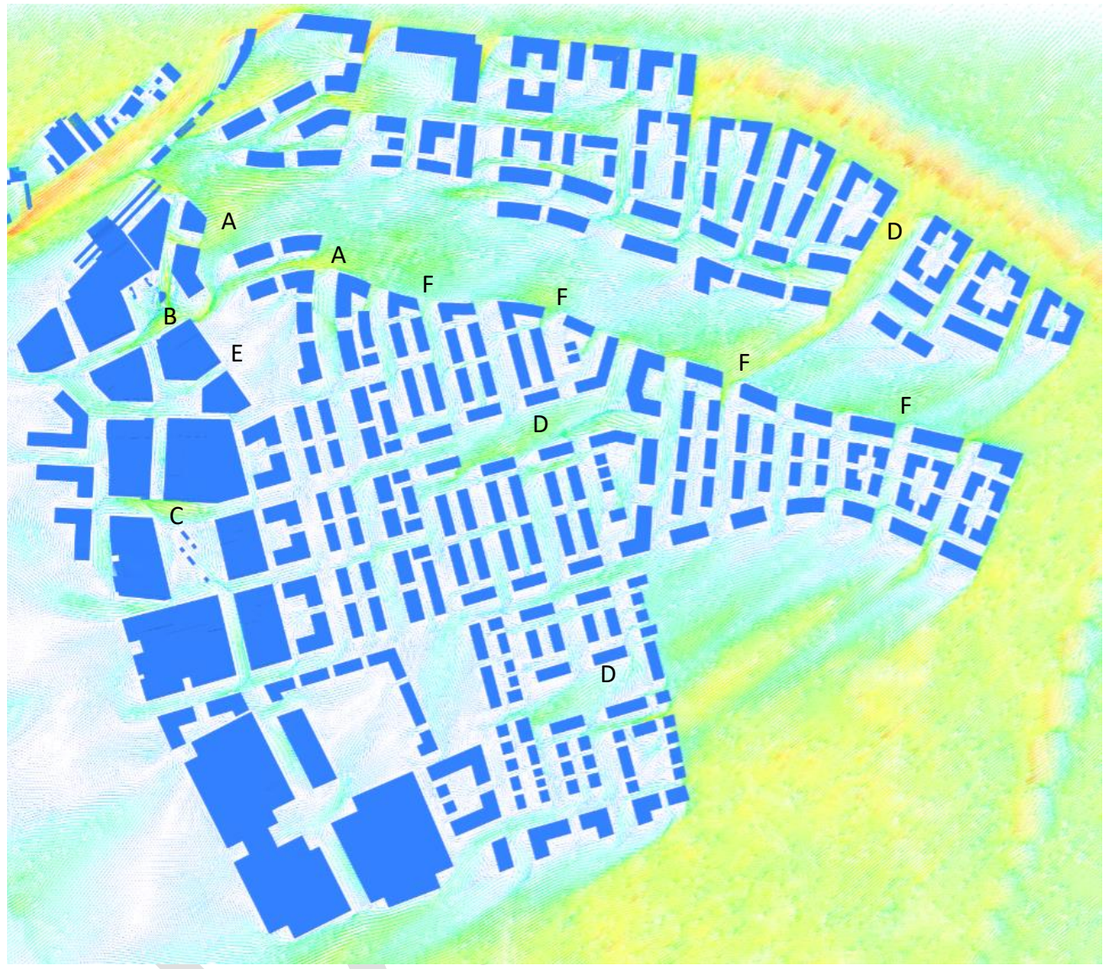


Figure 45: Northeasterly Wind Testing Diagram

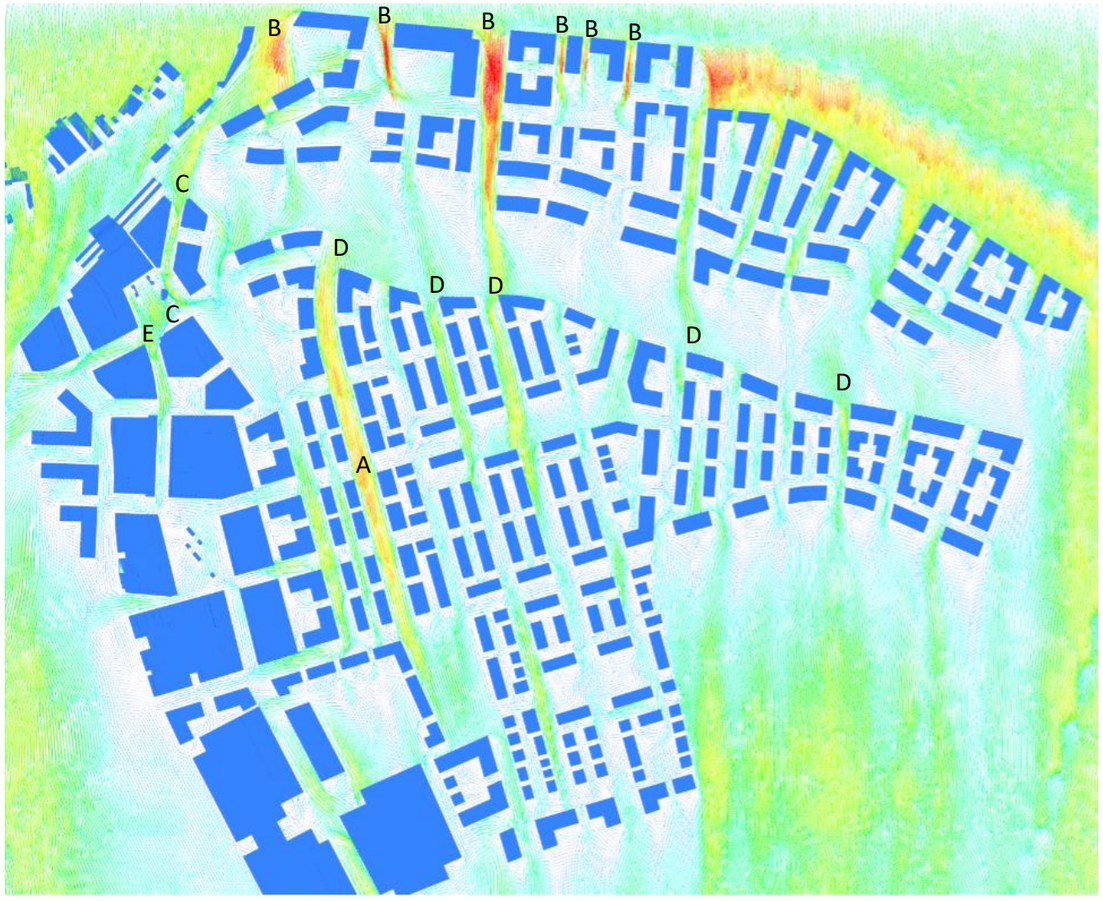


Figure 46: Northerly Wind Testing Diagram

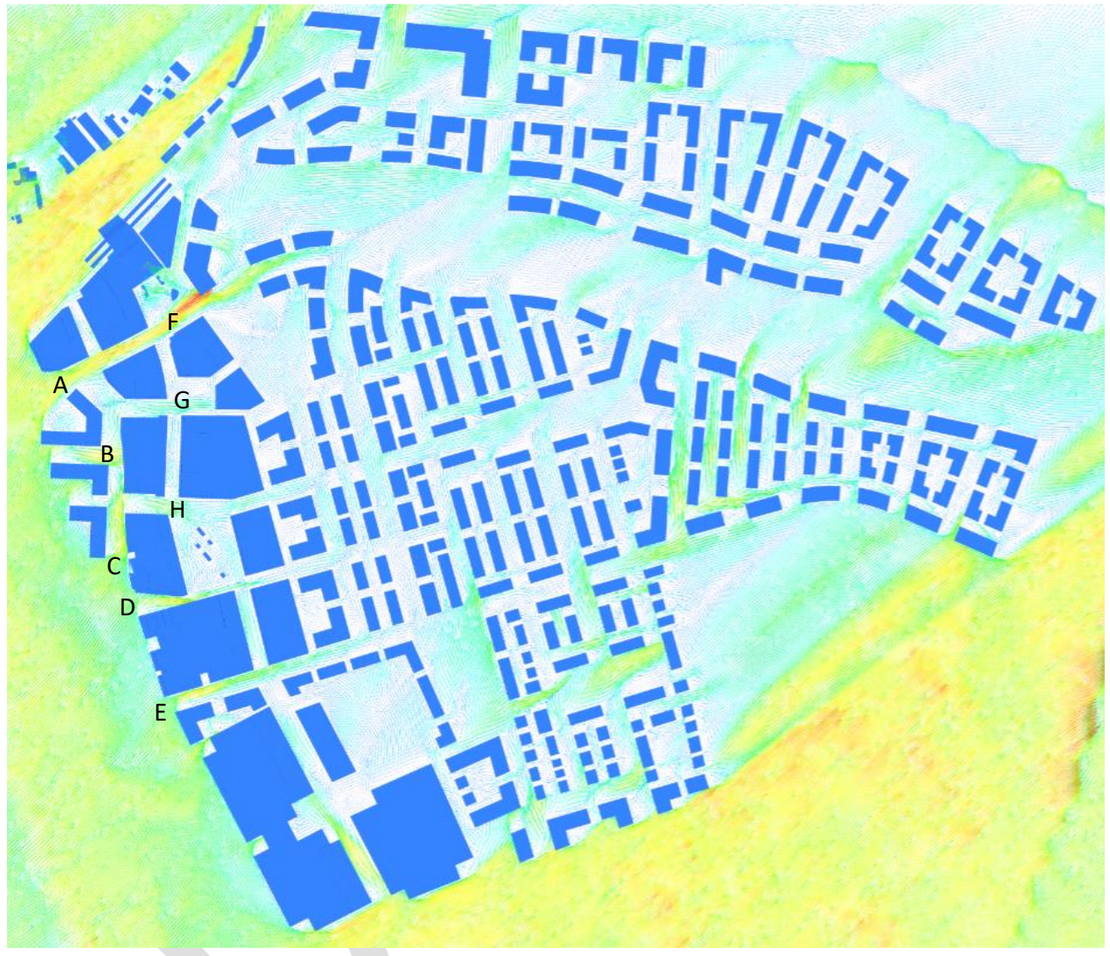


Figure 47: Southwesterly Wind Testing Diagram

4.14 Wastewater, Greywater & Utilities Concept

Wastewater

For the purpose of this report, the Wastewater Concept refers to a general principle of where wastewater main lines are located. These lines are generally located to work with gravity and within right-of-ways.

The concept is an illustration of plausibility only, and is subject to further detailed design and analysis.

Greywater

Where possible, use of on-site treatment devices and strategies (such as dedicated greywater line) are encouraged to ensure high quality discharge (for potential reuse such as irrigation) and enables minimization of untreated volume into the public system.

Water Supply and Utilities

For potential concept for water supply lines, refer to figure 48 and 49. This preliminary concept was derived in conjunction with Blue Barn.

Moreover, it can be assumed that other services such as telecommunications, gas, electricity, could be located within a common services trench They are subject to further detailed design to ensure optimal layout for each stage of development as well as in-between stages.

Refer to the Supporting Studies (Blue Barn chapter) for further details.

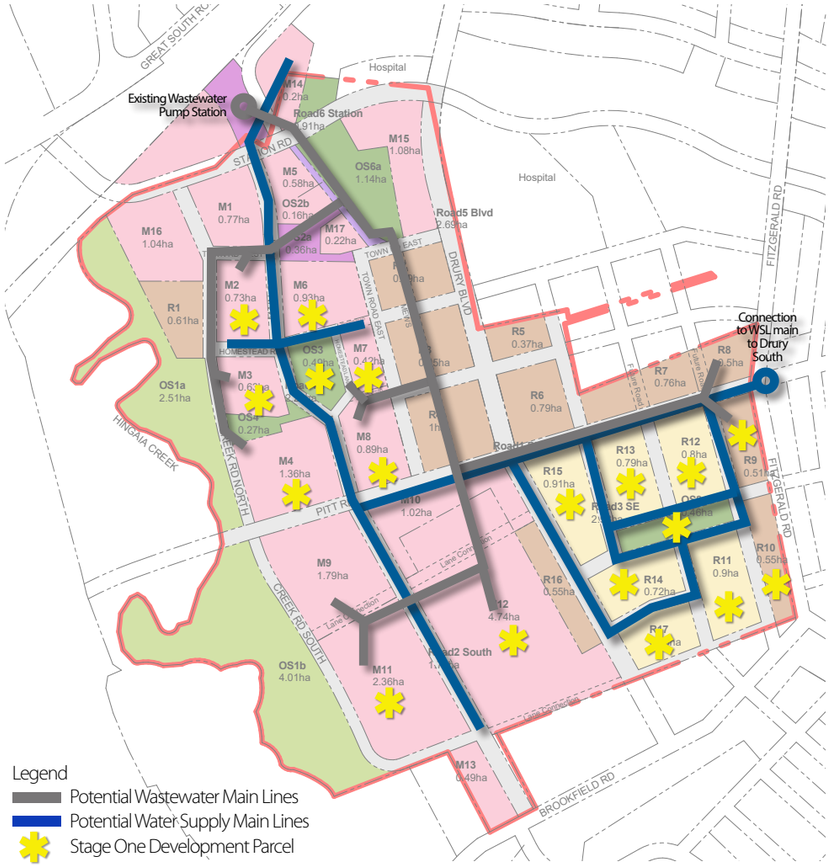


Figure 48: Stage 1 Wastewater & Water Supply Concept Plan

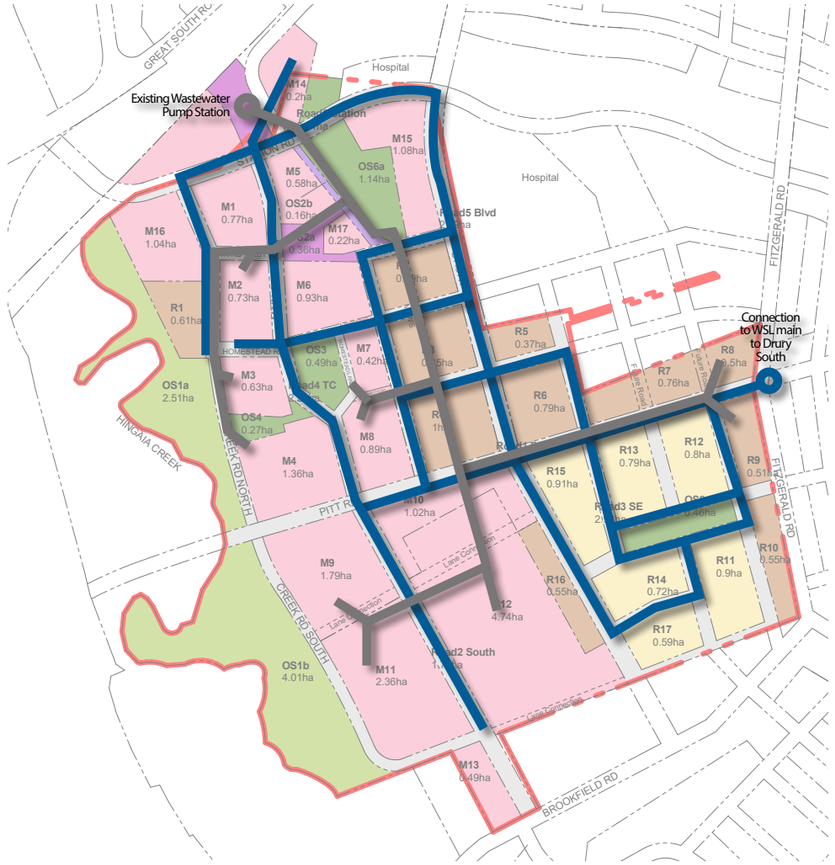


Figure 49: 2048 Wastewater & Water Supply Concept Plan

4.14.1 Stormwater Concept & Ecology

Stormwater

The master plan envisages that stormwater devices such as raingardens, bioretention swales, tree pits, communal detention tanks, permeable paving, raintanks and green outfalls are utilized as part of the treatment train and before discharge into Hingaia and Fitzgerald streams. These stormwater devices should also be visually attractive and be part of streetscapes and open spaces.

While Drury Boulevard has the size, length, and topography to be a major corridor for bioretention swales and other stormwater devices, every road in the metropolitan centre will require at-source devices to provide water quality treatment and hydrological mitigation.

The concept (fig. 50) is an illustration of plausibility only. It generally follows overland flowpaths and stormwater pipe locations will need to maintain balance of flows between Hingaia and Fitzgerald watercourse. This is all subject to further detailed design and analysis.

Refer to the Supporting Studies, (Blue Barn and Tonkin & Taylor June 2019 Stormwater Management Plan) for further details.

Ecology

The primary area of consideration from an ecological point of view are the main watercourses. As they have connectivity to significant ecological areas in its head waters and the receiving marine environment of Drury Creek as an important intertidal bird habitat. The change in land use proposed by the master plan takes this into consideration by minimizing development within watercourse areas and utilizing water sensitive urban design principles and practices.

For further details refer to Tonkin & Taylor report (June 2019 Assessment of Ecological Effects).

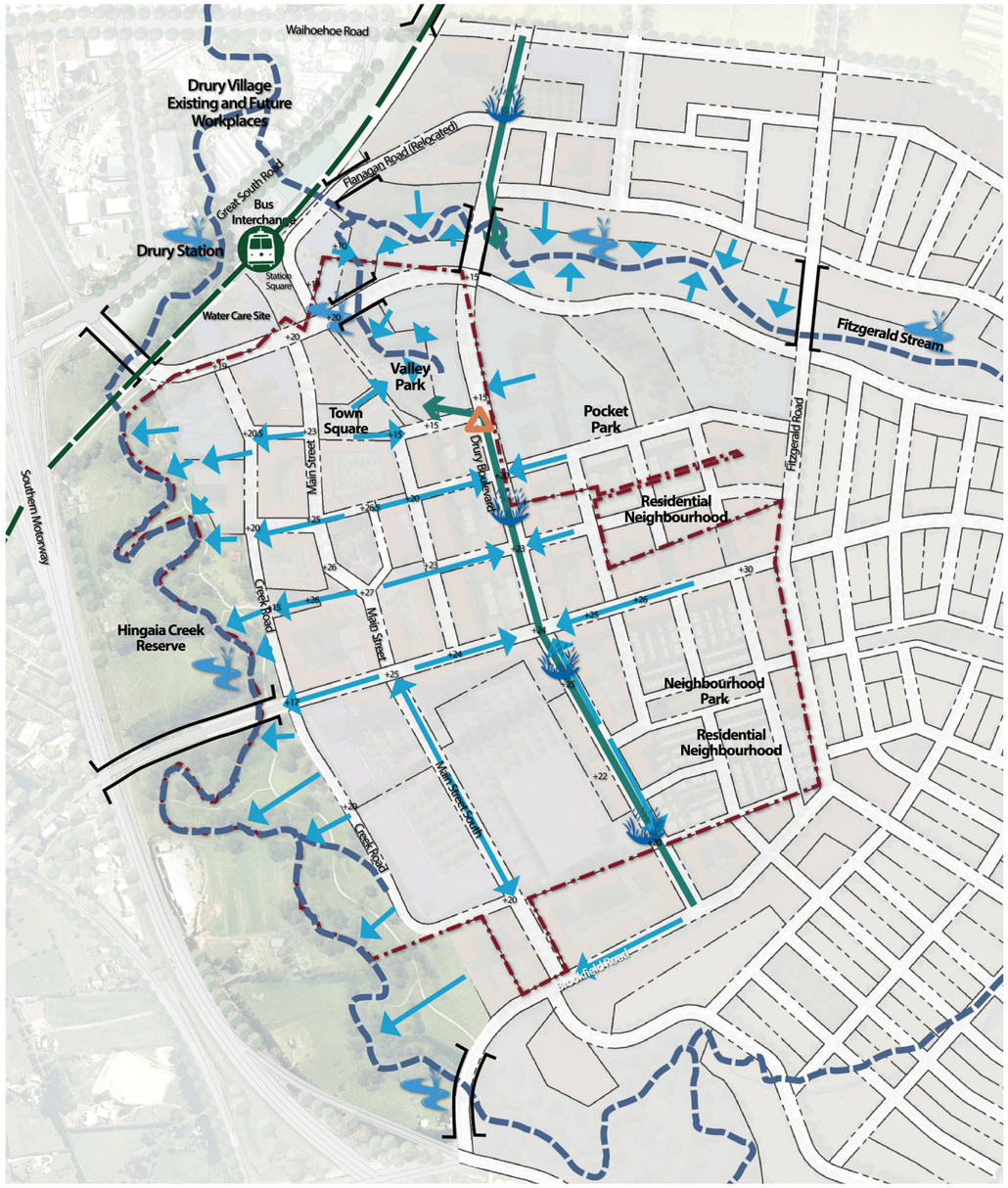


Figure 50: Stormwater Concept Plan



Bioretention swales for stormwater management example

Legend

- Street Bioretention Swales
- Existing Creek Runoff
- Conveyance Path for Overland Flow
- Stormwater Flow Direction
- Road Sags
- Train Station
- Bridge

4.14.2 Earthworks

A best practice aspiration for earthworks on large sites is to target net zero cut/fill volumes where possible. This has cost advantage and it limits the disruption that is caused by the extraction or dumping of material off site.

Preliminary studies (with Blue Barn) indicates that the master plan is within range of achieving this aspiration as:

- Total fill volume of 812,000 cubic metres.
- Total cut volume of 717,000 cubic metres.
- Assuming estimated 30,000 cubic metres of unsuitables from cut volume excavated, shortfall of fill required of approx. 126,000 cubic metres.
- And, a surplus of topsoil of approx. 72,000 cubic metres.

The above findings assumed the following:

- Average topsoil depth of 300mm.
- Average topsoil respread depth over entire site of 150mm.
- Earthworks will be done as one operation.
- Unsuitables estimated at 30,000 cubic metres
- Compaction factor of 85%.
- Cut and fill batter slopes 1 in 3 within the KP site apart from the portion of proposed Drury Boulevard that runs adjacent to Lots 2 and 3 DP 165262 where the batter extends into the neighbouring properties.

Putting the shortfall into context, based on the various assumptions the whole site would need to be lowered by 261mm to achieve a cut/fill balance. Subject to further detailed design and analysis, there is comfort that an adjustment of this order can be achieved, for example by lowering the elevations of building basement platforms.

Refer to the Supporting Studies (Blue Barn chapter) for further details.

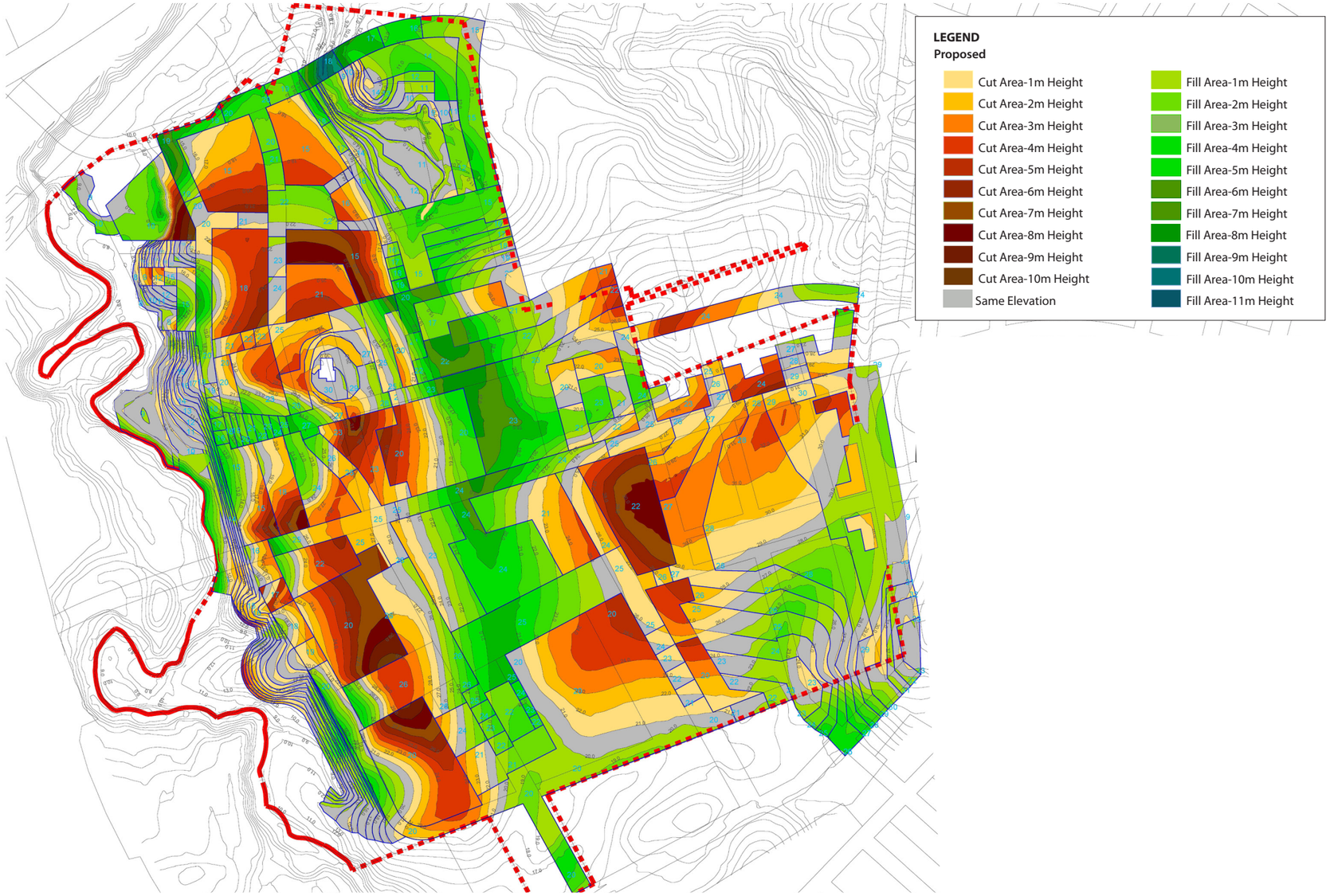


Figure 51: Earthworks Preliminary Analysis Plan

4.14.3 Geotechnical & Floodplain

Geotechnical

Typical of large developments such as the Drury metropolitan centre, preliminary geotechnical investigations were undertaken as part of due diligence. The findings are listed below and as shown in the map:

- The area that encompasses the majority of the Town Heart, Homemaker Precinct, and Southeast Residential neighbourhood (i.e. stage one) has undergone investigations which has ascertained preliminary confidence to their suitability for development. However, these areas are subject to further site-specific investigations and testing as part of future detailed design work.
- Areas adjacent to Great South Road, Waihoehoe and Brookfield are suggested for investigation as they were not part of the preliminary due diligence at the time of this document.
- Areas adjacent to the Fitzgerald Stream and Hingaia Creek at Brookfield are suggested for investigation and require specific geomorphological hazard assessment. These areas were not part of the preliminary due diligence at the time of this document.

Refer to the Supporting Studies (Engeo chapter) for further details.

Floodplain

There are modified 100-year ARI floodplain zones associated with Hingaia and Valley Park creeks, and Fitzgerald Stream. The majority of the building developement parcels are outside of the floodplain and flood-prone zones. In addition, the following flood risk management approaches shall be considererd:

- All roads, carparks and building platforms should be set above the post-developed 100-year ARI storm flood level, with suitable allowance for freeboard. In cases where there is no option to do so, the infrastructure shall be designed to be resilient to flood damages.
- Any changes to landform in the 100-year ARI floodplain shall be designed with appropriate mitigation to ensure there is no adverse effect on dwellings/land use amenity at the upstream/ downstream ends. And does not worsen flooding on land without property owner agreement.
- All overland flow paths will be retained or redirected with allowance for adequate conveyance capacity.

For further details refer to Tonkin & Taylor report (June 2019 Stormwater Management Plan).

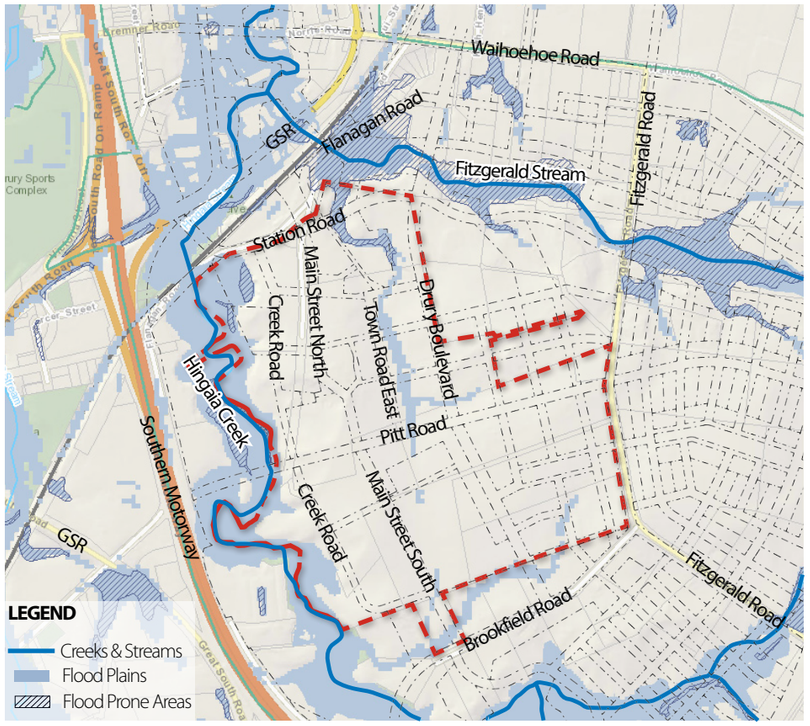


Figure 52: Floodplain and Flood-prone Areas Map

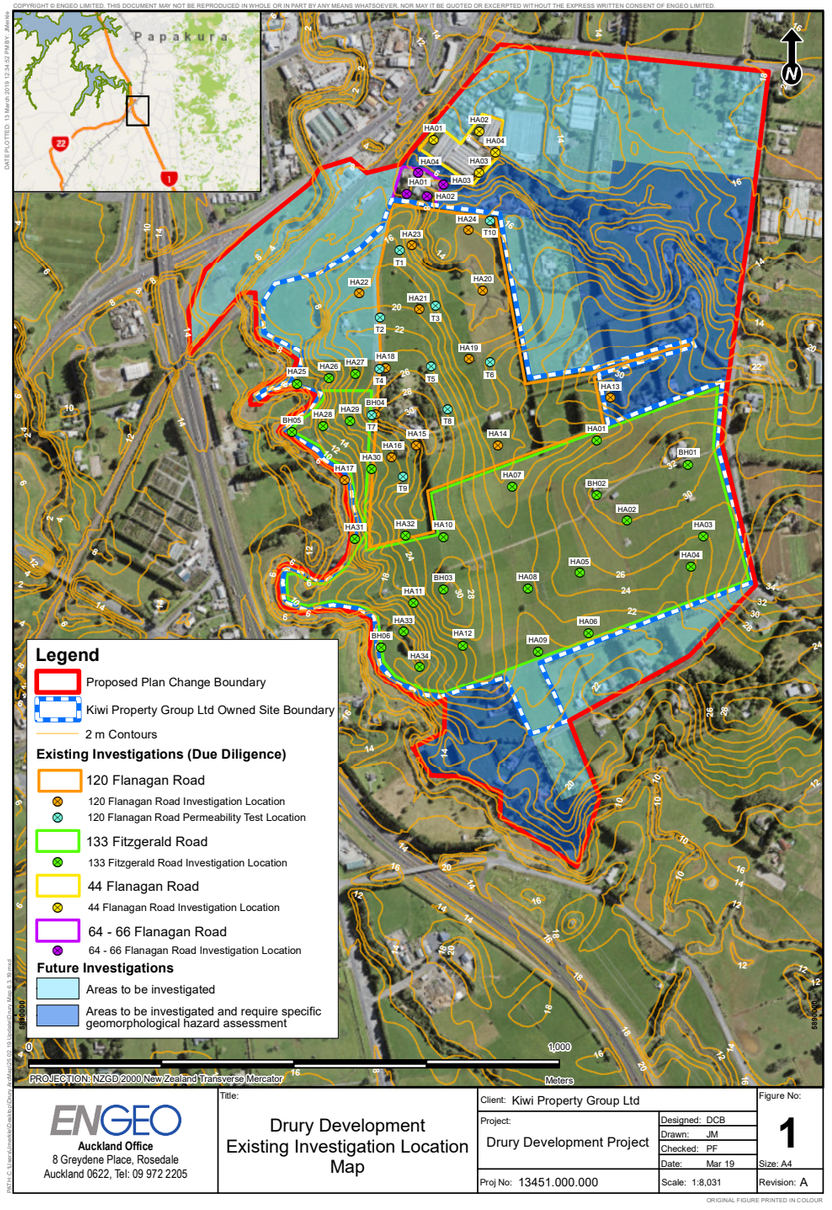


Figure 53: Exisitng Investigation Location Map (March 2019)


Papakura via Neumarket
AMP633



5.0 Mobility Strategy

For a metropolitan centre to be economically viable and to fully serve its community, its access network must be highly connected and integrated with the broader mobility network for private and public transportation. Guided by he urban design principle and informed by the topography, existing and potential future regional transportation links, the mobility strategy for the master plan facilitates a high degree of integrated connectivity by the following approaches and rationales.

Vehicular Access & Street Network

- Creating direct, legible, and multi-modal access to the centre's main retail street to reinforce its commercial viability;
- Utilize lower topographical elevations and at the periphery of parcels to access undercroft parking spaces, and;
- Create direct, legible, and multimodal access to the peripheral (collector and local) streets from the existing arterial access network at multiple locations along Great South Road, Waihoehoe, Fitzgerald, Brookfield streets.

Pedestrian Network

- Ensure pedestrian primacy especially within the Town Heart, yet complementary to vehicular access, the pedestrian and active mobility network must be legible, permeable, and integrated throughout the site.
- Create a pedestrian network that encourages and supports walking across its fine grain network of streets and park footpaths.
- Create a variety of pedestrian experiences that links retail, employment, residential, public transport, and park and recreational destinations.
- Ensure private/public interfaces encourage continuous and vibrant street edges by fostering active, fine grain retail frontages.
- Ensure pedestrian safety by providing 'eyes on the street' that is created by active uses (resi, fine-grain retail etc) that sleeve large format retail, and building lobbies that are oriented towards the street.
- Ensure private/public interfaces encourage continuous and vibrant street edges by fostering active, fine grain retail frontages.

Cycling & Public Transport

- Include provisions for separated cycle routes across the site to encourage cycling as an enjoyable, healthy, and sustainable form of transport
- Provide connectivity to the existing network without hindering the flow of vehicular traffic.
- The cycling strategy includes shared on-road and dedicated off-road options which provide connectivity while enhancing cyclist safety. Designated bicycle parking facilities should be located at key destinations.
- Accommodate public transport access along Pitt, Station, Creek roads as well as Drury Boulevard.
- Ensure legible integration of modes at the Drury Rail Station/Public Transport Hub.

Shared Parking Strategy

- Utilize a shared parking strategy whereby the residential, retail and office parking requirements are balanced with the parking needs for the development.
- Assume residential parking requirements are fully accommodated but a 'park once' principle is assumed for other occupancies to enable parking requirements to be shared across uses; a portion of the vehicles will be on site for combined activities such as shopping, dining and attending events.
- Assume any parking requirement to be reconfigured and incorporated into new parking allocation and/or overflow parking as they are affected during the course of development staging. This includes park&ride provisions.
- Ensure today's parking requirements (e.g. 5.0 spaces per 100sm retail GFA) are met yet assume reduced overall future requirements (e.g. 3.0 spaces per 100sm retail GFA) as the public transport network becomes more fully established and to reinforce its use.

The following sections within this chapter describes in more detail the specific attributes of the master plan's mobility strategy. Specific attributes such as the Drury Rail Station Hub, vehicular access network, and the pedestrian access network. Moreover, the following details are subject to further traffic modelling and testing.

5.1 Drury Rail Station / Public Transport Hub

Station Location for Population Catchment

A central component of the master plan is the Drury Rail Station and the pivotal role it will play in supporting the mobility needs for the development of this area as a TOD.

For this master plan we have investigated the potential station location of this station based upon the following best-practice TOD objectives, whereby:

- The station is considered as a public transport hub that integrates multiple modes of a broader mobility network that links other neighbourhoods and work places (see figure 54);
- The station is located at the center of a walkable catchment (of up to 800m walk circle) that captures the highest residential and work place density and population possible, and;
- The location facilitates a strong sense of identity and arrival/departure experience for the community that is integrated with the short, medium and longer terms of time.

These objectives are ideally achieved with a station located approximately midway between SH1 offramp and Waihoehoe Road, due to:

- Flat topography and the availability of land;
- Crown and Watercare land ownership which could aid in simplifying cooperation and realization;
- Initial projections of approx. 10,000 residents and 16,900 workers as its catchment area covers all of the highest density developments of the metropolitan centre (see figure 55), and;
- Strong opportunities to enable the integration of mobility modes and provide options for the aforementioned population with the existing work places of Drury Village with future work places, homes and amenities of the future metropolitan centre.

Metropolitan Centre Public Transport Hub

These opportunities to enable the integration of mobility modes and to provide options, includes the follow and as shown in figure 56:

- Creating a strong and direct pedestrian link between homes, public transport hub, workplaces, and metropolitan centre destinations;
- Pedestrian drop-off/pick-ups closer to Town Heart/ Main Street to minimize bus exchange conflicts and increase legibility;
- Direct bus route connectivity to Great South Road to minimize conflicts with pedestrian-focused Town Heart;
- The Park&Ride having direct adjacency advantage which reinforces its shared-use and park-once strategies and thereby reducing trips generation;
- Strong modal integration and legibility within a compact footprint yet minimizes modal conflicts;
- Short and long term connectivity advantages of utilizing existing access routes while enabling versatility of future routes and connections;
- Short and long term expansion capacity within the same area;
- A pedestrian overbridge is required as a function of the rail station for users to access platforms on either side of the railway. This overbridge could also serve as a connection between Drury Village, Station, and Town Heart (see figure 57);
- Enables more options for infrastructure development staging as the location is not reliant on Waihoehoe bridge upgrade;
- The options for infrastructure development staging and multiple routes enables versatility to help alleviate potential bottlenecks at road intersections.

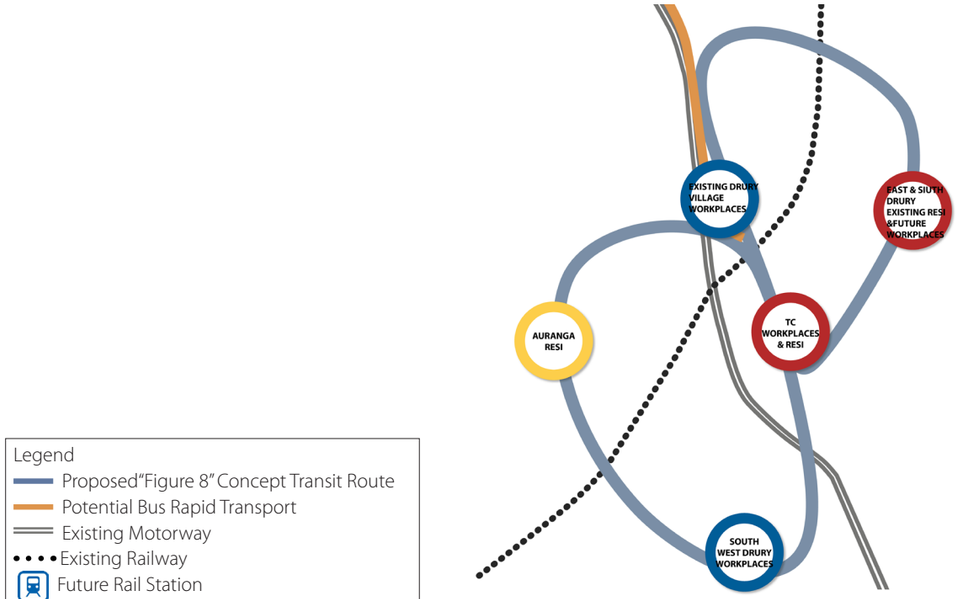


Figure 54: Potential Drury Public Transport Concept Diagram

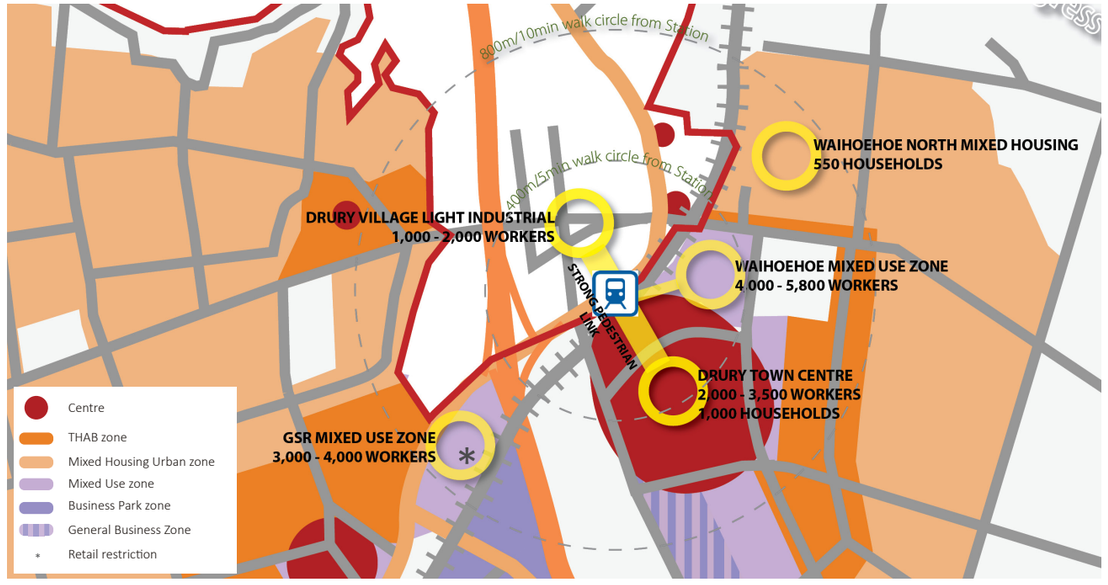
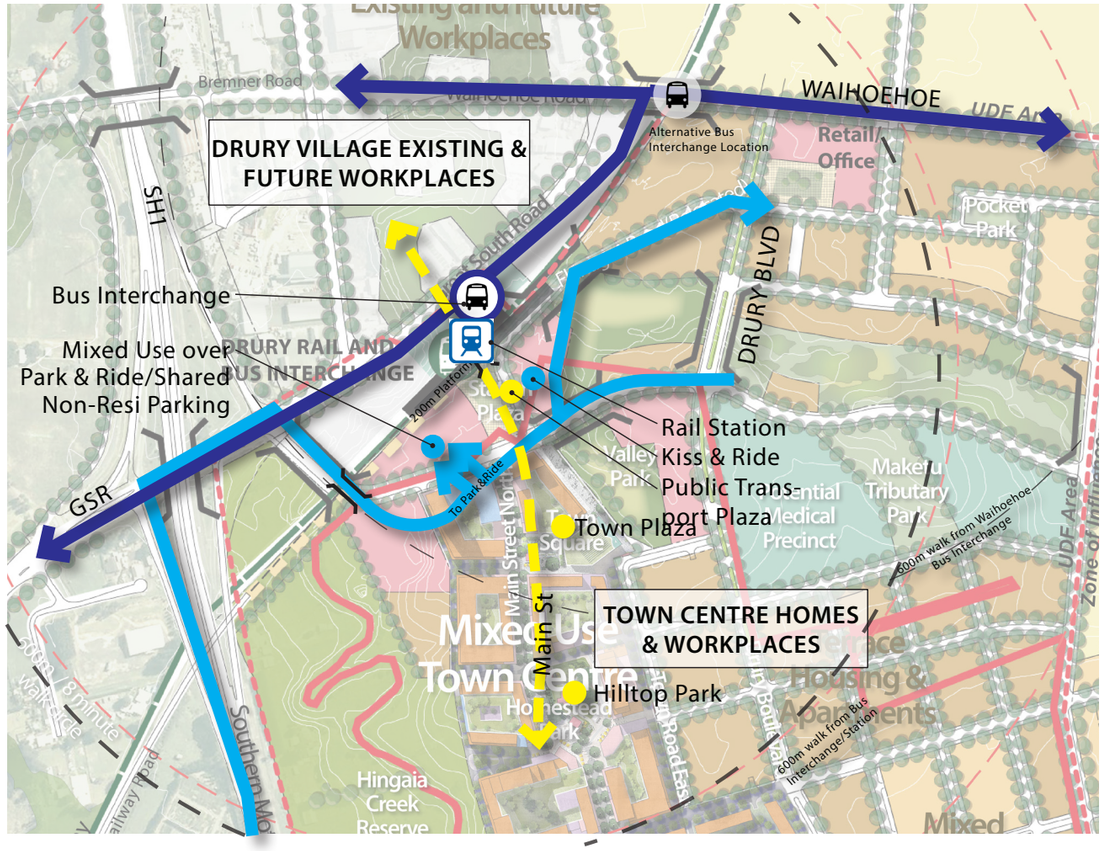


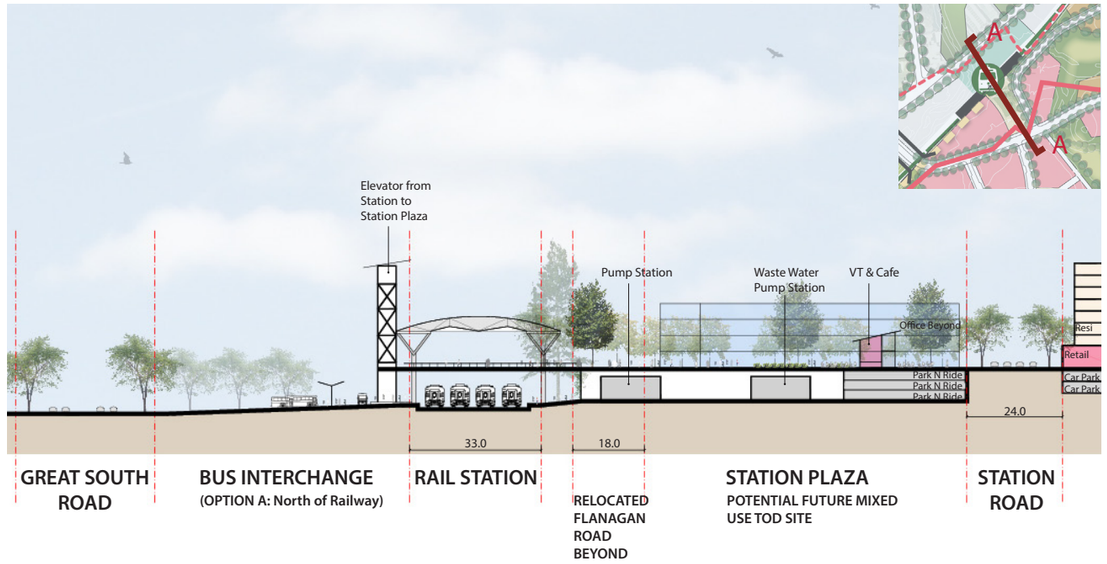
Figure 55: Structure Plan Population Catchment Analysis Diagram



Legend
- Primary Pedestrian Route
- Bus Route
- Private Vehicle Pick Up/Drop Off Route

Figure 56: Drury Station Movement Diagram

SITE SECTION THROUGH STATION PLAZA & DRURY CENTRAL STATION (Section A-A)



SITE SECTION THROUGH MIXED USE TOD & DRURY CENTRAL STATION (Section B-B)

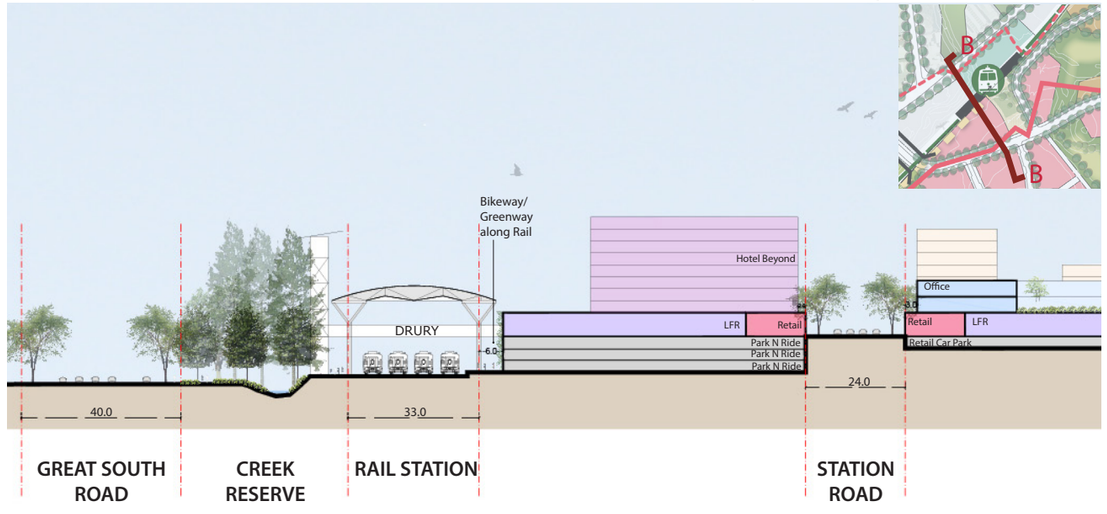


Figure 57: Drury Station Study Sections

5.1.1 Drury Rail Station Catchment Study

In addition to best practice urban design/planning approaches that ensure a successful TOD, a population catchment study was undertaken to further reinforce and provide additional data to support the design approaches. The catchment analysis utilizes the existing and proposed land uses known at the time of study.

For the preferred location at Drury Rail Station, the catchments are:

- Potential total 10,047 residents
- Potential total 3,653 households
- Potential total 16,984 jobs.

These findings were based on the following assumptions:

- Average 2.75 residents per household
- Average 100sm GFA per household within Town Heart.
- Average 110sm GFA per household outside of Town Heart.
- Mixed housing suburban 13upha, mixed housing urban 15upha, Mixed use housing 30upha.
- Fulton Hogan lands assumes average 10upha
- Average 3.0 jobs per 100sm GFA of retail or office.
- Average 2.5 jobs per 100sm GFA of light industrial in existing Drury Village on 0.5 FAR basis.
- Assumes design densities for respective MP for Kiwi, Fulton Hogan, and Oyster master plans.
- Flooding restrictions north of Waihoehoe may restrict ability to achieve high densities within the 800m walk circle catchment

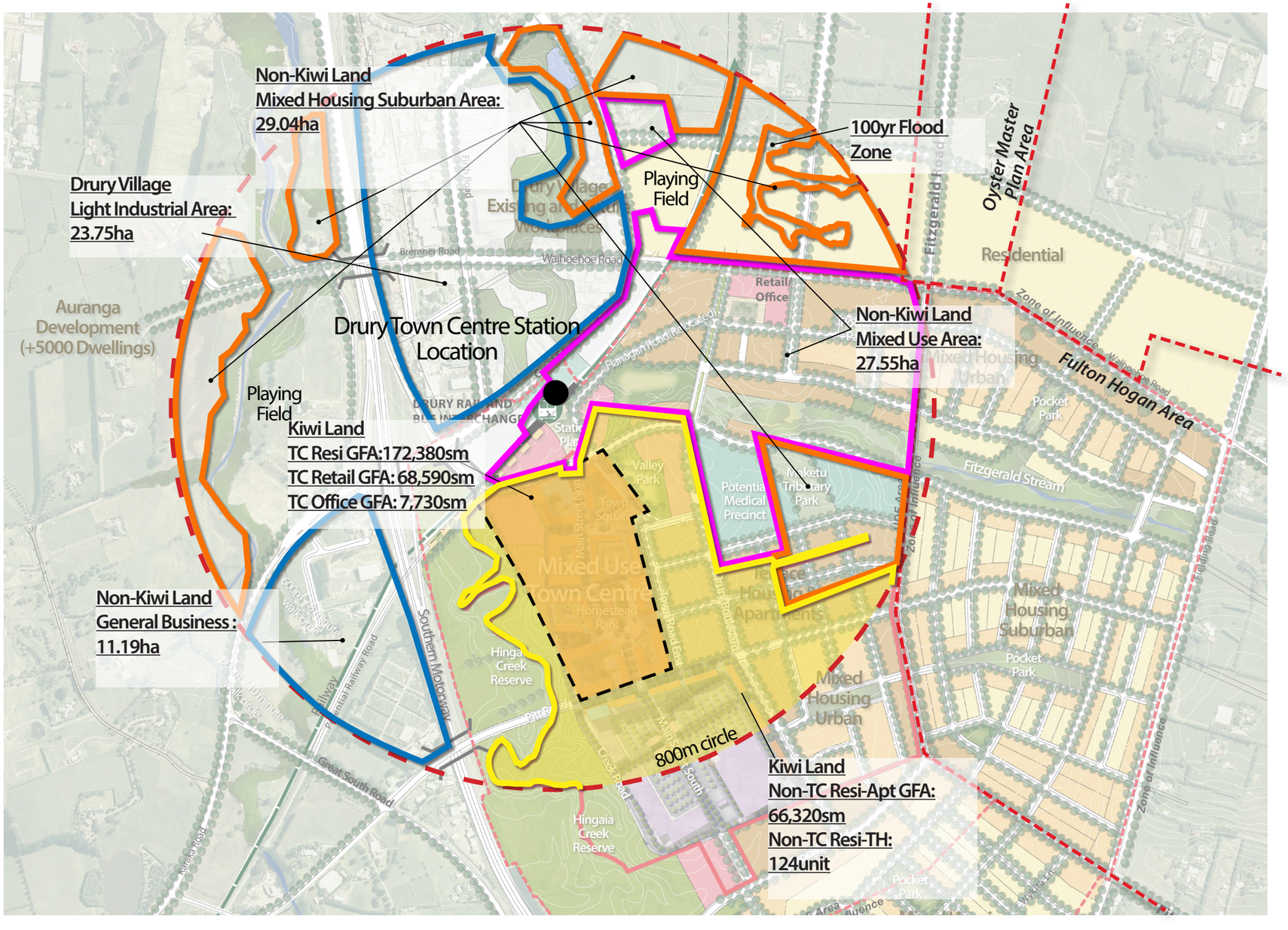


Figure 58: Drury Town Centre Station Catchment Diagram

5.1.2 Waihoehoe Station Catchment Study

A potential alternative station location could be located closer to Waihoehoe Road. This location is Council's working assumption at the time of this study. Additional commentary about the pros/cons of this location is in subsequent pages.

This location has a lower catchment compared with Drury Rail Station. The catchment for this location are:

- Potential total 9,442 residents
- Potential total 3,433 households
- Potential total 11,046 jobs.

These findings are based on the same assumptions as for Drury Rail Station.

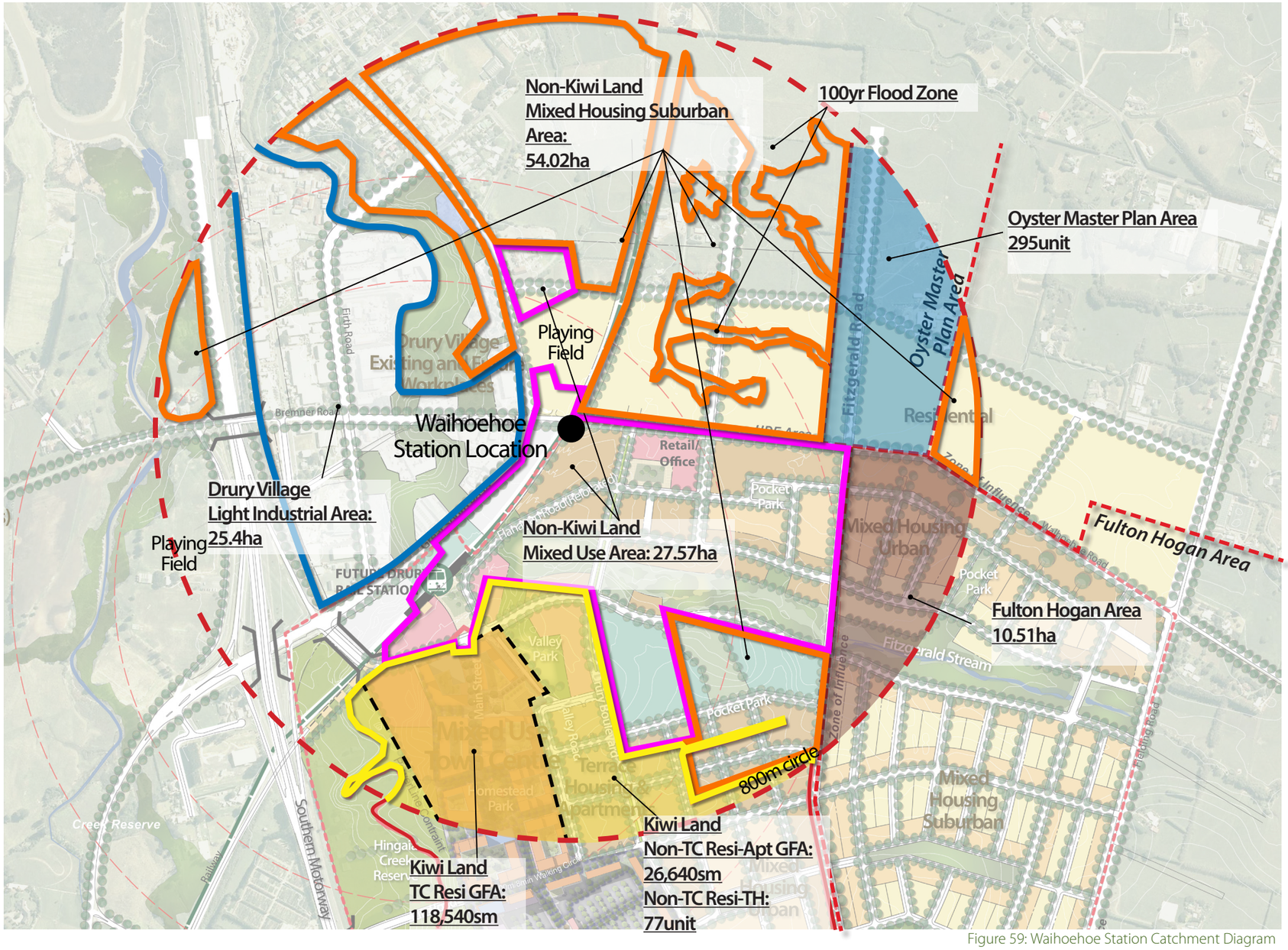


Figure 59: Waihoehoe Station Catchment Diagram

5.1.3 Waihoehoe Station Option Study

Further to the potential catchment, preliminary urban planning and existing site analysis indicates the following constraints:

R.O.W and 4-tracking

1. Existing R.O.W width fits the proposed 4 tracks but does not fit platforms.
2. Slight curvature of R.O.W. and tracks require straightening to avoid curved platform.
3. Straightening of tracks for proposed platform requires corresponding track path realignments along the corridor.

Waihoehoe-Great South Road Intersection

4. Potentially inadequate separation distances to resolve future demand traffic flow complications between intersection and rail station driveway entries/exits.
5. Potentially inadequate separation distances to resolve modal conflicts.

Waihoehoe Road Bridge

6. Road bridge needs to be rebuilt and upgraded to remedy the constriction of existing bridgeheads for the proposed 4 tracks.
7. Bridge upgrading disrupts a critical east-west traffic corridor and with severely limited alternative routes.

Topography

8. Elevation difference of approx 5m and embankment will need to be resolved for station access.
9. Existing Flanagan Road may need to be realigned and upgraded to allow station access, pickup/dropoff, and to maintain access to existing abutting properties.

Adjacent properties

10. Landowners east of station potentially affected by realignment, land requisition, and upgrading of existing Flanagan's Road.
11. Landowners west of station will be affected by land requisition for station access, platforms and infrastructure.

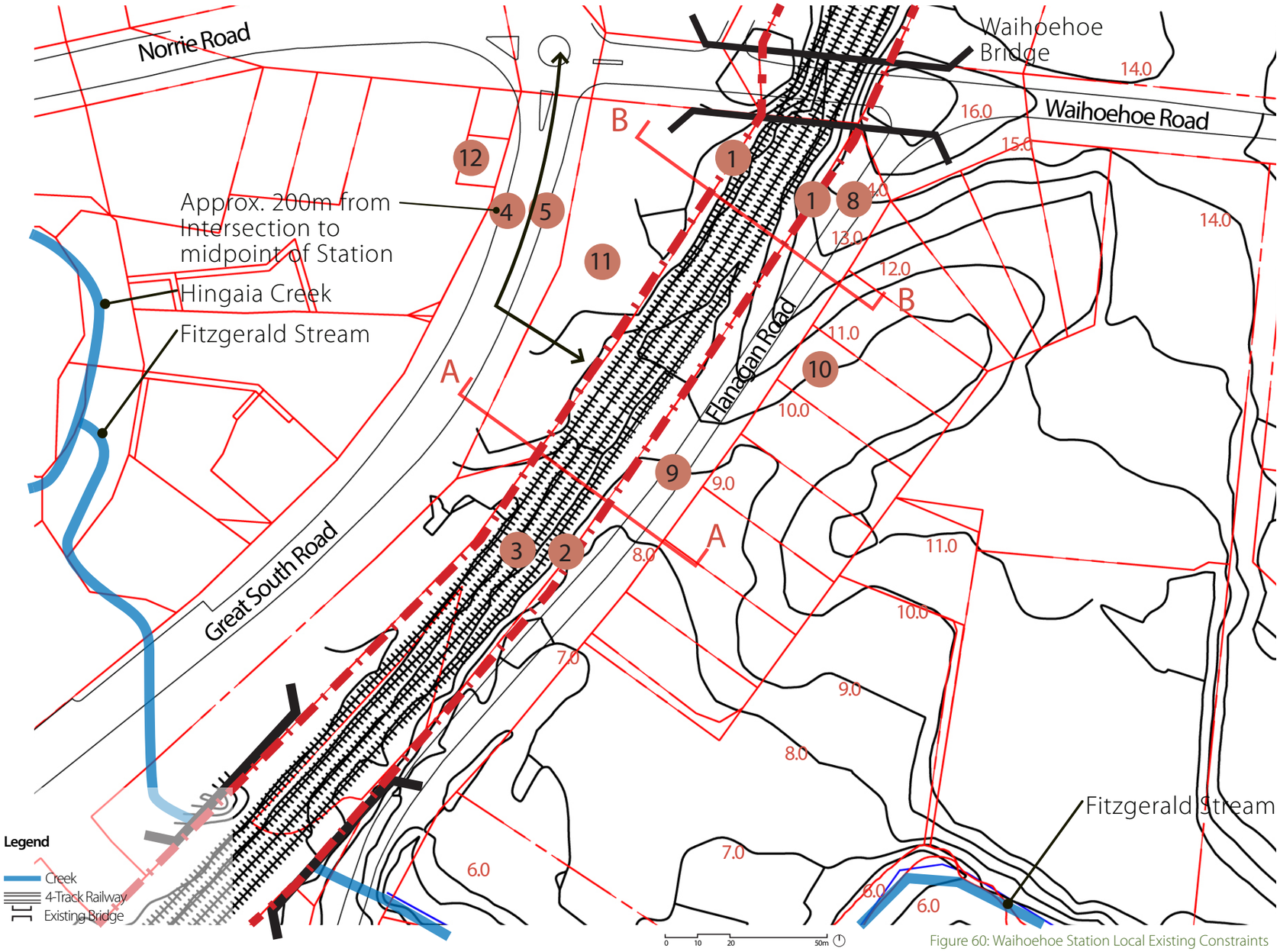
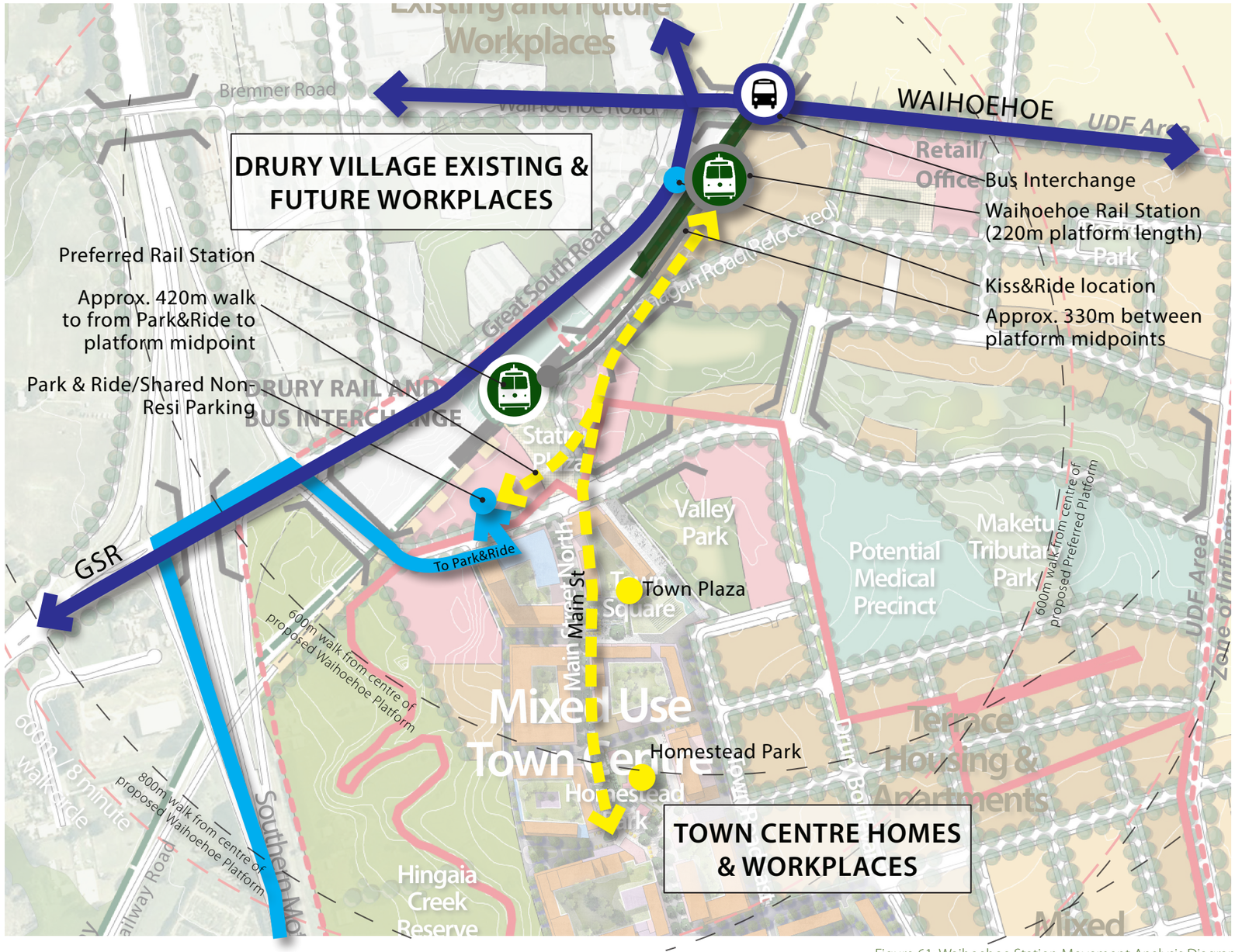


Figure 60: Waihoehoe Station Local Existing Constraints

Moreover, preliminary urban design, urban planning, and movement analysis of this station's location in relation to the Town Heart and metropolitan centre indicates the following pros and cons:

+ Strong pedestrian east-west linkages between existing homes, transit hub, workplaces.
+ Pedestrian drop-off/pick-ups closer to Town Centre/Main Street to minimize bus exchange conflicts and increase legibility.
+ Direct bus route connectivity to GSR; minimizing conflicts with pedestrian-focused Town Centre.
– Modal integration and legibility not strong nor within a compact footprint
– Reliant on Waihoehoe bridge upgrade. Needed to accommodate public transport, pedestrians, cycle, arterial road and to minimize modal conflicts.
– Short term connectivity advantages potentially creates bottlenecks that limits versatility of future routes and connections.
– Limited long term expansion capacity within a compact footprint.
– Lack of proximity to Park&Ride.
– Weak linkages to Town Centre destinations and population density.
– Potential multi-modal bottleneck at GSR-Waihoehoe intersection.
– Additional pedestrian bridge is likely required to connect Drury Village, Station and TC.



Legend

- Primary Pedestrian Route
- Bus Route
- Private Vehicle Pick Up/Drop off Route

Figure 61: Waihoehoe Station Movement Analysis Diagram

5.1.4 Watercare Site

Located parallel with the Southern Line railway, Great South Road, future Station Road access to SH1, and at the northern end of the proposed Main Street of the metropolitan centre, it is clear that the Watercare site is important and an ideal site for a TOD.

As such, cooperation is ongoing with Watercare to enable commercial realization of the site's value as well as ensuring connectivity to the proposed Drury Rail Station from Main Street, and connectivity to SH1 and Great South Road by the proposed Station Road and overpass.

The master plan envisions this TOD site as consisting of:

- Station Plaza - an arrival plaza to/from the Rail Station and bus interchange by Great South Road.
- An arrival plaza for taxis, kiss-and-ride too.
- Park and Ride - of approximately 400 spaces. Spaces that could also be shared with non-resi uses.
- Predominantly commercial office uses that capitalizes on the public transportation hub as well as close proximity of Main Street offerings.
- Potential hotel could be located around Station Plaza to provide rooms for visitors to the region and adjacent East Medical Precinct.
- Existing water pump station and wastewater pump stations to be integrated with the TOD and under future Station Plaza while maintaining service access.
- A pedestrian bridge over the railway to connect the plaza and Main Street with opposite side train platforms and bus interchange by Great South Road, and existing and future workplaces in Drury Village.
- Existing heritage elements that are integrated and on interpretative display within the TOD.

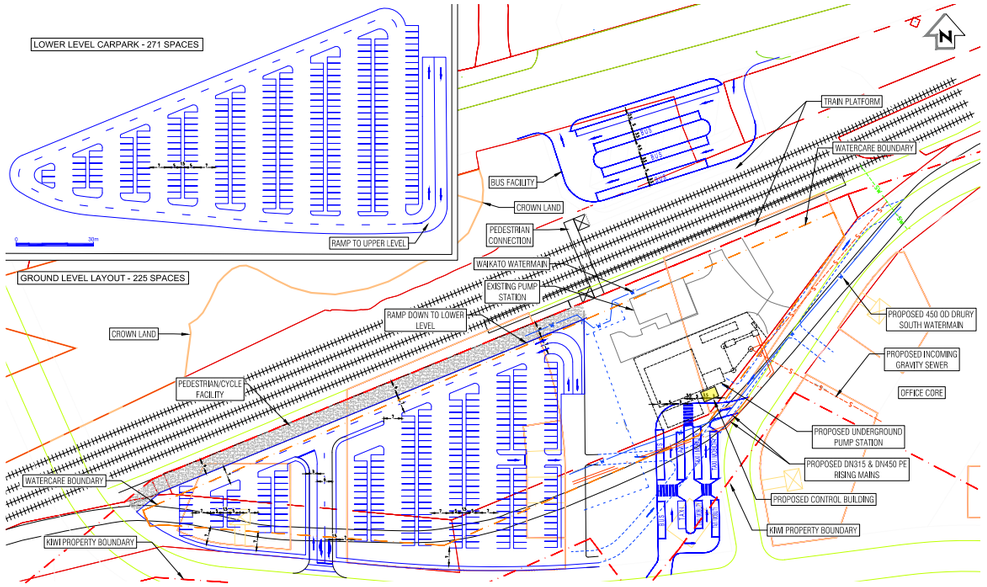


Figure 62: Watercare Site Park and Ride Diagram

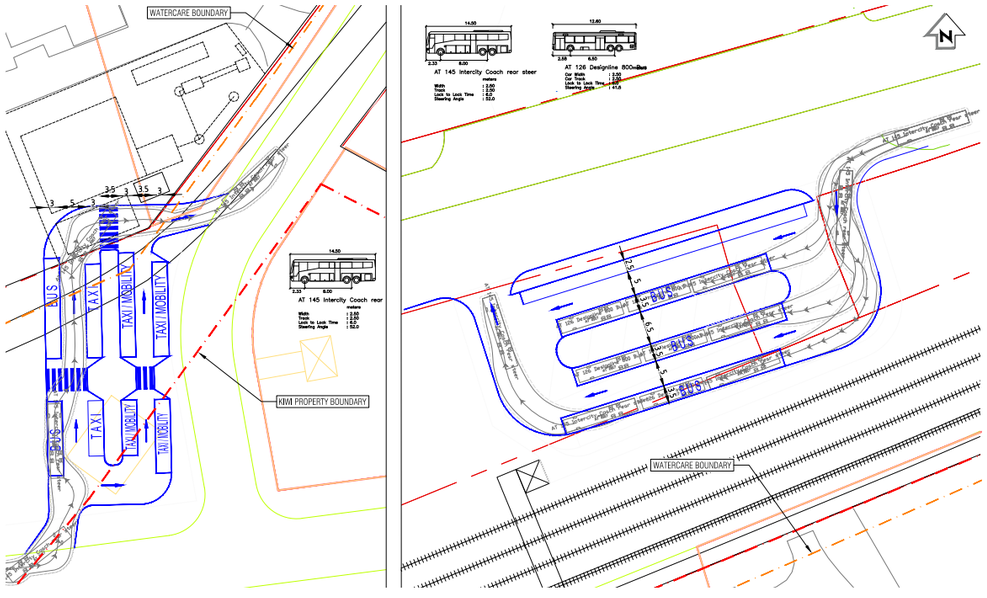


Figure 63: Watercare Site Bus Interchange Diagram



Stone loading platform



Structure made from rail tracks

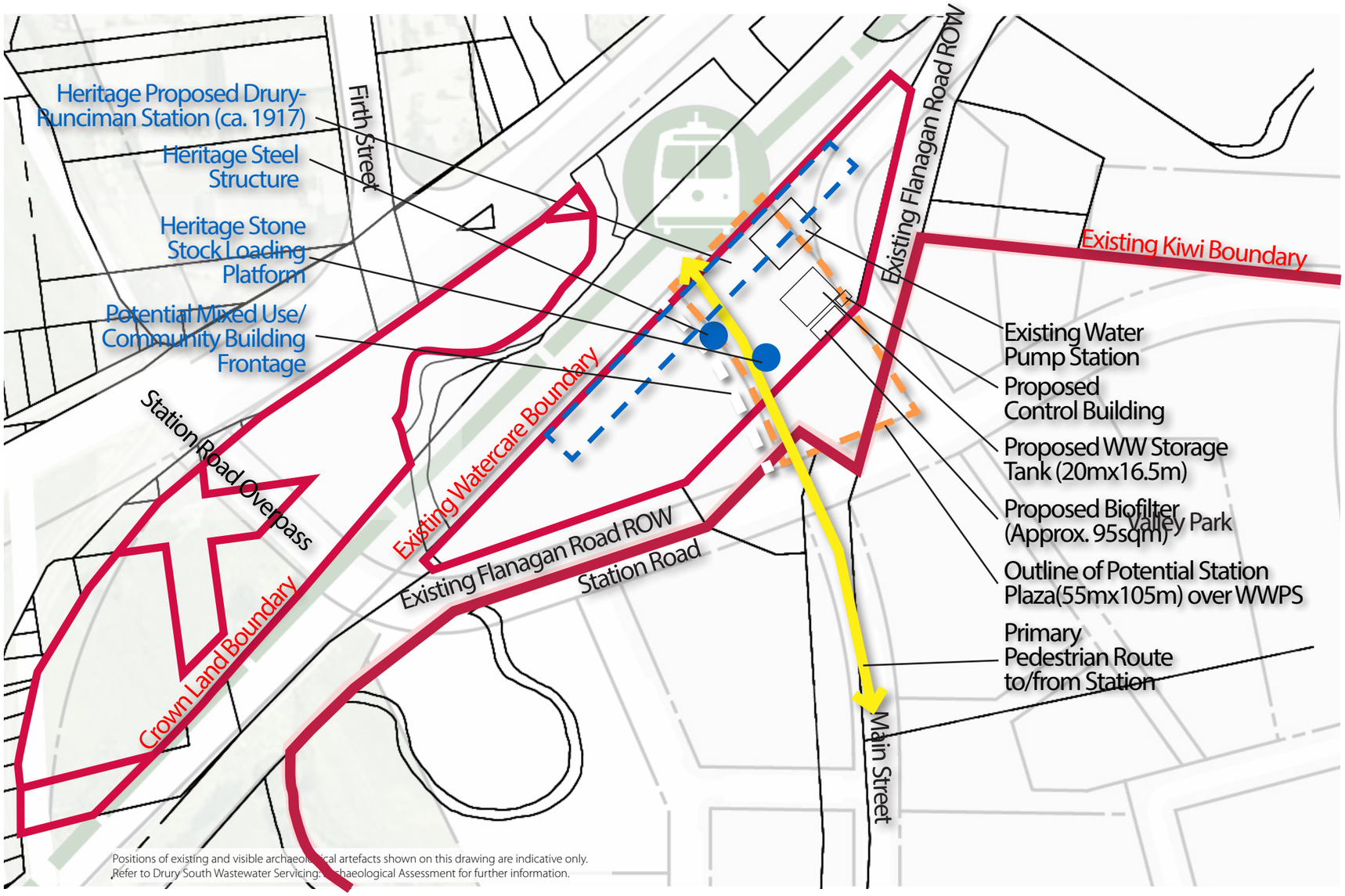


Figure 64: Drury Station and Watercare Site Movement Analysis

5.2 Street Hierarchy & Access Network

The Master Plan assumes the following street hierarchy, of which is subject to further traffic modelling and testing:

- Arterials: These are assumed to be existing Great South Road, Waihoehoe, Fitzgerald, and Brookfield roads, including Quarry Road overpass.
- Collectors: These are proposed to be Station, Pitt, Drury Boulevard, Creek, and Main Street South roads. Minimum 21 metres wide ROW.
- Pedestrian-focussed Lanes: These are proposed within the Town Heart and adjacent to key openspaces.
- Local Road: These make up the balance of the network. Range of 18-20 metre wide ROW.
- Truck Routes: GSR, Brookfield, Creek, Station, Drury Boulevard, Pitt and Main Street South roads could accommodate trucks to enable the strategy for retail servicing from the periphery.

While connections to East Drury can be facilitated by Waihoehoe and Fitzgerald roads, connections to West Drury and Drury Village has the inherent challenges of the railway, Motorway and the Hingaia Creek topography. For a desirable outcome, the master plan envisages greater east-west and northern connectivity being facilitated by:

- A Station Road Overpass connection to Great South Road at the Motorway offramp. This important connection bridges over the railway and enables critical and direct access to/from the Motorway and Great South Road, creating a complementary route to Waihoehoe that benefits the centre and beyond.
- A mid-point access through the centre and beyond that is complementary, and avoids Motorway interchange bottlenecks at Great South Road and future Mill Road. The master plan envisages this connection as a potential overpass from the existing Pitt Road that bridges over the Motorway and Hingaia Creek.

Public Transport Network

To integrate with the aforementioned Drury Rail Station Public Transport Hub, the following provisions are envisaged to enable effective bus catchment, of which are subject to further bus service modelling and testing:

- Bus stops are distributed to ensure an approximate maximum of 400m walk.
- It is assumed that bus stops are located on arterial and collector roads only to balance the need for operational efficiency with pedestrian-focussed local roads and Town Heart.
- Local roads are orientated to enable direct connectivity to bus routes.

Bike Network

To complement the vehicular network, the following provisions are envisaged to ensure safe and convenient use of bikes:

- It is assumed that all arterial and collector roads will have dedicated bike lanes to faciliate commuter bike use. These also shall integrate with proposed bikeway on SH1.
- On local roads where there are no dedicated bike lanes, bike provisions should be accommodated by slow-speed design and 30kph speed limits.
- Recreational bike ways within parks and along watercourses (i.e. within Hingaia Creek Reserve) are integrated with the aforementioned provisions to enable connectivity with these destinational amenities.
- End of trip facilities, such as bike lockers and changing rooms, should be provided at convenient and appropriate locations of arrival/ departure. Facilities, especially larger one, should be integrated with buildings.

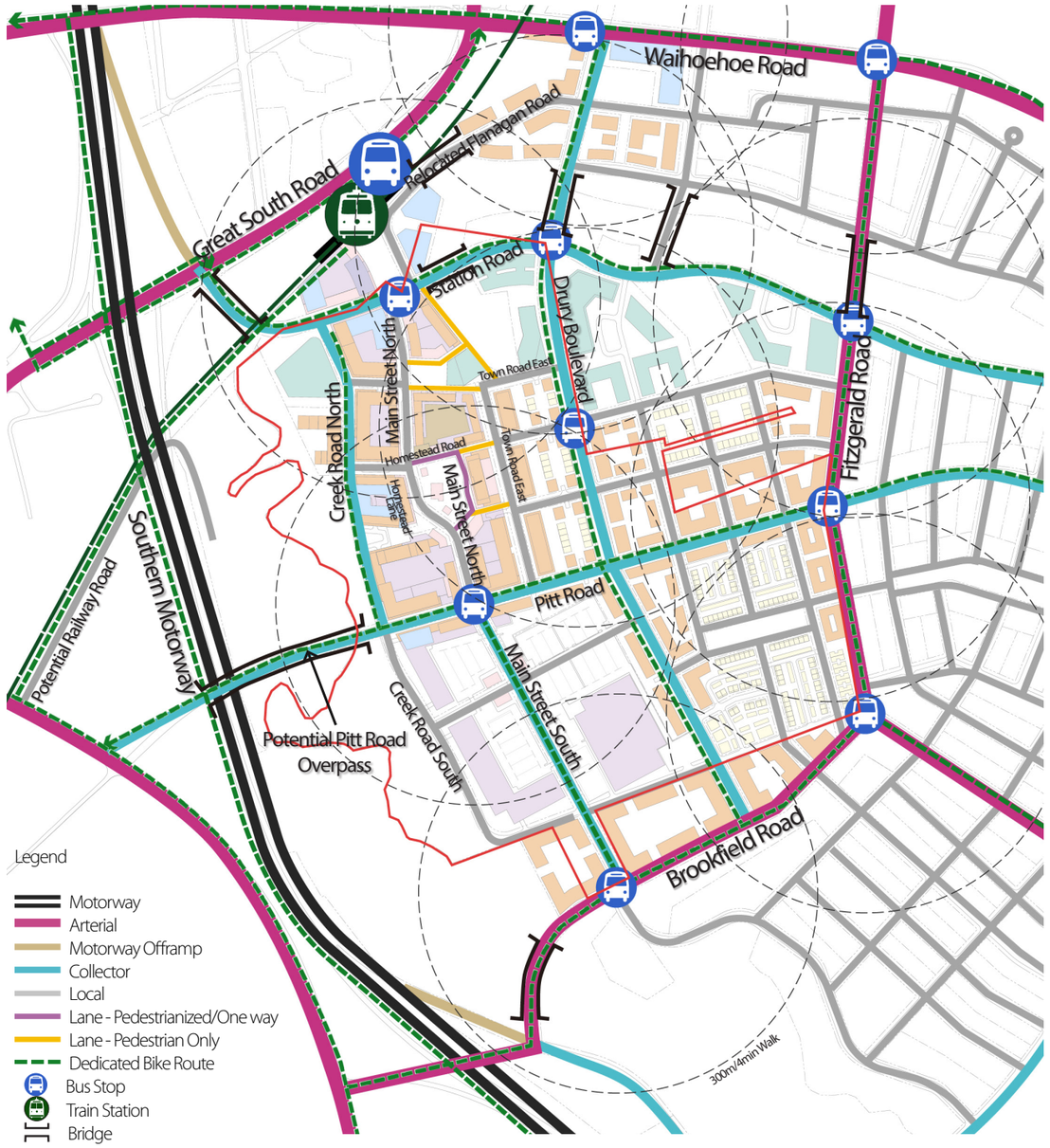


Figure 65: Potential Access Plan

5.2.1 Drury Interchange

The viability of the metropolitan centre is underpinned by this direct access to/from SH1. As such this road junction is critical and provides a primary route from SH1, Great South Road, and over the Southern Line railway.

At the time of publication, and due to the ongoing complexity of design and stakeholder engagement, the master plan assumes and shows an indication of a connection while options continue to be assessed.

Generally, the assumed constraints for this connection are as follows:

- A bridge over Hingaia Creek and Southern Line railway is required; piers outside of watercourse channels.
- Transmission lines/pylons clearances.
- Design vehicles to include trucks and bikes if possible.
- Review with NZTA the requirements due to widening of SH1.
- Where possible, minimize private land acquisition and develop within existing roading designation.
- Develop this connection to be timed with Stage 3 of the metropolitan centre or earlier if possible.

With the above constraints an early working concept is shown in the following figure.

Refer to Supporting Studies (Stantec chapter) for additional information.

Firth St Overpass Alternative

Due to the complexity, and potential complications, of the Drury Interchange, an alternative was studied where an overpass connection was made between Station Rd at Firth St intersection instead of SH1 offramp. The master plan can accommodate this alternative connection but with the lesser desirability of a less direct access to/from SH1.

Refer to Supporting Studies (Civitas chapter) for additional analysis and information.

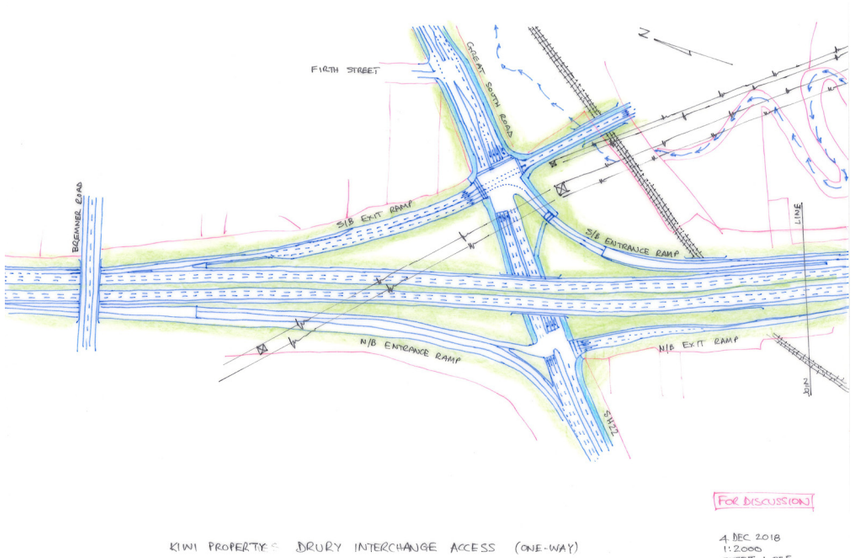


Figure 66: Dec 2018 Sketch of Potential Drury Interchange Concept

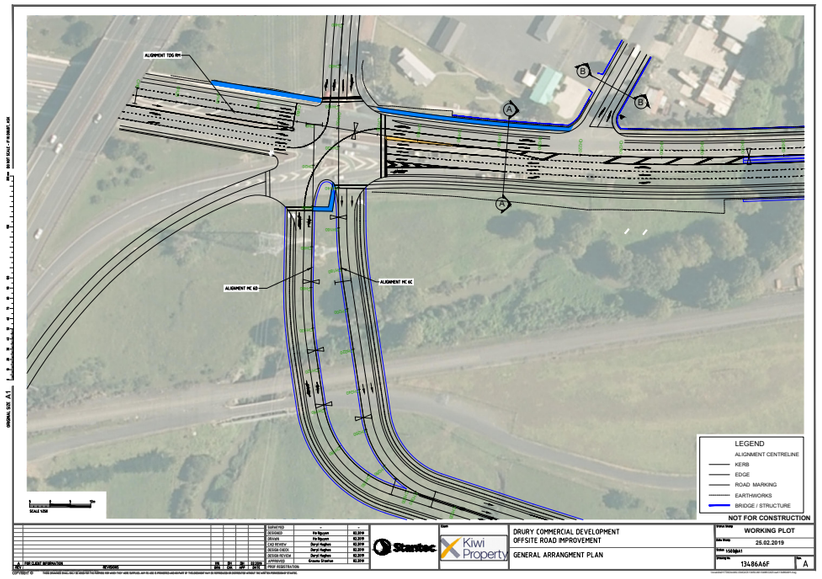


Figure 67: June 2019 Station Road-GSR Concept

5.2.2 Brookfield-Quarry Road Connection

Facilitating a highly desirable southerly access into the metropolitan centre from SH1, westerly Great South Road-Quarry Road over SH1, and from road network further south, this is a critical roading junction.

At the time of publication, and due to the ongoing complexity of design and stakeholder engagement, the master plan assumes and shows an indication of a connection while options continue to be assessed.

Generally, the assumed constraints for this connection are as follows:

- A bridge over Hingaia Creek is required to connect between existing Brookfield Rd and Quarry Road.
- Due to ecological and flooding assessments, bridges shall have piers outside of the watercourse channel.
- Transmission lines/pylons clearances.
- Design vehicles to include trucks and bikes if possible.
- Review with NZTA the requirements, or variation to, acceptable merging lane distance separation with Great South Road and Mill Road interchanges.
- Where possible, minimize private land acquisition and develop within existing roading designation.
- Develop this connection to be timed with Stage 1 or Stage 2 of the retail components of the metropolitan centre.

With the above constraints an early working concept is shown in the following figure.

Refer to Supporting Studies (Stantec chapter) for additional information.

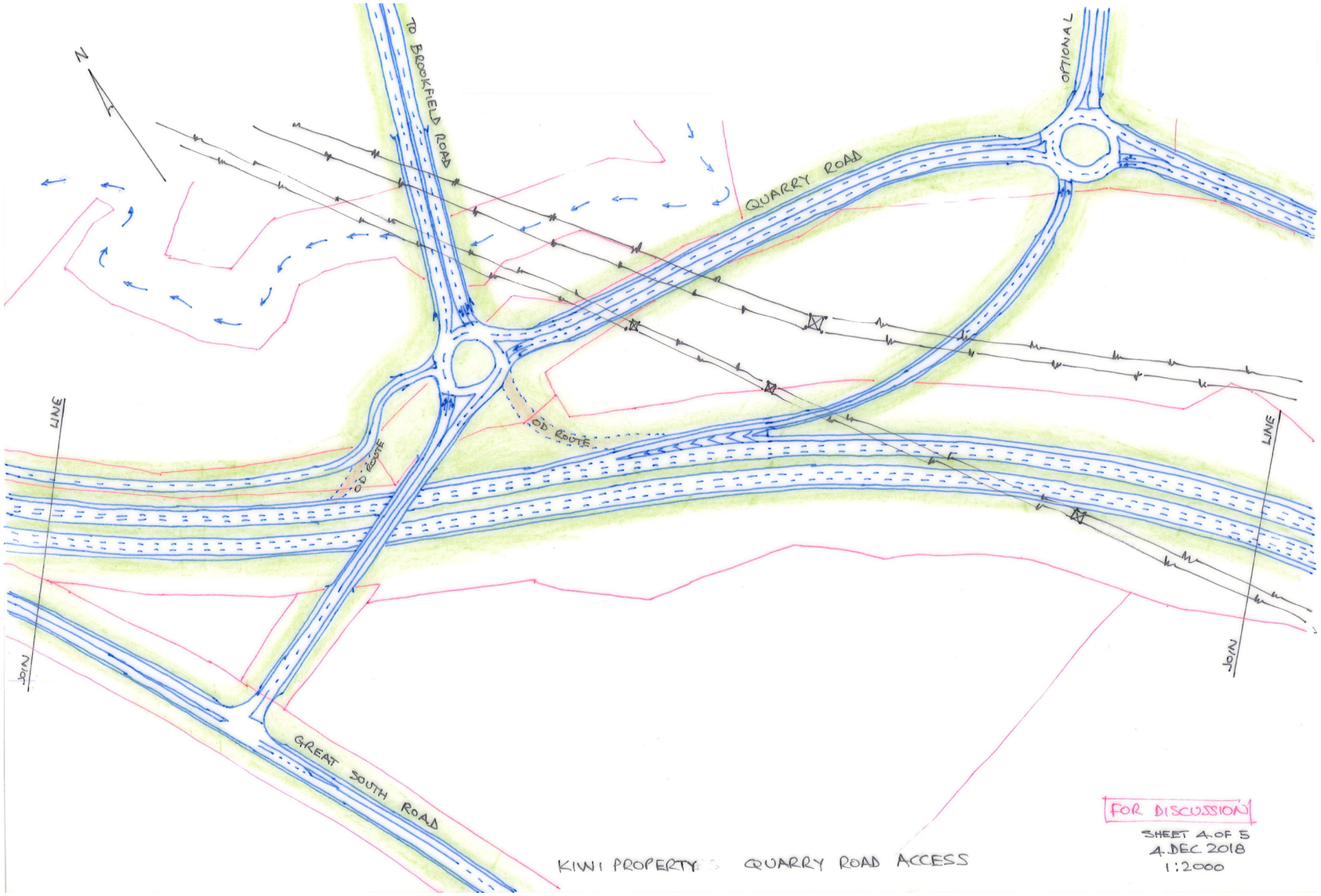


Figure 68: Dec 2018 Sketch of Potential Brookfield-Quarry Rd Connection Concept

5.2.3 Pitt Road Overpass

An access that is aligned with the existing Pitt Road ROW, this potentially critical road access facilities direct east-west connectivity into midpoint of the site of the metropolitan centre from westerly Great South Road over SH1 and continues as a collector road into East Drury and connecting with the proposed Mill Road arterial.

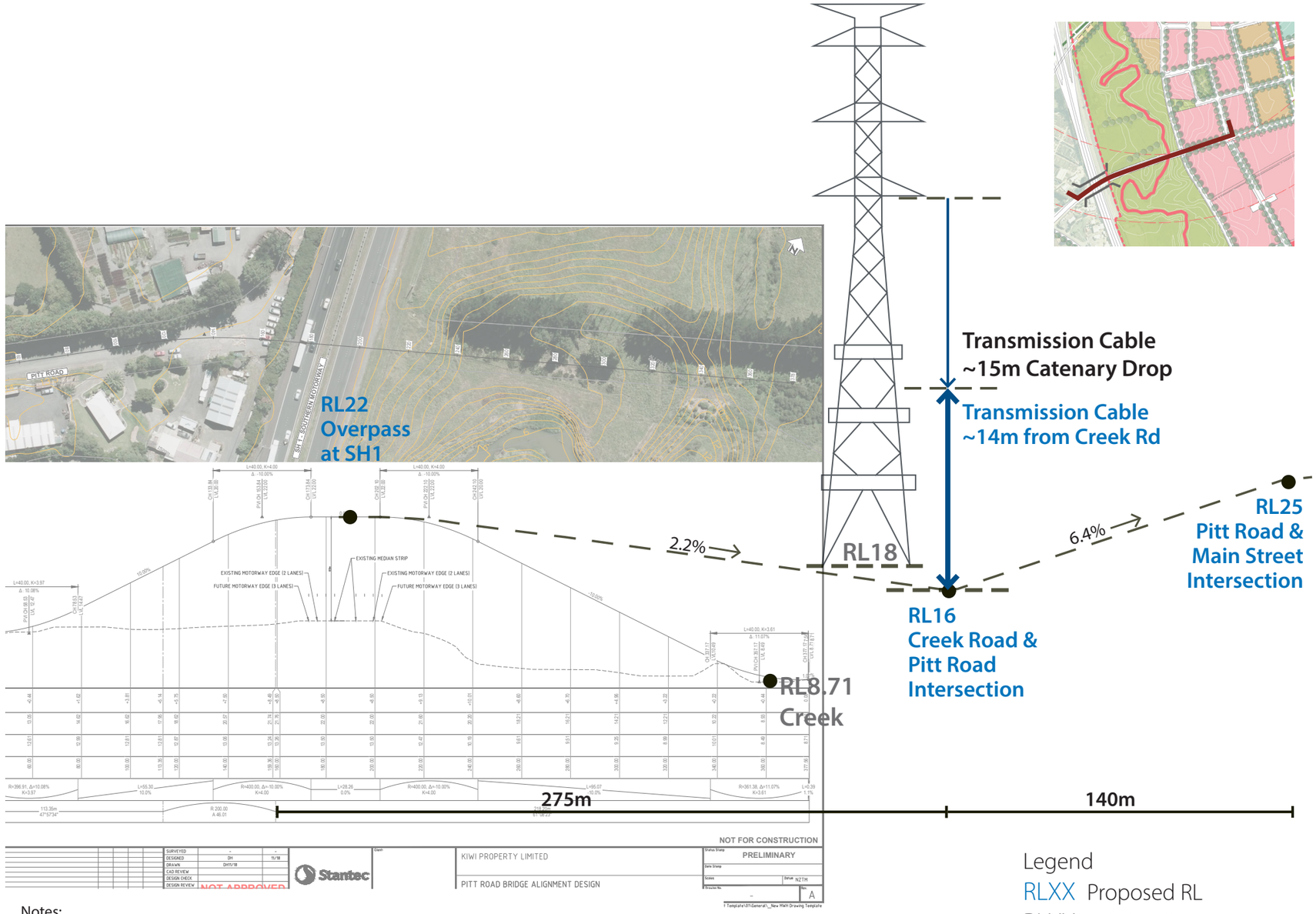
At the time of publication, and due to the ongoing complexity of design and stakeholder engagement, the master plan assumes and shows an indication of a connection while options continue to be assessed.

Generally, the assumed constraints for this connection are as follows:

- A bridge over Hingaia Creek and SH1 is desired as opposed to a tunnel and bridge combination due to flood risk.
- Due to ecological and flooding assessments, bridges shall have piers outside of the watercourse channel.
- Transmission lines/pylons clearances.
- Design vehicles to include trucks and bikes if possible.
- Review with NZTA the requirements due to widening of SH1.
- Where possible, minimize private land acquisition and develop within existing roading designation.
- This connection to be timed with Stage 3 of the metropolitan centre or earlier if possible.

With the above constraints an early working concept section is shown in the following figure, describing a potential solution.

Refer to Supporting Studies (Stantec chapter) for additional information.



Notes:
Dimensions of catenary drop is an estimate only for the purpose of identifying potential design thresholds.

Figure 69: Pitt Road Overpass Analysis Diagram

5.3 Pedestrian & Cycle Access Network

Further to the vehicular access network, the master plan places a strong emphasis on creating a rich pedestrian access amenity. The following key pedestrian access provisions are:

- Legible and direct routes that are integrated with the openspace network and public transport network and its hub at the rail station.
- Routes have high permeability throughout the site and the grid encourages and reinforces the Town Heart as a walkable destination.
- These routes are predominantly footpaths within the street ROW with some pedestrian only lanes and mews located within or near the Town Heart.

Similar to the vehicular network, connections to East Drury can be facilitated by Waihoehoe and Fitzgerald roads, connections to West Drury has the inherent challenges of the Motorway and the Hingaia Creek topography. For a desirable outcome, the master plan envisages greater east-west connectivity being facilitated by:

- A pedestrian overpass connection at Station Plaza between Great South Road/Drury Village and High Street. This important connection bridges over the railway and also functions as a primary access to Drury Rail Station platforms and Bus interchange.
- A mid-point access through the centre and beyond that is complementary, and avoids Motorway interchange bottlenecks at Great South Road and future Mill Road. The master plan envisages this connection as a potential overpass from the existing Pitt Road that bridges over the Motorway and Hingaia Creek. The master plan also envisages a potential connection route that is parallel on the southern side of the railway.



Figure 70: Pedestrian & Cycle Access Network Plan

5.3.1 Dry Journey Network & Retail Arrival Experience

As part of the mobility strategy, the master plan envisages a pedestrian dry journey network strategy for the Town Heart and Homemakers Precincts that aims to take the edge off rainy and down-draft wind conditions but without the complete exclusion of the climate. This maintains awareness of the natural context and seasonality while providing human comfort.

The dry journey network is also intended to be integral to the retail arrival experience of Main Street. Therefore the dry journey network focuses on the Town Heart and Main Street area as it is expected to receive the bulk of the pedestrian footfall with shoppers, workers, visitors and residents.

Like many New Zealand shopping streets, permanent awnings fixed overhead of pedestrian footpaths will be a key weather protection device for the Town Heart. These are continuous weather protection canopies. Discontinuous weather protection canopies offer only localized protection at locations such as residential individual front doors and residential or commercial lobbies that are not part of retail frontages.

To encourage cross-street shopping on both sides of Main Street, covered street crossings are envisaged to be located at key east-west pedestrian crossings that are also on routes to/from community facilities.

Therefore, the arrival experience by rail/public transport consists of the following sequence:

- Arriving to Station Plaza 'front door' people will be protected from the weather by continuous overhead canopies as they walk to Main Street;
- Crossing Station Road will also be weather protected, and;
- Walking along Main Street there are options to cross the street under weather protection or without, like majority of towns and cities.

And, the arrival experience by car consists of the following sequence:

- Parking in the undercroft, people will escalator/ elevator up to public lobbies to arrive at Main Street level;
- The east-west covered street crossings are located to coincide with major public lobbies to enable convenient access between both sides of Main Street and arrival from undercroft parking.



Example Image of crosswalk center-supported canopy



Example Image of Crosswalk Side Canopy

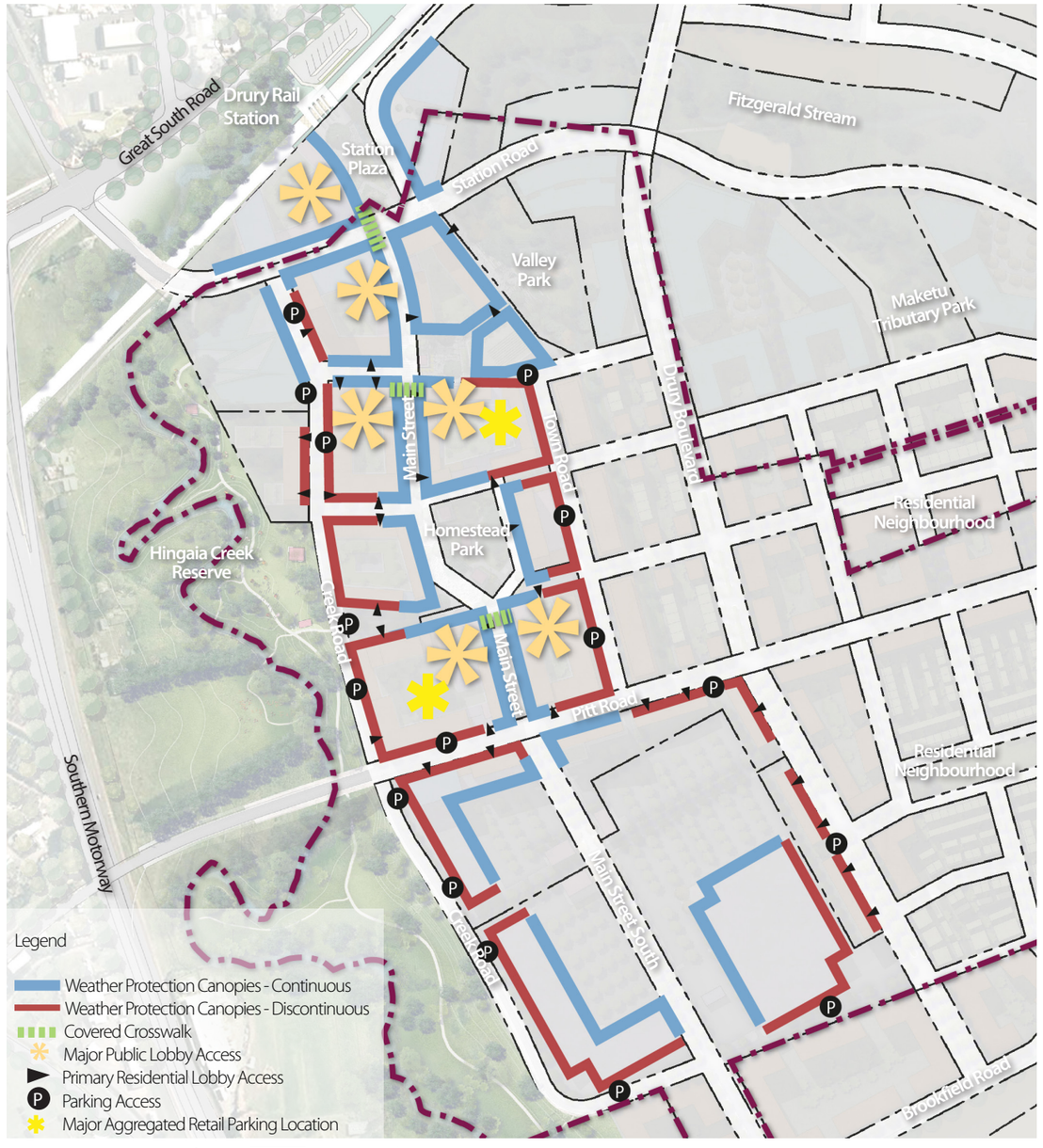


Figure 71: Dry Journey Network & Retail Arrival Experience Diagram

5.4 Indicative Street Sections

The Master Plan assumes the following street sections of the key streets within the street hierarchy. These are indicative only of the potential streetscape character and are subject to change according to further traffic modelling and testing. However, the Master Plan assumes dimensions that are in alignment with Council/NZTA requirements for street components and ROW widths for each proposed street classification.

Moreover, it is intended that all streets shall incorporate at-source stormwater treatment devices. Their required size will be ascertained at later design stages and will need to reconcile with the desired number of street carparks and areas of planted verges.



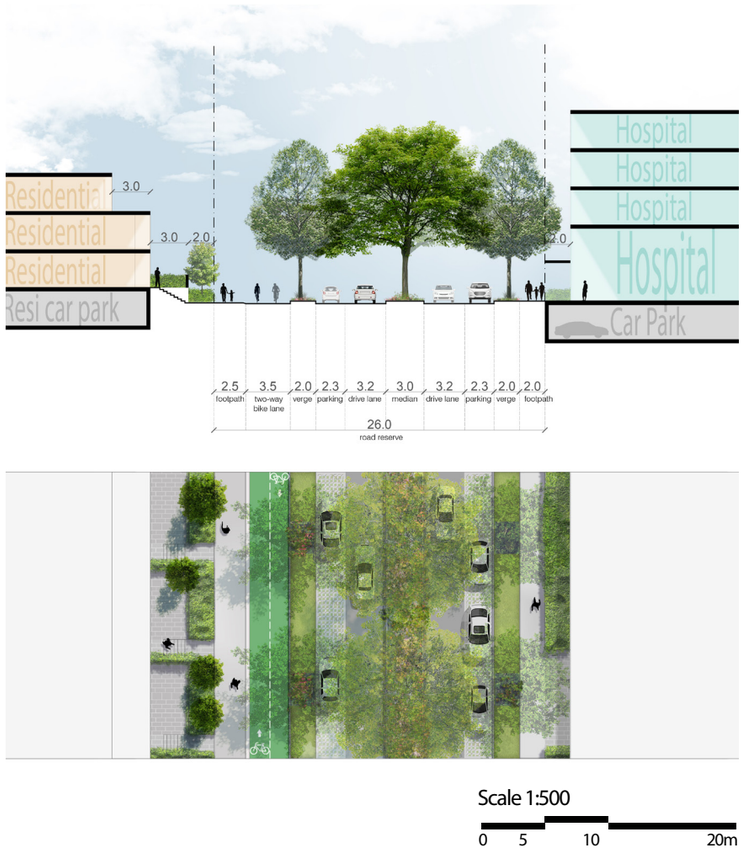


Figure 72: Section a-a Drury Boulevard Section(To North)

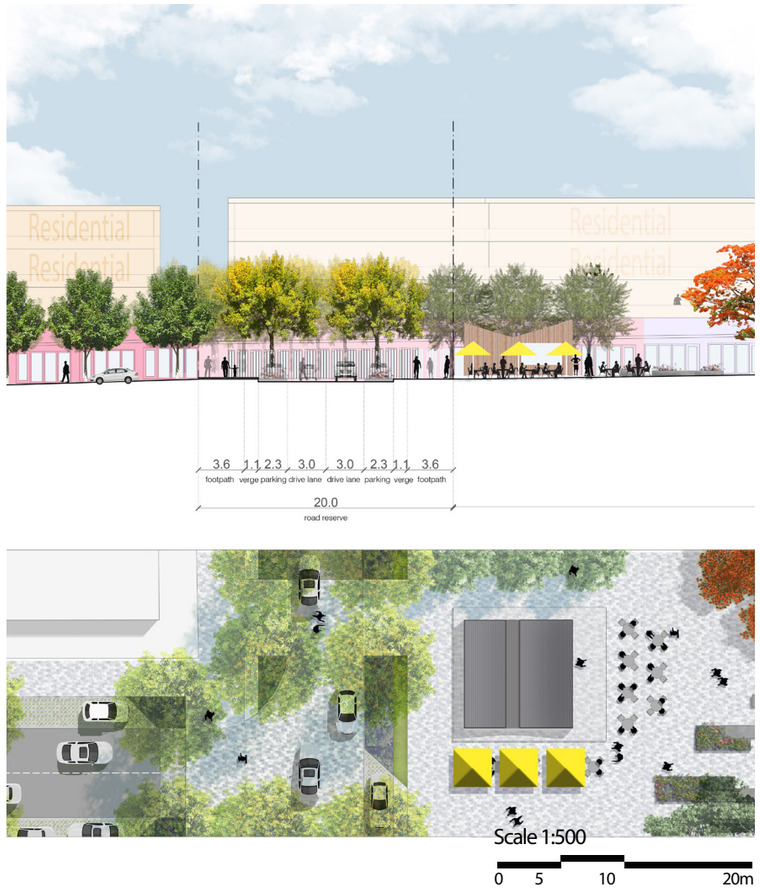


Figure 73: Section b-b Main Street North Section(To North)

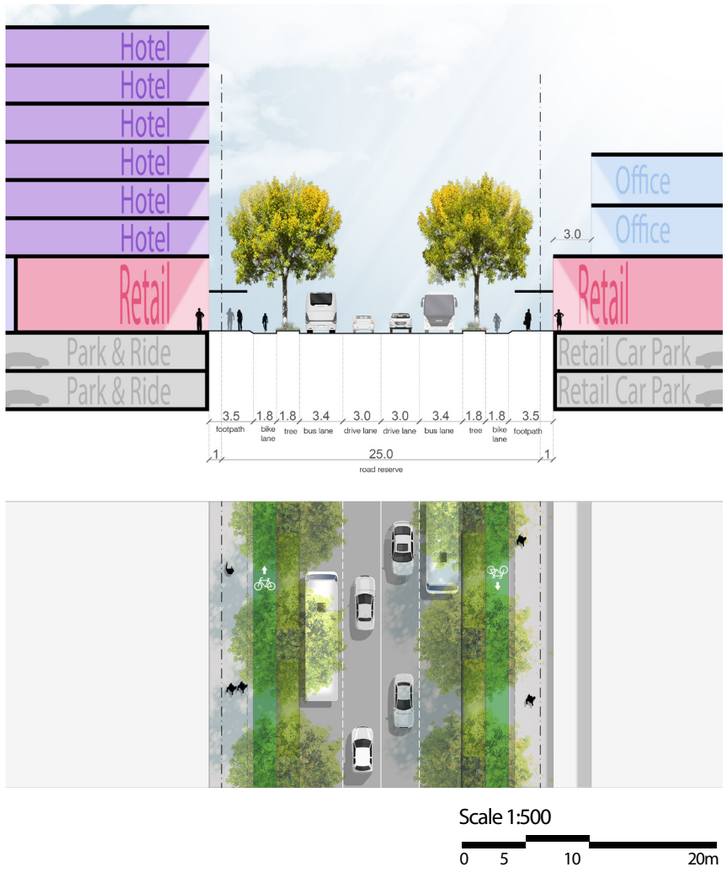
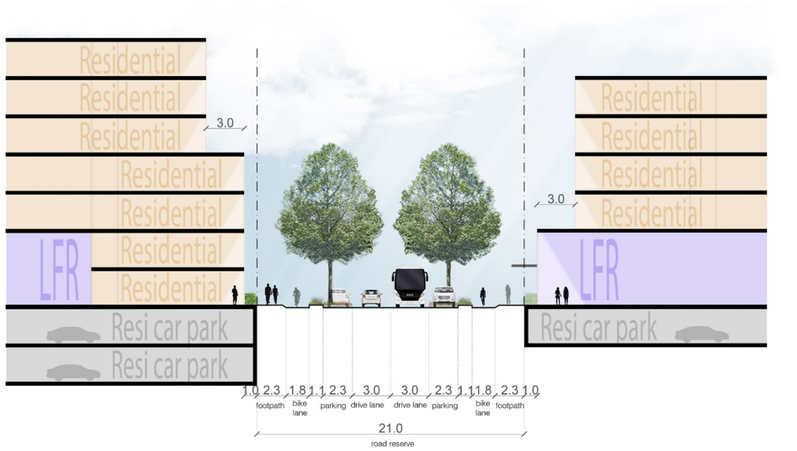
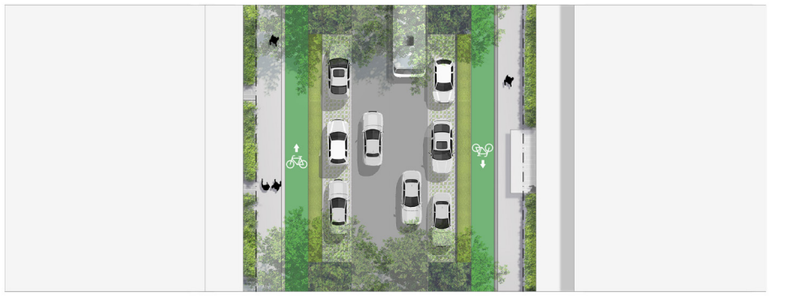


Figure 74: Section c-c Station Road Section(To East)





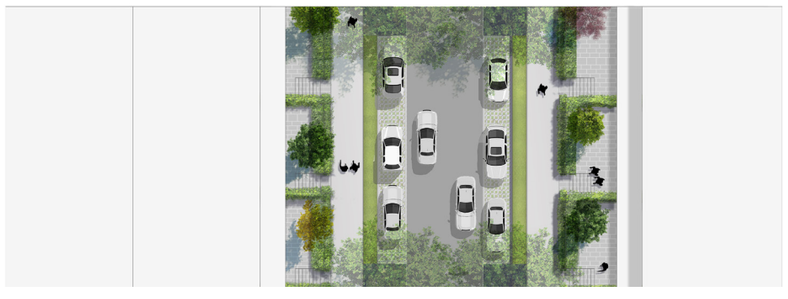


Scale 1:500

0 5 10 20m

Figure 75: Section d-d Pitt Road Section(To East)

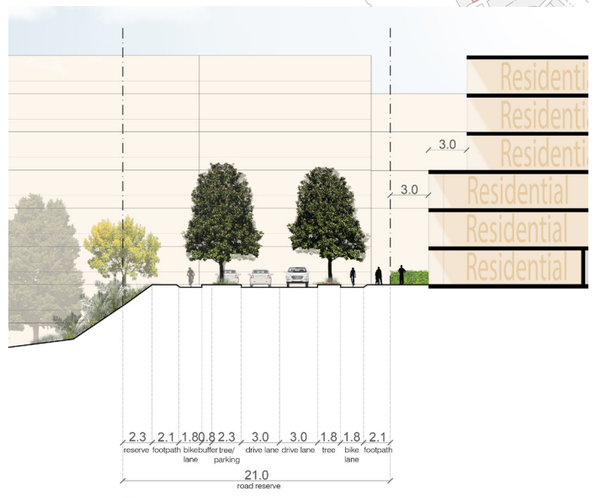


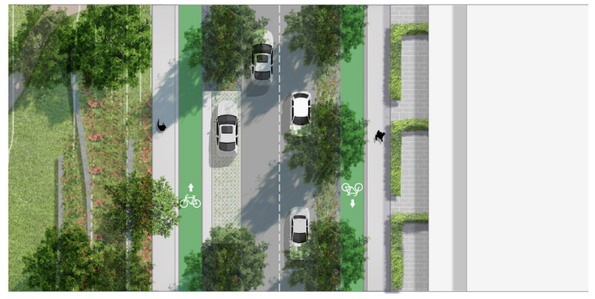


Scale 1:500

0 5 10 20m

Figure 76: Section e-e Town Lane Section(To North)





Scale 1:500

0 5 10 20m

Figure 77: Section f-f Creek Road Section(To North)

5.4.1 Additional Street Sections

Further to the key streets, the following are additional sections of streetscapes for other road ways. These sections are intended to illustrate a desirable streetscape character outcome, but are subject to further design development due to their specific site conditions and traffic modelling requirements. The street components within the R.O.W. are intended to be compliant with Council/NZTA objectives and requirements.





Figure 78: Section g-g Typical Residential Section

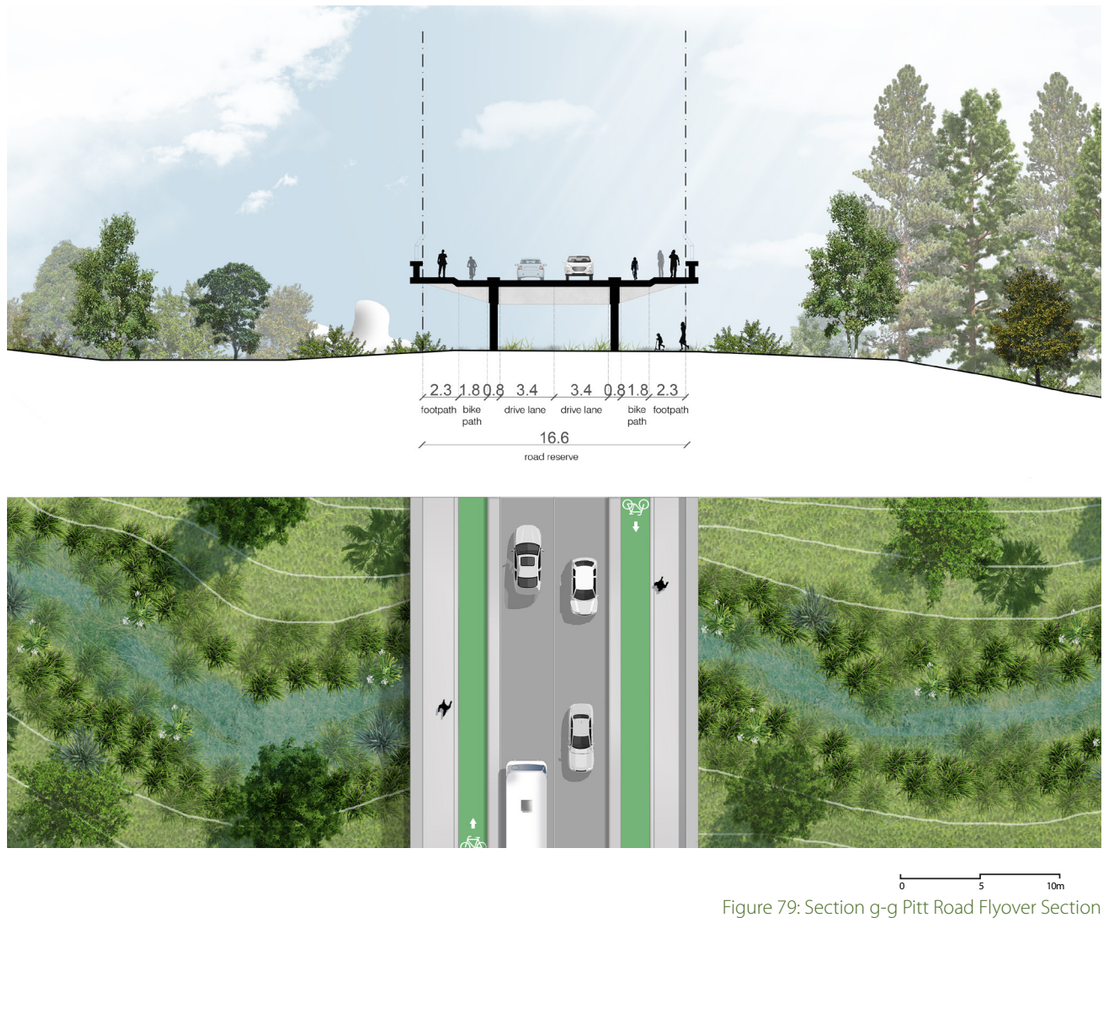


Figure 79: Section g-g Pitt Road Flyover Section



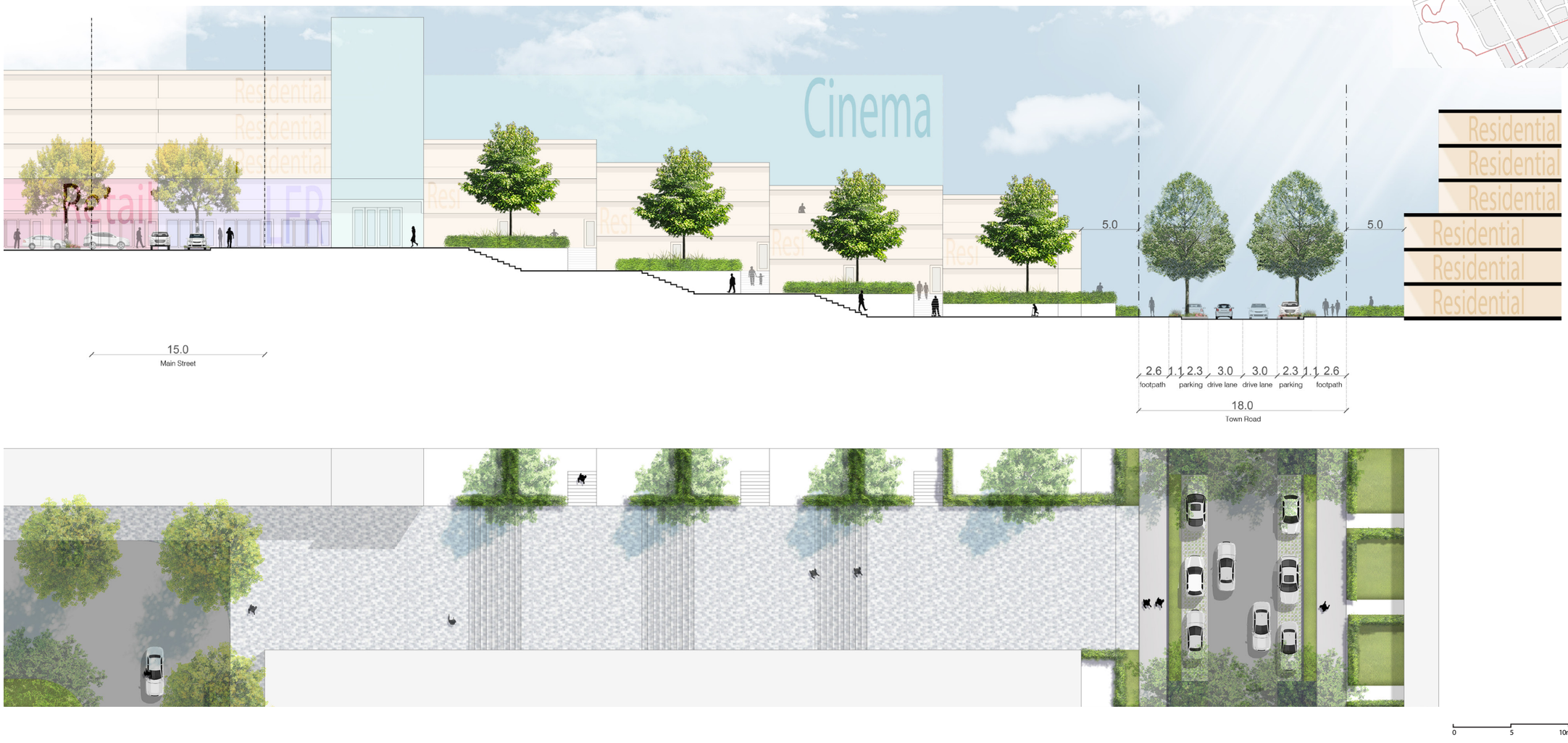


Figure 80: Section i-i Section through Homestead Mews



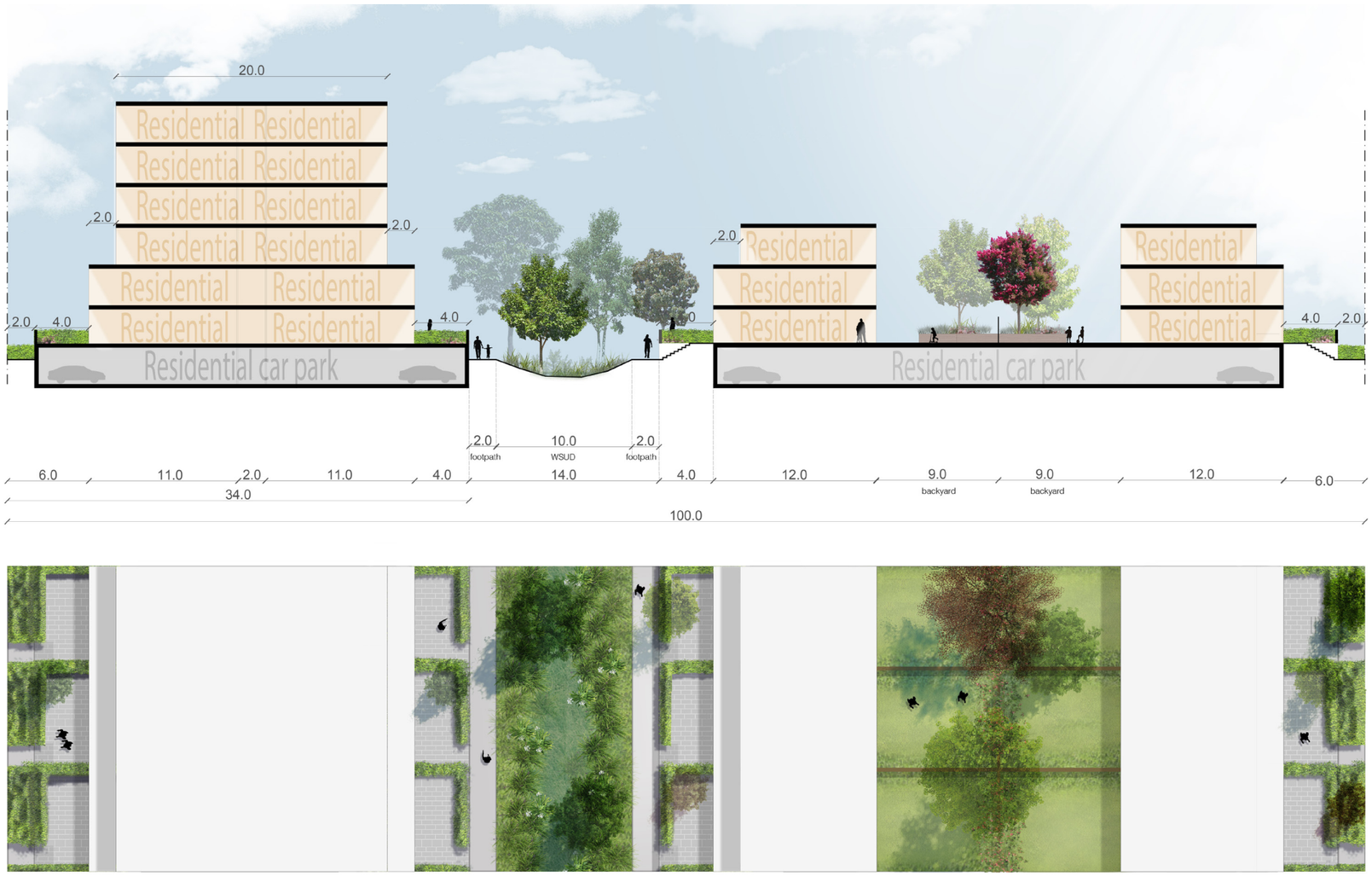


Figure 81: Section j-j Village Mews Section





Figure 82: Section k-k South Precinct Big Box Section





Figure 83: Section l-l Homestead Park Section E-W through Main Street

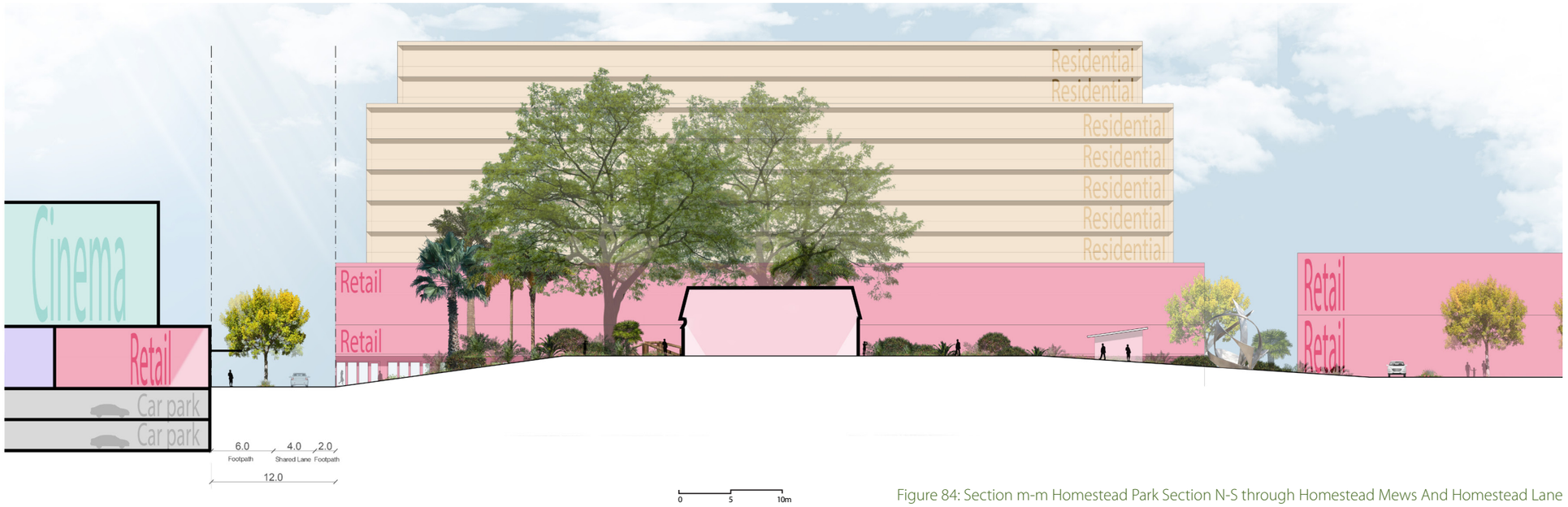


Figure 84: Section m-m Homestead Park Section N-S through Homestead Mews And Homestead Lane





Figure 85: Town Square Section E-W through Relocated Flanagan Road (To North)

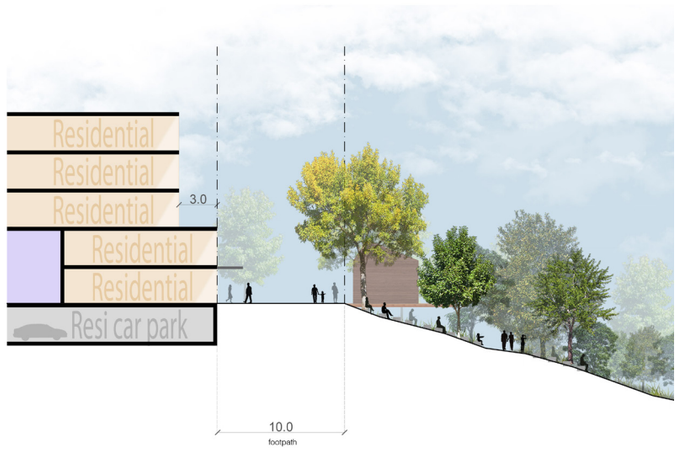


Figure 86: Section n-n Valley Park Section through Walking Lane



Figure 87: Section o-o Town Square Section E-W through Relocated Flanagan Road (to North)


THE ROCK
FACTORY

6.0 Public Realm

The Public Realm

The public realm is a critical component of the Master Plan and its design is key to creating a vibrant, active, comfortable and engaging town centre.

The public realm at Drury includes parks, plazas, squares and reserves as well as streets, boulevards and laneways. Each of these components work individually and as part of the wider network to provide a high level of public amenity and a variety of public opportunities and experiences.

The public realm enhances the existing features of the site, including the homestead setting on the top of the hill, the creek lines and the valleys, while also providing a new urban character to the area consistent with its future role as a town centre.

This section outlines the public realm principles and approach as well as the public realm components of the Master Plan.

Open Space Provision

The Master Plan envisages a high level of open space provision and variety, that will cater to the social and recreational needs of visitors, workers and residents.

Key open spaces include:

- Hingaia Creek and Fitzgerald Stream, which frame the site to the north and south and provide extensive recreational opportunities;
- the urban plazas of Station Plaza and Town Square providing a civic amenity and forecourt to public facilities;
- Homestead Park as a entertainment destination that captures the existing character of the site;
- Valley Park as a local open space with an rehabilitated creek environment; and
- a series of Neighbourhood Parks servicing the new residential neighbourhoods adjacent the town centre.

These spaces are further detailed within this section.

6.1 Public Realm Plan

The Public Realm Plan for Drury is based on a number of key guiding principles as summarised below:

- Create spaces for the everyday;
- Provide for play for all ages;
- Establish a diverse and well-defined network of spaces;
- Provide for a range of different journeys and episodes within the public realm;
- Provide high quality open space with appropriate amenities;
- Respond to and celebrate the natural landscape and particularly its topography and hydrology;
- Integrate significant existing vegetation and new planting, particularly of trees, into the public realm;
- Integrate public art into the landscape;
- Ensure the public realm plan is centred on sustainable design principles including ecology, resources, community, livability and resilience, and;
- Be an Auckland icon and a world class landmark.



Figure 88: Drury Public Realm Plan

Spaces for the Everyday

A successful town centre requires spaces that will function seamlessly every day as well as during programmed events and gatherings. The public realm is to include spaces that cater to a diverse range of people and activities by:

- Providing intimate spaces for people to enjoy alone or in small groups as well as facilities for large community gatherings and events;
- Promoting and developing social landscapes;
- Provide protected areas for people to gather and enjoy the throughout the year;
- Provide open spaces for picnics and games;
- Incorporate playful elements to encourage play and attract children;
- Provide community garden / edible gardens and other spaces that promote community engagement and a sense of ownership;
- Provide an environment that is universally accessible and engaging for a diverse range of people; and
- Encourage greater engagement between private buildings and the public domain whilst balancing the need for privacy.

Providing Play for All Ages

Play across all ages is an important component of every development, and will be provided for all ages and abilities at Drury. The approach to play is to consider the following:

- Promote nature and discovery. Encourage play and playful engagement with the landscape.
- Big kids need playgrounds too, and so do mums and dads - provide activities for all ages.
- Promote active lifestyles through exercise.

Diverse and Defined Spaces

A range of public spaces will provide or a variety of opportunities and experiences. The design of the public realm considers the following:

- Well defined large spaces provide opportunities for festivals and larger events, while intermediate and small spaces are also vital to sustaining activities.
- Consider how the changing seasons bring a change in use.
- Provide amenities for night time activities.
- Provide for regular or re-occuring use; eg markets.
- Design for change and encourage community driven interventions like pop-ups and temporary installations.

Journeys and Episodes

The public realm is not just about destinations, public spaces also form journeys and episodes. Our journeys are often social and taken with others. Paths can also be intimate, formalised or informal. People need choices and the journey doesn't have to be long to be enjoyed.

The public realm should:

- Provide a range of landscape types and sequence of spaces to allow varied forms of engagement and occupation.
- Utilise buffers and linear spaces for pedestrian paths; and
- Provide places of respite to encourage occupation.

Amenities

Public realm amenities allow for the comfortable and functional use of the public domain. Seating creates places for people to occupy, structures provide shade and define spaces and cooking facilities help to encourage occupation. These amenities are to be provided in appropriate places and intervals across the public realm.

Celebrating the Natural Landscape

The natural landscape of Drury can be celebrated through engagement with the creeks and the use of water, vegetation and natural materials across the public realm.

Water in particular is a material is like no other - people should be encouraged to touch it and feel it and the waters edge provides opportunities for respite and occupation.

The creeks at Drury can be viewed as both functional infrastructure and a place of amenity. In this regard, the Hingaia Reserve and Valley park should provide opportunities to engage with water as well as regenerate the creek environment and improve water quality.

Vegetation and Planting

Vegetation and planting can enhance the public realm in the following ways:

- Trees create defined edges and spaces, provide shade and create microclimates, and mark the seasons and passage of time.
- Balance the formality and regularity of the built environment with the 'wild' landscape.
- Create a strong 'village' character through avenue and street tree plantings that define the street hierarchy to promote natural wayfinding.

Art and Landscape

Art is to be an integrated and extensive component of the public realm and consider the following:

- Art should be accessible.
- The park isn't a gallery and there are no plinths - encourage engagement with sculptures.
- It doesn't have to be grand in scale - small details can add interest and distinction to everyday items
- Landscape as art.
- Celebrate the seasons and passage of time through planting.

Sustainability

Ensure the public realm is centred on sustainable design principles, including:

- Ecology;
- Resources;
- Community;
- Livability; and
- Resilience.

DRURY TOWN CENTRE - OPEN SPACE MATRIX (DRAFT)

FACTOR	REQUIREMENT	Town Square	Station Plaza	High Street Plaza	High Street	Homestead Park	Valley Park	Hingaia Creek Lookout	Neighbourhood Parks	Hingaia Creek o/s	Maketu Creek o/s
Regional Context	How does the open space hierarchy consider the broader regional context?	Forms 'heart' of town centre. Key urban space on High Street with potential Civic building	Forms gateway urban space at north end of High St and forecourt to Station with potential public building.	Forms key public space on high street within large format retail precinct.	Forms key pedestrian spine and active retail street between station and Homestead Park and beyond along ridgeline	Forms the major urban green space within the town centre. Located at the high point with active retail edges.	Important park located in the valley along the secondary pedestrian route to the station	Located on the edge of Hingaia Creek at the key gateway entry from Homestead Park and High Street. Forms an important outlook space.	Located within the predominantly residential areas and primarily serving the local community within 400m catchment	Forms key north-south corridor of regional open space adjacent to the town centre. It also creates the foreground and setting to the town centre from the	Forms key east-west corridor of regional open space, connecting with future residential areas to the east.
Connectivity	How do spaces connect to one another and across the hierarchy?	Located on High Street. Connects to Station Plaza to north, Valley Park to east and Homestead Park to south.	Located at north end of High Street at station entry. Connects to Town Square and Homestead Park via High Street.	Located on south part of High Street within large format retail precinct. Connects to Hingaia Creek to west.	Connects town centre and the spaces along it with the station. Forms the key north-south street within the town centre. Street follows the ridgeline.	Located on High Street. Connects to Town Square and Station Plaza to north and to Pitt Rd to south. Direct link to Hingaia Creek to west. Connects via east-west streets with residential	Connects to Station Plaza to north and to Town Square to west. Connects with residential areas to south and east.	Connects directly to Homestead Park to the east and then to High Street. Directly adjoins Hingaia Creek to the west.	Connect with surrounding residential area via local streets.	Forms regional pedestrian and bicycle route connecting to south along creek line, and across railway and motorway to north-west. Pedestrian links into town centre at regular	Forms regional pedestrian and bicycle route connecting to east along creek line, and to north across creek. Pedestrian links into adjoining residential areas at regular intervals.
Primary Audience	Is the audience residential, visitors, workers, community or commuters?	Primarily visitors to town centre; also residents, workers, commuters	Primarily commuters and visitors; also residents, workers	Primarily visitors to town centre; also workers	Primarily visitors, workers and residents,	Primarily visitors to town centre; also residents, workers, commuters	Primarily visitors and residents; also workers, commuters	Primarily visitors to town centre; also residents, workers, commuters	Primarily residents	Primarily residential - may also attract visitors and workers	Primarily residential - may also attract visitors and workers
Primary Catchment	Is the catchment local, neighbourhood or regional?	Regional	Regional	Regional	Regional	Regional	Neighbourhood	Regional (as interface between Homestead Park and Hingaia Creek)	Neighbourhood	Regional	Regional
Activation	Is the space active or passive?	Active + passive	Active + passive	Mainly passive	Mainly active	Active + passive	Mainly passive	Mainly passive	Active + passive	Active + passive	Active + passive
Program	Is programming permanent or dynamic and temporary?	Permanent + opportunity for small scale temporary events	Permanent + opportunity for larger scale temporary events	Permanent + opportunity for small scale temporary events	Permanent + opportunity for temporary events if closed off	Permanent (including dining pavilions) + ongoing dynamic programming that provides continual	Permanent + opportunity for small scale temporary events	Mainly permanent + opportunity for small scale temporary events	Mainly permanent + opportunity for casual programming.	Mainly permanent + opportunity for temporary events & programs.	Mainly permanent
Community	Does the space seek to meet community infrastructure requirements?	Partly (space associated with adjacent community building)	Partly (space associated with adjacent community pool)	No	No	Partly (as community events space)	Partly (as community events space)	Partly (as community events space)	Yes	Yes (recreation, regional cycle network & stormwater management)	Yes (recreation, regional cycle network & stormwater management)
Urbanity	Is the space natural and green, or a more urban and paved landscape?	Paved urban space with trees	Partly paved urban space with trees and lawn	Paved urban space with trees	Paved with street trees	Urban park with combination of hard & soft (including lawn)	More soft than hard with open lawn, planting and limited paving.	More soft than hard with open lawn, planting and limited paving.	More soft than hard with open lawn, planting and limited paving.	Natural green space (stream corridor) with riparian revegetation, stormwater detention and some open lawn areas	Natural green space (stream corridor) with riparian revegetation, stormwater detention and some open lawn areas
Scale	Is the space small and intimate, or large?	Small - 2,100m2; contained by built form on all sides so feels quite intimate.	Medium - total space is 6,000m2; contained by built form on E & W sides and Station to N.	Small - 3,000m2; contained by built form	20m wide contained by built form	Medium - 5,200m2 contained by built form.	Large - total space is 13,00m2; contained by built form	Small - 800m2; contained by built form to N & S.	Medium - typically 4,000-6,000m2	Very large - approx. 200m in width	Large - approx. 80-100m in width
Time of Use	When will people use the space - early in the morning, mainly on week days or on weekends, or all the time?	Morning - night time (7am-10pm) all week	Early morning - night time (6am-midnight) during week. Daytime & evening use at weekends	Morning - evening (9am-6pm) all week, with peak use at weekends. Laegely following retail trading hours.	Early morning - evening (7am-10pm) all week, with peak use at weekends	Early morning - evening (7am-10pm) all week, with peak use at weekends	Morning - night time (7am-9pm) all week	Early morning - evening (6am-9pm) all week, with peak use at weekends	Early morning - evening (6am-9pm) all week, with peak use at weekends	Early morning - evening (6am-8pm) all week, with peak use at weekends	Early morning - evening (6am-8pm) all week, with peak use at weekends

DRURY TOWN CENTRE - OPEN SPACE MATRIX (DRAFT)

FACTOR	REQUIREMENT	Town Square	Station Plaza	High Street Plaza	High Street	Homestead Park	Valley Park	Hingaia Creek Lookout	Neighbourhood Parks	Hingaia Creek o/s	Maketu Creek o/s
Play Overlay	How does the space relate to the wider play strategy?	Play forms part of programming (primarily water play)	Informal play use e.g. lawn area	Informal play forms part of programming	No specific play provision	Informal play forms part of programming	Incorporates formal and informal play for younger and older children	Informal play use e.g. lawn area, terraces	Forms secondary play provision in northern precinct. Caters for young & older children's play and active use e.g. sports courts	Major play space for younger & older children in natural setting	Secondary play space for younger & older children in natural setting
Public Art Overlay	How does the space relate to the wider public art strategy?	Opportunity for small scale public art or interpretation and potential water feature	Provides opportunity for major piece of public art to mark Station and northern gateway to town centre	Opportunity for small scale public art or interpretation	Opportunity for small scale public art or interpretation	Provides opportunity for major public art overlay or rotating arts program as key open space within town centre	Opportunity for medium scale integrated public art and interpretation overlay	Opportunity for small to medium scale public art or interpretation reflecting interface with natural landscape	Opportunity for small scale, integrated interpretation	Opportunity for gallery space, rotating arts program, temporary exhibitions etc	Opportunity for small to medium scale public art or interpretation reflecting interface with natural landscape
Interpretation Overlay	How does the space relate to the wider interpretation strategy?	Opportunity for interpretive elements integrated into final design of space	Opportunity for interpretive elements possibly based on transport or gateway theme	Opportunity for interpretive elements possibly based on orchard theme	Opportunity for interpretive elements possibly based on ridgeline theme	Opportunity for interpretive elements possibly based on agricultural theme	Opportunity for interpretive elements possibly based on valley/stream theme	Opportunity for interpretive elements possibly based on natural theme	Opportunity for interpretive elements possibly based on local community theme	Opportunity for interpretive elements possibly based on Iwi or natural themes	Opportunity for interpretive elements possibly based on Iwi or natural themes
Digital Overlay	How does the space relate to the wider digital strategy?	Opportunities for free Wi-Fi, digital screen, wayfinding apps	Opportunities for free Wi-Fi, digital screen, wayfinding apps	Opportunities for free Wi-Fi, digital screen, wayfinding apps	Opportunity for free Wi-Fi, wayfinding apps	Opportunities for free Wi-Fi, digital interactive play, wayfinding apps	Opportunities for free Wi-Fi, digital interactive play, fitness/wayfinding apps	Opportunities for free Wi-Fi, wayfinding apps	Opportunities for free Wi-Fi, digital interactive play, fitness/wayfinding apps	Opportunity for fitness / wayfinding apps	Opportunity for fitness / wayfinding apps
Health & Wellness	How does the space relate to the wider health & wellness strategy?	Forms part of wider pedestrian network	Forms part of wider pedestrian network	Forms part of wider pedestrian network	Forms part of wider pedestrian network	Opportunity for informal fitness activities within open space at certain times. Forms part of wider pedestrian network	Opportunity for fitness activities within park including fitness stations & programming. Forms part of wider pedestrian network	Opportunity for informal fitness activities within open space. Forms part of wider pedestrian network	Opportunity for fitness activities within park including fitness stations & programming. Forms part of wider pedestrian & bicycle network	Opportunity for fitness activities including fitness stations & programming. Forms part of wider pedestrian and bicycle network	Opportunity for fitness activities including fitness stations & programming. Forms part of wider pedestrian and bicycle network
Ownership & Maintenance	Who owns and maintains the space?	KP owned & managed	Council	TBC	TBC	KP owned & managed	KP owned & managed	Council	Council	Council	Council

6.1.1 Public Realm Key Moves

The urban design principles established for Drury are delivered across the public realm through a series of key moves.

These key moves illustrate how the design principles are encompassed within the master plan, and include:

- A distinct landscape setting;
- A highly connected series of public spaces;
- A variety of public space experiences and amenity;
- Punctuation of key architecture; and
- Great streets, boulevards and laneways.

A distinct landscape setting



A distinct landscape setting is created through the retention and enhancement of the surrounding creek environments, valley park and homestead park.

These spaces make the most of the existing site conditions and form an integral part of the character and context for the town centre.







A highly connected series of public spaces

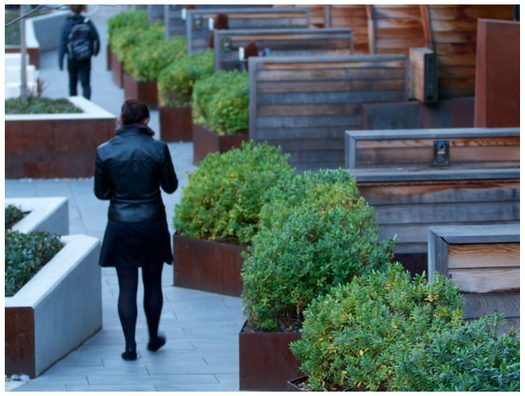


The numerous public spaces of the master plan are connected to each other, the town centre, and surrounding residential communities through direct and generous street and open space connections.

A series of east-west connections in particular provides visual and physical connectivity to the Hingaia Creek Reserve.







A variety of public space experiences and amenity



The public spaces across the master plan provide a variety of experiences and amenity, from civic plaza spaces, to regional parklands and waterways and local neighbourhood parks and play spaces.

Each of these spaces is intimately related to its context in terms of character and the amenity it provides, with the overall open space network catering to the needs of a vibrant and active town centre.







Punctuation of key architecture



Great architecture will help to define the public domain and character of the town centre. Locations for key architecture include public and civic buildings, edges of open spaces, town centre entry points and buildings within key view lines and vistas. These buildings will be held to a higher design standard and reflect the character and scale of the public domain.







Great streets, boulevards and laneways



Streets, boulevards and laneways not only provide the movement network for Drury, but also become integral public spaces within the master plan. The scale and character of these corridors reflects a clear hierarchy of connections, with the pedestrian experience put first to encourage a safe and walkable town centre.







6.1.2 Place Activation

Drury will be a highly active town centre, with all of the public spaces well-used for a variety of activities across day and night, weekdays and weekends.

A mixture of dining opportunities, informal gatherings, play and recreation will be combined with a program of organised events and activities to ensure a vibrant town centre that capitalises on a generous public domain.

The adjacent diagram provides an indication of the intensity of various activities within the open spaces across a typical week day.

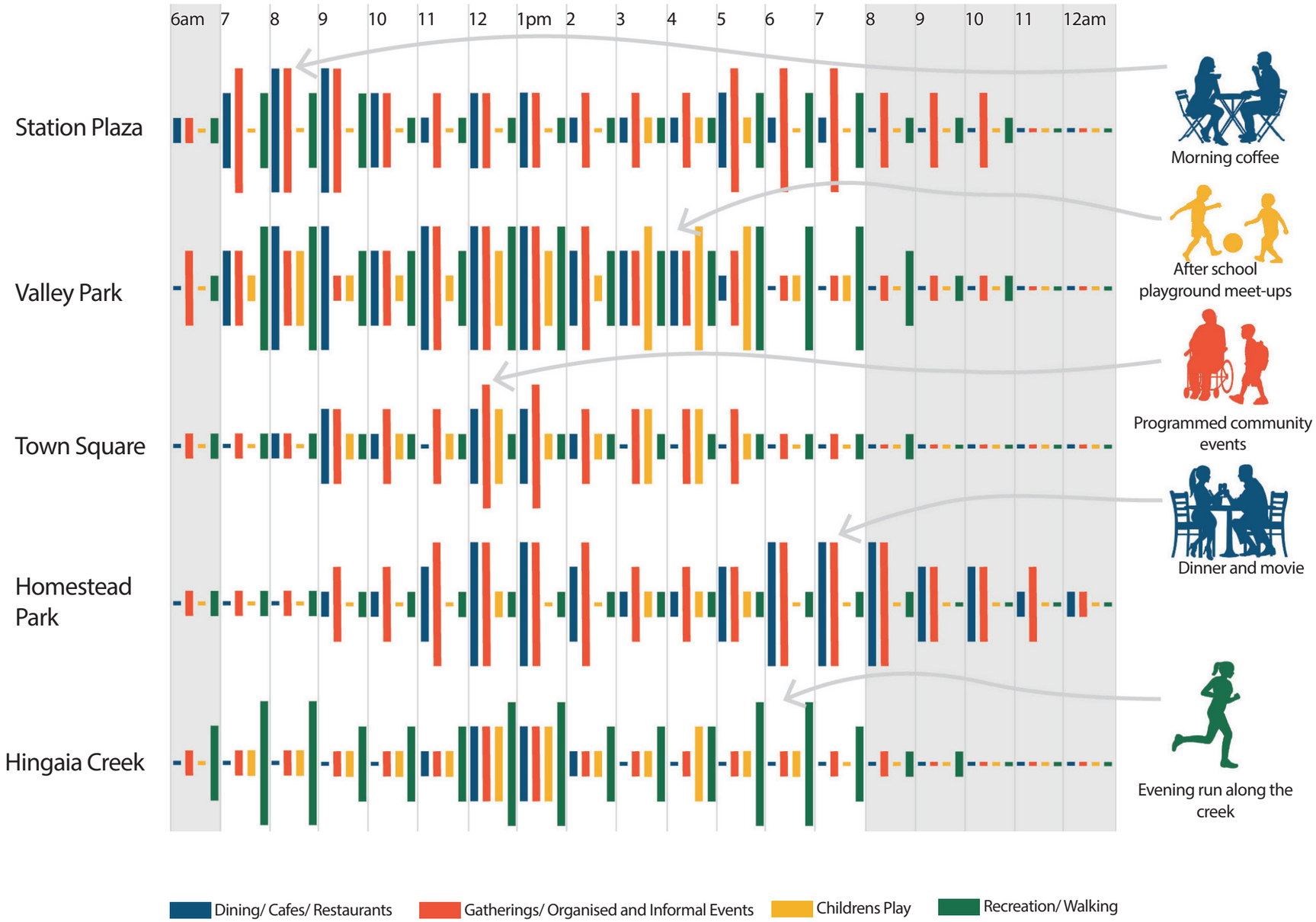


Figure 89: Place Activation Diagram

Drury Metropolitan Centre Vision Master Plan Report (28-11-2020) Internal Reference Only

6.2 Main Street

Main Street is the main north-south pedestrian spine linking the public transport node with the rest of the town centre and key public spaces along its length such as Town Square and Homestead Park. The Main Street is located along the existing ridge line and links with east-west green streets.

Main street will include:

- Accessible grades;
- A varied spatial experience along its length - meandering and varied in width;
- Active frontages and outdoor dining in some locations;
- High quality and durable materials;
- Mainly hard paved surfaces;
- Street trees for shade; and
- A variety of small scale seating and gathering opportunities.



Main Street

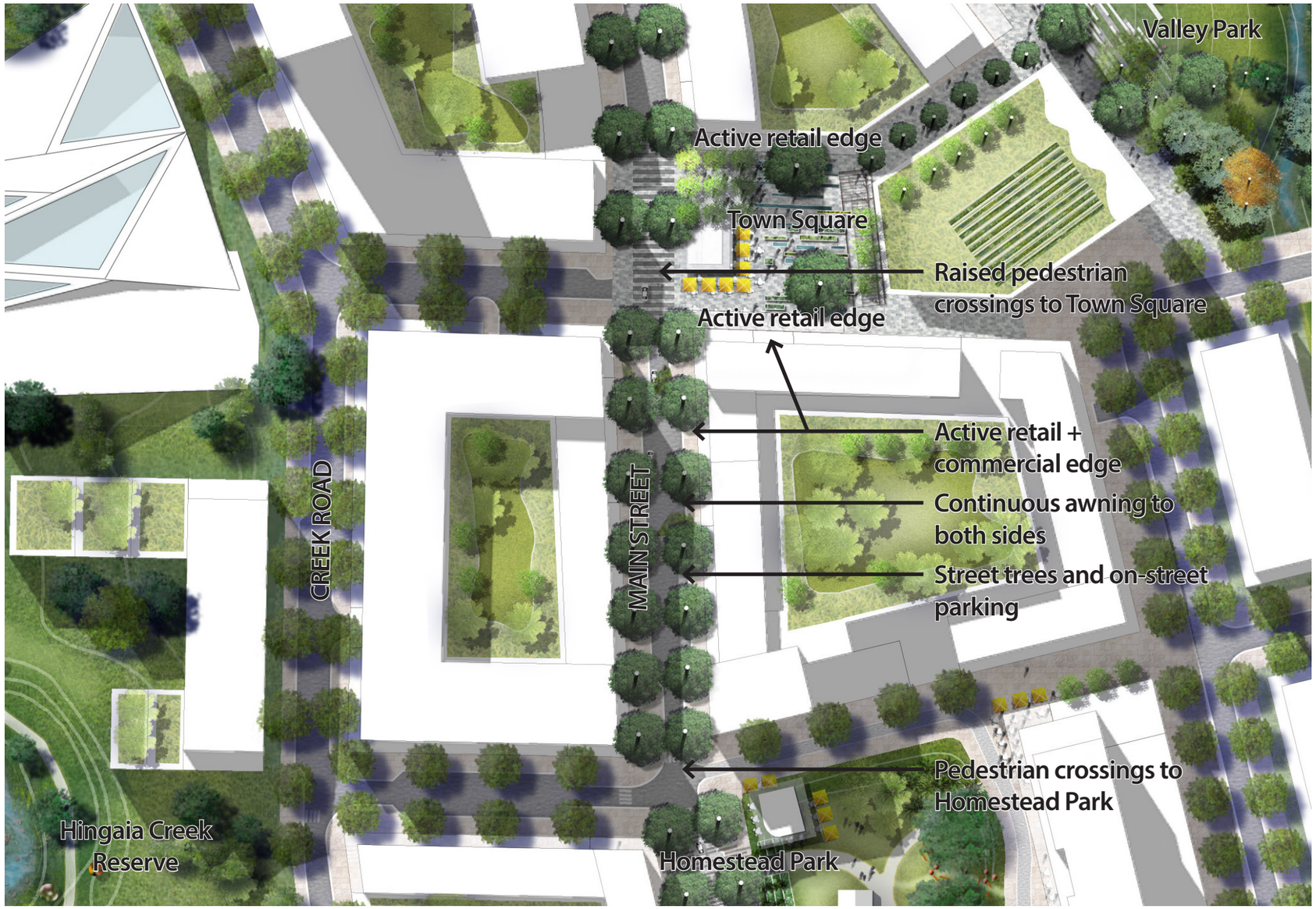






Figure 90: Main Street Public Realm Uses Diagram

0 10 20 40m

6.3 Station Plaza

Station Plaza is a major public entry space directly in front of train station, linking directly with Main Street.

Station Plaza will include:

- Accessible grades;
- Active frontages and outdoor dining potential;
- Potential Cafe/kiosk within space;
- Trees for shade and as features;
- A variety of public seating and gathering opportunities;
- High quality materials;
- Art and play elements;
- A mixture of hard surfaces and soft lawn and planted areas; and
- Potential for programming at a variety of scales.



Station Plaza

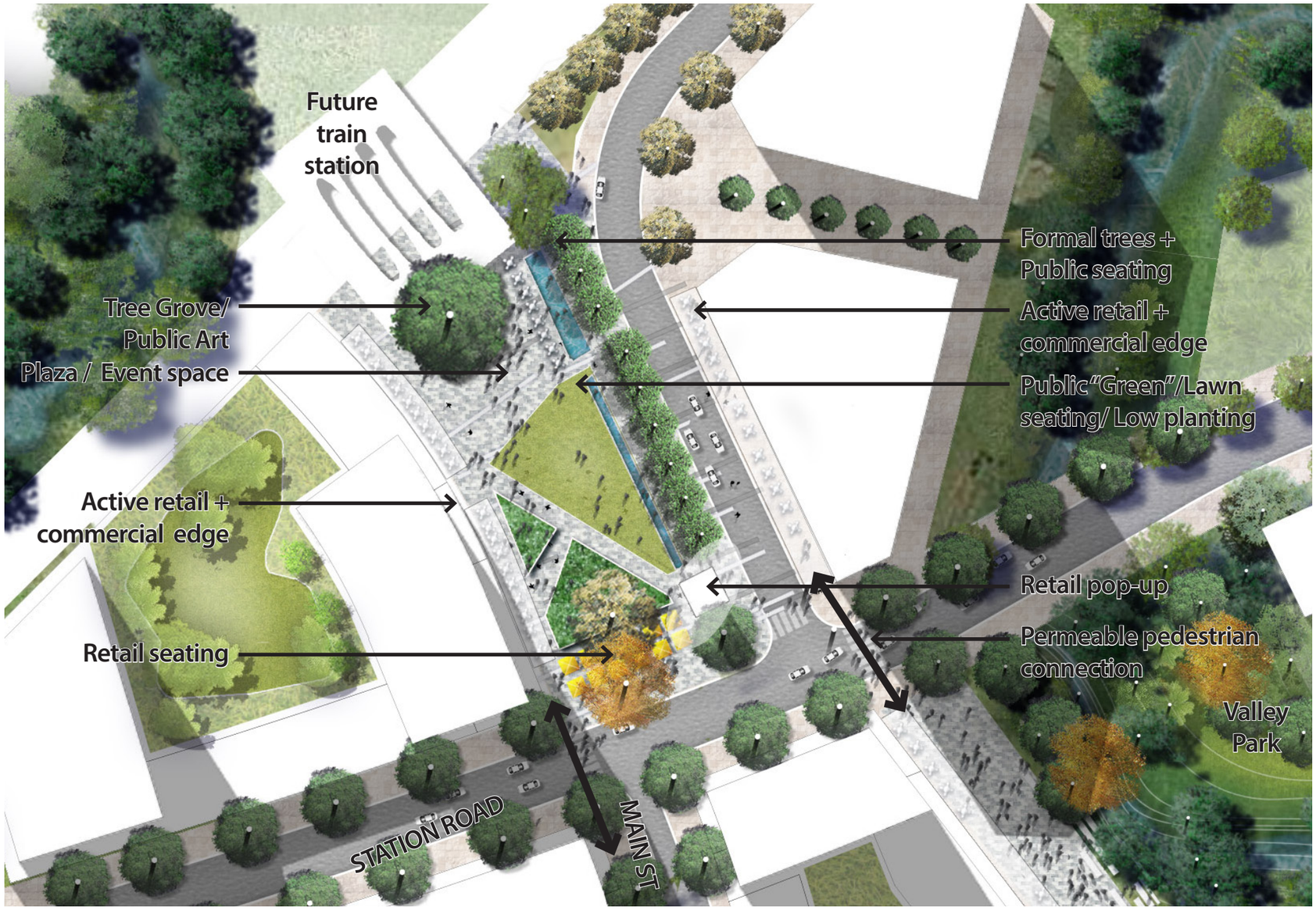






Figure 91: Station Plaza Public Realm Uses Diagram

6.3.1 Station Plaza - spatial layout

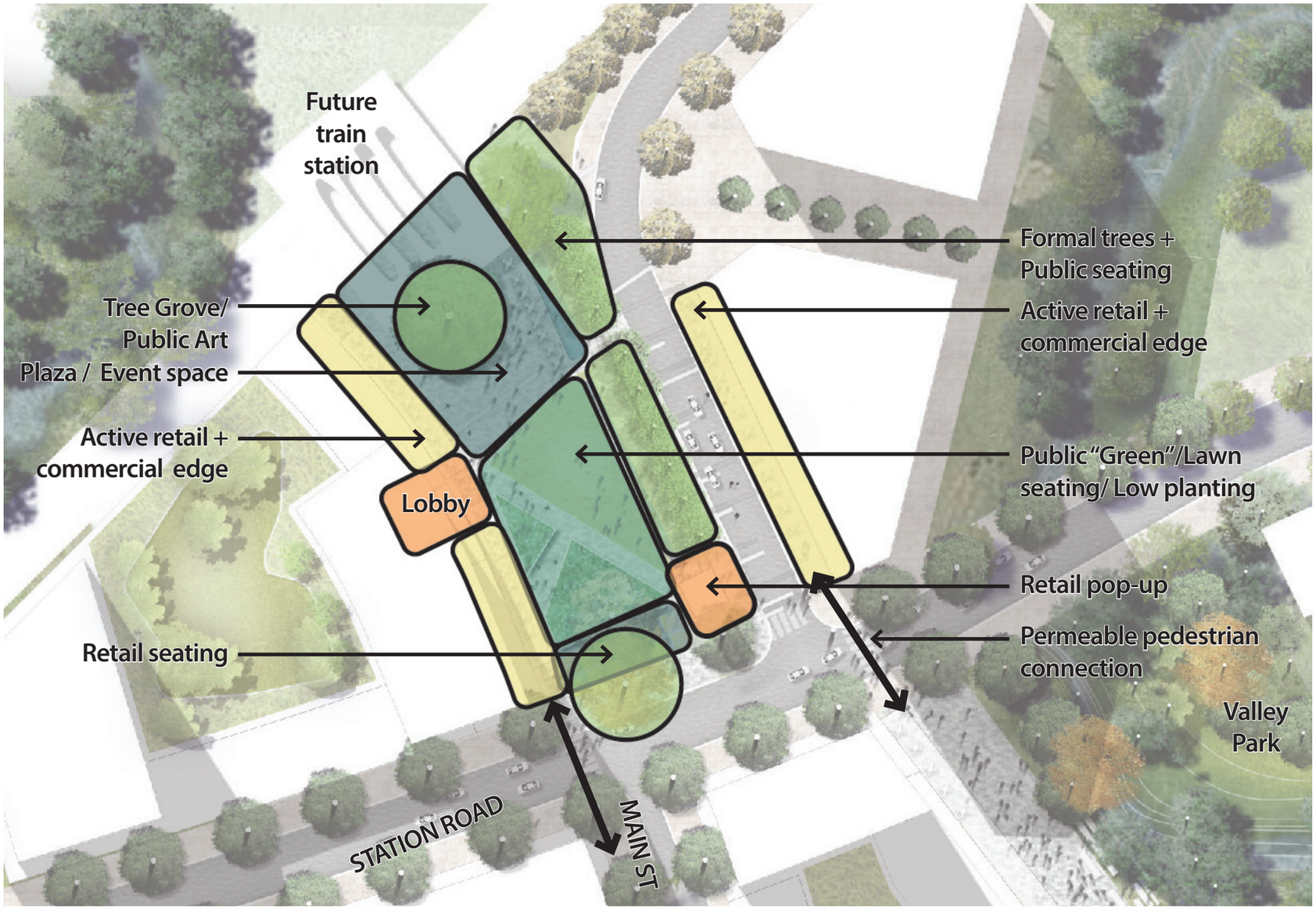
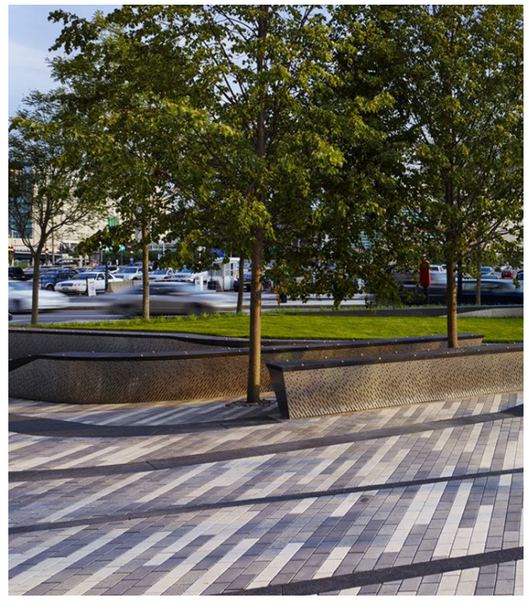


Figure 92: Station Plaza Spatial Layout Diagram





6.3.2 Station Plaza - section

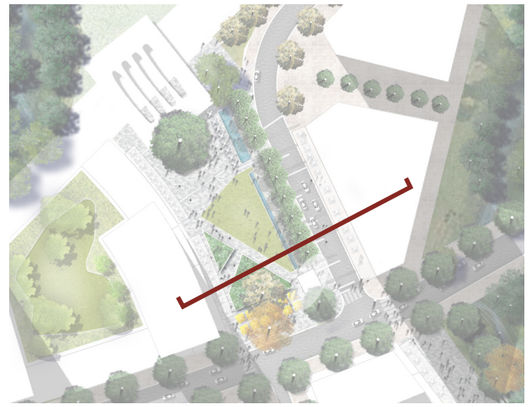




Figure 93: Station Plaza Section E-W (to North)

0 3 6 10m

6.4 Town Square

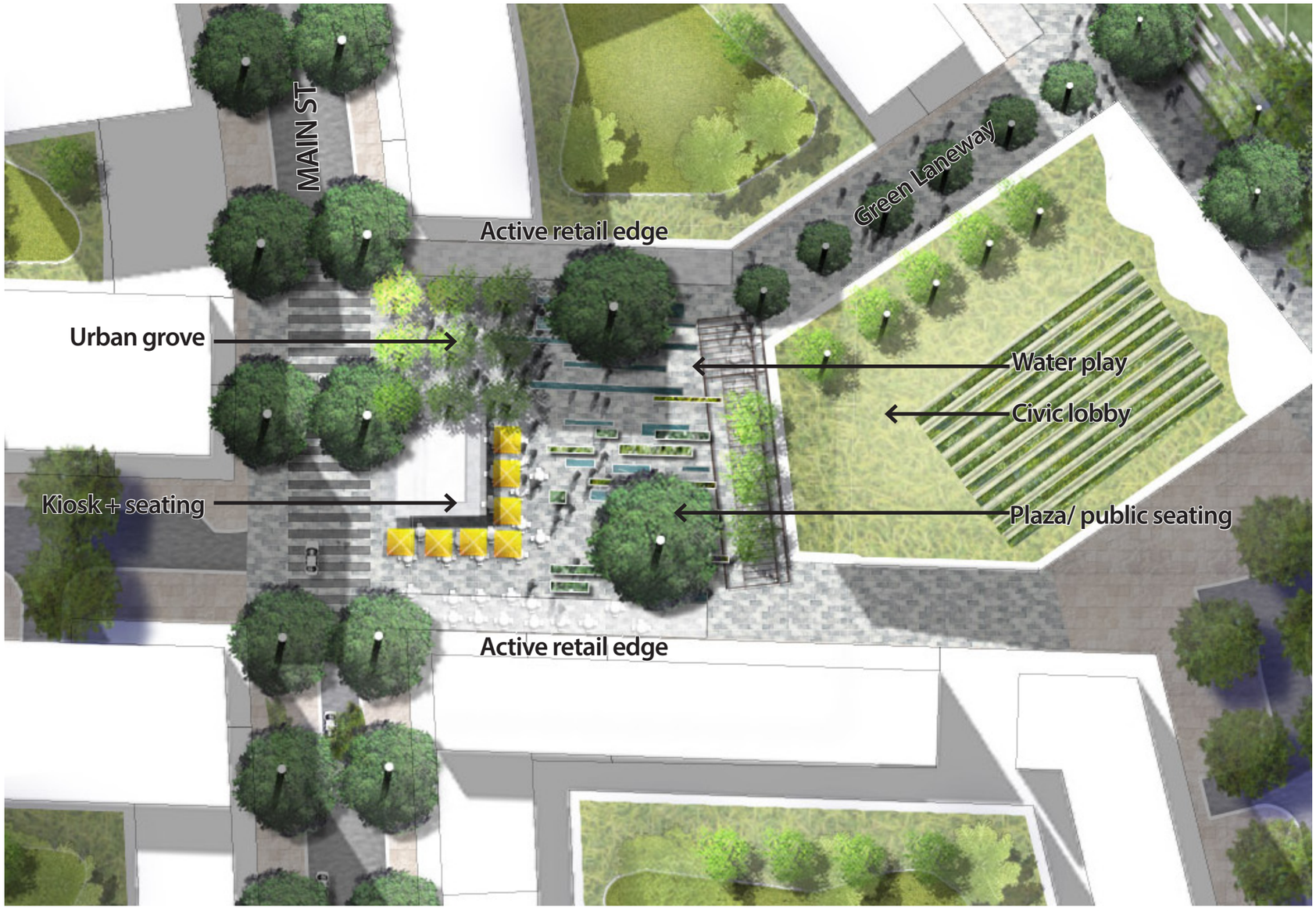
Town Square is the focal public space for the town centre providing a flexible urban plaza with a civic nature and bounded by community facilities and active retail frontages.

Town Square will include:

- A laneway link to Valley Park;
- Art, play and water elements;
- A mixture of hard surfaces and planted areas;
- Trees for shade and as a feature;
- A variety of seating and gathering opportunities;
- Opportunity for pavilion building or structure; and
- Potential for programming at a variety of scales.



Town Square





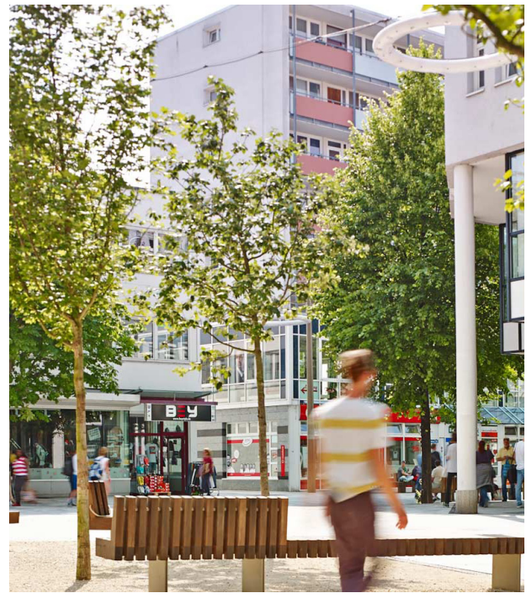


Figure 94: Town Square Public Realm Uses Diagram

6.4.1 Town Square - spatial layout

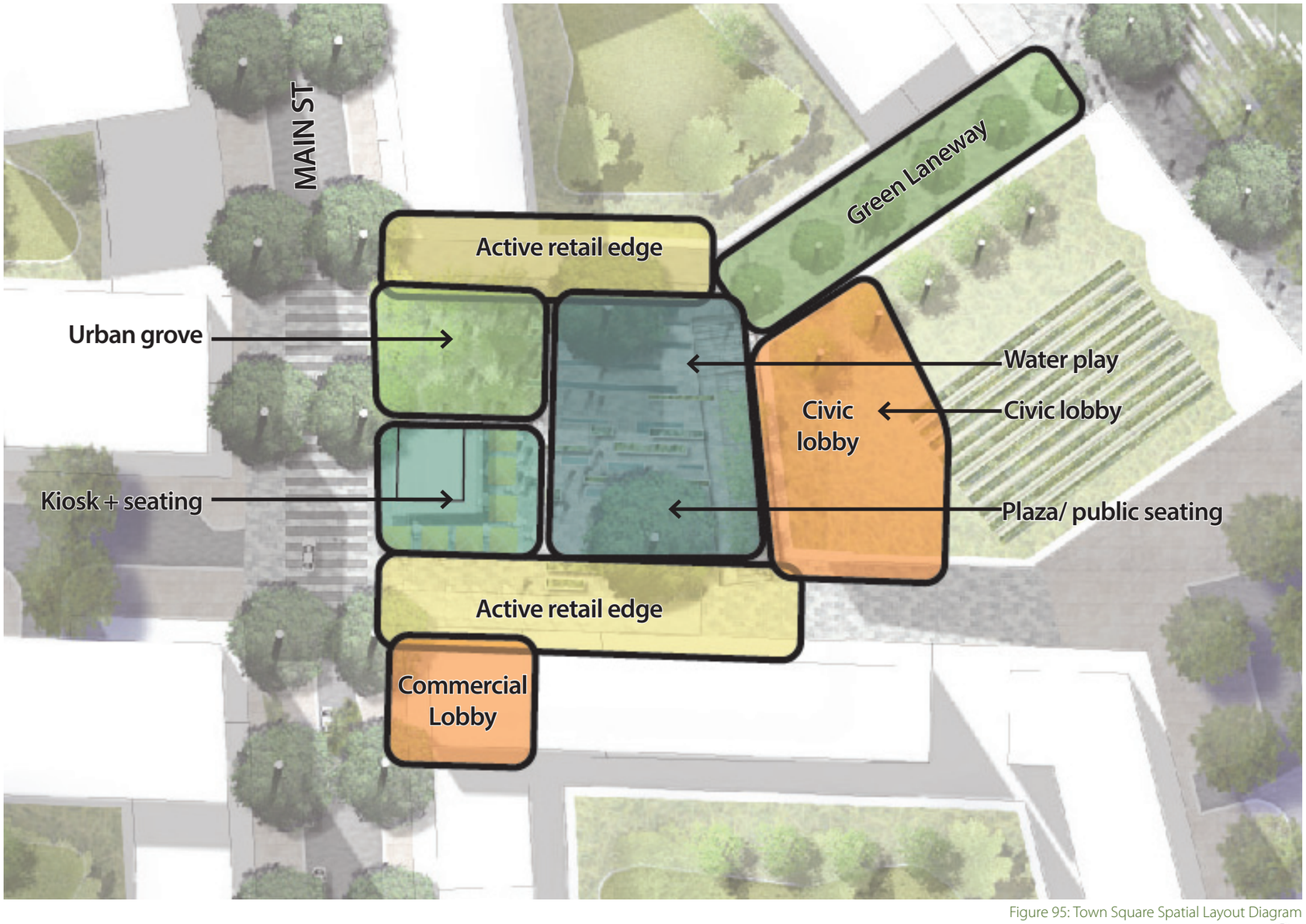
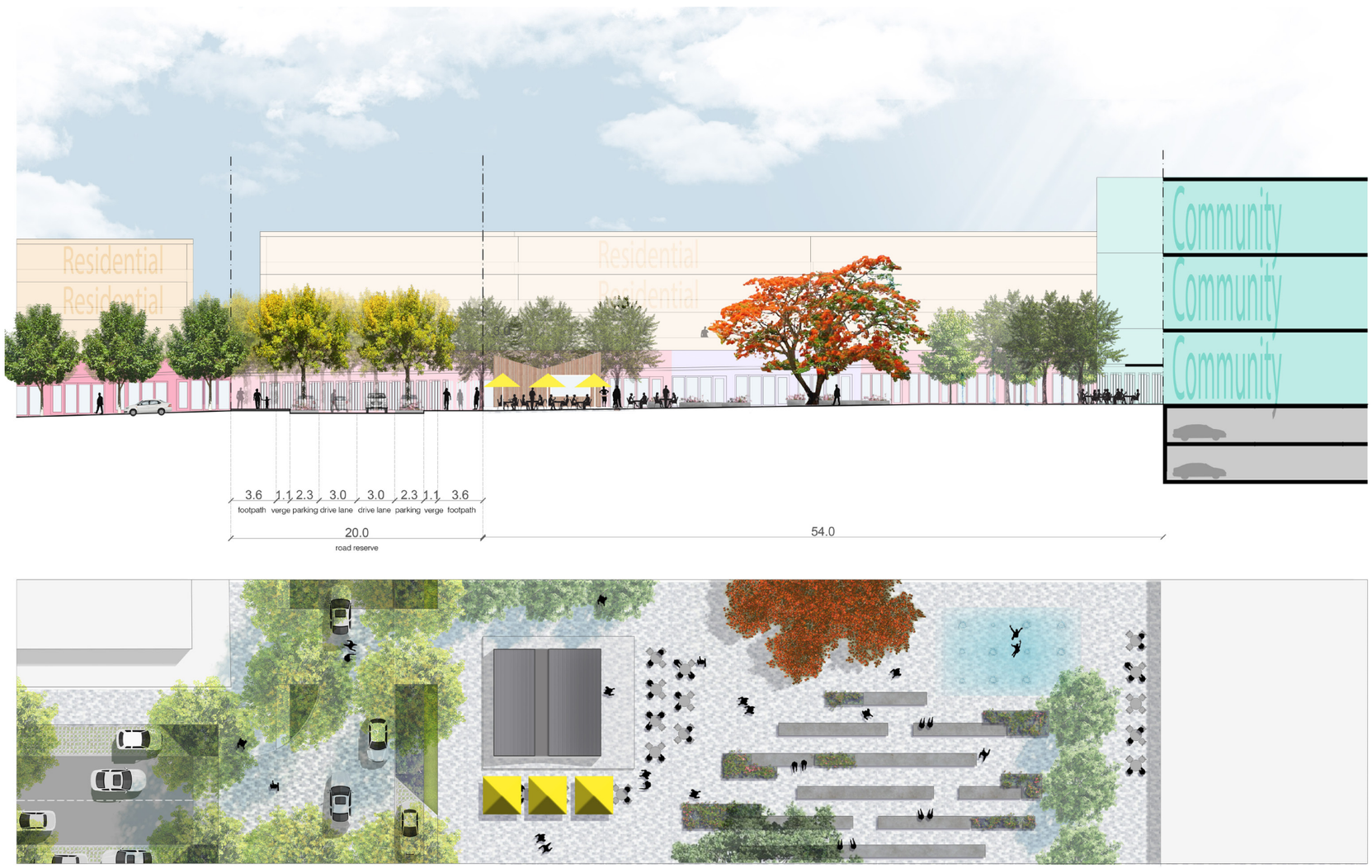






Figure 95: Town Square Spatial Layout Diagram

6.4.2 Town Square - section



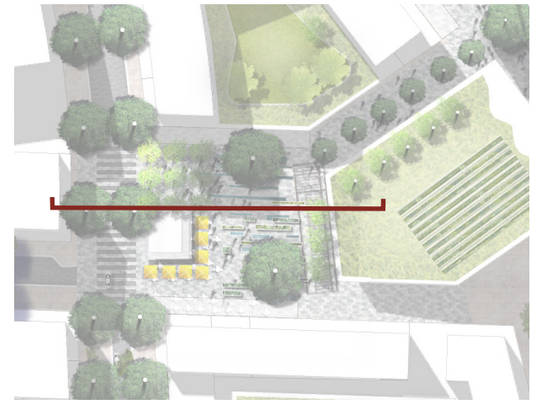
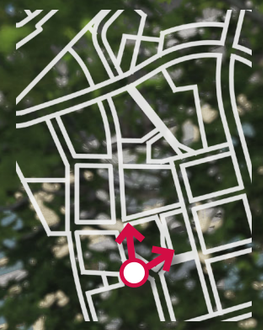


Figure 96: Town Square Section E-W (to North)

0 3 6 10m

6.5 Homestead Park



Homestead Park will become a key entertainment and recreation destination, located on high point of site in close proximity to the town centre and higher density residential areas;

Homestead Park will include:

- An existing homestead that is retained and refurbished on site;
- A homestead that could have Pakeha and Maori heritage interpretative displays about the site and region;
- Existing tree groups retained where possible;
- Visual connection to surrounding landscape and rural context;
- Repurposed homestead;
- Urban and formal character, while still potentially playful and green;
- Provision for small to medium community gatherings and events;
- Retail frontages and outdoor dining potential;
- High quality and durable materials;
- Trees for shade and to define sub-spaces; and
- A variety of seating and gathering opportunities.

Homestead Park





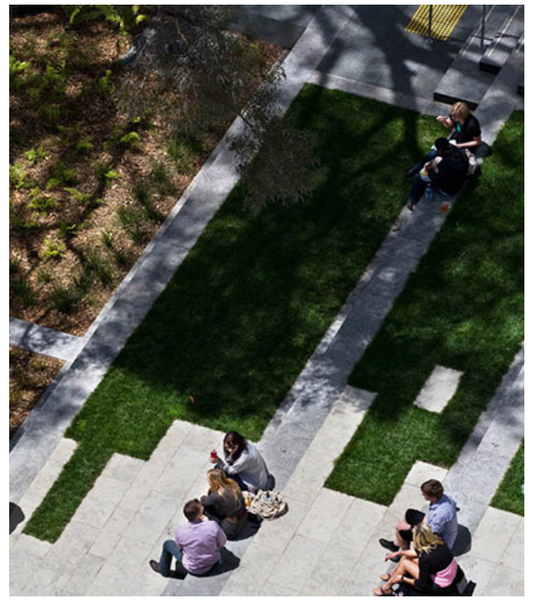


Figure 97: Homestead Park Public Realm Uses Diagram

6.5.1 Homestead Park - spatial layout







Figure 98: Homestead Park Spatial Layout Diagram

6.5.2 Homestead Park - section E-W

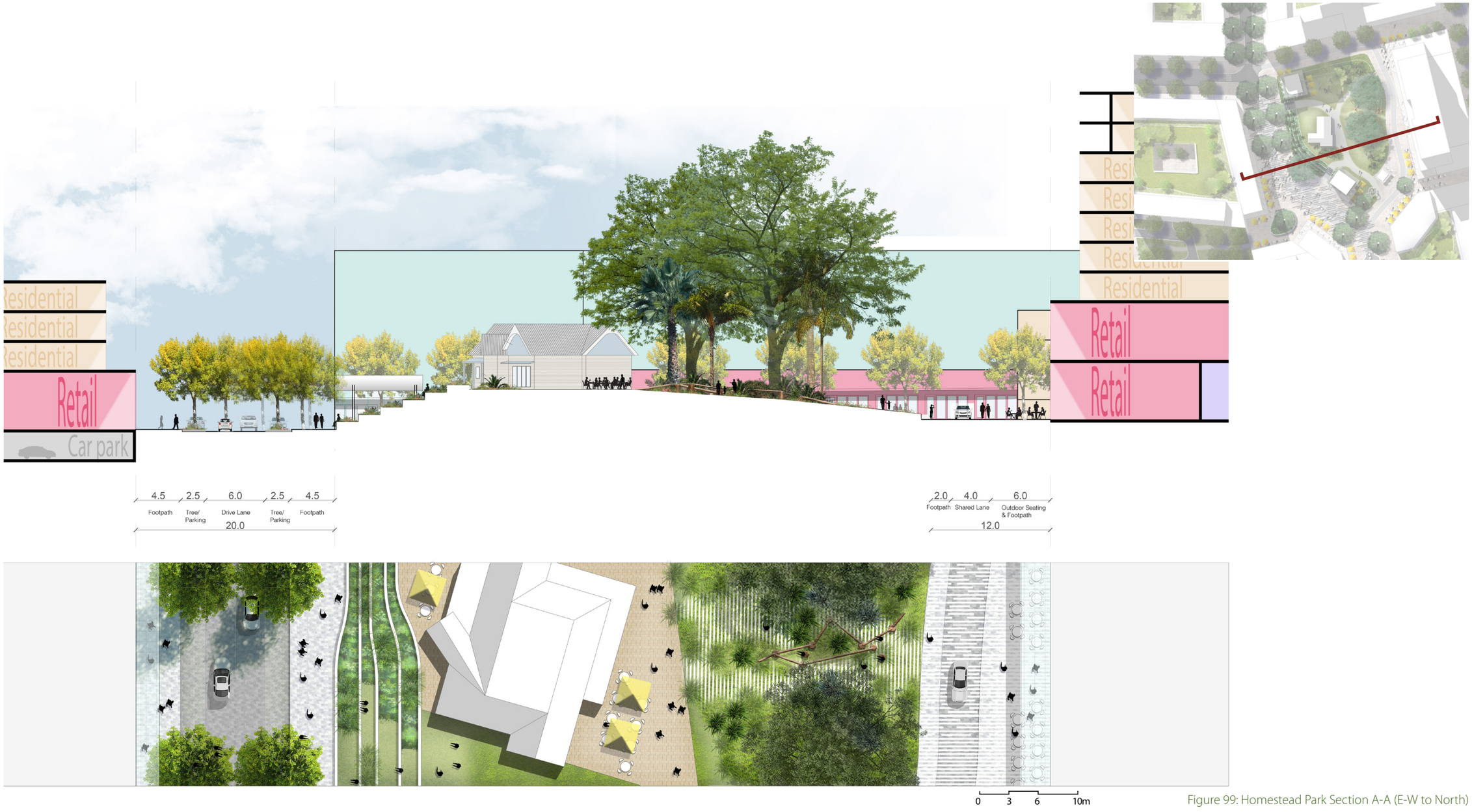


Figure 99: Homestead Park Section A-A (E-W to North)

6.5.3 Homestead Park - section N-S

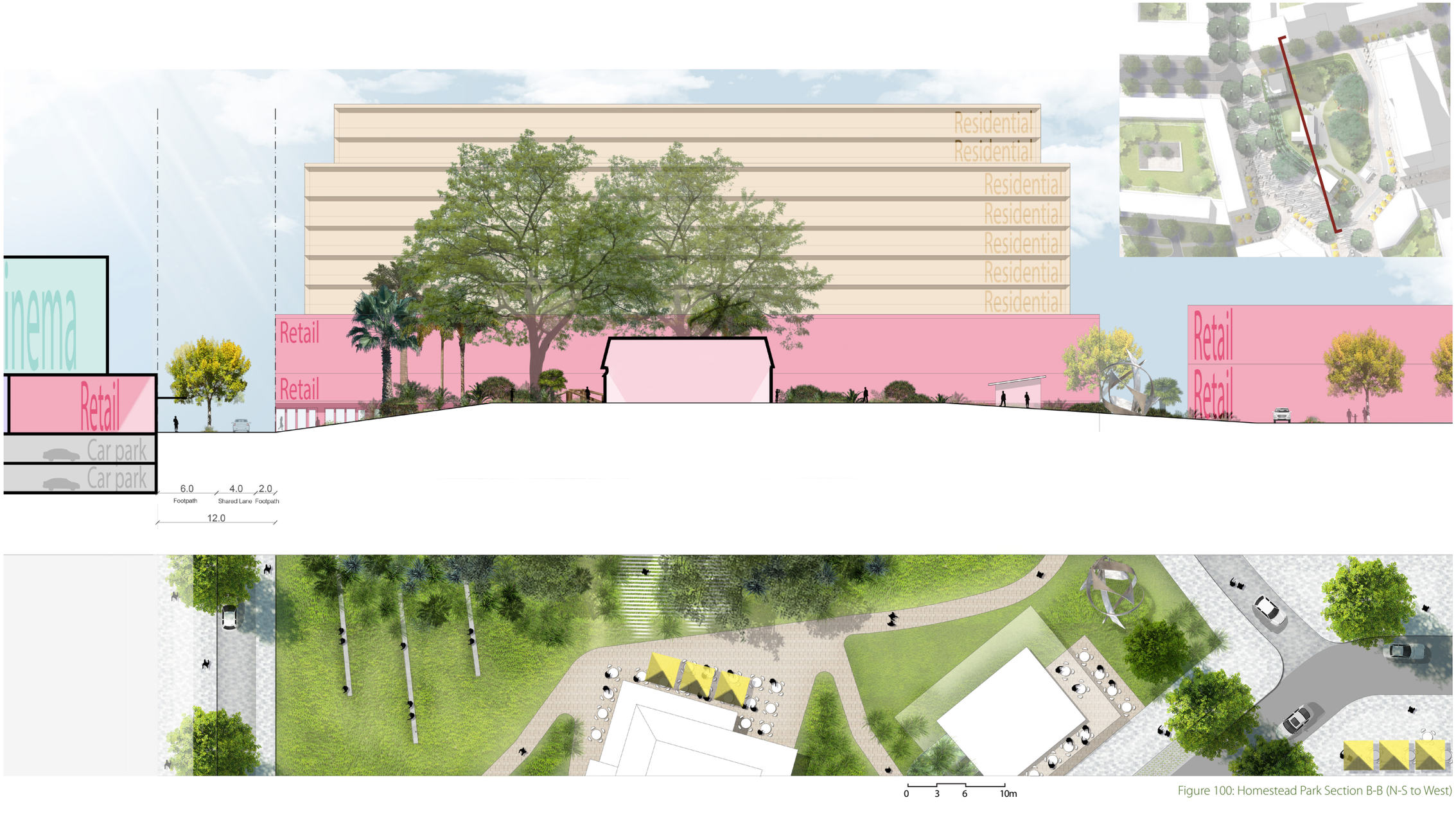


Figure 100: Homestead Park Section B-B (N-S to West)

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6.6 Valley Park

Valley Park is located in the existing stream valley and will provide gathering, seating and play opportunities for both the town centre and residential communities. Valley Park will encourage community use and cater to small to medium gatherings.

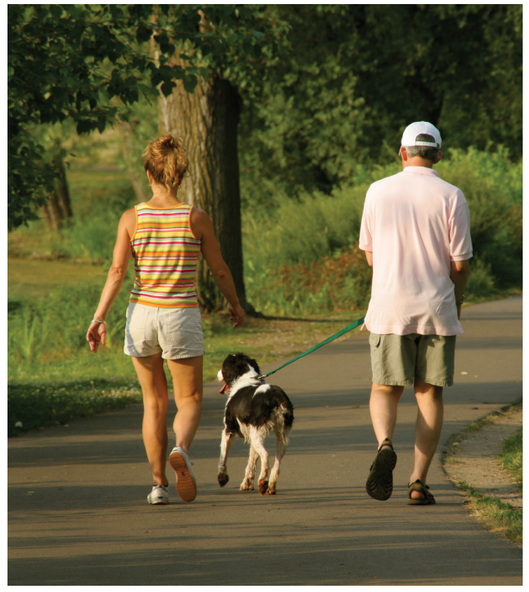
Valley Park will include:

- Retention of existing tree group;
- Stream retained and rehabilitated;
- Direct connection with Fitzgerald Stream;
- Laneway link to Town Square;
- Retail on one side and residential on other;
- Pedestrian/cycle connection through park to station;
- Play and recreational space;
- Tiered seating;
- Potential community structure or pavilion; and
- Predominantly lawn and planting with paved walkways.



Valley Park





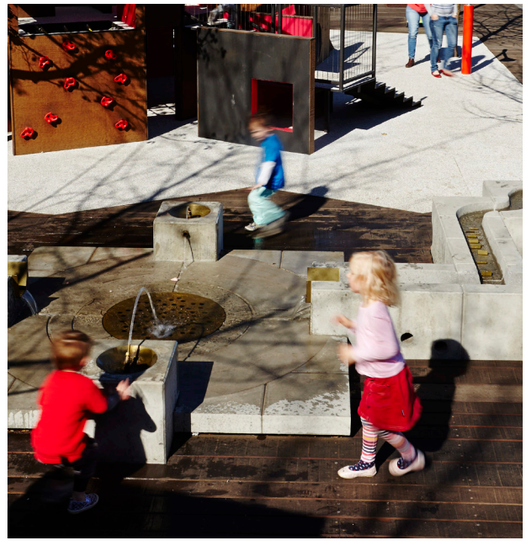


Figure 101: Valley Park Public Realm Uses Diagram

0 10 20 40m

6.6.1 Valley Park - spatial layout

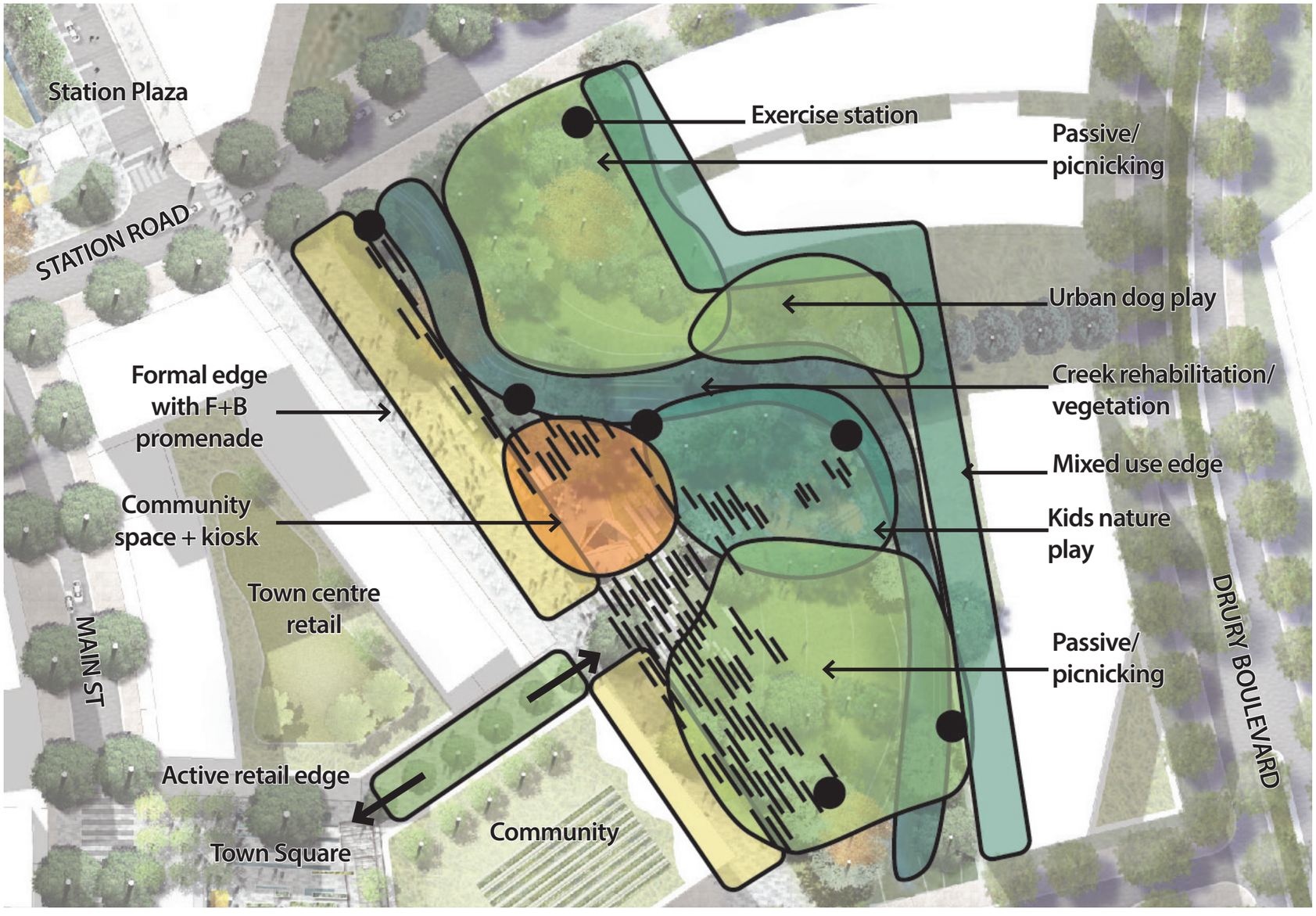


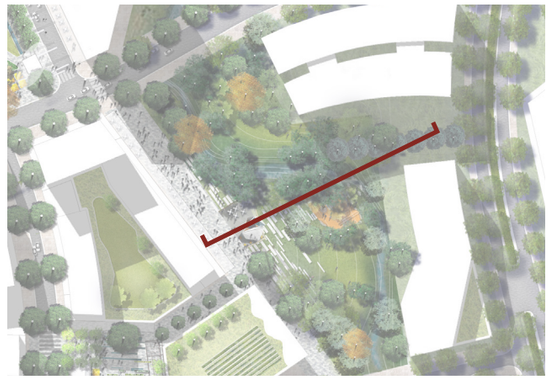




Figure 102: Valley Park Spatial Layout Diagram

0 10 20 40m

6.6.2 Valley Park - section



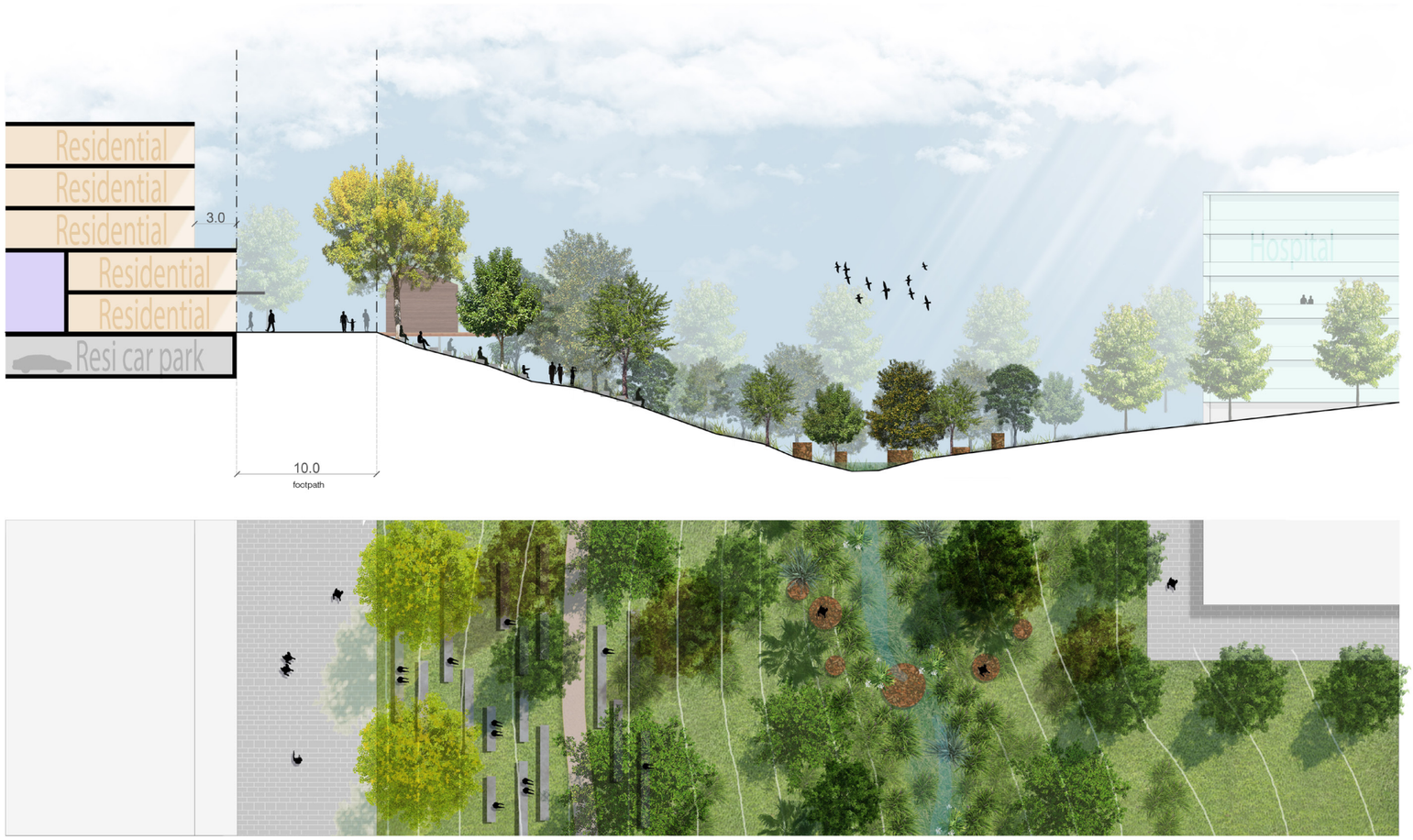


Figure 103: Valley Park Section

0 3 6 10m

6.7 Hingaia Creek Reserve

Hingaia Creek Reserve is part of regional open space network. The reserve will be a 'Blue-Green' corridor combining infrastructure and amenity. The reserve will be primarily passive, but able to be programmed.

Hingaia Creek Reserve will include:

- Existing stream rehabilitated and revegetated;
- Ways of occupying the waters edge and engaging with water;
- Regional pedestrian and cycle path network connections;
- Considered use of materials, planting and topography to encourage people to dwell and occupy the landscape;
- Promotion of interpretive, health and educational aspects.



Hingaia Creek Reserve

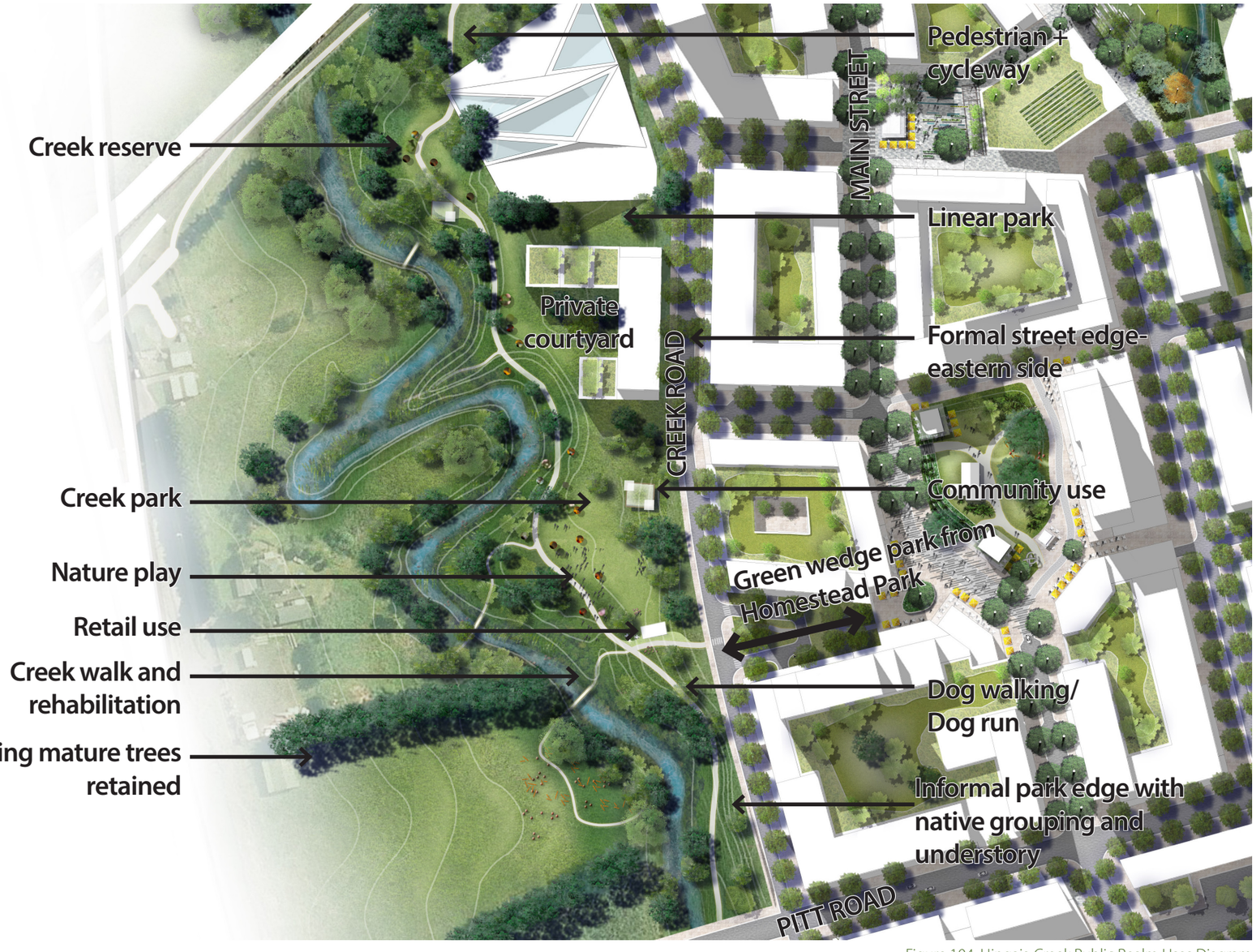






Figure 104: Hingaia Creek Public Realm Uses Diagram

6.7.1 Hingaia Creek Reserve - spatial layout



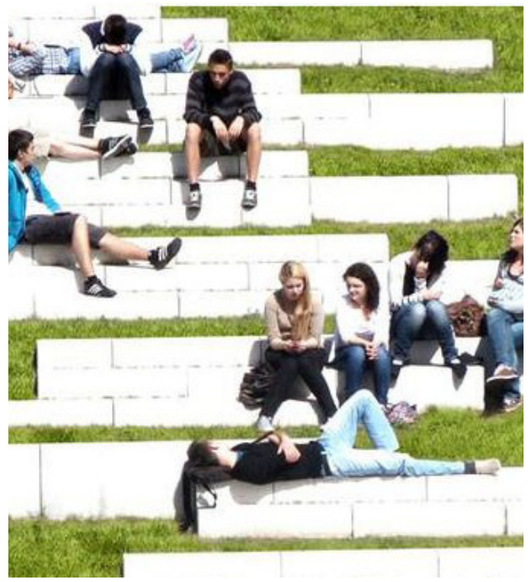




Figure 105: Hingaia Creek Spatial Layout Diagram

6.7.2 Hingaia Creek Reserve - section





Figure 106: Valley Park Section

6.8 Neighbourhood Parks

Several Neighbourhood Parks will provide additional open space provision servicing the surrounding neighbourhoods. These parks are to include play spaces, seating and picnic facilities and a mixture of hard and soft surfaces, trees and planting.



Figure 107: Neighbourhood Parks Public Realm Uses Diagram



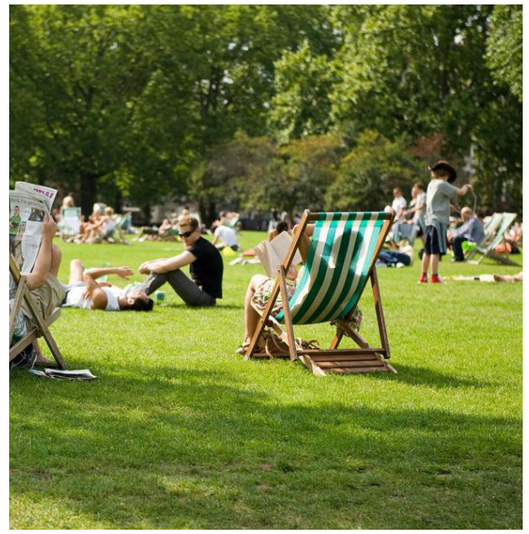


6.9 Fitzgerald Stream

Fitzgerald Stream frames the northern side of the town centre. While not part of Kiwi lands, the reserve is a significant placemaking opportunity for the broader community. Providing recreational opportunities for the adjacent residential communities and include the rehabilitation of the creek, informal gathering and recreation spaces and regional cycle and pedestrian connections.



Figure 108: Fitzgerald Stream Public Realm Uses Diagram



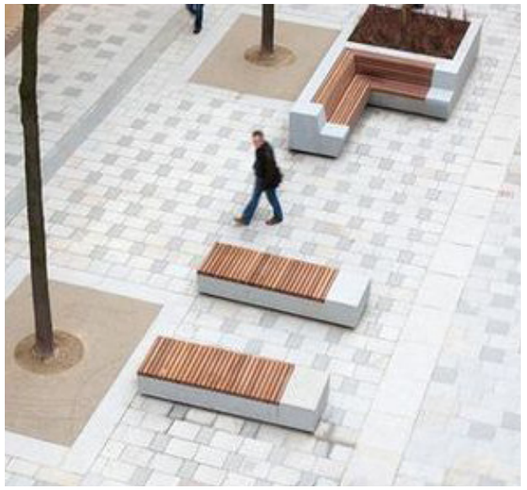


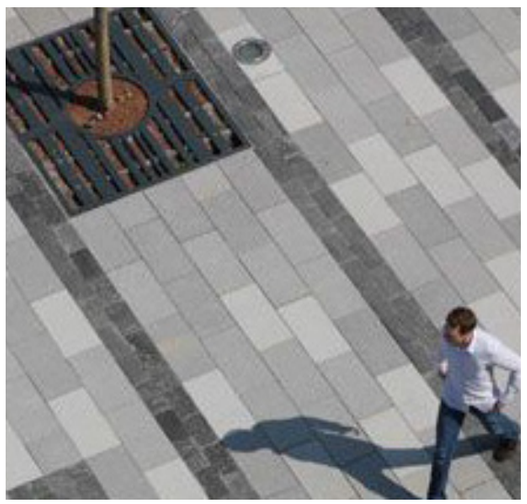
6.10 Paving and Furniture Strategy

While not exhaustive and subject to further design development in the future, the paving and furniture strategy illustrates a desirable outcome for various public realm character areas of the master plan. The strategy for these character areas are organised into four palettes as follows. Refer to the Appendix for further details.

Premium Urban Palette

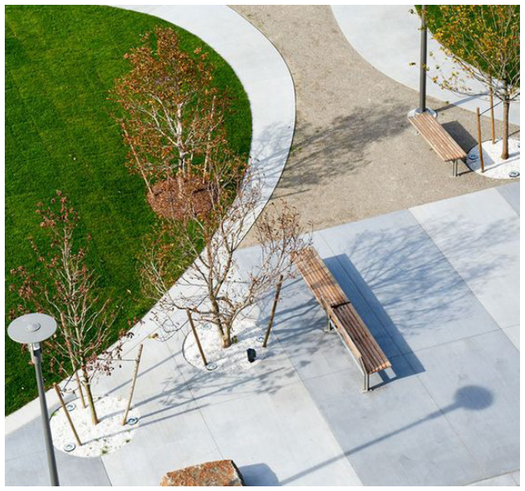
The premium urban palette consists of high quality street furniture elements and paving suited to the urban character of the spaces.





Urban Palette

A consistent palette of unit paving and contemporary furniture for secondary town centre spaces, streets and connections.





Residential Palette

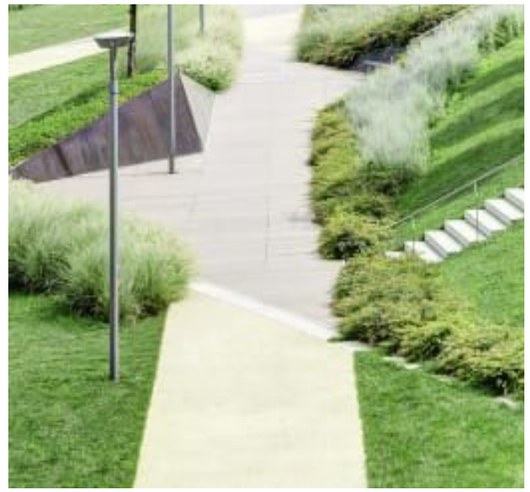
A warmer, robust and more natural palette for residential public domain.





Natural Palette

The natural palette provides an informal, natural and robust palette suited to the open space environment of the creek reserves.





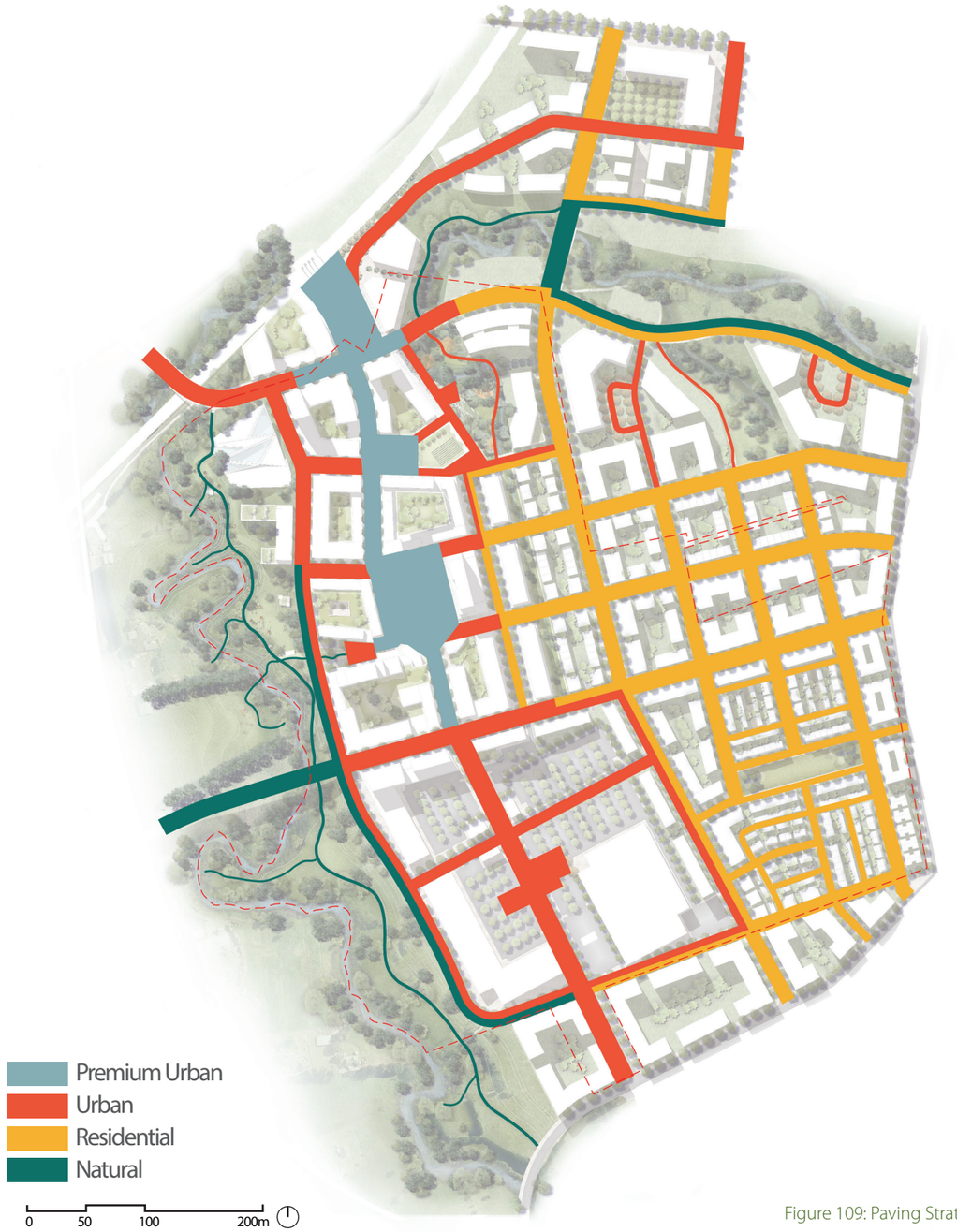


Figure 109: Paving Strategy Plan

6.11 Lighting Strategy

Night lighting is critical placemaking and safety component and the following lighting strategy illustrates a desirable outcome for the various public realm character areas of the masterplan. The strategy for these character areas are organised into seven palettes as follows and are subject to further design development. Refer to the Appendix for further details.

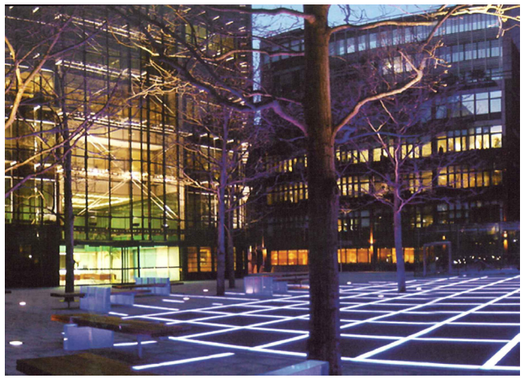
Homestead Park Palette

The Homestead Park's diagonal pathway is illuminated softly by overhead suspended lighting, as well as spill out lighting from the adjacent pavilions Pockets stemming off the central path host a softer, more mellow lit spaces for dining.



Station Plaza Palette

The Station Plaza's highly trafficable perimeter is well lit by accent lighting and pole lighting. The central space hosts in-ground feature lighting, while seating and wall edges are softly illuminated along their base.



Main Street Palette

Main Street is well illuminated by the building facade active frontages, accent lighting within furniture and also pole lighting. The major pedestrian thoroughfare at night is a bright street that acts as a lively arena where activities converge.



Gateway Palette

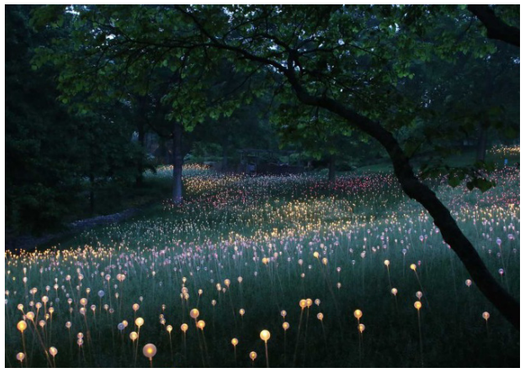
Entry Gateways will have subtle feature lighting to emphasise the approach and arrival sequence into the town centre.

A strong lineage of double sided pole lighting acts as a formal greeting into the town centre, while feature lighting sprinkles the tree canopies.



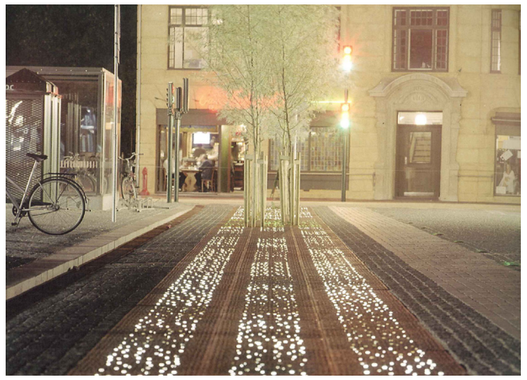
Creek Reserve Palette

Walking through the reserve at night presents a dynamic and lively landscape. The undulating topography and twisting paths are complemented by a spectrum of luminosities. Pavilions act as beacons within the landscape; in some places flooding the waterside setting, while selectively shading others. Lighting is restricted to key pathways and spaces so as not to detract from the Reserve's ecological function.



Town Square Palette

The Town Square is illuminated by in-ground feature lighting which provides wayfinding to the Valley Park. Pedestrian scaled lighting accentuates the planting, steps and seats, while pole lighting provide an alluring light through the trees.



Valley Park Palette

The lighting for Valley Park will exemplify the juxtaposition between its built edges and its softer interior.

Pole lighting along the built edge turns to accent lighting on concrete seating that dissolves into the park, and then to in-ground lighting illuminating existing mature trees.





Figure 110: Lighting Strategy Plan

6.12 Public Realm Tree Strategy

The Public Realm Tree Strategy provides structure and wayfinding to the Drury Town Centre streetscapes.

Feature trees complement the structural trees and provide accents at key locations within the public realm. For example, key entry gateways are marked by upright shaped trees reminiscent of the agricultural shelterbelts in the area, while broad canopied feature trees act as gathering places and landmarks in the urban fabric.

The Tree Strategy is also organised to retain existing trees on site wherever possible. While there is little tree canopy on site, what mature tree canopy exists can provide immediate aesthetic and ecological value. Opportunities for relocating smaller existing trees to more appropriate locations should be considered if they are unable to be retained.

The following pages contain examples of the varying tree species to be used across the public realm.

Neighbourhood Parks

Significant native trees including the Totara, Kaikomako, Kowhai and Titoki will attract birds and wildlife to the neighbourhood parks, producing edible fruits.





Creeks

The Giant Umbrella Sedge, New Zealand Cabbage Tree, New Zealand Flax and Manuka tree begin to restore the wetland to an ecologically viable and aesthetically lush breakout space for the community.



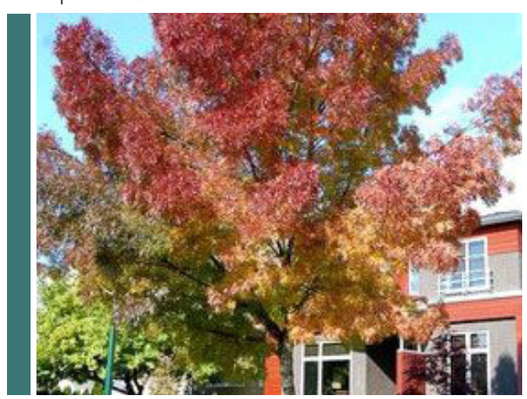




Rewarewa



Japanese zelkova



Claret Ash



Bull Bay Magnolia



Maori Princess



Jacaranda

Native Note: refer to adjacent tree strategy plan for legend.



London Plane Tree



Black Tulepo



Puriri



Maidenhair Tree



Figure 111: Tree Strategy Plan

6.13 Public Art Strategy

Public art is to be integrated with a site-wide approach with specific principles relating to public art that will help reinforce the urban nature of the Town Centre and the identity of the spaces within. This framework will encourage cultural and creative activities as well as permanent and temporary public art installations.

Strategies

- Provide permanent public artworks throughout the town centre and open space network to reinforce the unique identity of Drury Town Centre and complement the pedestrian environment.
- Encourage use of temporary art to facilitate a diverse, ephemeral and interactive environment that promotes the flexibility of the various spaces.
- Provide curation or place management of temporary art to ensure innovative methods of integration with the public realm.
- Utilise overlays of informatics to create temporal and ephemeral landscapes within the public realm.

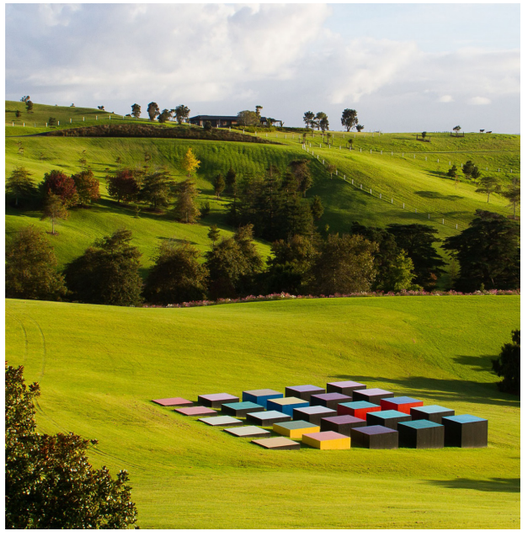
Guidelines

- Encourage the involvement of local and indigenous artists in the delivery of the public art strategy.
- All public art should be site specific and responsive to its location.
- Artwork should be visual and tactile, and should generate interest and activity.
- Site artworks at key pedestrian crossing areas and gateways to help draw users into a space.
- Large-scale iconic/civic art pieces and/or installations should be considered for key gathering spaces such as Station Plaza and Main Street Plaza.
- Installation of temporary artworks and installations should be encouraged through a curatorial process.
- Creative collaborations and cultural programming can include interpretive works but is not intended to limit the scope of opportunities, which may include temporary art projects, festivals, events, talks, tours, and educational activities.
- Utilise, as far as practical, materials from the site demolition reuse strategy or local sourced materials.
- Public art siting should be consistent with the Public Art Strategy Plan.

Themes

- The natural landscape of Drury and its context (e.g. topography, hydrology).
- Local Iwi culture, history and stories.
- The history of the area including its involvement in the New Zealand Wars.
- The agricultural history of the area.











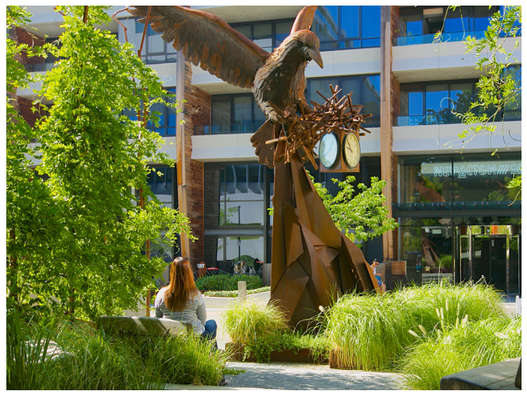






Figure 112: Public Art Strategy Plan

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7.0 Sustainability

For ease of reference, this chapter collates various ecological, waters, and building sustainability strategies that are applicable site-wide.

These strategies are envisaged to be applicable in addition to macro site considerations, such as block and building orientation, which aids in achieving sustainability goals and are detailed in preceding chapters.

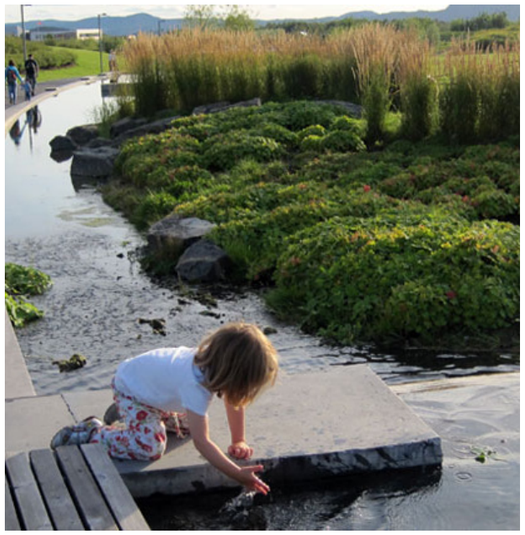
7.1 Ecology, Waters & Buildings

Ecology

- Promote biodiversity by maintaining or enhancing existing levels of indigenous vegetation where possible.
- Protect and enhance existing streams through revegetation, erosion control and control of nutrients.
- Encourage an awareness of the regional landscape setting and natural context in the public realm.

Energy

- Provide phone, electric car and e-bike charging stations.
- Use solar powered lighting where possible.
- Use energy efficient lighting e.g. LED and smart street lighting e.g. building integrated solar.
- Where possible, provide localised energy generation (e.g. solar) for electricity to buildings to offset demand load or provide net positive load.
- For commercial buildings adopt forms that deliver high levels of daylighting whilst appropriately controlling solar load.
- For residential buildings adopt passive solar design principles.
- Deliver high performance facades i.e. high levels of insulation to control heat loss and high air tightness levels to reduce infiltration loads.
- Where possible, utilize heat pumps to augment heating with lower CO_2 and cost footprint.
- Utilise well controlled high efficiency plant, thermal mass and free cooling strategies to reduce heating and cooling loads whilst deliver quality comfort levels.





Stormwater

- Create green corridors along existing streams for stream protection and flood management.
- Utilize a treatment train approach by providing at-source water quality treatment and detention/ retention using multi-functional devices such as tree pits, raingardens, vegetated swales and filter strips.
- Capturing and reusing roof water for use in non-potable uses e.g. flushing water and irrigation.
- Utilise permeable paving where appropriate e.g. for parking lanes.

Greywater

- Where possible, use on-site treatment devices and strategies (such as dedicated greywater line) to ensure high quality discharge (for potential reuse such as irrigation) yet enables minimization of volume into the public system.

Materials

- Select robust and durable products, materials and finishes that are suitable for local climatic conditions and the physical demands of users.
- Select materials, products and finishes that have short distances from point of origin to point of consumption.
- Specify recycled materials (including those found on site) and recyclable materials.
- Specify low embodied energy materials.
- Specify materials and products from certified sustainable sources (e.g. Timber).
- Specify materials and products with low volatile organic compounds (VOCs).

- Adopt external finishes to reduce solar gain in commercials buildings
- Adopt landscapes that requires little to no irrigation where possible.

Solid Waste

- Provide best practice waste management areas i.e. enough space, ease of access, odour control etc.
- Explore the use of compost bins or composting units to recycle green waste.
- Provide both general waste and recycling bins within the public realm.
- Consider use of Smart Waste management.





Roof Areas

- Explore opportunities to create green roofs that provide residential and community amenity such as gardening plots, ornamental courtyards, kids play areas, bbq areas, and leash-free areas.
- Explore opportunities to create green roofs that provide visual amenity from upper level residential dwellings.
- Where green roofs are not possible, ensure roof surfaces have high albedo and are light-coloured to help reduce heat absorption by reflecting sunlight (heat from the sun).

Community

- Ensure the involvement of local Iwi groups in the design of the public realm.
- Design flexible open spaces which allow people to engage with their surroundings in various ways.
- Create a public realm which supports a diverse community and creates opportunities for them to interact.
- Explore opportunities for the public realm design to interpret and celebrate the existing natural environment, local heritage and community.
- Ensure universal accessibility within the public realm.
- Explore opportunities to provide wi-fi hotspots to encourage use of outdoor spaces.
- Foster and develop community groups to guide development and use of community spaces or facilities

Liveability

- Maximise planting canopy to reduce urban heat island impacts.
- Use planting design (spacing, species etc) to promote solar access in winter, provide summer shade and offer wind protection;
- Optimise materials colour palettes having consideration for their solar absorbance and the radiative effect throughout the year to optimise comfort.
- Promote urban farming and farmers markets to encourage locally grown produce.
- Maximise access to public transport in order to reduce the need for private vehicles;
- Encourage walkability by creating a highly permeable pedestrian network and good pedestrian amenity, including weather protection canopies from rain and peak sun where possible i.e. retail frontages.
- Create bike friendly streets and incorporate a network of connected cycleways.
- Provide car share pods

Resilience

- Ensure flexible resilient design.
- Provide spaces that are adaptive and resilient to the changing climate, market, and population.
- Integrate flexibility into the public realm design by providing multi-use spaces and reduce the need for ongoing upgrades with changes in demands.
- Provide places of refuge in extreme heat and storm conditions through reducing heat island and flood management design.

Compliance

- Consider third party rating scheme (e.g. Greenstar, LEED, BREEAM) at communities/precinct level as well as for individual buildings.









7.2 Kiwi Property Sustainability Strategy Plan

In addition to the aforementioned strategies, the master plan aligns with Kiwi Property's corporate sustainability strategy plan. A plan, and its future iterations, should also underpin the sustainability strategy as it evolves with the development. These additional strategies are outline in the table below:

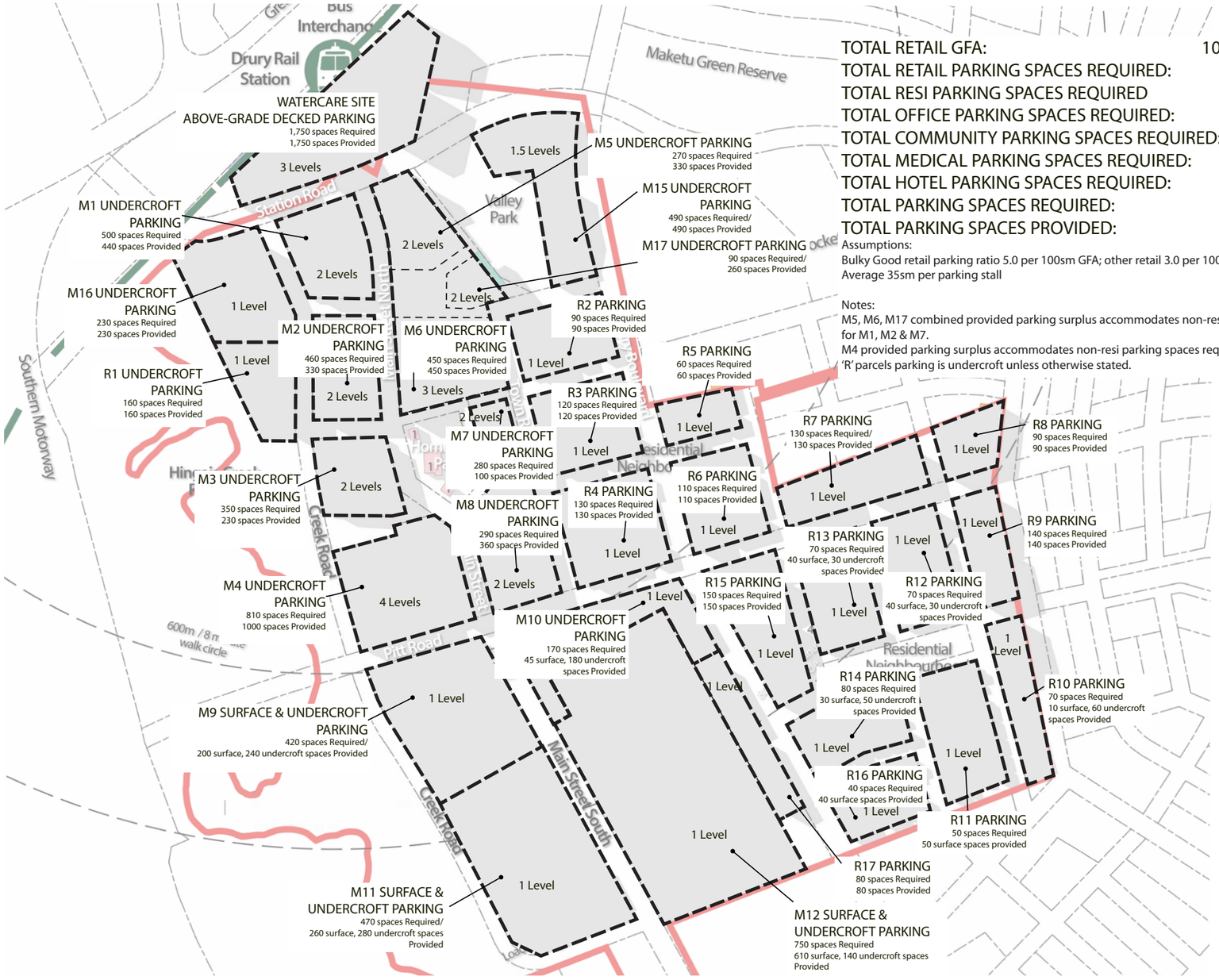
Sustainability Proposed Actions FY20

Strategic intent: At Kiwi we do what's right and sustainability is the right thing to do!

	People *We are community builders*		**Planet** *We are focused on reducing our footprint*		**Profit** *Sustainable returns by creating valued exceptional experiences*	
Development	Wellbeing & H&S	H&S target from H&S strategy	Waste reduction	Agree target recycling levels for main contractors on future development of appropriate % (provided no cost)	Reduce carbon footprint	High efficiency plant and equipment in Galleria Derive a marketing summary
	Accessibility & inclusiveness	BeAccesible ratings for new developments	Energy reduction	Explore including solar into Galleria deliver	Responsible investment	Consider third party rating for Drury e.g. Greenstar communities, LEED, BREEAM
	Supporting communities	Trial partnering with appropriate community organisations to use hoardings as an opportunity for community commnicates or community building.	Reduce chemical use	Galleria where practical specify low VOC paint	Encourage suppliers/tenants	Include in future main contractor agreements a target recycling level for construction waste
			Preserve biodiversity	Drury seek to include a target to improve biodiversity on the site as part of the master plan		
Operations	Wellbeing & H&S	Each centre (retail & commercial) to have a community relevant project H&S strategy/actions being developed	Waste reduction	Target 2.5% reduction in waste in line with SBTi targets Specific waste reduction strategy, focused on reduction and "hero" PR/community project/s.	Reduce carbon footprint	Reduce carbon inline with SBTi targets Carbon reporting Lead NZX in CDP
	Accessibility & inclusiveness	BeAccesible ratings for office buildings Multi language or icon signage for retail centres in appropriate locations e.g. parents rooms	Energy reduction	Target 2.5% reduction in energy in line with SBTi targets Portfolio marketing campaign on energy	Responsible investment	Retain high FSTE4 Good rating Gap analysis to GRI4 reporting, cost full compliance delivery
	Supporting communities	Volunteering to have a common focus Complete a feasibility study of the retailer lounge concept Identify a preferred coproate partner e.g. KidsCan or other NGO E transport - EV chargers and e bike/bikes facilites to all retail sites. Enhance end of trip facilities in commercial sites.	Reduce chemical use	Complete a feasibility study of single pass chemical free cooling towers.	Encourage suppliers/tenants	Include sustainability assessment in cleaning contract tendering Deliver video training for tenants on recycling
			Preserve biodiversity	Increases biodiversity on a target site e.g. explore green wall in an office building as a trial	PR	Derive and obtian approval for sustainability budget to support programme Sustainability awareness wall across both portfolios
					Strategic oversight/advisory	Support for strategy and ongoing adhoc advisory
	Other activities Kiwifit equivalent to all malls		**Other activities** Plant out stream at Drury as community building activity and biodiversity project Continue solar roll out project Explore feasbility of 100% LED for common areas		**Other activities/details** Heat pump to augment heating with lower CO2 and cost footprint Drive energy efficiency projects to support planned marketing Tenant fitout award scheme	

8.0 Appendix

8.1 Parking Strategy



TOTAL RETAIL GFA:	103,000 sm
TOTAL RETAIL PARKING SPACES REQUIRED:	3,700
TOTAL RESI PARKING SPACES REQUIRED	3,190
TOTAL OFFICE PARKING SPACES REQUIRED:	1,360
TOTAL COMMUNITY PARKING SPACES REQUIRED:	320
TOTAL MEDICAL PARKING SPACES REQUIRED:	490
TOTAL HOTEL PARKING SPACES REQUIRED:	380
TOTAL PARKING SPACES REQUIRED:	9,440
TOTAL PARKING SPACES PROVIDED:	9,565

Assumptions:
Bulky Good retail parking ratio 5.0 per 100sm GFA; other retail 3.0 per 100sm GFA.
Average 35sm per parking stall

Notes:
M5, M6, M17 combined provided parking surplus accommodates non-resi parking required for M1, M2 & M7.
M4 provided parking surplus accommodates non-resi parking spaces required for M3.
'R' parcels parking is undercroft unless otherwise stated.

Legend

- Property Boundary
- Parking Boundary Above
- Parking

Note: Retail Parking on M1, M2, M3 and M7 could be recongcile and aggregated with other major retail undercroft parking in Town Centre
Assumption: Community 2 per 100 sqm Retail/Commercial 3 per 100sqm Residential 1 per 1 unit

Parcel ID	Community	Office	Retail	Residential	Total Carpark Needed	Total Carpark Provided
Town Centre						
M1		170	190	140	500	440
M2			240	220	460	330
M3		90	110	150	350	230
M4			430	380	810	1,000
M5			140	130	270	330
M6			350	100	450	450
M7			150	130	280	100
M8			170	120	290	360
M16	230				230	230
M17	90				90	260
R1				160	160	160
Sub - Total	**320**	**260**	**1,780**	**1,530**	**3,890**	**3,890**
Home Maker						
M9		100	260	60	420	440
M10			70	100	170	225
M11			470		470	540
M12			750		750	750
R17				80	80	80
Sub - Total		**100**	**1,550**	**240**	**1,890**	**2,035**
SE Residential Superblock						
R9				140	140	140
R10				70	70	70
R11				50	50	50
R12				70	70	70
R13				70	70	70
R14				80	80	80
R15				150	150	150
R16				40	40	40
Sub - Total		**0**	**0**	**670**	**670**	**670**
East Residential						
M15	490				490	490
R2				90	90	90
R3				120	120	120
R4				130	130	130
R5				60	60	60
R6				110	110	110
R7				130	130	130
R8				90	90	90
Sub - Total	**490**	**0**	**0**	**730**	**1,220**	**1,220**
Watercare		**1,000**	**370**	**380**	**1,750**	**1,750**
GRAND TOTAL	**810**	**1,360**	**3,700**	**3,550**	**9,420**	**9,565**

8.2 Staging Program Summary

Assumption: Community 2 per 100 sqm Retail/Commercial 3-5 per 100sqm Residential 1 per 1 unit

STAGE 1A

Parcel ID	Non Resi GFA											Resi GFA		Total GFA	Units	Carpark Summary			
	Community	Medical	Office	Retail								Hotel	Residential			Required	Provided		Total Provided
				Major	Mini Major	Specialty	F&B	LFR	Costco	Cinema	Bowling						Surface	Undercroft	
Town Centre																			
M1																			
M2																			
M3																			
M4				11,366	1,527	1,180	380						38,098	52,551	380	810	0	1,000	1,000
M5																			
M6																			
M7																			
M8					4,369	749	598						11,658	17,374	120	290	0	360	360
M16																			
M17																			
OS3																			
R1																			
Sub - Total	**0**	**0**	**0**	**11,366**	**5,896**	**1,929**	**978**	**0**	**0**	**0**	**0**	**0**	**49,756**	**69,925**	**500**	**1,100**	**0**	**1,360**	**1,360**
Home Maker																			
M9																			
M10																			
M11							375	9,175						9,550		470	260	280	540
M12									14,051					14,051		750	610	140	750
R17																			
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**375**	**9,175**	**14,051**	**0**	**0**	**0**	**0**	23,601	**0**	**1,220**	**870**	**420**	**1,290**
SE Residential Superblock																			
R9													15,664	15,664	140	140		140	140
R10													9,662	9,662	70	70	10	60	70
R11													9,137	9,137	50	50	50		50
R12													10,044	10,044	70	70	40	30	70
R13													10,044	10,044	70	70	40	30	70
R14																			
R15																			
R16																			
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**54,551**	**54,551**	**400**	**400**	**140**	**260**	**400**
East Residential																			
M15																			
OS6a																			
R2																			
R3																			
R4																			
R5																			
R6																			
R7																			
R8																			
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Watercare																			
GRAND TOTAL	**0**	**0**	**0**	**11,366**	**5,896**	**1,929**	**1,353**	**9,175**	**14,051**	**0**	**0**	**0**	**104,307**	**148,077**	**900**	**2,720**	**1,010**	**2,040**	**3,050**

Assumption: Community 2 per 100 sqm Retail/Commercial 3-5 per 100sqm Residential 1 per 1 unit

STAGE 1B

Parcel ID	Non Resi GFA											Resi GFA		Total GFA	Units	Carpark Summary			
	Community	Medical	Office	Retail								Hotel	Residential			Required	Provided		Total Provided
				Major	Mini Major	Specialty	F&B	LFR	Costco	Cinema	Bowling						Surface	Undercroft	
Town Centre																			
M1																			
M2				6,492		1,174	226							7,892		240		330	330
M3			2,922		2,761	740	243							6,666		200		230	230
M4																			
M5																			
M6				5,672		1,704	450			4,000				11,826		350		450	450
M7					1,816	503					2,599			4,918		150		100	100
M8																			
M16																			
M17																			
OS3							472							472					
R1																			
Sub - Total	**0**	**0**	**2,922**	**12,164**	**4,577**	**4,121**	**1,391**	**0**	**0**	**4,000**	**2,599**	**0**	**0**	**31,774**	**0**	**940**	**0**	**1,110**	**1,110**
Home Maker																			
M9																			
M10																			
M11																			0
M12																			0
R17																			
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	**0**	**0**	**0**	**0**	**0**
SE Residential Superblock																			
R9																			
R10																			
R11																			
R12																			
R13																			
R14													11,104	11,104	80	80	30	50	80
R15													16,657	16,657	150	150		150	150
R16													6,593	6,593	40	40	40		40
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**34,354**	**34,354**	**270**	**270**	**70**	**200**	**270**
East Residential																			
M15																			
OS6a																			
R2																			
R3																			
R4																			
R5																			
R6																			
R7																			
R8																			
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Watercare																			
GRAND TOTAL	**0**	**0**	**2,922**	**12,164**	**4,577**	**4,121**	**1,391**	**0**	**0**	**4,000**	**2,599**	**0**	**34,354**	**66,128**	**270**	**1,210**	**70**	**1,310**	**1,380**

Assumption: Community 2 per 100 sqm Retail/Commercial 3-5 per 100sqm Residential 1 per 1 unit

STAGE 2

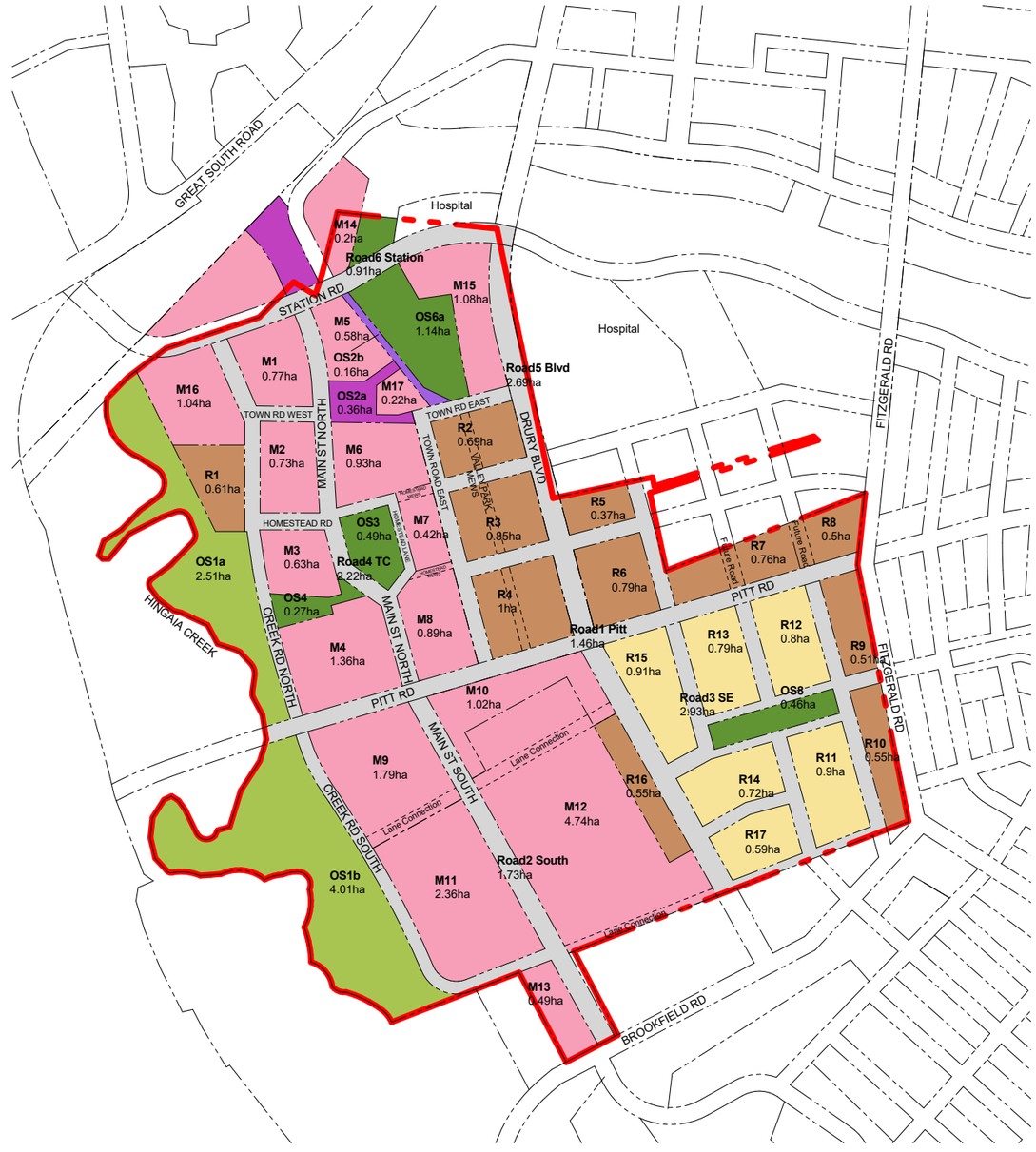
Parcel ID	Non Resi GFA											Resi GFA		Total GFA	Units	Carpark Summary			
	Community	Medical	Office	Retail								Hotel	Residential			Required	Provided		Total Provided
				Major	Mini Major	Specialty	F&B	LFR	Costco	Cinema	Bowling						Surface	Undercroft	
Town Centre																			
M1																			
M2													22,235	22,235	220	220		330	330
M3													14,633	14,633	150	150		230	230
M4																			
M5																			
M6													10,478	10,478	100	100		450	450
M7													13,400	13,400	130	130		100	100
M8																			
M16	11,694													11,694		230		230	230
M17	4,528													4,528		90		260	260
OS3																			
R1													16,006	16,006	160	160		160	160
Sub - Total	**16,222**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**76,752**	**92,974**	**760**	**1,080**	**0**	**1,760**	**1,760**
Home Maker																			
M9			3,387		2,023		375	2,872					6,211	14,868	80	420	200	240	440
M10					817	573	304						11,383	13,077	100	170	45	180	225
M11																			
M12																			
R17													9,072	9,072	80	80		80	80
Sub - Total	**0**	**0**	**3,387**	**0**	**2,840**	**573**	**679**	**2,872**	**0**	**0**	**0**	**0**	**26,666**	**37,017**	**260**	**670**	**245**	**500**	**745**
SE Residential Superblock																			
R9																			
R10																			
R11																			
R12																			
R13																			
R14																			
R15																			
R16																			
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
East Residential																			
M15																			
OS6a							180							180					
R2													11,815	11,815	90	90		90	90
R3													14,868	14,868	120	120		120	120
R4													17,310	17,310	130	130		130	130
R5													6,162	6,162	60	60		60	60
R6													11,878	11,878	110	110		110	110
R7													14,792	14,792	130	130		130	130
R8													9,557	9,557	90	90		90	90
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**180**	**0**	**0**	**0**	**0**	**0**	**86,382**	**86,562**	**730**	**730**	**0**	**730**	**730**
Watercare																			
GRAND TOTAL	**16,222**	**0**	**3,387**	**0**	**2,840**	**573**	**859**	**2,872**	**0**	**0**	**0**	**0**	**189,800**	**216,553**	**1,750**	**2,480**	**245**	**2,990**	**3,235**

Assumption: Community 2 per 100 sqm Retail/Commercial 3-5 per 100sqm Residential 1 per 1 unit

STAGE 3

Parcel ID	Non Resi GFA											Resi GFA		Total GFA	Units	Carpark Summary			
	Community	Medical	Office	Retail								Hotel	Residential			Required	Provided		Total Provided
				Major	Mini Major	Specialty	F&B	LFR	Costco	Cinema	Bowling						Surface	Undercroft	
Town Centre																			
M1			5,581		3,922	2,189	211						14,386	26,289	140	500		440	440
M2																			
M3																			
M4																			
M5					2,638	2,049							12,816	17,503	130	270		330	330
M6																			
M7																			
M8																			
M16																			
M17																			
OS3																			
R1																			
Sub - Total	**0**	**0**	**5,581**	**0**	**6,560**	**4,238**	**211**	**0**	**0**	**0**	**0**	**0**	**27,202**	**43,792**	**270**	**770**	**0**	**770**	**770**
Home Maker																			
M9																			
M10																			
M11																			
M12																			
R17																			
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
SE Residential Superblock																			
R9																			
R10																			
R11																			
R12																			
R13																			
R14																			
R15																			
R16																			
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
East Residential																			
M15		24,728												24,728		490		490	490
OS6a																			
R2																			
R3																			
R4																			
R5																			
R6																			
R7																			
R8																			
Sub - Total	**0**	**24,728**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24,728**	**0**	**490**	**0**	**490**	**490**
Watercare			**33,410**		**9,645**		**2,749**						**12,627**	**58,431**		**1,750**		**1,750**	**1,750**
GRAND TOTAL	**0**	**24,728**	**38,991**	**0**	**16,205**	**4,238**	**2,960**	**0**	**0**	**0**	**0**	**12,627**	**27,202**	**126,951**	**270**	**3,010**	**0**	**3,010**	**3,010**

8.3 Parcel Program Summary



Legend

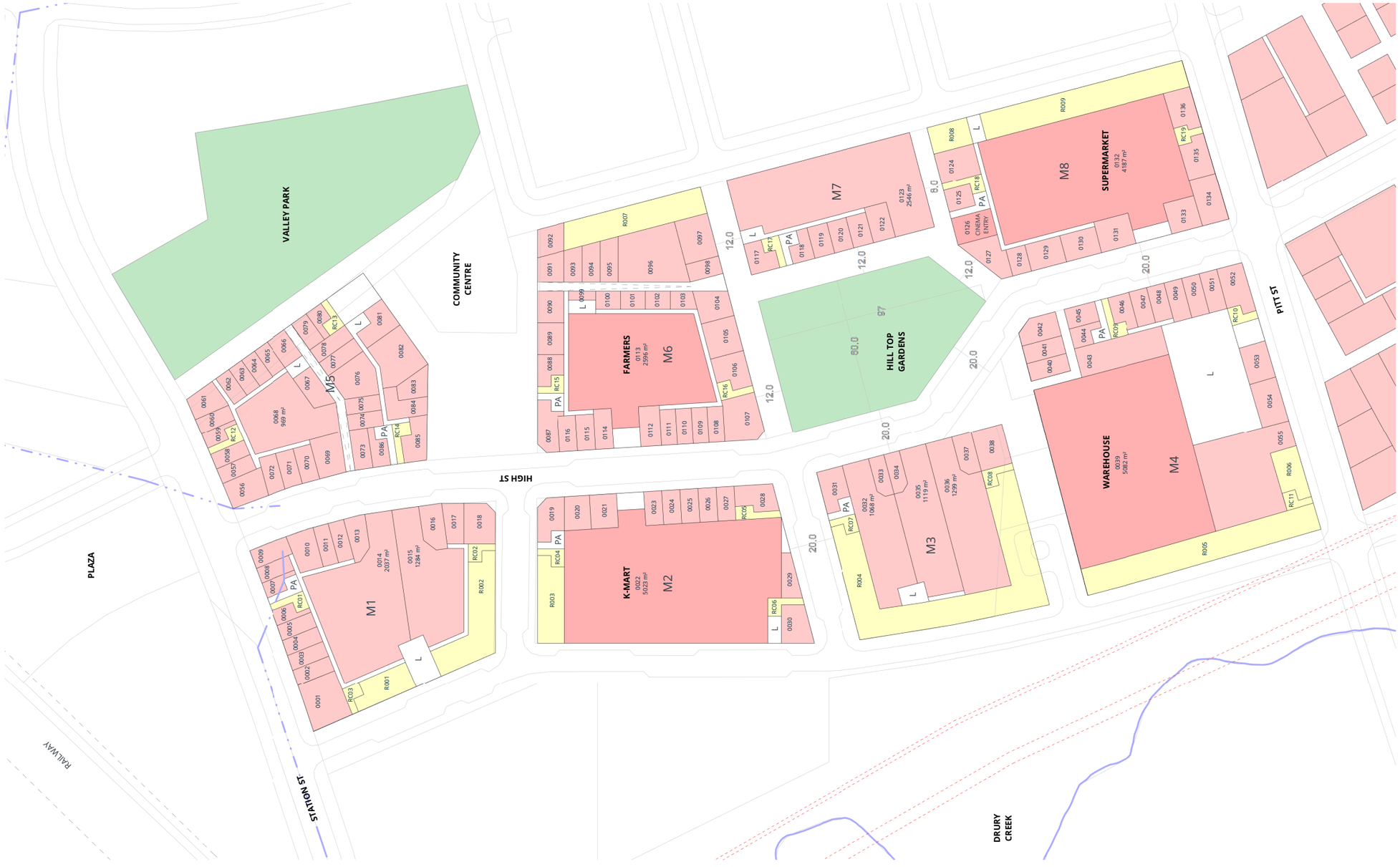
- Mixed Use
- Mixed Housing Suburban
- Terraced Housing & Apartment
- Open Space - Creek Reserve
- Open Space - Public Park
- Open Space - Plaza
- Open Space - Green Lane
- Road

Assumption: Community 2 per 100 sqm Retail/Commercial 3-5 per 100sqm Residential 1 per 1 unit

PARCEL SUMMARY

Parcel ID	Non Resi GFA											Resi GFA		Total GFA	Units	Carpark Summary			
	Community	Medical	Office	Retail								Hotel	Residential			Required	Provided		Total Provided
				Major	Mini Major	Specialty	F&B	LFR	Costco	Cinema	Bowling						Surface	Undercroft	
Town Centre																			
M1			5,581		3,922	2,189	211						14,386	26,289	140	500		440	440
M2				6,492		1,174	226						22,235	30,127	220	460		330	330
M3			2,922		2,761	740	243						14,633	21,299	150	350		230	230
M4				11,366	1,527	1,180	380						38,098	52,551	380	810		1,000	1,000
M5					2,638	2,049							12,816	17,503	130	270		330	330
M6				5,672		1,704	450			4,000			10,478	22,304	100	450		450	450
M7					1,816	503					2,599		13,400	18,318	130	280		100	100
M8					4,369	749	598						11,658	17,374	120	290		360	360
M16	11,694													11,694		230		230	230
M17	4,528													4,528		90		260	260
OS3							472							472					0
R1													16,006	16,006	160	160		160	160
Sub - Total	**16,222**	**0**	**8,503**	**23,530**	**17,033**	**10,288**	**2,580**	**0**	**0**	**4,000**	**2,599**	**0**	**153,710**	**238,465**	**1,530**	**3,890**	**0**	**3,450**	**3,890**
Home Maker																			
M9			3,387		2,023		375	2,872					6,211	14,868	80	420	200	240	440
M10					817	573	304						11,383	13,077	100	170	45	180	225
M11							375	9,175						9,550		470	260	280	540
M12									14,051					14,051		750	610	140	750
R17													9,072	9,072	80	80		80	80
Sub - Total	**0**	**0**	**3,387**	**0**	**2,840**	**573**	**1,054**	**12,047**	**14,051**	**0**	**0**	**0**	**26,666**	**60,618**	**260**	**1,890**	**1,115**	**920**	**2,035**
SE Residential Superblock																			
R9													15,664	15,664	140	140		140	140
R10													9,662	9,662	70	70	10	60	70
R11													9,137	9,137	50	50	50		50
R12													10,044	10,044	70	70	40	30	70
R13													10,044	10,044	70	70	40	30	70
R14													11,104	11,104	80	80	30	50	80
R15													16,657	16,657	150	150		150	150
R16													6,593	6,593	40	40	40		40
Sub - Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**88,905**	**88,905**	**670**	**670**	**210**	**460**	**670**
East Residential																			
M15		24,728												24,728		490		490	490
OS6a							180							180					0
R2													11,815	11,815	90	90		90	90
R3													14,868	14,868	120	120		120	120
R4													17,310	17,310	130	130		130	130
R5													6,162	6,162	60	60		60	60
R6													11,878	11,878	110	110		110	110
R7													14,792	14,792	130	130		130	130
R8													9,557	9,557	90	90		90	90
Sub - Total	**0**	**24,728**	**0**	**0**	**0**	**0**	**180**	**0**	**0**	**0**	**0**	**0**	**86,382**	**111,290**	**730**	**1,220**	**0**	**1,220**	**1,220**
Watercare			**33,410**			**9,645**	**2,749**					**12,627**		**58,431**		**1,750**		**1,750**	**1,750**
GRAND TOTAL	**16,222**	**24,728**	**45,300**	**23,530**	**19,873**	**20,506**	**6,563**	**12,047**	**14,051**	**4,000**	**2,599**	**12,627**	**355,663**	**557,709**	**3,190**	**9,420**	**1,325**	**7,800**	**9,565**

8.4 Retail Test Fit




RAILWAY
PLAZA
STATION ST
RC
M1
M5
VALLEY PARK
COMMUNITY CENTRE
HIGH ST
M2
FARMERS
1001
2599 m²
M6
L
12.0
M7
20.0
M3
60.0
97
HILL TOP GARDENS
8.0
M8
CINEMA
1002
5059 m²
DRURY CREEK
M4


PITT ST
0137
0138
0139
0140
0141
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0145
0146
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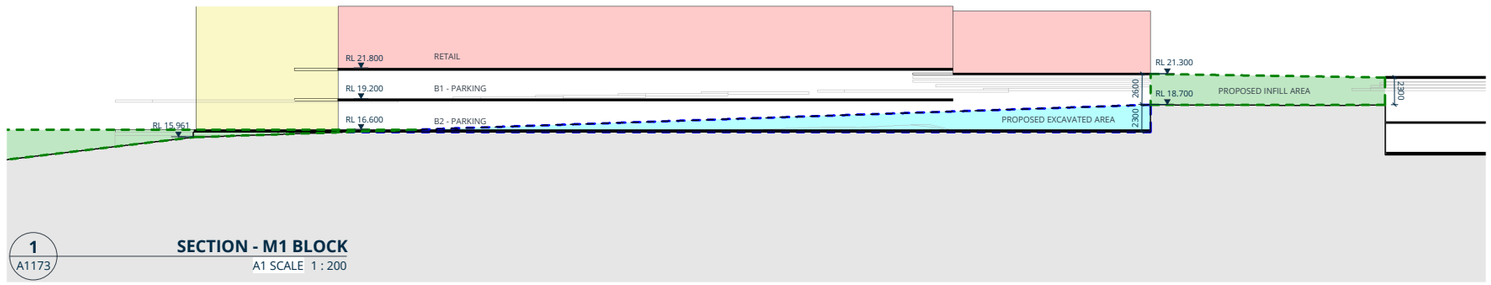
0178
0179
M9
PARKING
M11
PARKING
LOADING
COSTCO AREA OF INFLUENCE
PARKING
M12
COSTCO
0180
14000 m²
COSTCO
PETROL
STATION
0181
PARKING
M10
0153
5072 m²
SUPERMARKET/DECATHLON
0154
0155
0156
0157
0158
0159
LOADING
DRURY
CREEK

Note: Typical Block Test Fit refer to supporting documents



1 A1173

SECTION - M1 BLOCK

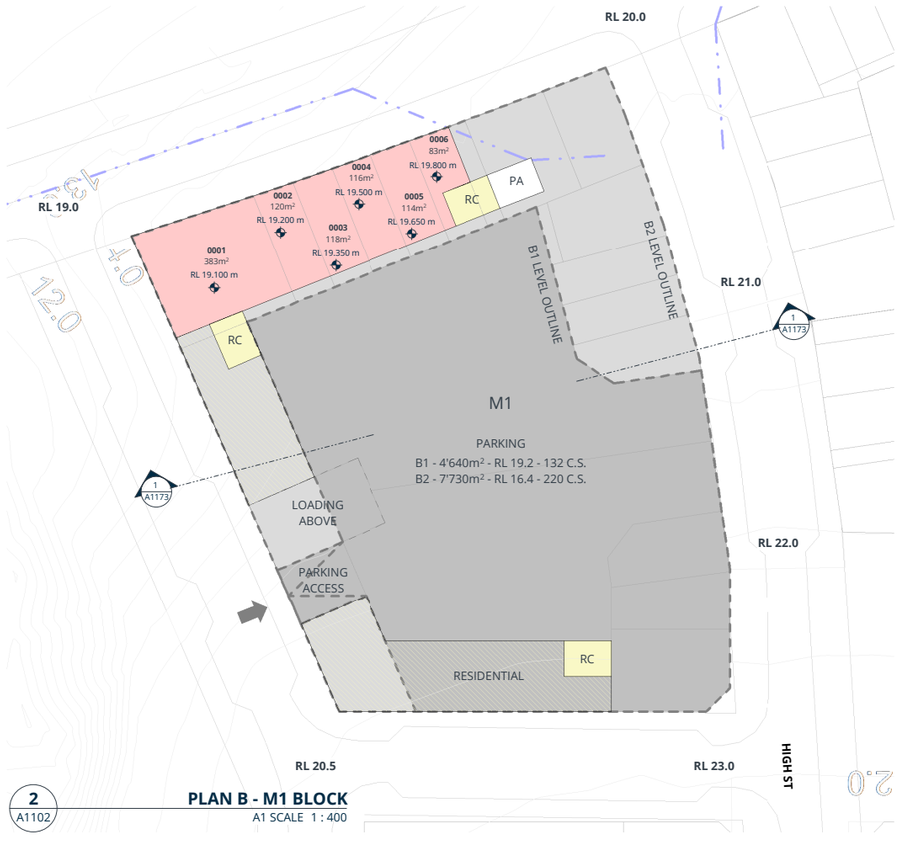
A1 SCALE 1 : 200

M1 SUMMARY

RETAIL AREA:	5'883m^2
RETAIL REQ. PARKING:	295 CAR SPACES
RESID. REQ. PARKING:	200 CAR SPACES
PARKING PROVISIONS:	2 UNDERCROFT LEVELS
PROVIDED PARKING:	12'380m^2 (APPROX. 353 C.S.)
LOADING/WASTE:	575m^2

GENERAL NOTE

- QUANTITY OF UNDERCROFT PARKING DECKS AS PER CIVITAS
- BALANCE OF PROVIDED PARKING SPACES TO BE ALLOCATED TO RESIDENTIAL REQUIREMENT
- ASSUMES GROUND LEVEL RETAIL SLAB IS SLOPING WITH INDIVIDUAL TENANT SPACES "TOPPED" TO PROVIDE LEVEL TRADING FLOOR
- ASSUMES RETAIL PARKING CALCULATION RATIO 5/100M2 TO BE ACCOMMODATED IN INTERIM PARKING AREAS AND UNDERCROFT; 3/100M2 FOR RETAIL OVERALL IN FINAL BUILDOUT



2 A1102

PLAN B - M1 BLOCK

A1 SCALE 1 : 400



3 A1102

PLAN GF - M1 BLOCK

A1 SCALE 1 : 400

8.5 Paving and Furniture Strategy Palettes

Premium Urban Palette

- Main Street, Station Plaza, Town Square and Homestead Park

The premium urban palette consists of high quality street furniture elements and paving suited to the urban character of the spaces. Predominantly grey stone such as slate, dark granite and bluestone, utilised in a variety of scales, patterns and textures ,provides as sophisticated paving palette that brings scale and a sense of quality to the public domain.

Stone kerbs, stone pavers and trim details continue to define different zones such as parking zones, pathways, shared ways, slow zones or gathering spaces.

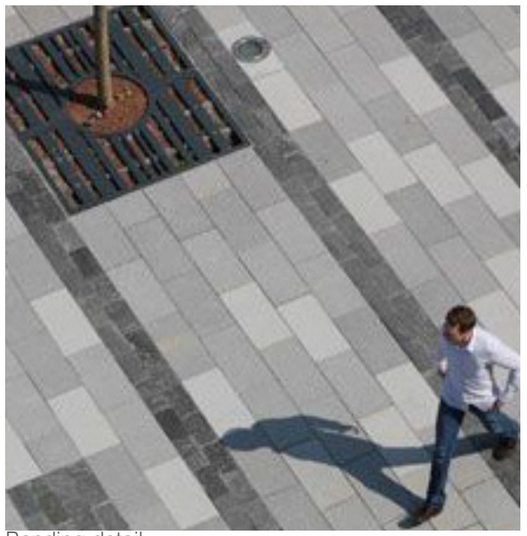




High quality, bespoke seating and furniture elements



Stone arrangement to identify zones of use.



Banding detail



Large format stone tiles along main sidewalks



Stone variation

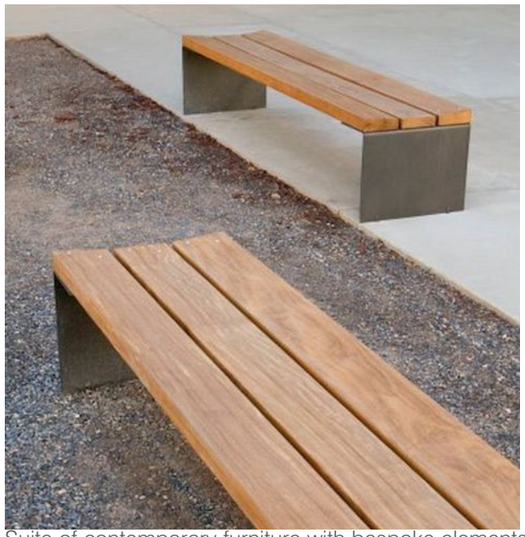
Urban Palette

- Secondary town centre spaces, streets and connections

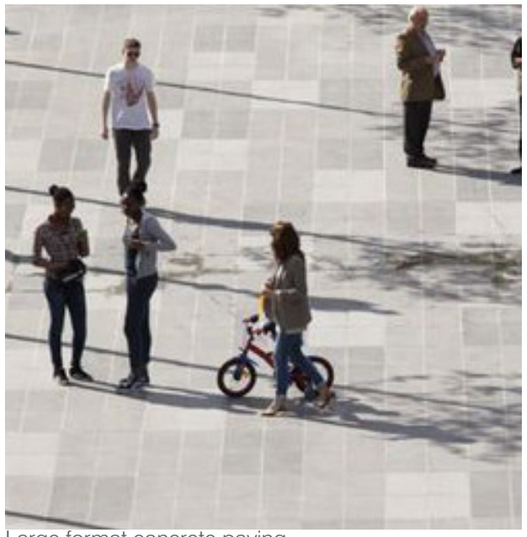
The urban palette ties into the blue/grey colour of the urban centre, while being simpler and less varies in its application. Variation in materiality and bespoke elements should be used in the public spaces, with the streets and connections using a consistent palette of unit paving and contemporary furniture.

A mixture of insitu concrete, concrete pavers and stone paving is to be implemented across the Urban Palette.





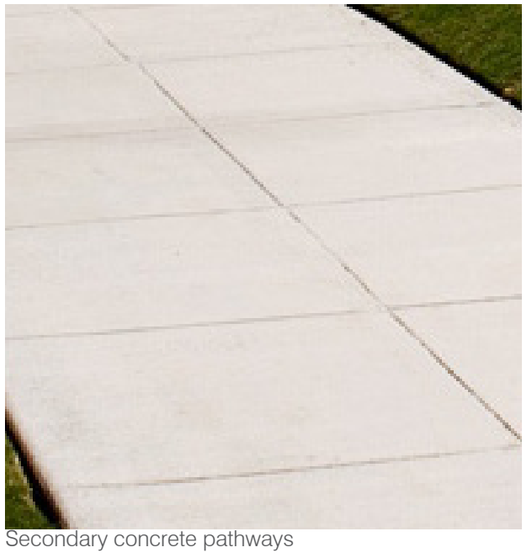
Suite of contemporary furniture with bespoke elements in key spaces



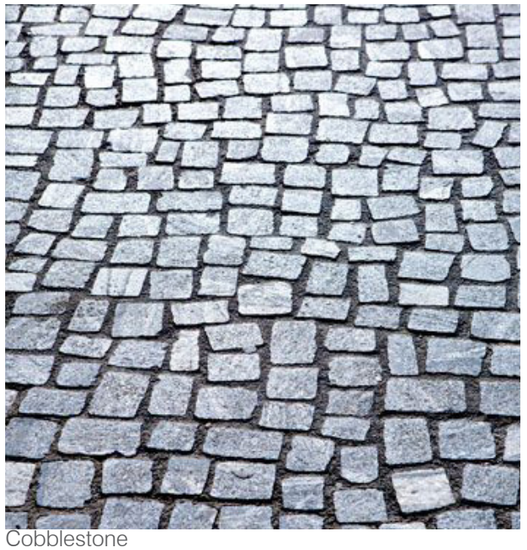
Large format concrete paving



Feature unit paving



Secondary concrete pathways



Cobblestone

Residential Palette

- Residential public domain

The residential palette is of a warmer, and more natural colour.

Reminiscent in colour of sandstone, travertine and limestone, the residential zones, although dense, maintain a definitive feel, separate to the urban centre.

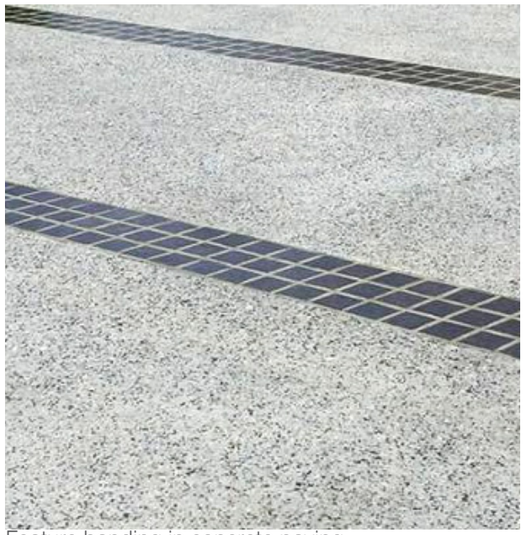
The greening affect of permeable paving complements the 'suburban' feel of the lesser trafficked residential streets, while helping to manage rainwater and mitigate flooding.

Detailing across the Residential Palette may include- permeable treatment for parking zones, brick paving banding along concrete pathways, paving details at intersection ramps and cobblestone roadways at important thresholds and crossings.

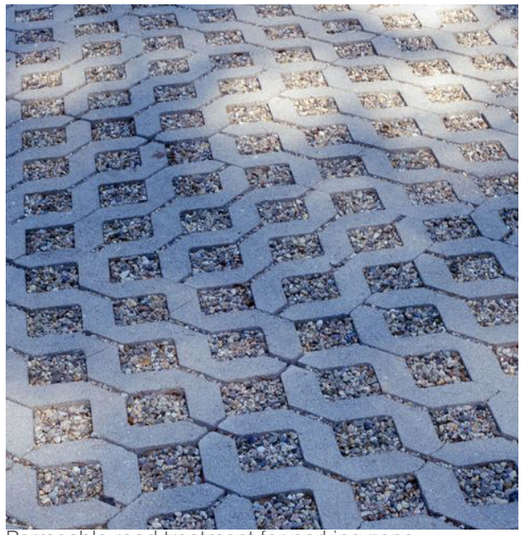




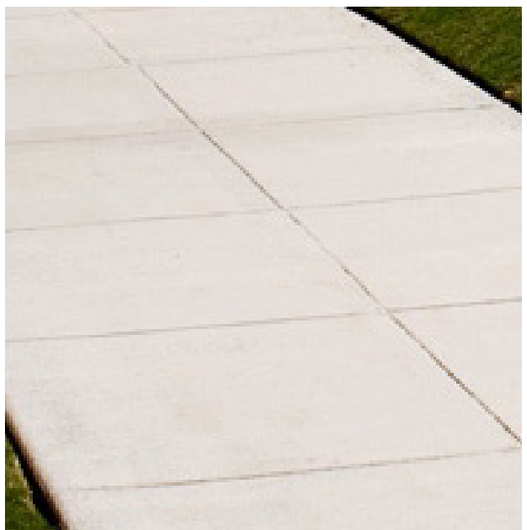
Contemporary and consistent set of street furniture



Feature banding in concrete paving



Permeable road treatment for parking zone



Concrete pathways



Cobblestone

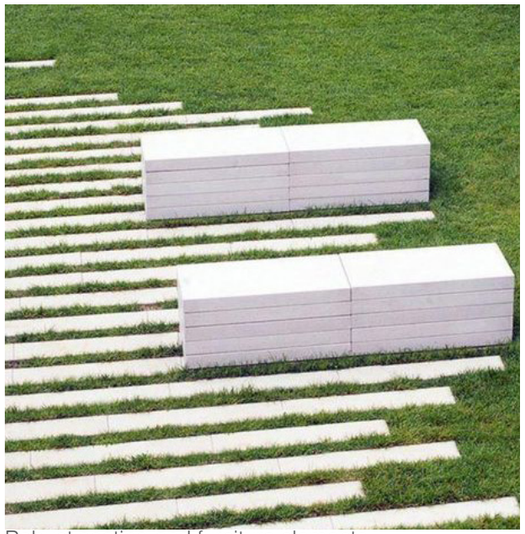
Natural Palette

- Creek reserves

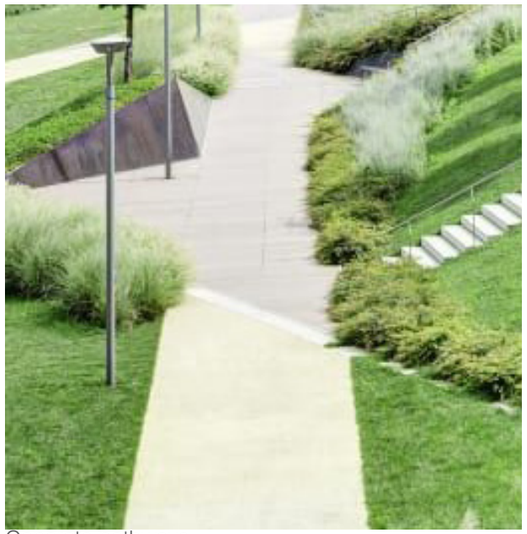
The natural palette provides an informal, natural and robust pallete suited to the open space environment of the creek reserves.

Similar in colour to the residential palette, a mixture of concrete, natural materials and colours should be used across the Natural Palette. Consideration should be given to ensuring robust materials and furniture are used, with a lower maintenance requirement than the more urban palettes.





Robust seating and furniture elements



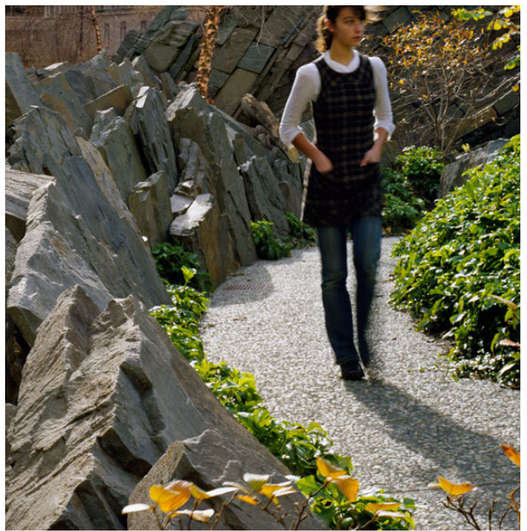
Concrete pathways



Informal pathways and natural materials



Creekline boardwalks



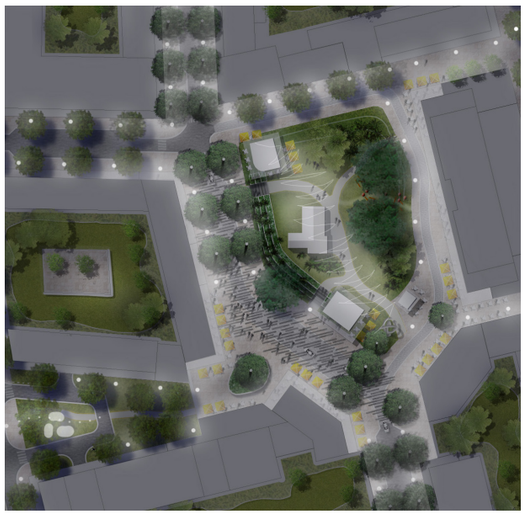
Informal pathways and natural materials

8.6 Lighting Strategy Palettes

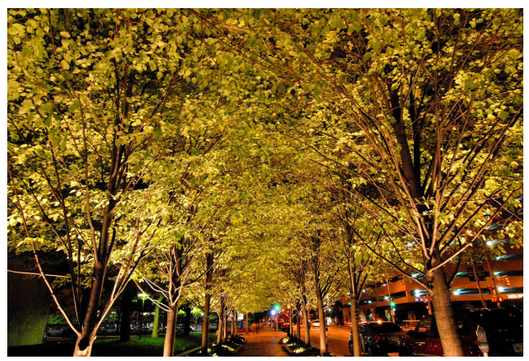
Homestead Park

The Homestead Park's diagonal pathway is illuminated softly by overhead suspended lighting, as well as spill out lighting from the adjacent pavilions Pockets stemming off the central path host a softer, more mellow lit spaces for dining.







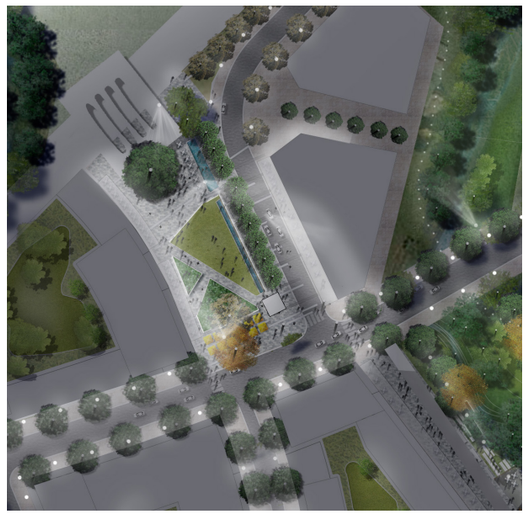


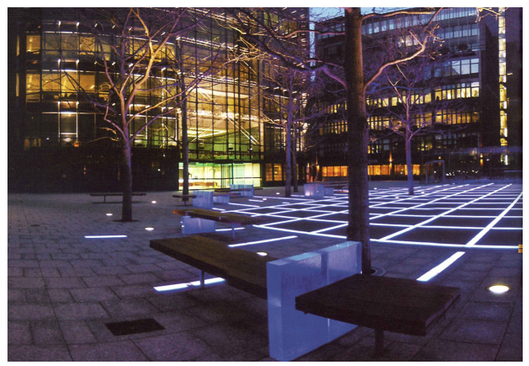
Station Plaza

The Station Plaza's highly trafficable perimeter is well lit by accent lighting and pole lighting. The central space hosts in-ground feature lighting, while seating and wall edges are softly illuminated along their base.





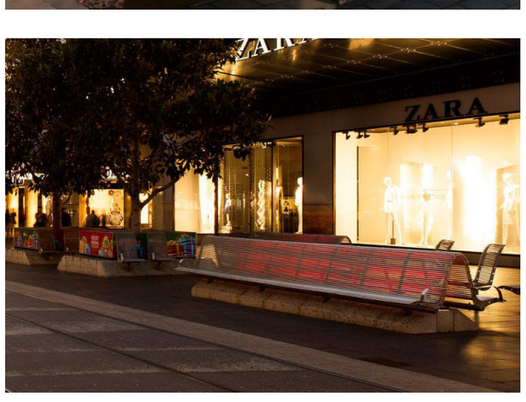




Main Street - Streetscape

Main Street is well illuminated by the building facade active frontages, accent lighting within furniture and also pole lighting. The major pedestrian thoroughfare at night is a bright street that acts as a lively arena where activities converge.







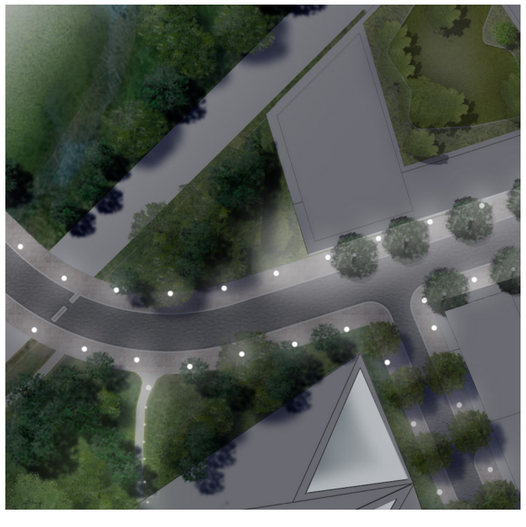


Entry Gateway

Entry Gateways will have subtle feature lightinng to emphasise the apporach and arrival sequence into the town centre.

A strong lineage of double sided pole lighting acts as a formal greeting into the town centre, while feature lighitng sprinkles the tree canopies.

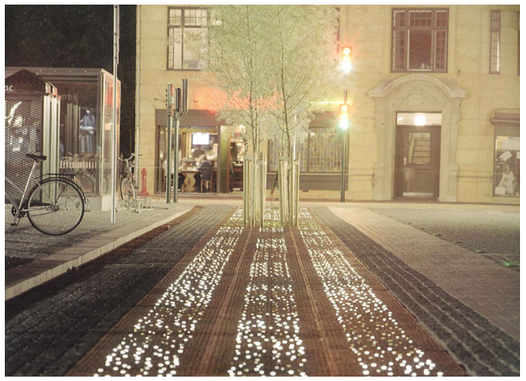


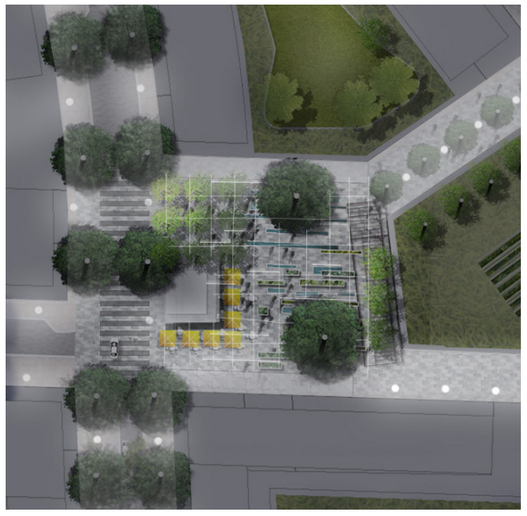




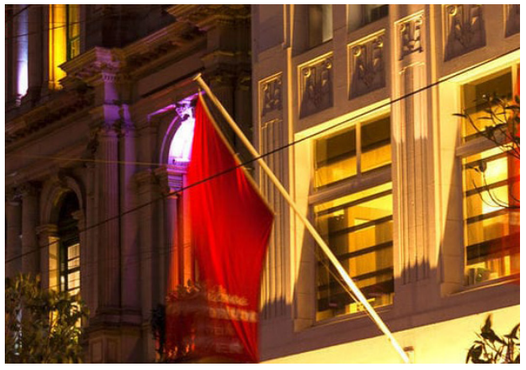
Town Square

The Town Square is illuminated by in-ground feature lighting which provides wayfinding to the Valley Park. Pedestrian scaled lighting accentuates the planting, steps and seats, while pole lighting provide an alluring light through the trees.





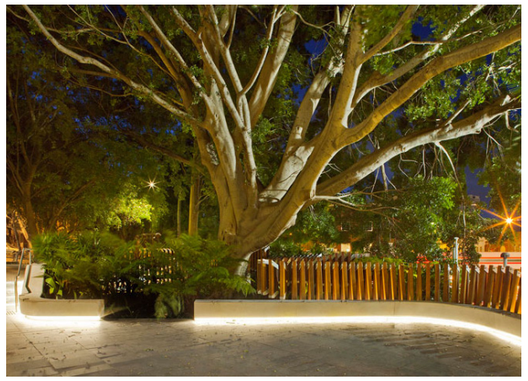


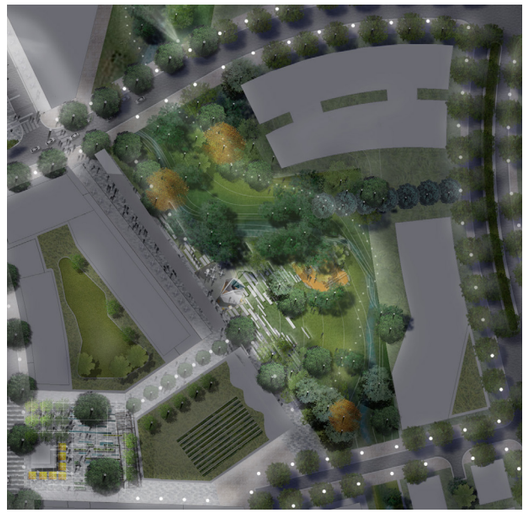


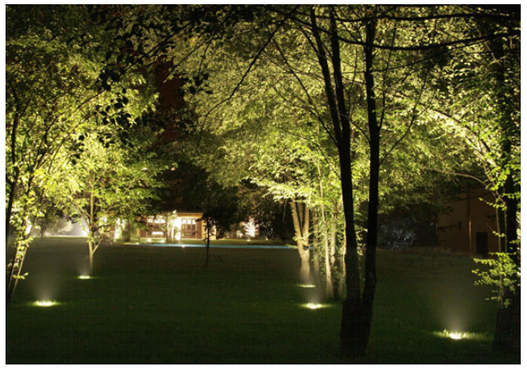
Valley Park

The lighting for Valley Park will exemplify the juxtaposition between its built edges and its softer interior.

Pole lighting along the built edge turns to accent lighting on concrete seating that dissolves into the park, and then to in-ground lighting illuminating existing mature trees.



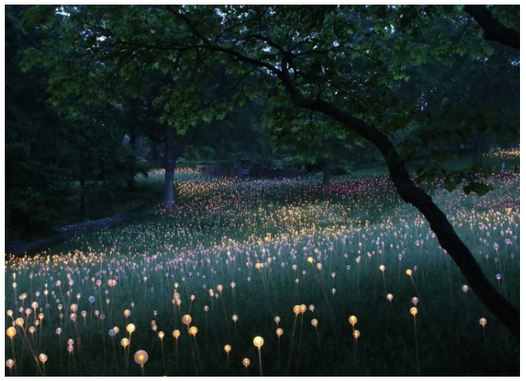






The Reserve

Walking through the reserve at night presents a dynamic and lively landscape. The undulating topography and twisting paths are complemented by a spectrum of luminosities. Pavilions act as beacons within the landscape; in some places flooding the waterside setting, while selectively shading others. Lighting is restricted to key pathways and spaces so as not to detract from the Reserve's ecological function.









8.7 Glossary

This glossary lists only those terms that are used in a manner specific to this development and do not include that which would be considered as typical or common planning, architectural, and landscape terms.

Accessible | Accessibility: The ability of all users to safely negotiate throughout the public realm.

Ahi Ka: Enduring presence as related to mana whenua.

Amenity: A use of a development that may increase its marketability or usability to the public; i.e. a health club or garden.

Articulation: The manner in which portions of a building form are expressed (materials, colour, texture, pattern, etc.) and come together to define the structure.

At-grade: Finish grade or ground level, i.e. at street level.

Awning: A type of weather protection that is attached to the building facade.

Basement: The spaces and areas underneath the ground floor that are surrounded by and/or require excavation of earth on all sides.

Building Block: A parcel of land that is bounded on all sides by Streets or Pedestrian Right-of-Ways. May include several Building Sites, and can provide Pedestrian Right-of-Ways through the Block for public access.

Building Face: A single facade of a Building Site. Each facade fronting a Street or Pedestrian Right-of-Way of a Building Site is a Building Face. Refers to the overall length of each facade fronting a Building Site as defined by the total length of the Building Face, not by breaks between buildings.

Building Length: Refers to the architectural expression of individual buildings, rather than the physical full length of a Building Face. Based n the understanding that each Building Site is likely to be comprised of only one physically constructed building, and due to the Building Sites being up to a full Building Block in length, there is a need to provide a finer-grain 'division' of buildings. Building Length refers then to the architectural expression of individual buildings along a Block.

Building Site: A parcel of land, in plan, that establishes a property line for an individual building project. The area within which a building can be built.

Built-To Line: A front setback expressed as a required distance for placement of the building face from the property line, defining the Building Site. The Build-To Line typically refers to the requirement for zero front setback from the property line, with limitation on In-Goes and Out-Goes (inset and projections) from this line.

Fenestration: The arrangement and design of windows and doors on a building facade.

Fine-Grain: In terms of retail, refers to the dimension and or number of linear shops along the street. In terms of residential, refers to the dimension of linear width of a single unit. Fine-grain frontage along the street refers to not just the Ground Floor but the entire expression of the building facade vertically.

First Floor: The building level that is situated immediately above the Ground Floor.

Ground Floor: The building floor level that is situated at, and accessed from, the grade level of the Street or Pedestrian Right-of-Way.

Iconic: An architecturally strong feature of a building that is distinguished from more common elements, and whose form suggests its meaning.

Interim Use: The stage on land use (i.e. Parking, landscaping, building, etc.). Interim Uses are temporary uses until such time as the future stages can be realised.

Kaitiakitanga: Guardianship or stewardship.

Land Use: Refers to the proposed uses or occupancies at each floor level, as defined on a building by building basis.

Large Format Retail: Refers to a single retail shop that exceeds 1,000 square metres in floor area on any one level.

Mahi Toi: Recognition and expression of iwi/hapu naratives through creative arts and crafts.

Mana Whenua: Territorial rights or recognition of indigenous rights.

Massing: Three dimensional bulk of a structure: height, width, and depth.

Mauri: The environmental health or life force and the recognition to protect, restore, or enhance it.

Maximum Building Height: The allowable building height as measured from the lowest point on the building site to the building's highest projection. The building heights in this Master Plan include an allowance of 5.0 metres above the roof line for all roof projections.

Minimum Building Height: The height of a one storey building; typically 6.0 metres for Retail or Commercial Use.

Mixed Use: A building that is required to be designed and occupied by more than one land use. Permitted application of the mix of uses is described in the Master Plan.

Off-Road Dedicated Cycleway: Designated cycle path outside of the carriage way.

Open Space: Green landscaped and/or water area with its surface open to the sky. Provides active or passive recreational opportunities. Provides structure for urban development and form.

Pedestrian Corridor: A pedestrian access that is located at the First Floor that provides an exterior route and linkage. It is not a Pedestrian Right-of-Way.

Pedestrian Right-of-Way: A publicly accessible linkage between buildings that is used by pedestrians only. No portion of a building may cover a Pedestrian Right-of-Way, excepting permitted Weather Protection devices. The Pedestrian Right-of-Way must be entered from a Street or public space, such as a plaza, and must provide a clear public link through to a destination Street and may not be terminated at a building as a dead-end. May have transparent security gates at either end, for limited night time closure, where appropriate.

Pedestrian Zone: Refers to the space within a Street Right-of-Way that is occupied solely by pedestrians and may include footpaths, furniture, planted areas, and street trees.

Permeability: The ability of pedestrians, vehicles, and cyclists to move easily and without impediment within and between public spaces.

Private Outdoor Open Space: A landscape, terrace, or internal courtyard owned and maintained by an individual residential unit.

Public Realm: Refers to all portion of the Town Centre that are accessible to the general public, including Streets and Pedestrian Right-of-Ways, plaza spaces, park spaces, and community facilities such as bus stops. The Public Realm may not be publicly owned or managed.

Same-grade: The loading dock that is situated at the same level as the retail trading floor it services.

Second Floor: The building level that is situated immediately above the First Floor.

Semi-Private Open Space: Outdoor open space that is in common ownership within a residential site and for which the use of the space is

limited to the common owners, with no general public access.

Servicing: The space and facilities used for the delivery and/or removal of material to a residential, retail, or commercial property.

Setback: The required or actual placement of a building a specified distance away from a road, property line, or other structure.

Shared Way: A vehicular street that shares a designated cycling lane.

Sleeve Building: A building that wraps Large Format Retail, service areas, and parking, such that they are hidden and masked from view, particularly when viewed from Streets. Sleeve Buildings may contain residential, retail, commercial or community uses.

Storey: A habitable level or enclosed floor in a building.

Street: A space within the public right-of-way that includes provisions for pedestrian and vehicle traffic movement.

Streetscape: The composition of physical elements within a street that results from the combination of building facades, weather protection, the street surface, footpaths, landscape and furniture elements including lighting, seating, etc.

Streetwall: The overall presence of a building facade in defining the vertical edge wall of a street. When both Streetwalls on a street are considered in combination, they define the Streetscape edges and containment of the street space.

Taiao: The natural environment and the recognition to protect, restore, or enhance it.

Te Aranga Māori Design Principles: Te Aranga Māori Design Principles were developed by Māori design professionals as a response to the New Zealand Urban Design Protocol in 2005. Over time the principles have evolved and been adopted by the Auckland Council with the support of Ngā Aho and are being promoted across all council built projects.

Tohu: Recognition of significant sites and cultural landmarks to mana whenua.

Undercroft: The spaces and areas underneath the ground floor that are not surrounded by nor require excavation of earth on all sides.

Water Sensitive Urban Design (WSUD): A land planning and engineering design approach which integrates the water cycle, including stormwater management and water supply, into urban design to minimise environmental degradation and the environmental impacts of urbanisation in terms of the demand for water and the potential pollution threat to natural water bodies.

Wayfinding: Sequential experience and sense of orientation provided to pedestrians as they journey through public spaces.

Weather Protection: Refers to the requirement to provide protection of public pedestrian areas at the Ground Floor.

Whakapapa: Recognition of ancestral names, historical narratives, and customary practices and their ability to enhance sense of place connections.

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This document has been prepared on behalf of:

Kiwi Property

Masterplanning and Urban Design Lead:

CIVITAS urban design & planning

709-510 Burrard Street
Vancouver, BC V6C 3A8 CANADA
t. 604-683-8788 f. 604-683-3880

Landscape Architecture and Public Realm Consultant:

OCULUS

1/5 Wilson Street, Newtown, NSW Australia
P.O Box 307 Newtown, NSW Australia 2042
t +61 2 9557 5533

NZ Architectural Consultant:

IGNITE

1 Pakenham Street East, Viaduct Harbour, Auckland 1010,
Auckland 1142
t: +64 9 356 4791