HUTT CITY

Planning for the Future
A long-term vision for future housing growth and choice

17 AUGUST 2016

HUTT CITY
TE AWA KAIRANGI

URBAN DEVELOPMENT PLAN FOR HUTT CITY RESIDENTIAL INTENSIFICATION

Project no: IZ005300
Revision: 4
Date: 17 August 2016
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Revision	Date	Description	By	Review	Approved
0	23 December 2015	Draft Report	DCM / MH	MH	MH
1	15 April 2016	Draft Report	DCM/MH	MW	MH
2	15 May 2016	Final draft bar infrastructure and hazard update	MH/DCM	MH/SC	MH
3	18 July	Final report - updated maps, changes to height limit and insertion of infrastructure and hazard section	MH/DCM	MH/SC	MH
4	17 August 2016	Final Report - correction of text, labels	SC/DCM	MH	MH

JACOBS

CONTENTS

1. INTRODUCTION

Providing for the changing demographic needs of Lower Hutt City within the wider growth framework of Wellington's urban settlement pattern has been a key focus of this review of the Hutt's urban residential zones. The Urban Growth Strategy (the Strategy) in 2012-2032 has identified the following key issues that need to be addressed if Hutt City is to continue to provide for strong building blocks for further residential development which provides for:

- the opportunity for a growing population; and
- access to the types of housing the market wants to provide for the each part of the residential population in Hutt City.

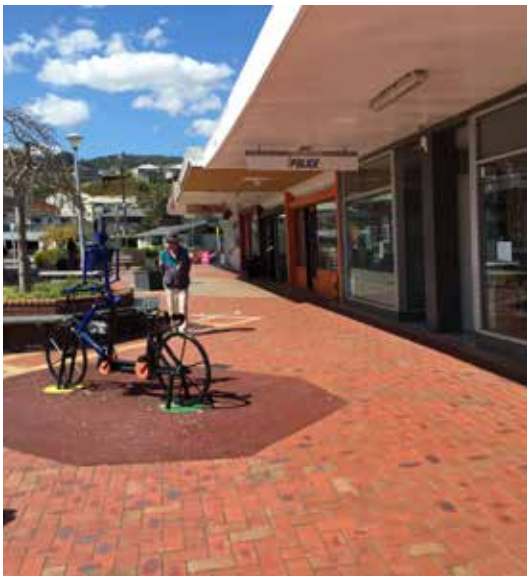
The Strategy identified a range of targets for population growth of providing for 11,762 people and at least 6000 new homes within the city by 2032. The Urban Growth Strategy also recognises that a "business as usual" approach will not achieve their goal of achieving the council vision for urban growth of:

"Hutt City is the home of choice for families and innovative enterprise"

A business as usual approach is not supported due to the current low population growth levels of 0.55% since 2006 compared to the Wellington Region as a whole of 5%. Generally growth has been concentrated in a small number of central valley and western hill areas, the northern suburbs of Taita and Naenae, and in Waiwhetu, Epuni and Waterloo. Some areas of Wainuiomata have experienced substantial depopulation. In order to address these concerns we must address not only housing choice but economic development needs. However provision of jobs within Lower Hutt city is also complicated by the make up of residents employment with many working outside of Hutt City, in Wellington City for example.

In order to provide for housing choice, much of this new home growth was identified as being provided for through greenfield development at the edges of the general residential activity areas in Lower Hutt. Urban intensification was also identified for investigation primarily through:

- Targeted intensification in Waterloo and Epuni through infill;
- Investigation of further areas that may be suitable for targeted intensification, such as the railway corridor and the periphery of the Central Business District (CBD);
- Providing for low rise apartment developments in targeted locations;
- Providing for targeted multi unit development rather than reducing lot size across the board; and
- Providing for a 40% site coverage rule to remove this restriction to multi unit development, where necessary.



Investigation into confirming the viability of potential greenfield sites and in the existing urban environment has been undertaken for the Urban Growth Strategy. A Residential Growth Discussion Document was released for consultation with the community and a series of targeted consultation meetings and workshops were held to understand people's initial views of providing for residential intensification.

The discussion document also helpfully defines what is meant by residential intensification. The definition is outlined below:

"Residential intensification refers to an increase in the density of dwellings or residential population over the existing level. Residential intensification can take a number of forms including standalone houses on smaller lots, semi-detached housing, townhouses (terrace housing) and apartment buildings. Higher density can be achieved vertically or horizontally, and does not always involve an increase in height."

A range of options for changing the district plan was outlined for feedback from the community in this document and also to inform the future assessment. This document identifies a planning framework for Council providing for future housing and population growth. This growth needs to be planned and have an acceptable impact on existing communities.

1.1 WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this assessment is to outline how residential intensification can be improved within the urban limits of Hutt City in order to continue to achieve it's growth objective of being a home of choice for families and innovative enterprise in addition to what has already been identified within the existing district plan.

1.2 APPROACH TO ASSESSMENT

A whole of city approach has been taken in spatially identifying where increased levels of intensification may be appropriate. Additionally the testing of the impacts of this development has been assessed. The study has not just looked at the areas identified to date in the Urban Growth Strategy but also considered the all residential activity areas in the city. A starting point for investigation of suburbs was to consider areas where suburbs already provide the following characteristics:

- They have a suburban centre with a bus or other public transport connection which can provide for further intensification that can provide for walkability; and
- only general residential activity areas in the district plan were considered for intensification.

While these are simple criteria they fit into a recognised set of spatial criteria for assessing appropriate urban form patterns of providing for people, places and spaces through:

Consolidation of activity

Providing for intensity and interaction with communities;

Integration and connectivity

With movement networks and building interfaces;

Diversity and adaptability

Providing for mixed use and flexibility of spaces and buildings within an urban area;

Environmental responsiveness

Providing for increased activity within the existing urban footprint providing for efficiency of networks, while not further impinging on green networks and public open space provision.

The core reasons for using this high level criteria are because residential intensification relies on services are within walkable distances and provide a range of options for access throughout the suburb to provide for a range of demographics.

In general this has resulted in the majority of opportunities for consideration of residential intensification occurring on the valley floor as there are only a few hill suburbs which have a suburban centre with public transport connections.

A range of suburbs has then been assessed, the method of which is outlined in section 4 and the results are outlined in section 5. Overall each area has been assessed testing whether increased height and diversity of uses could be included within the existing suburban centre zones and general residential activity areas.

Three types of uses have been assessed. The proposed mixed use zone and higher intensity residential zone have been selected and mapped spatially primarily because it is only appropriate to provide for these types of zones in selected locations. A proposed rule change to provide for encouraging well designed comprehensive residential development is then provided for in the general residential zone. Each suggested change has been provided as a way to provide a step change for development to make the most of:

- The existing amenity and walkable services that can already provide for intensity of development in Lower Hutt;
- the existing well used public transport spine and bus services within Lower Hutt so that future development does not need to rely on high levels of vehicle use and can maximise the benefits of transit oriented development principles.

This step change recognises that while the medium density provisions can currently exist in the district plan cover and provide for increasing residential density, it is a business as usual approach to development. This alternative approach takes account of changing development forms that are being implemented throughout New Zealand, accounts for a range of development patterns that are required for Hutt City's growth aspirations and provides for a clear framework for how well designed development could be further encouraged through the district plan over the long term.

Each agent for change is outlined below:

- Mixed use
- 10m high residential
- 2000m² comprehensive residential development

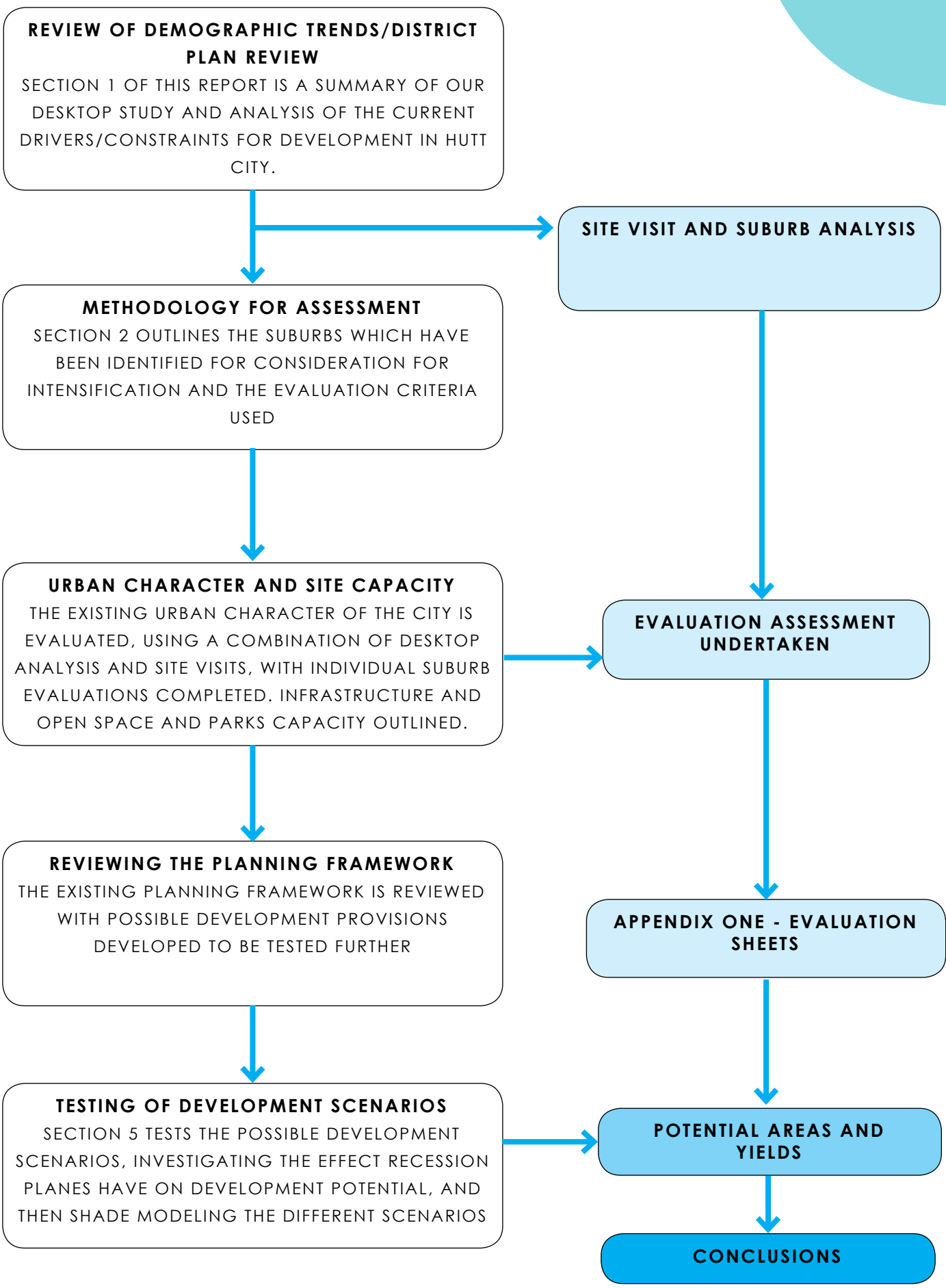


FIGURE 1.1 REPORT STRUCTURE FLOWCHART

THIS FLOWCHART OUTLINES THE STRUCTURE OF THE REPORT AND THE METHODOLOGY WHICH WAS USED TO DEVELOP ITS FINDINGS

2. METHODOLOGY FOR ASSESSMENT

In order to identify where future growth opportunities could be present we have completed the following assessments:

- Undertaken site walkovers of the main village and suburban centres in Lower Hutt. These walkovers were undertaken to determine the current condition of the urban environment in terms of retail activity, condition of houses and amenity within each suburb.
- Areas chosen for assessment were chosen primarily by:
    - Primarily looking at sites with railway stations;
    - Secondly identifying primary bus routes or major bus stations which have suburban centres as the focus of an area for intensification.

After completing site visits, selection of areas for intensification was informed by using the following tools:

- Walkability assessment using GIS identifying walkable catchments of up to 400m from the public transport node;
- Context maps were created identifying features associated with each area such as community facilities, natural features such as beaches, and educational facilities;
- An assessment undertaken of bottom up (not viewing how the district plan is currently zoned) and top down (using the existing zonings) to inform the identification of intensification areas;
- Previous work identifying reserves and open space provision on the valley floor was used to inform capacity for providing public open space provision to support intensification;
- Infrastructure capacity has been investigated and this concludes that intensification will not be suitable in all areas.

2.1 SUBURB SELECTION

Section 3 describes the existing urban character of Hutt City, evaluating 19 suburbs in terms of their suitability for intensification. These suburbs were selected in consultation with council staff, with evaluation criteria developed to 'score' their suitability for intensification as well as a possible yield, based on the scenarios outlined in Section 4. In order to identify where areas of growth may be best targeted there has been a tiered approach to investigate intensification. Firstly targeting development where there is existing or expected higher density development. For example where suburbs are more walkable, with good levels of amenity and public transport provision, near

railway stations and bus routes so residential intensification may have more local community acceptance and existing infrastructure levels of service to cope for additional demand.

Areas which have good long term potential for intensification, but with known high levels of community resistance to change and/or require increased infrastructure provision for intensification are likely to be prioritised for the next level of development intensification if they are still logical areas for development. In order to continue to encourage intensification Council is also keen to pursue opportunities for the market to respond and provide well design infill development at higher yields where lots are larger and can be redeveloped comprehensively. In summary the areas that have been investigated are:

- Alicetown
- Avalon
- Boulcott
- CBD edge
- Eastbourne
- Epuni
- Fairfield
- Kelson
- Maungaraki
- Moera
- Naenae
- Petone
- Petone East
- Stokes Valley
- Taita
- Wainuiomata
- Waterloo
- Woburn

The results of this work are such that each centre has been individually mapped to confirm how much further intensification can be supported. Each of these centres have then been integrated into an overall map of the city to confirm each how intensification can be provided, accounting for the interactions of how each centre and land use in between the centre can support each other. On the valley floor in particular this means that many of the centres and land use activity co-support each other. This is why in some residential areas with a neighbourhood centre, such as Boulcott, it would result in lower levels of targeted residential intensification being provided for, compared with an area such as Epuni which has a train station, suburban centre and capacity for expansion around the centre which could lead to further residential activity being provided.

Overall in confirming whether an area is selected for intensification above using the proposed comprehensive general residential proposed rule the area had to have a higher score than the neighbouring centre to be confirmed as the area for intensification. For example Epuni has been selected for targeted intensification, whereas Fairfield and Boulcott has not been selected but will be influenced by this targeted area for intensification.

2.2 EVALUATION CRITERIA USED TO CONFIRM APPROPRIATENESS FOR LEVELS OF INTENSIFICATION

Each of the selected suburbs have been scored against the following criteria. Where a suburb receives a score above 12 then this has been considered as a site potentially appropriate for further targeted intensification. Scores under 12 have resulted in the area not being considered for targeted intensification. However the suburb may be influenced by other neigbouring suburbs targeted intensification. E.g Epuni influencing Boulcott. Suburbs which scored less than 12 have only had the comprehensive residential development rule being recommended as an overall outcome for providing increased intensification:

PROXIMITY TO TRANSPORT MODES

SCORE	*Proximity to train stations, Bus Rapid Transport (BRT) corridors or bus stations is considered one of the key design criteria influencing where intensification should occur. Train stations and BRT corridors signal to the market that these corridors will provide a permanent location for high frequency public transport. However frequent service bus transport corridors also provide for accessibility, but are not as strong for encouraging development due to bus routes being more easily changed spatially or services reduced. Overall, public transport choice allows for a greater number of residents while minimising the need for increasing road infrastructure. Intensification also helps support public transport provision providing for more efficient service provision. It also can attract people to existing suburban centres to support economic activity. These suburbs have greater accessibility and connectivity, and provides choice for how people make journeys. People should be able to walk in 5 minutes (400metres) to local shops, bus stop or 10minutes to a train station*
4	Train, BRT or bus stations within 400m walking distance
3	Train station within 400m walking distance but physical constraints to movement/access
2	Train station within 800m
1	Major bus stop within 400m
0	No public transport routes within 800m

ATTRIBUTES OF THE LOCAL COMMERCIAL CENTRE

SCORE	*The next most important attribute of a suburb is the provision of amenities to create a diverse and interesting place for residents to buy everyday items as well as to meet and socialise. There is a wide variety of different commercial centres throughout Hutt City, each with its own character and influence. It is considered that a larger commercial centre can support greater residential intensification, and in some cases needs it to make a centre more viable. Some of the existing commercial centres are in decline, with empty shops and it would not be appropriate to provide additional commercial space over the next 30 year planning horizon. Other centres, however would benefit from additional capacity or the ability to cater for different businesses.*
4	Commercial centre with more than 10 shops / offices including a supermarket and community facilities
3	Mid-sized commercial centre with more than 10 shops / offices
2	Convenience store + 5-10 local shops / offices
1	Less than 5 shops / offices
0	No commercial shops / offices

AVAILABILITY OF LAND / OWNERSHIP

SCORE	*Large parcels of undeveloped or vacant land make it easier for comprehensive developments to occur without adversely affecting existing residential areas. There are a number of brownfield sites throughout the Hutt that are either vacant or are not developed to their full potential. These can provide an opportunity for a 'master planned area' where good urban design principles can be employed.*
3	Large areas of vacant land, single ownership
2	Vacant land but in small holdings and or large parcels of land that can be amalgamated, multiple owners
1	Under utilised land, with the ability to redevelop a site as a comprehensive development.
0	No vacant land and or built envelope of building close to or at maximum site coverage, multiple owners

HERITAGE / CHARACTER OVERLAYS

SCORE	*Heritage and character overlays and notations protecting a valued area of the city are important to retain identity, but can have a negative effect on the availability of land to develop. It can also be difficult to integrate two very different built typologies with newer developments potentially relating poorly to a heritage building. Areas where there are no restrictions are seen as preferable for intensification. This will build on the existing listed items identified within the District Plan, and also those areas with established historic residential activity area zoning. Possibilities exist to create an overlay for areas considered to be of particular interest or special character. Where character has been identified in a suburb, (other than a District Plan zone or notation) and may require additional assessment, it has not influenced scoring. However it may influence the location of the boundary for targeted intensification.*
3	No overlays in or neighbouring the identified zone
2	Some overlays but limited in area and unlikely to restrict redevelopment to a single street
1	More than one overlay over most of the area increasing consent restrictions

PROXIMITY TO SCHOOLS

SCORE	*Travel movements to schools generate the largest number of vehicle numbers during peak periods. By intensifying development close to existing school infrastructure it is likely more trips will be by foot or bicycle.*
3	Primary and intermediate school within 1.2km
2	Primary school within 1.2km
1	primary school between 1.2km and 2.0km
0	No schools within 2.0km

RESERVES / OPEN SPACE

SCORE	*It is important that the perceived negative effects of intensification can be offset by the provision of high quality public spaces. Good public spaces allow people to gather, socialise and play close to their homes, and is more important where private amenity space has been reduced*
3	Reserves, public open space and facilities within 400m walking distance
2	Reserves over 400m from area or limited / undersupply of open space
1	Inadequate open space provision

3. URBAN CAPACITY

3.1 GROWTH CONTEXT

As identified through the Urban Growth Strategy Hutt City has had very limited population growth of 0.55% since 2006, compared to 5% in the Wellington Region as a whole and 5.3% nationally.

However, overall this level of growth has been skewed by a range of suburbs in particular which has had negative growth due to a range of factors such as redevelopment of Housing New Zealand housing stock in Waiwhetu, Woburn, Epuni and Taita. Other areas in Hutt City consisting of primarily housing that is associated with the valley floor has had significant increases, some above the average population increase for the Wellington region and nationally. Examples include:

- Hutt Central (5.7%)
- Maungaraki (6.3%)
- Alicetown (6.3%)
- Petone Esplanade (5.3%)[1]

In many of these cases this population growth has also resulted in an increase of occupied dwellings and depending on the typologies in demand has resulted in higher percentage increases in dwellings.

For example in Petone Esplande the population increase is 5.3% but the dwelling number increase is 6.2% indicating a demand for dwellings with lower occupancy, which on the Esplanade has been primarily characterised by new build, higher end homes. Whereas in Waiwhetu South, while the population increase has been below 5% there has been a 3.2% increase in population but only a 2.4% increase in dwellings. This is due to the provision of large 3-4 bedroom family homes providing for families. These homes have been spec built and provided on former railway land.

Overall, analysis of what growth trends are occurring indicates there is still positive demand for housing stock across Hutt City. Growth figures have primarily been affected by redvelopment of housing stock rather than large new areas of greenfield development. Some of this growth is also due to the desirability of suburbs acting as employment generators changing. For example, Waiwhetu and Petone.

[1] 2013 Census data

3.2 SITE SENSITIVITIES

The following site sensitives has been considered in the identification of areas. Each are important to consider but they do not necessarily mean that development should not be considered in a particular situation. A range of responses can be considered including:

- Avoidance of intensification in an area either temporarily through staging of development until suitable infrastructure is in place or never developing an area

- Remedying or mitigating against the hazard or lack of service provision through design. For example providing habitable building floor levels above a 1/100 year flood event.

3.2.1 HAZARDS

Residential development needs to take into account and appropriately respond to natural hazard risk, and therefore hazards can dictate what areas are and are not appropriate for intensification. Some hazards such as protection of overland flow paths and providing protection of residential floor levels may also be able to be addressed through managing development to standards through the district plan. Much of Hutt City is located on a floodplain and large parts of the city are vulnerable to natural hazards. Natural hazard risks in Lower Hutt include:

- Landslide/slope failure: Western Hills, Eastbourne and Bays, and Wainuiomata Hill Road are most vulnerable.
- Subsidence: particularly in Moera
- Flooding: Parts of the Hutt Valley flood plain could be subject to flooding in the event of stopbank failure or overtopping. Or from sea level rise as a result of climate change, increasing coastal erosion and storm surges.
- Earthquake: Fault rupture could cause catastrophic subsidence in

Petone, and liquefaction in low elevation floodplain areas.

- Tsunami: Initial wave and ongoing wave oscillation within the harbour (seiching) could lead to major flooding to the Hutt Valley and significant damage to coastal infrastructure.

Seismic hazards risk may be able to be sufficiently managed through engineering methods and planning controls. Flooding risk from the Hutt River and Waiwhetu Stream can be largely addressed through planning structural works and building controls provided for in the district plan. There is also a tsunami risk in the southern end of the Hutt, including the Petone/Moera general area. This tsunami risk reduces the more heading inland. All of these risks have been reviewed by Geological Natural Sciences (GNS) in Review of hazard information for Hutt City, GNS Science Consultancy Report 2016/74 May 2016. The key implications from this review is discussed in the suburb evaluation section.

3.2.2 INFRASTRUCTURE

Existing and future infrastructure influences are primarily designed to support existing development around central and suburban communities. These proposals can then support further residential development. To provide further guidance in the confirmation of whether surban development could currently be provided for from an infrastructure capacity perspective, Wellington Water Limited provided an infrastructure capacity assessment of water supply, stormwater and waste water to confirm whether sufficient capacity could be provided for development without having to increase funding for further capex upgrades. In addition to the Wellington Water work, a transport assessment by Harriet Fraser Limited was completed.

The findings of this work was that while there were potential infrastructure constraints for primarily waste water services and water supply, the majority of areas zoned for intensification could be planned for encouraging residential intensification, either now or subject to further upgrades or developers providing for additional mitigation of their development through design and or change in funding for allocating upgrades. However, the following suburbs were discounted primarily due to high infrastructure constraints or a combination of infrastructure and hazard constraints:

- Eastbourne due to waste water and water supply constraints
- Petone East due to stormwater and hazards.

In addition there are some projects that could potentially encourage further residential growth through:

- Increase in the provision of infrastructure to improve levels of service could

improve quality of life. For example through reducing risk of inundation from flooding. An example of this is the replacement of Melling bridge and Stopbank. This project in particular could help contribute to the City Making Places Strategy to revitalise the CBD.

- Cross Valley Link which could improve access for commuters across the city but more importantly reduce the transportation of freight via the esplanade.
- Additional walkways/cycleways in Eastern Bays, Hutt Valley and Wainuiomata Hill which not only improve accessibility but also the amenity and choice for residents.
- Asset renewal projects such as Awamutu Stream which can improve flood risk– through channel improvements and pump station.
- A new rail network hub may be provided as part of the Greater Wellington Rail Strategy at the Waterloo Railway Station for a new level of train service of up to 5 trains per hour in the AM peak.

Other projects such as potential cycleway projects from Melling to Ngauranga Cycleway and Petone to Grenada Link Road could also improve accessibility to Hutt city, including addressing the current congestion identified on the Petone Esplanade. Subsequently, increased multi modal accessibility could provide opportunities for a change in land use in Petone, such as that identified through the Urban Growth Strategy and Nguaranga Triangle Study.

FIGURE 3.1 IMPRESSION OF THE ESPLANADE WITH MEDIUM DENSITY DEVELOPMENTS ALONG THE WATERFRONT

(SOURCE: RESIDENTIAL INTENSIFICATION, OPTIONS FOR EPUNI, WATERLOO AND EPD PHERIPHERY (JUL2014, HCC ENVIRONMENTAL POLICY)

While discussed above, the Cross Valley Link is a project that could also have significant land use change as it connects the west and east sides of the valley alongside the railway line. This could result in encouraging freight off the Esplanade, creating opportunities to enhance the waterfront. This could result in local development (mixed use) and along the Esplanade through to Jackson Street due to associated traffic calming and amenity improvements.

The Link could create better linkages and access for the eastern suburbs around the Moera area, however there may be adverse land use effects along Wakefield Street from the intensity of passing traffic, as well as some impacts on surrounding properties. This detracts from residential amenity, however may create opportunity for light industrial of commercial activities. This includes opportunities for industrial/commercial regeneration of the Seaview Marina

3.2.3 COMMUNITY FACILITIES

A range of new community and civic facilities are currently being built or planned for to provide for future growth and employment needs within Hutt City. Key projects that may encourage growth, particularly residential intensification are outlined below:

Avalon Park
The upgrade of the primary recreation park for Hutt City will provide for further growth of population in the northern suburbs. The park also acts as a regional facilityfor families so will continue to provide a strong public centre of activity

Walter Nash Sports Centre - Taita
This completed Centre provides a new community service and activity node for Taita. It provides a high quality multi-purpose sports faciltity and associated spaces for providing services and local connections, providing vulnerable kids with more choices and opportunities and giving them access activities that have not always been provided in the north east suburbs of Hutt City.

Stokes Valley Community Hub
A new project will be undertaken to provide a new all of service community centre to improve access to community services in the suburb of Stokes Valley. This could potentially increase the attractiveness of the suburb centre for local residents.

Civic Precinct Upgrade - CBD
The Civic Precinct aims to create an exciting community space and provide greater integration with the council administration building, the Civic Gardens and Riddiford Gardens, the War Memorial Library, The Dowse Art Museum and

Dowse Square. Overall this new space could potentially improve the vitality of the CBD but also influence the attractiveness for development of suburbs within walking distance of this precinct, which is Alicetown and the CBD Edge.

Huia Pool upgrade- CBD Edge
A dedicated Learn to Swim pool is being built to meet the growing numbers of residents taking part in our Learn to Swim programmes, while a hydrotherapy pool will fill the need for therapeutic facilities in the community. This facility is a regionally based facility adding additional services for the community

Regional Bowls Centre - Naenae
A new Regional Bowls Centre based in Naenae will also soon be built on Walter Mildenhall Park. The centre will have the capacity to host significant national and international events.

3.2.4 RESERVES

Public reserve lands are considered to be core assets for a community due to their recreational, amenity, social, stormwater management, cultural and ecological benefits.

Population and demographics (children, elderly, ethnic diversity, etc.) determine the how much reserve land is required and the character/function of these reserves. Where there is medium or high density housing, there is increased demand on public reserves due to the higher site coverage and limited private on site open space. It is important to identify what areas of Hutt City have sufficient reserve to cater for intensification, and which areas have a short fall.

Hutt City Council (HCC) have undertaken significant research on the availability and quality of reserves in the valley floor. This review was aimed at understanding the public open spaces on the valley floor and the likely future demands of these spaces. The review provides an audit of the reserve areas and also outlines the qualities and characteristics of the public open spaces.

The supplementary reports developed by PAOS Ltd look at reserves in the suburbs, especially neighbourhood reserves. The reports also consider the current and future need for reserves. The goal is to have a reserve within 400 metres or 8.5 minutes walk of any home.

Overall there was 339 hectares of reserve in the valley floor, 197 hectares of which are owned by HCC. Greater Wellington Regional Council (GWRC) owns 142 hectares of reserve, which is largely situated along the Hutt River and is generally not multi-use. A small portion of reserve land (0.71%) is owned by

DoC. Essentially, the GWRC and DoC land is for conservation and amenity, but do not serve as reserves with community facilities such as sport grounds or play equipment.
Neighbourhood reserves tend to have playground equipment and open grassed area. They are especially important in areas of higher density, where properties have limited outdoor space and vegetation. Neighbourhood reserves are also important in areas of low socio-economic status, where people may not be able travel outside their community easily.

The valley floor has a number of enclosed neighbourhood reserves, especially in the northern and eastern areas of the valley floor; which are enclosed reserves established to serve higher density housing schemes. These reserves are surrounded by houses as opposed to facing the street and are often low quality, largely due houses turning their back on the reserves and having high fences, restricting access and visibility of these spaces.

Areas identified to date as having a shortfall are outlined in figure 3.2 below. While this work has been derived using the existing medium density overlay the areas considered are consistent with the majority of areas considered for intensification in this study. For the remaining suburbs considered in this assessment all have a good range of public reserve provision either through passive open space or formal play areas.

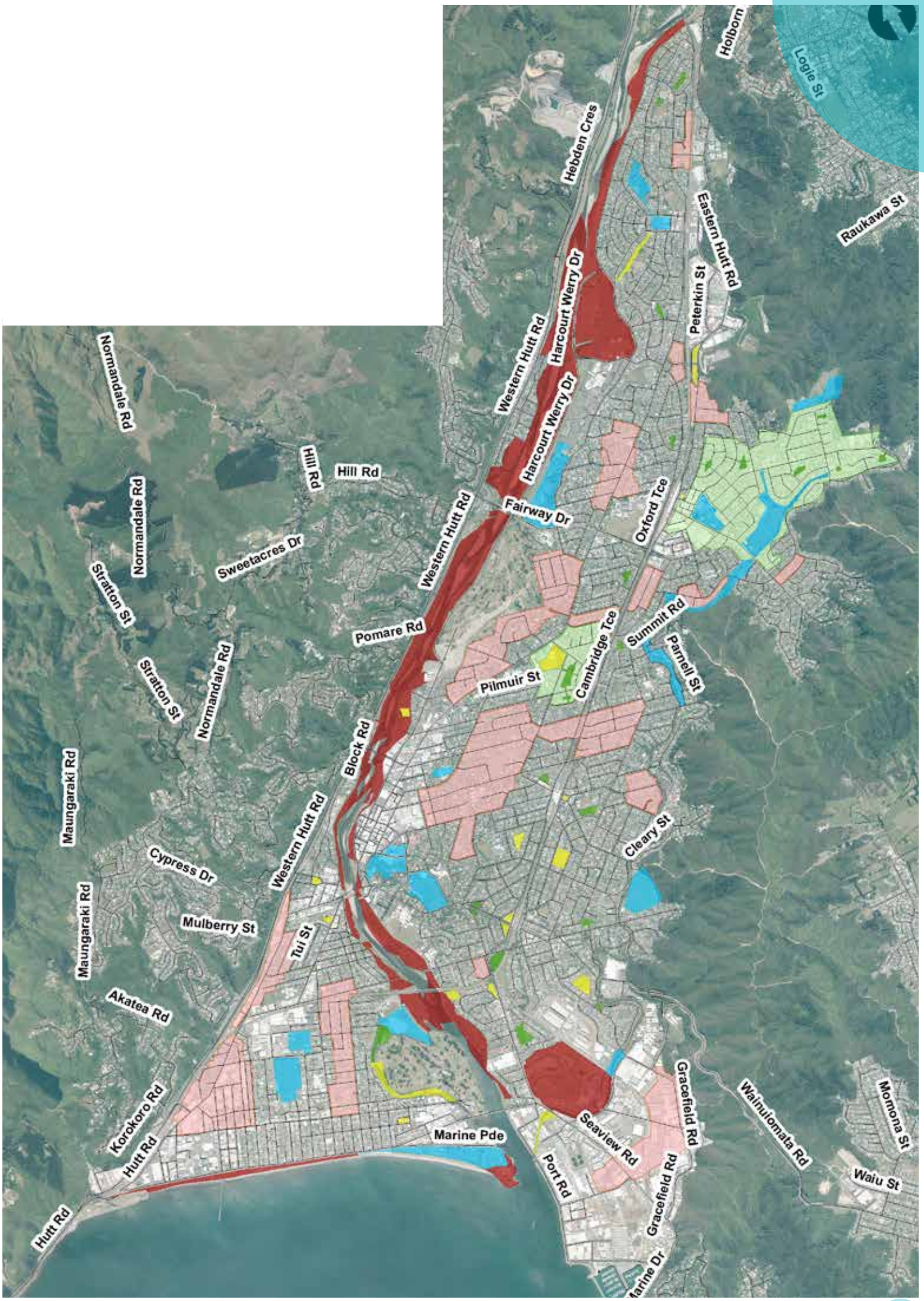
Overall, there is sufficient sports and recreational reserves to serve the Hutt under the existing development scenarios anticipated in the district plan. However, there is demand for more good quality neighbourhood reserves, especially in light of the intensification and changing demographics under the operative district plan. There are also a number of existing enclosed valley neighbourhood reserves with opportunities for enhancement, through revegetation and improvement of facilities. The identified short falls in neighbourhood reserves have been taken into account with the evaluation of areas which could provide for further intensification. Key areas of interest where there are short falls have been:

- Ava, Petone and Petone West
- West Alicetown
- CBD Edge, Avalon and Boulcott; and
- Fairfield.

FIGURE 3.2 AREAS OF SUFFICIENT RESERVES AND RESERVE SHORTFALL
Sourced from Hutt City Council report 'Review of Valley Floor Reserves - June 2013'

LEGEND
RESERVE AREAS

Reserve Shortage (<1 reserve within 8.5min walk)
Reserve (>1 reserve within 8.5min walk)
City / District
Community / Suburban
Local / neighbourhood
Regional assetts


Holborn
Logie St
Hebden Cres
Eastern Hutt Rd
Raukawa St
Harcourt Werry Dr
Western Hutt Rd
Peterkin St
Normandale Rd
Hill Rd
Hill Rd
Normandale Rd
Harcourt Werry Dr
Fairway Dr
Oxford Tce
Sweetacres Dr
Western Hutt Rd
Stratton St
Pomare Rd
Summit Rd
Cambridge Tce
Parnell St
Stratton St
Normandale Rd
Pilmuir St
Block Rd
Maungaraki Rd
Western Hutt Rd
Cleary St
Cypress Dr
Maungaraki Rd
Mulberry St
Tui St
Akatea Rd
Gracefield Rd
Wainuiomata Rd
Momona St
Korokoro Rd
Seaview Rd
Marine Pde
Hutt Rd
Port Rd
Gracefield Rd
Waiu St
Hutt Rd
Marine Dr

3.3 SUMMARY OF SUBURB EVALUATION

An evaluation of each suburb was undertaken to confirm which had a higher level of capacity for residential intensification, where some levels of site specific for residential intensification could be provided for:

- Petone East
- Avalon
- Epuni
- Waterloo
- Woburn
- Naenae
- Moera
- CBD Edge
- Stokes Valley
- Wainuiomata
- Avalon
- Alicetown
- Taita
- Eastbourne

In addition to these suburbs, each suburb should experience at least the ability to provide for further comprehensive residential development within existing general residential activity areas.

Not all development scenarios (described in Section 4) should be applied to every suburb or at the same scales. Accessibility to public transport facilities, with the view to creating Transport Orientated Development was considered the most important aspect followed by the attributes of the local commercial centre, and then proximity to high amenity areas, open space and services in defining areas that could accommodate new mixed use or 10m high residential zones. Remaining areas would allow for encouragement of comprehensive residential development.

EPUNI INTENSIFICATION MAP

Suburbs that had a higher ability to provide for transit orientated development were centres that provided for a railway station and local commercial centre. Intensification types A and B would be promoted in these areas, generally within a 400m walking distance of the station. In some cases, where there was still strong access to employment and public space Type B was extended within 800m of the transit node. All of the centres proposed for mixed use are all located with good transport links to the Hutt CBD, industrial employment areas and Wellington City making them attractive for home buyers who work in major employment nodes.

WATERLOO INTENSIFICATION MAP

Following this evaluation the overlay of hazard impacts and ability for providing for intensification within the zones from an infrastructure perspective

was overlaid. As a result some of the identified suburbs were discounted from being recommended as being taken forward for further assessment in a future plan change. However, by still including these suburbs for intensification it does not mean that in all cases infrastructure and or hazards are not an issue in the area. Only that they could be managed through capital upgrades and or design controls in the district plan.

Of all of the centres proposed for mixed use, the following provide the strongest potential for targeted intensification through a mix of either intensification type A and B:

- Epuni
- Waterloo
- Naenae
- Taita
- Woburn/Waiwhetu

To a lesser extent intensification types A and or B were recommended for the following suburbs, but to smaller degrees as they took account of the following characteristics that need to be balanced in the suburb:

- Wainuiomata: has all of the characteristics of a self sufficient suburban town with commuter bus connections. Currently there is likely to not be the demand for this type of intensification within the town centre. However as greenfield development capacity is filled over time further intensification within the existing town centre should also be provided for to provide for choice and a range of housing types and to continue to strengthen and revitalize the existing centre, including provision for Mixed Use Development. Provision for some levels of intensification type B in addition to C was also identified to provide for future long term growth.

- Stokes Valley: is a self sufficient suburb that has frequent bus connections to the Hutt CBD and a commuter service to Wellington CBD. Due to the

NAENAE INTENSIFICATION MAP

TAITA INTENSIFICATION MAP

WOBURN INTENSIFICATION MAP

EASTBOURNE INTENSIFICATION MAP

compact nature of the suburban centre, planned future community services and existing medium density residential development surrounding the village centre, mixed use zoning could be provided for long term growth and residential intensification Type B can be provided around the centre. Due to the larger land parcels within Stokes Valley you can also expect a higher amount of comprehensive residential development being able to occur throughout the suburb.

- CBD Edge: is characterized by the CBD and as such further mixed use development is not recommended to effectively extend the boundary of the CBD. However due to the high amenity and walkability to the bus interchange and the CBD employment node, the area can cater for further residential intensification to support the CBD. The area also has a number of schools and community facilities within walking distance, however as you move further north towards Boulcott there becomes a shortage of community reserve and play areas for providing for more targeted residential intensification. In addition to this, while there could be potential for the Type B area to extend further north, this is further away from the Queensgate and Melling stations and away from the civic precinct which provides for place making.
- Avalon: has a small suburban centre with a mix of fine grain retail and convenience stores and a larger service centre including petrol station in the business zoned land. The centre is served by a bus route but residents need to cycle or drive to reach the closest railway station at Epuni or Naenae. A small amount of infill development has been observed and some medium density residential development is present as well as a residential tower but most dwellings are typically on an individual section. The suburban centre is fragmented at the moment by residential and business land, but as it is central to the suburb

WAINUIOMATA INTENSIFICATION MAP

STOKES VALLEY INTENSIFICATION MAP

AVALON INTENSIFICATION MAP

CBD EDGE INTENSIFICATION MAP

and close to Avalon Park and schools in the area a small mixed use zone has been identified which could strengthen the centre and support limited targeted intensification within the suburb.

ALICETOWN INTENSIFICATION MAP

Of the remaining suburbs, only comprehensive residential development intensification was recommended around each centre due to their lack of connectivity, existing levels of intensification already provided for, or lack of walkable open space provision. In addition to the above criteria, a lack of development space due to topography was another reason that influenced selection. For example Maungaraki, but this was not a consistent issue that needed to be addressed for each suburb.

- Fairfield: has a small and well utilised commercial centre on Waiwhetu Road. However, due to its close proximity to the Epuni intensification areas, which are served by both rail as well as a commercial centre on the western side the influence of this centre on Fairfield meant there was a large degree of overlap with development aspirations in this area. As a result it was not recommended for further intensification at this stage.
- Boulcott: has a small but well patronised commercial centre. Given the centre's close proximity to the proposed intensification areas of Epuni, further residential intensification is provided from Epuni and overlaps with much of the area that is appropriate for further intensification in Boulcott. This level of intensification could also support the Boulcott village centre. The area was not recommended for providing for further residential intensification in its own right.
- Petone West: The large number of heritage overlays and special amenity areas will affect the amount of land which is available for intensification. The remaining areas of land are covered by the Petone Commercial Zone. Intensification is already occurring in Petone due to the amenities the local retail area and zoning with good access to good public transport.

	Intensification Criteria							Recommended Intensification Type			
Suburb	Proximity to Transport Nodes	Availability of Land / Ownership	Heritage / Character Overlays	Attributes of local commercial centre	Proximity to Schools	Reserves / Open Space / Amenity	**Total Score**	Type A - 12m Mixed Use	Type B - 10m Apartment / townhouse	Type C - 2,000m² Comprehensive Development	**infrastructure and Hazards** (green - acceptable for consideration for intensification subject to management of effects, red - currently has too high a risk or significantly constrained to be considered)
Alicetown / Ava	4	0	3	3	3	2	**15**	x	x	x	
Avalon	1	1	3	2	3	3	**13**	x	x	x	
Boulcott	1	1	2	1	1	1	**7**	-	-	x	
CBD Edge	2	0	1	4	3	3	**13**	-	x	x	
Eastbourne	1	0	3	3	2	4	**13**	-	x	x	
Epuni	4	3	3	2	2	2	**16**	x	x	x	
Fairfield	1	1	3	1	2	1	**9**	-	-	x	
Mangauraki	1	1	3	2	1	2	**10**	-	-	x	
Moera	3	1	3	3	2	4	**16**	x	x	x	
Naenae	4	2	3	3	2	2	**16**	x	x	x	
Petone East	2	1	2	4	1	2	**12**	-	x	x	
Stokes Valley	1	1	3	4	2	3	**14**	x	x	x	
Taita	4	1	3	4	2	2	**16**	x	x	x	
Wainuiomata	1	2	3	4	2	3	**15**	x	x	x	
Waterloo	4	1	3	3	3	3	**17**	x	x	x	
Woburn/Waiwhetu	4	2	2	3	2	2	**15**	x	x	x	

TABLE 3.3.1 THE TABLE ABOVE IS A SUMMARY OF EACH SUBURB'S SCORE AND WHAT INTENSIFICATION TYPE IS RECOMMENDED, PRIOR TO INFRASTRUCTURE AND HAZARDS CONSTRAINTS BEING TAKEN INTO ACCOUNT .

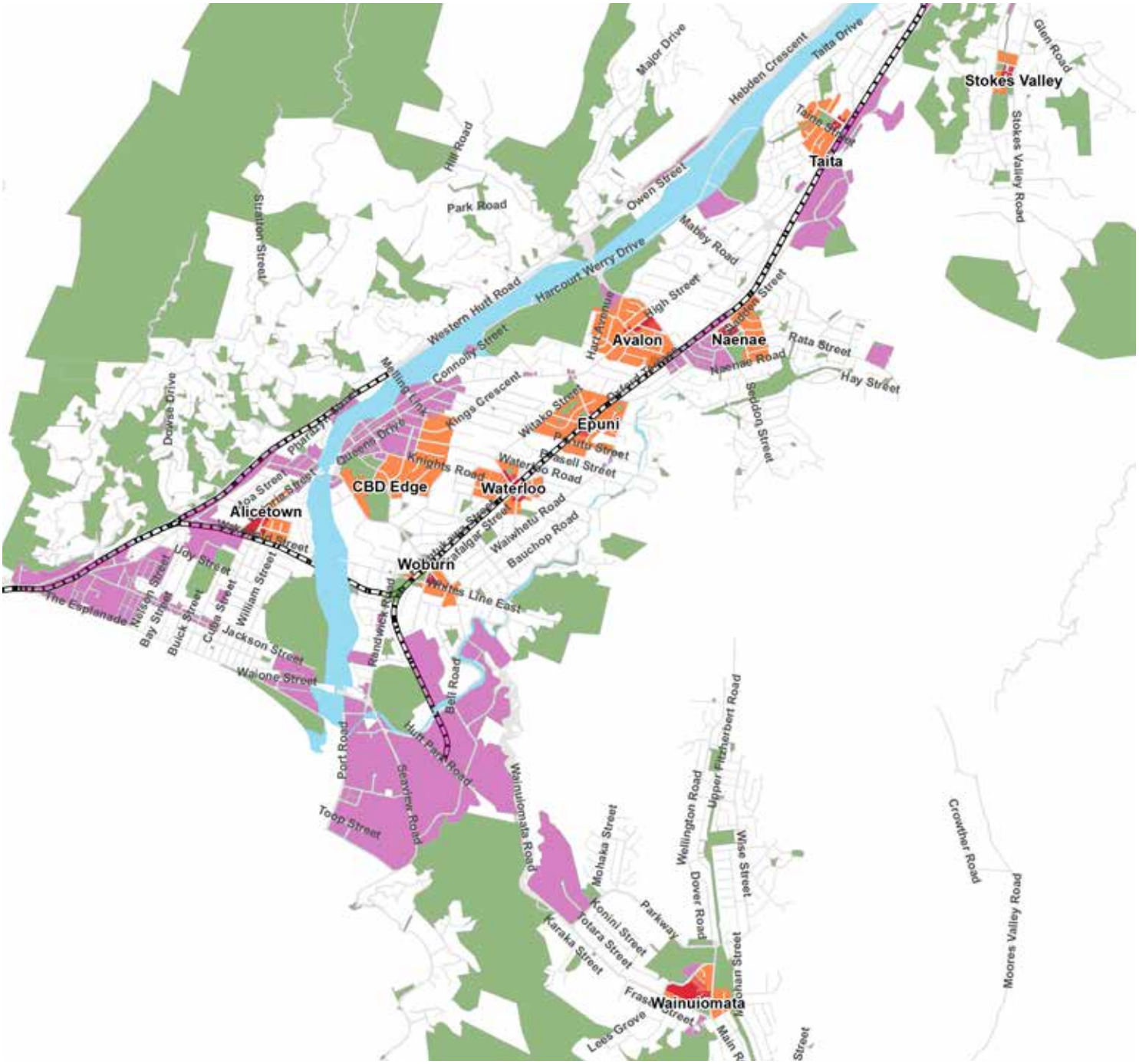


FIGURE 3.3 SUGGESTED INTENSIFICATION MAP FOR HUTT CITY

4. REVIEWING THE PLANNING FRAMEWORK

The existing planning framework for development in Hutt City is established by the District Plan. This section provides a brief summary of the current provisions which currently manage residential intensification outcomes. Potential changes to be considered to allow for changes further residential intensification are then outlined. These changes provide the basis for unlocking further residential development within the existing urban limits.

4.1 ZONING

The District Plan (Chapter 4) includes zoning and provisions for residential activities. The various residential activity areas are:

- General Residential
- Special Residential
- Historic Residential
- Hill Residential
- Landscape Protections Residential Activity Area.

There is also a medium density overlay over some General Residential activity areas within the District. The difference in rules between General Residential and Medium Density is limited to the site area, site coverage and multi-unit developments standards.

The overall approach for managing increased residential intensification is by controlling the following matters:

- amenity values, traffic effects and landscaping.

Development in the Medium Density area needs to be assessed against the Medium Density Design Guide. The design guideline has the following design criteria for assessment:

- fitting into the neighbourhood
- integrated buildings and spaces
- vehicles
- fences and walls
- site facilities
- privacy and safety
- landscaping and vegetation.

If a medium density site is proposed outside of the medium density overlay then additional matters of discretion are assessed:

- whether public transport facilities and community services facilities which provide for residents daily needs are accessible within reasonable walking distances
- where there is a recorded flood risk associated with the site
- the capacity of the cities infrastructure to service additional development on the site.

Overall the current district plan approach promotes a centres based approach to encouraging development. This same approach is being undertaken as part of this study as current plan provisions are reviewed. The design guide is comprehensive. It provides strong guidance, but not direct requirements. Note that there is no requirement for a design statement against this Design Guide to be submitted with the consent application. As such there is no mechanism that makes developers consider the guidelines. However as a general practice Council will consider the proposal against the design guide in processing the resource consent.

FIGURE 4.1 *WHILE NOT A PRIMARY FOCUS OF THE STUDY A FINAL VERSION OF THE MAPS TO BE CREATED COULD POTENTIALLY USE SYMBOLOGY SIMILAR TO THE CURRENT DISTRICT PLAN TO DEFINE THE TARGETED AREAS.*

4.2 POSSIBLE DEVELOPMENT PROVISIONS

The following section describes possible development provisions which could be adopted to encourage intensification in the areas identified in section 3 of this report. The provisions are then tested in Section 5, at both a city wide scale and at a localised level.

The provisions are suggested as possible approaches to achieve additional intensification within Hutt City to help meet growth targets set by the Urban Growth Strategy at a city wide level. Each provision has benefits as well as potential negatives which need to be evaluated and tested further as part of a future section 32 evaluation assessment for a plan change. In developing each zone approach and rules for the general residential zone understanding how each land use type can contribute to the criteria used for this study has been taken into account.

It is also important to recognise that these proposed provisions will need to be assessed in conjunction with a wider review of the residential chapters and there may need to be review of future chapters. For example, currently land use is a restricted discretionary activity and subdivision is assessed as a discretionary activity. Activity status for the same anticipated activity would need to be brought in line with each other to achieve the result sought based on anticipated environmental outcomes identified for the district plan.

To encourage and facilitate future intensification, the following intensification types have been created.

4.2.1 INTENSIFICATION TYPE A - MIXED USE

A new mixed use suburban centre activity area will be created providing for mixed use development with greater permitted bulk, including 12m height to allow for greater residential development capacity and variety of building forms. This type of development would only be proposed within 400m of a railway station or in a suburban centre that has capacity to provide for further growth serviced by public transport.

Type A is generally in areas that are currently Suburban Commercial, with a development potential up to 8m height. Providing development to 12m caters for an addition 1-2 storeys, which can provide for apartment like living above retail / commercial premises. It is likely that development form would result in only some areas of the zone developing to the full height parameters. The purpose of this zone is to provide for intensification and contributing to further place making consolidated in appropriate areas. For example, areas with existing amenities, shops, public transport and infrastructure. The ground floor level and second floor will be encouraged to provide for retail, commercial and office spaces through the design guide, to ensure availability of building space in suburban centres.

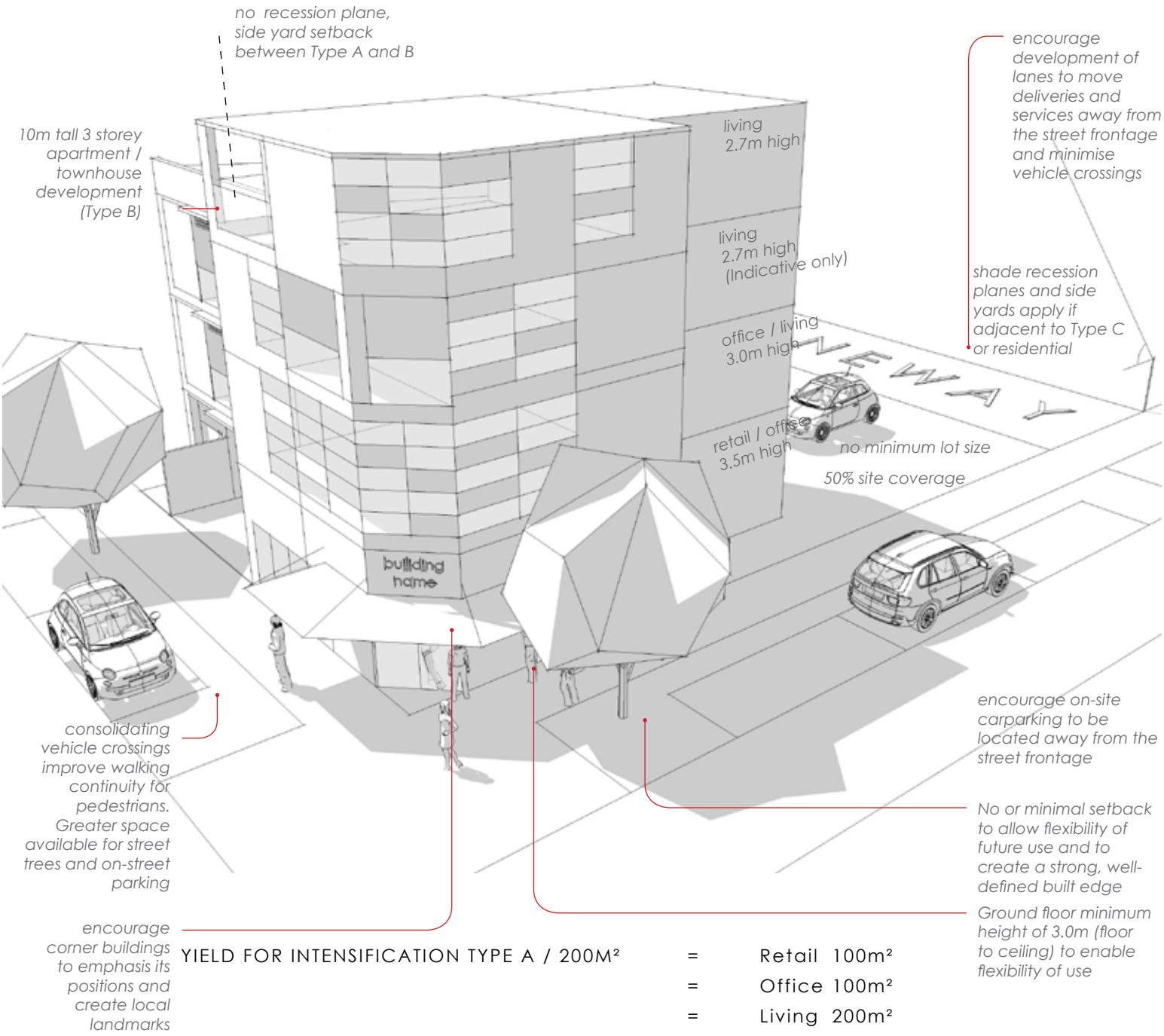


FIGURE 4.2 *THE SKETCH ABOVE SHOWS A 12M HIGH, 4 STOREY MIXED USE BUILLDING WHICH WOULD BE A PERMITTED ACTIVITY FOR TYPE A INTENSIFICATION*

The difference in provision for Type A and Suburban Commercial are related to bulk and form. Larger buildings will be able to be established, while meeting permitted activity conditions. Other rules of the Suburban Commercial zone are anticipated to be adopted, where applicable.

This is a long term vision – it does not mean development will occur to 12m at the moment, but going forward planning for this development can happen more easily, when there becomes a market or community need. Buildings are required to be built up to or close to the street frontage so that they have a strong interface with the streetscape. It also enables provision of requiring verandas in these areas.

Key design elements of this typology are:

- No minimum lot size or site coverage requirement
- Height recession planes and side yards would only apply to sites adjacent to a Residential (8m) zoned property. No street frontage recession plane will be required; and
- Communal carparking, the creation of laneways and the removal of minimum carparking provision would be permitted to provide for more flexible approaches to residential building types and functionality.

4.2.2 INTENSIFICATION TYPE B - 3 STOREY RESIDENTIAL

Intensification Type B is a new residential zone that allows a greater level of bulk form for buildings as a permitted activity. Type B is a transitional area between Type A mixed use and General Residential. All Type B areas are within 400m (convenient walking distance) of a railway station or adjacent to an existing commercial area with public transport provision which supports developments which do not need as many car parks. Each area requires adequate provision of active and or passive open space provision.

Type B provides for development up to 10m high, which is in between the 12m provided for in Type A and the 8m provided under General Residential. It is anticipated that this type will consist of townhouses and apartments. The 10m height enables an extra storey, providing for intensification and consolidation of development within appropriate areas – i.e. those areas with existing amenities, shops, public transport and infrastructure. There will be stricter provisions around the buildings bulk and location as the site relates to adjoining residential areas, to help protect the amenity values of those areas. Buildings are required to be built close to the street frontage so that they have a strong interface with the streetscape. The transition from these areas to general residential are considered to be able to be managed. An example of the approach is outlined below. This is a long term vision to support growth in the right areas, when there becomes a market need. Type B will enable one-two dwellings as of right on a section. There will be more permissive bulk and form permitted activity conditions.

THE PHOTO ABOVE SHOWS THE TRANSITION FROM A LOW DENSITY, SINGLE STOREY BUNGALOW TO A MEDIUM DENSITY, THREE STOREY APARTMENT DEVELOPMENT AND THE BOUNDARY ISSUES THAT MAY RESULT. IN THIS EXAMPLE, ADDITIONAL MORNING SHADING IS EXPERIENCED BUT THE SETBACK REDUCES PRIVACY ISSUES

Key design elements of this typology are:

- No minimum lot size
- A 100% site coverage would be permitted
- Height recession planes and side yards would only apply to sites adjacent to a Residential (8m) zoned property. No street frontage recession plane will be required
- Front setback 2m minimum - 6m maximum
- Communal carparking, the creation of laneways would be permitted and the removal of minimum carparking provision would be provided
- No on-site carparking within the front yard of a development; and
- A minimum outdoor living space, directly accessible living space from internal living area of:
    - 10m² with a minimum dimension of 2m regarding strata title units;
    - 20m², 2m wide minimum with remaining units.

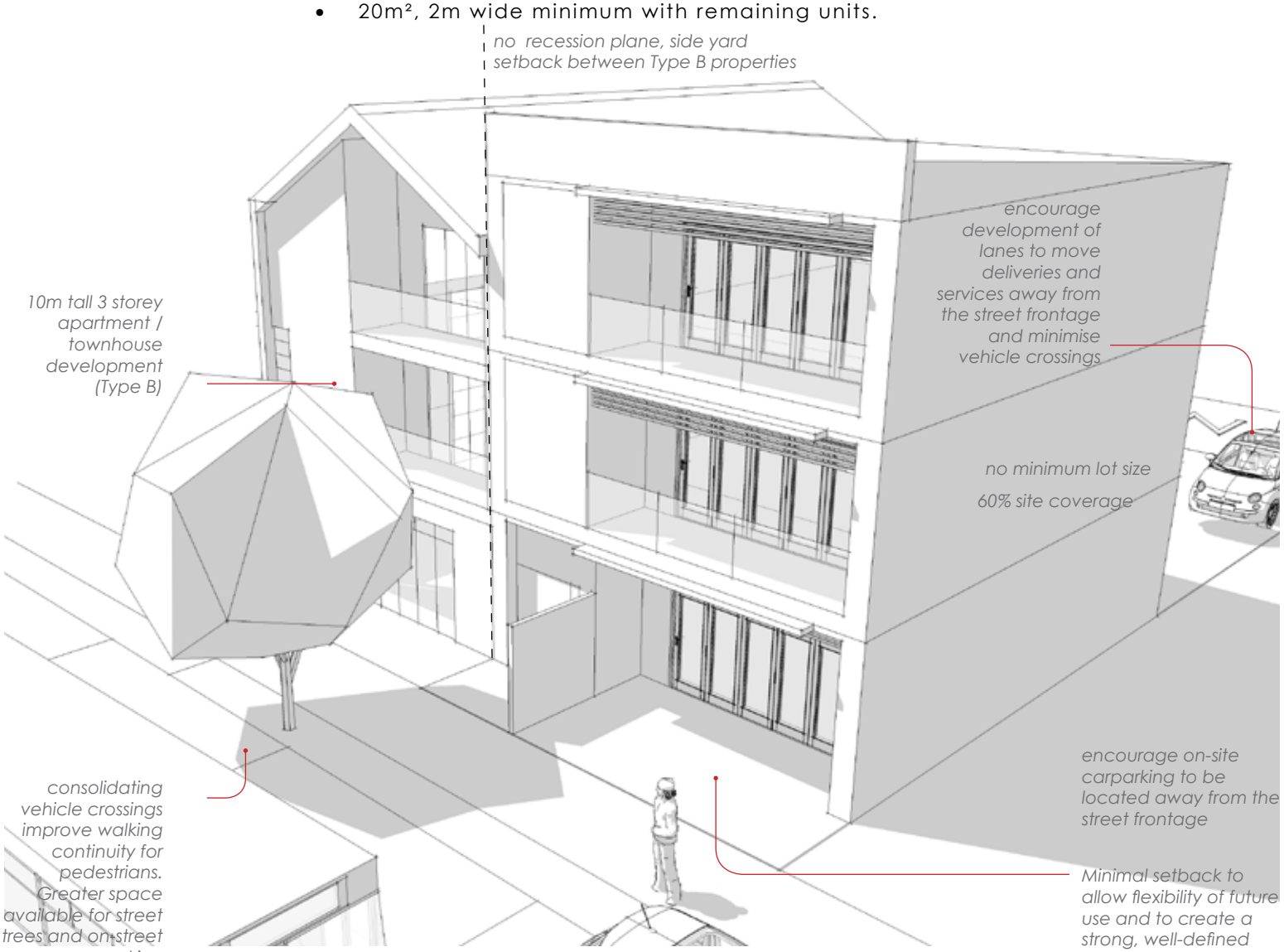


FIGURE 4.3 THE SKETCH ABOVE SHOWS A 10M HIGH, 3 STOREY RESIDENTIAL BUILLDING WHICH WOULD BE A PERMITTED ACTIVITY FOR TYPE B INTENSIFICATION

4.2.3 INTENSIFICATION TYPE C - COMPREHENSIVE RESIDENTIAL DEVELOPMENT

Intensification Type C provides for comprehensive residential development (CRD). CRD will provide for developments of on sites larger than 2,000m². This will be provided for under a new comprehensive residential development rule in the General Residential zone, as a restricted discretionary activity. This rule is in addition or to replace rule 4A 2.3 regarding residential development of 3 or more dwelling houses.

The CRD rule will have specific standards that apply to these sites, overriding some permitted activity conditions of the underlying residential zoning, This is ultimately to encourage well designed greater levels of density on a site. The CRD rule will not override the multi-unit development rule on sites under 2,000m². The aim of the CRD rule is to enable integrated design of larger scale residential development instead of having development occur on an ad hoc basis. Creation of this CRD rule guides the market to create this sort of development and gives them the confidence that it is deemed suitable by Council (subject to suitable design – as per a design guide or alternative method). This rule caters for town houses, in addition to the standard existing development already catered for in the district plan in the general residential

zone. This provides more flexibility of housing stock and types of development, providing for a wider audience changes in demands and needs over time.

The suggested definition of CRD is:

Comprehensive residential development: providing for residential dwellings sited within a separate, contiguous area of at least 2,000m² in the General Residential zone, at a density and/or building coverage that:

- *Has an average net site area of no more than 200m² per residential building; and*
- *Has a minimum net site area of 150m².*

Note: The land on which the proposed residential dwellings are to be Comprehensive residential developments may include multiple certificates of title.

The design criteria outlined below have been developed around a terrace house and semi-detached house typology where it is possible to efficiently utilize a relatively small lot without adverse amenity issues being created for residents or neighbours. The limits allow for higher density yields to be achieved without a significant change to an existing residential neighbourhood. Typically the developments result in individual titles being created as opposed to body corporates being required.

Key design elements of this typology are:

- 10m+1m for additional roof height subject to meeting design criteria;
- Minimum lot size of 150m², average lot size of 200m²
- A 60% site coverage would be permitted
- Existing recession planes are retained with external boundaries but not required on the street frontage or on internal boundaries between proposed dwellings
- Provision for 1 on-site carparking spaces (either garage, carport or parking spaces) for each dwelling
- Front yard setback 2m minimum - 6m maximum
- A minimum outdoor living space, directly accessible living space from internal living area of 25m² with a minimum dimension of 3m;and
- Design controls over above ground-floor balconies within 4m of a boundary.



FIGURE 4.4 THE SKETCH ABOVE SHOWS 10+1M HIGH, 3 STOREY TERRACE HOUSES WHICH WOULD BE A PERMITTED ACTIVITY FOR TYPE C INTENSIFICATION WHERE A SITE GREATER THAN 2,000M² IS DEVELOPED WITH NO SIDE YARDS OR INTERNAL RECESSION PLANES REQUIRED

4.3 HOW WOULD THIS COMPARE AGAINST THE EXISTING DISTRICT PLAN RULES?

Section 4.3 outlines the comparison of the proposed changes to the plan against the existing planning framework. Two new activity areas will need to be created and the standards for these are outlined in the table. For the Comprehensive Residential Development approach a new rule will be required as outlined below:

x.x *Comprehensive residential development is a Restricted Discretionary Activity.*
Note 1: Comprehensive Residential Development are not subject to the minimum net site area requirements of rule4A 2.1.1(a) and site coverage requirements of rule4A 2.1.1(b).
Note 2: There are no side/rear yards or building recession planes internally within the comprehensive residential development site.
Matters of discretion and the terms of the rule are outlined in table 4.4 below.

In developing this revised approach we have considered how this compares with the existing medium density overlay. As you can see from figure 4.5 and 4.6 the revised targeted intensification areas cover a much smaller area than what is provided for in the medium density overlay. Comprehensive residential development is then able to occur in the general residential zone which covers the majority of the remaining areas already identified as medium density overlay. It also enables future development occurring in other centres where general residential zoning is present.

Overall this approach provides a similar spatial outcome of targeting medium density development around centres. However, this study's approach only allows for further intensity where there is a strong public transport stop coupled with a suburban centre to help create a stronger centre for community interaction and commerce and encouraging design of residential developments to allow for flexibility of transport choice.

The current zoning allows for much of this to occur, but also highlights areas for further intensification along public transport corridors which may not necessarily converge at a suburb or village which can limit the attractiveness of providing for further well designed residential intensification. The comparison in approaches is outlined below. Overall after reviewing the approach a final recommendation of this study would be for the current medium density overlay to be removed and replaced with a new targeted intensification overlay.

Finally, this study recognises that there was previously a Comprehensive Residential Development rule provided in an earlier version of the district plan. This new rule, while it has a similar title, provides a clearer certainity around the outcomes sought and as a result should be promoted for re-integration into the plan to provide a clearer set of options for well designed housing choice in the city.

[1] *Comprehensive residential development will be subject to the existing general residential rules and conditions with the exception of the terms of that rule*

FIGURE 4.5 THE EXISTING MEDIUM DENSITY RESIDENTIAL OVERLAY

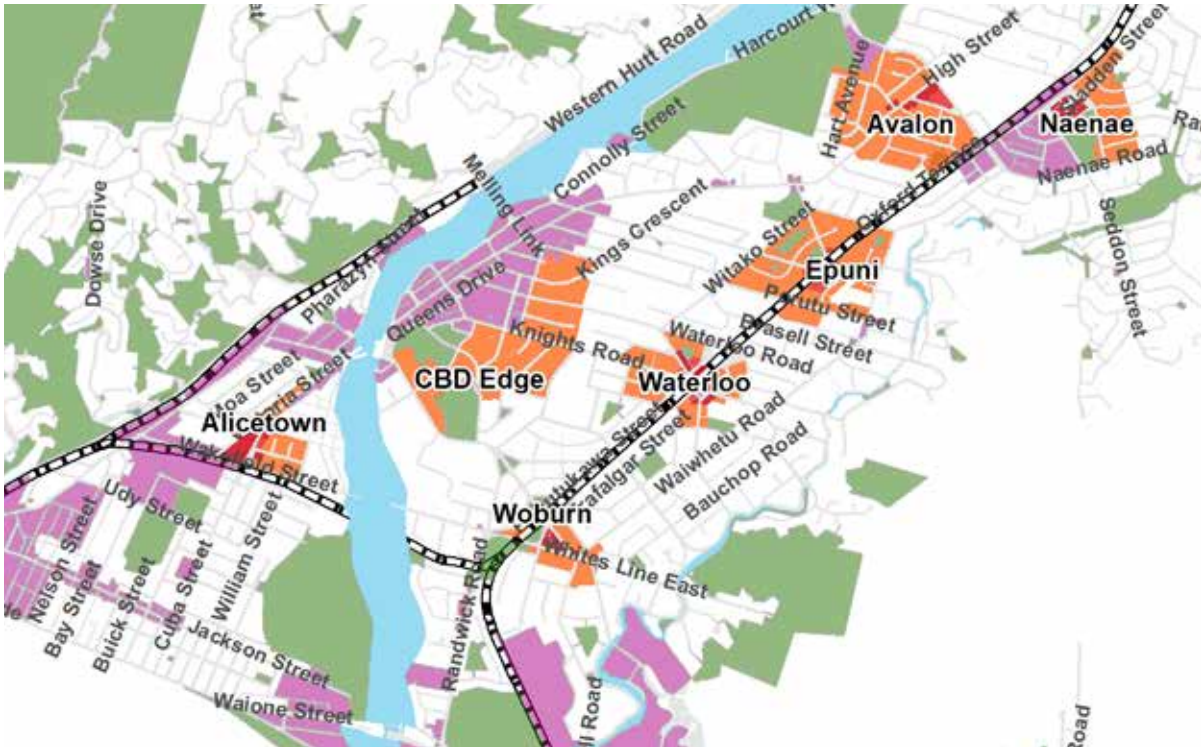


FIGURE 4.6 THE PROPOSED INTENSIFICATION MAP FOR THE VALLEY FLOOR

4.4 SUGGESTED PROVISION TABLE

The following table (Table 4.4) is a summary of the possible development scenarios in comparison with the existing district plan provisions.

	EXISTING PROVISIONS			
	GENERAL RESIDENTIAL	MEDIUM DENSITY OVERLAY	SUBURBAN COMMERCIAL	PETONE COMMERCIAL
Description			Residential activity is permitted above ground level and at the rear of the ground level floor	Residential is permitted above ground floor
Definition				
Min Site Area	400m²	300m²		
Yard Requirements	For all buildings on the net site area: Front Yard 3.0m/5m All Other Yards 1.0m		All buildings must be built up to the front boundary Where a building or structure abuts a residential activity area: Side yard: 3.0m (0m when there's a service lane) Rear yard: 8m (3 if there's a service lane to the rear of the site)	Where a building or structure abuts a residential activity area: Side yard: 3.0m Rear yard: 8m (less if there's a service lane to the rear of the site)

PROPOSED PROVISIONS		
INTENSIFICATION A 12M MIXED USE	INTENSIFICATION B 10M RESIDENTIAL	INTENSIFICATION C 2,000M² LOT AMALGAMATION
Development would only be proposed with 400m walking distance of a rail-way station and adjacent to exist-ing commercial areas.	3 story residential	Development standards are the same as General Residential but a new RD rule for Comprehensive residential de-velopment is created. Design guide controls these com-pre-hensive devel-opments Within the com-prehensive devel-opment there is no internal setbacks or internal yards required. (Still required on neighbours)
Development up to 12m of mixed use would only be proposed with 400m walking distance of a railway station and adjacent to existing commercial areas	Up to 10m high residential development anticipated	Comprehensive residential development: pro-viding for residential dwellings sited within a separate, contiguous area of at least 2000m² in the General Residential zone, at a density and/or building coverage that: • Has an average net site area of no more than 200m2 per residential building • Has a minimum net site area of 150m2. Note: The land on which the proposed residential dwellings are to be Comprehen-sive residential developments may include multiple certificates of title.
No minimum lot size Explanation: Sites have been selected as suitable for intensification. No min site area allows for greater building diversity and affordability Site coverage and permeable surface still control the level of development on site.	No minimum lot size Explanation: Sites have been selected as suit-able for intensification. No min site area allows for greater building diversity and affordability Site coverage and permeable surface still control the level of development on site.	150m²/unit
Front setback 0 to 3m No side or rear yard requirements except where a site abuts a Residential Activity area. In these locations a 3m side yard will apply.	Front setback 2 to 6m Explanation: Having a smaller front set back allows for outdoor living space to be maxim-ised where it receives sunlight while maintain-ing the flexibility for developments to alter their yard dimension to suit their site. No side or rear yard requirements except where abuts a Residential Activity Area or a corner site. In these locations a 3m side yard will apply	Front setback 2m to 6m All Other Yards 1.0m Explanation: Having a smaller front set back allows for outdoor living space to be maxim-ised where it receives sunlight while maintain-ing the flexibility for developments to alter their yard dimension to suit their site.

	EXISTING PROVISIONS			
	GENERAL RESIDENTIAL	MEDIUM DENSITY OVERLAY	SUBURBAN COMMERCIAL	PETONE COMMERCIAL
Parking and Access	Existing units: 1 car park. New single units: 2 car parks. Home occupation: 1 in addition to the dwelling. Traffic generation rate dictates access width. 0-30 vehicle movements per hour requires a 2.5-6.0m wide access. 31-100 movements requires a 6m access.	3 or more dwelling units 1 per dwelling		As per table in Appendix 3, Chapter 14
Building Recession Plane	2.5m + 45 degree	-	All buildings /structures which abut a residential activity area shall comply with the recession plane requirements of the abutting residential activity area	All buildings /structures which abut a residential activity area shall comply with the recession plane requirements of the abutting residential activity area
Height	Maximum Height of Buildings and Structures: 8m Maximum overall height: 13m	-	8m	10m
Site Coverage	35%	40%	-	100%
Maximum Building Length	20m			
Min Permeable Surfaces	30%	-	-	-
Outdoor Living space requirement		Subject to the design guide which recommends 5 x3m2 dimension		Subject to mixed use design guide
Balcony placement				
Design criteria that will be added to the district plan design guide for restricted discretionary activities				
Corner Treatment				
Maximum Building length				

PROPOSED PROVISIONS		
INTENSIFICATION A 12M MIXED USE	INTENSIFICATION B 10M RESIDENTIAL	INTENSIFICATION C 2,000M² LOT AMALGAMATION
Communal car parking, the creation of laneways and removal of minimum carparking provision would be permitted Parking to be located at the rear or underneath buildings. Parking is not permitted in the front yard.	Communal car parking, the creation of laneways and removal of minimum carparking provision would be permitted Parking to be located at the rear or underneath buildings. Parking is not permitted in the front yard.	Provision for 1 on site carparking spaces per dwelling (either garage, carport or parking spaces for each dwelling)
Building recession planes would only apply to sites adjacent to residential zoned property. No street frontage recession plane required	Building recession planes would only apply to sites adjacent to residential zoned property. No street frontage recession plane required	Existing recession planes (for general residential) are retained with the exception of the street frontage where no recession plane is required.
12m high mixed use consisting of retail/office on the first two floors with apartments/living spaces on the top floors.	10m high	10m high + 1m allowance for roof height
100%	100%	60%
		20m
30%	30%	30%
	A minimum outdoor living space, directly accessible living space from internal living area of: 10m² with a minimum dimension of 2m regarding strata title units 20m² , 2m wide minimum with remaining units	25m², 3m minimum width Directly accessible living space from internal living area
		no above ground-floor balconies within 4m of an external boundary

Buildings shall emphasise their corner location, relate to both frontages with glazing and detailing to reflect this.	1.0m side yard required where a building is located at the end of a row. of units on a corner site. Glazing must be provided on both frontages on all floors to avoid large blank walls facing a street	
		Variety of building treatments for exterior facades.

5. TESTING OF DEVELOPMENT PROVISIONS

The following section tests possible development provisions using building layouts/diagrams and shade modeling to illustrate proposed changes. It tests the implications of providing for different development forms in Hutt City and informs the final recommendations around plan rules to manage future residential development intensification. It highlights which provisions could be adopted to encourage intensification in the areas identified in section 2 of this report.

A key test that has been undertaken is shade modeling to confirm implications of changes of building heights and bulk and location in residential areas.

The shade modeling investigates four different design scenarios which are considered to be where the largest degree of change will occur, being:

- Intensification Type A - 12m high mixed use development
  (Case study : Waterloo)
- Intensification Type B - 10m high residential development
  (Case study : Epuni)
- Intensification Type B - 10m high residential development
  (Case study : Eastbourne)
- Intensification Type C - Comprehensive Development of a 2,000m² lot within the general residential zone
  (Case study : Stokes Valley)

For each of the scenarios the effects generated from changes to recession planes, building heights and boundary setbacks are investigated, with shade diagrams generated to show shadows at:

Winter (21 June)	8.30am, 10am, 12pm, 3pm, 4.30pm
Summer (21 December)	8.00am, 10am, 12pm, 3pm, 5pm, 7pm
Autumn / Spring equinox (21 March / 21 September)	8.00am, 10am, 12pm, 3pm, 5pm

All sketches have been generated using Sketchup Pro 2015 and Geo-referenced to actual sites within Hutt City. They also highlight impacts on public areas such as courtyards or streets. An illustration has been prepared showing how low impact design solutions can be integrated into a development, including where carparking will be provided.

Development form assumptions in terms of site characteristics from a character assessment perspective has been provided at a high level for each suburb in Appendix A but have not been assessed in this section. There is also a level of control around character outcomes provided for in the district plan through the design guide.

5.1 DEVELOPMENT POTENTIAL V RECESSION PLANES

A series of illustrations have been developed showing how recession planes have a considerable influence on the amount of a site which can be developed and that a 10m or 12m high limit may not be acheivable on many sites if there is not a relaxation of existing requirements. The sketches work through different scenarios, establishing why certain assumptions have been made, and which are then tested in section 5.3.

5.1.1 INTENSIFICATION TYPE A - 12M HIGH MIXED USE DEVELOPMENT (CASE STUDY : WATERLOO)

Figure 5.1.1 shows how the existing recession planes limit development potential on an existing site (a real-life scenario has been used with a 10.48m wide lot). A lot characteristic of the local area was selected, but also somewhere development is anticipated due to its proximity and prominence. In this scenario, there is a 45° recession plane on all sides including the street frontage as per the existing District Plan rules. Please note that the sketch does not take into account setbacks but is simply showing the building envelope created by the existing recession planes.

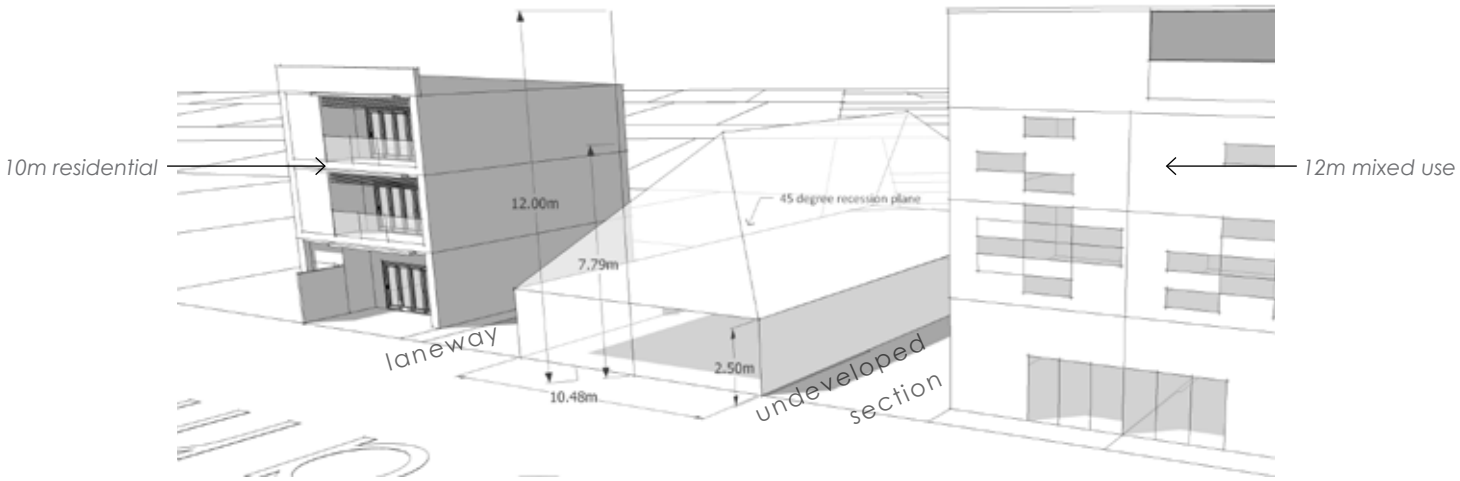


FIGURE 5.1.1 EXISTING RECESSION PLANES

Note: The illustration shows the recession plane controls and not an actual building as it does not take into account setback requirements.

With the removal of the street front recession plane in figure 5.1.2 the size of the building envelope increases but over 4m of developable floor space (height) is not accessible. Consolidation of lots would need to occur to access this additional height which has a number of disadvantages:

- it reduces the fine grain nature of neighbourhoods
- it could lead to an 'irregular' or scattered built form where development is limited to larger sites as opposed to creating a well-defined built edge along street frontages; and
- it removes the potential for smaller developers to construct mixed use as a larger site is required.

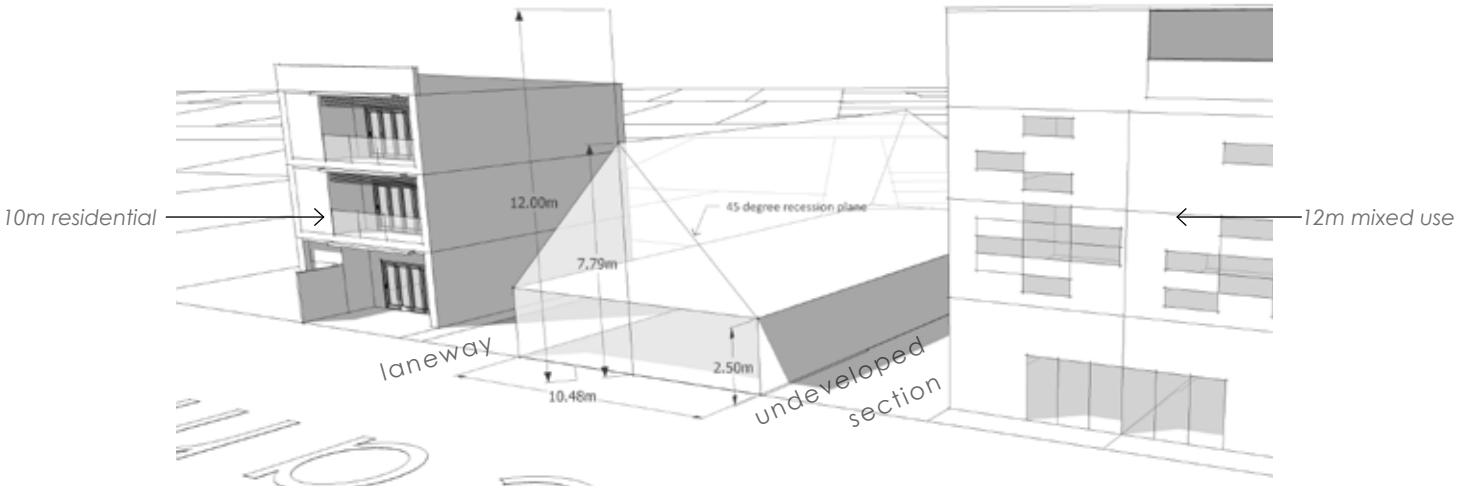


FIGURE 5.1.2 EXISTING RECESSION PLANES WITH THE REMOVAL OF THE STREET FRONTAGE RECESSION PLANE

Note: The illustration shows the recession plane controls and not an actual building as it does not take into account setback requirements.

Figure 5.1.3 then combines the proposed height and setback allowances with the existing recession planes to show how much developable floor space is lost if the existing controls are maintained. In section 5.2, the modelling assumes no recession planes within the mixed use zone and compares this with the existing provisions, making an analysis of the degree of effects.

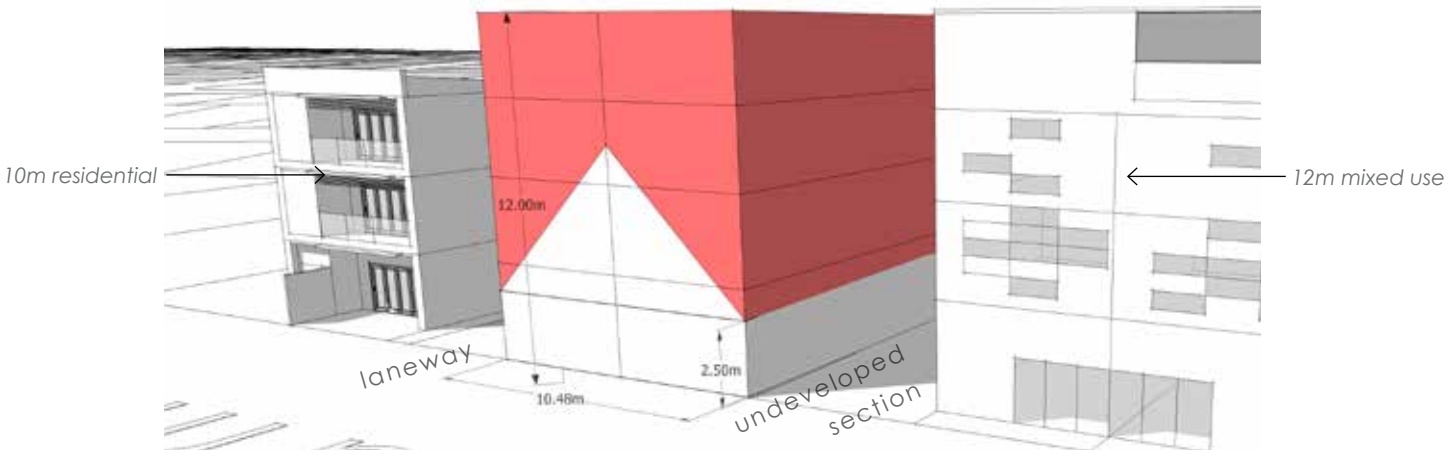


FIGURE 5.1.3 DEVELOPMENT POTENTIAL V RECESSION PLANES IN THE MIXED USE ZONE

The recommended approach, from an urban design point of view, and to be able to realise the full development potential of a site, is that recession planes and side yards are removed from the 12m mixed use zone, except where they adjoin a residential activity area. The sketch above highlights how much yield is lost and how it would not be possible to develop finer grain, taller developments as oultined earlier.

5.1.2 INTENSIFICATION TYPE B 10M HIGH RESIDENTIAL ZONE (CASE STUDY : EPUNI)

Figure 5.1.4 shows how the existing recession planes limit development potential on an existing site (a real-life scenario has been used with a 16.23m wide lot). In this scenario, there is a 45° recession plane on all sides including the street frontage as per the existing District Plan rules.

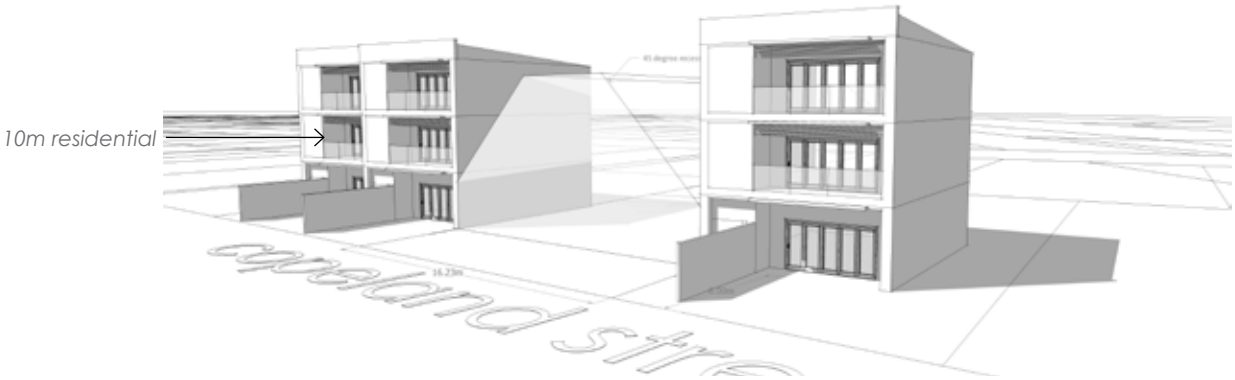


FIGURE 5.1.4 EXISTING RECESSION PLANES WITH THE REMOVAL OF THE STREET FRONTAGE RECESSION PLANE

Note: The illustration shows the recession plane controls and not an actual building as it does not take into account setback requirements.

Figure 5.1.5 below shows the difference between the current recession planes combined with no street frontage recession plane versus the proposed removal of recession planes within the zone and building up to 10m. With the removal of the recession planes the site becomes more usable with the ability to utilise the increased building height.

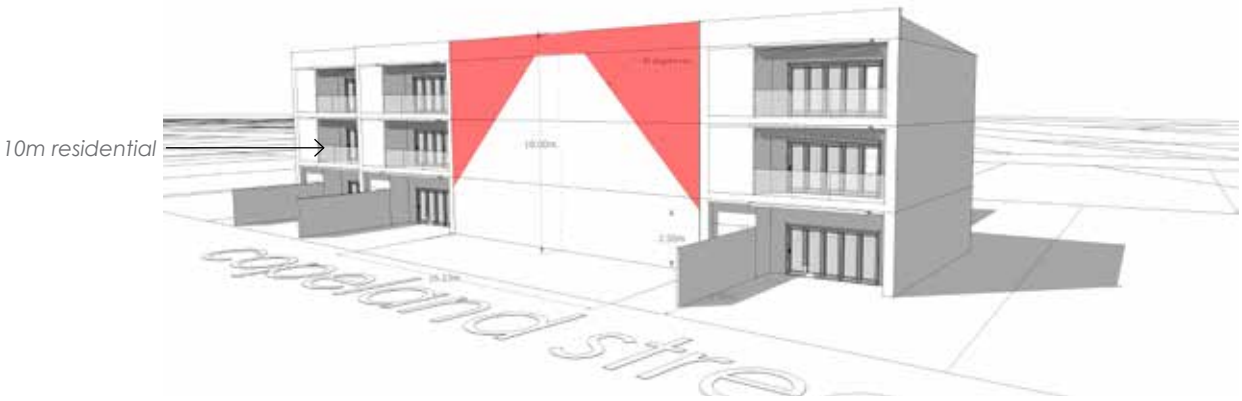


FIGURE 5.1.5 DEVELOPMENT POTENTIAL V RECESSION PLANES IN THE 10M RESIDENTIAL ZONE

The recommended approach is that recession planes and side yards are removed for the 10m residential zone and where they adjoin a 12m Mixed Use zone, but recession planes and side yards apply where they adjoin a general residential zoned property.

5.1.3 INTENSIFICATION TYPE B 10M HIGH RESIDENTIAL ZONE ADJACENT TO A 8M RESIDENTIAL ZONE (CASE STUDY : EASTBOURNE)

Figure 5.1.6 shows how the existing recession planes combined with the 3m sideyard requirements will protect existing residential development in lower density zones. The recession plane is drawn on a 45^{O} angle 2.5m above the side boundary. Note how the end wall of the building should be designed to avoid large blank walls.

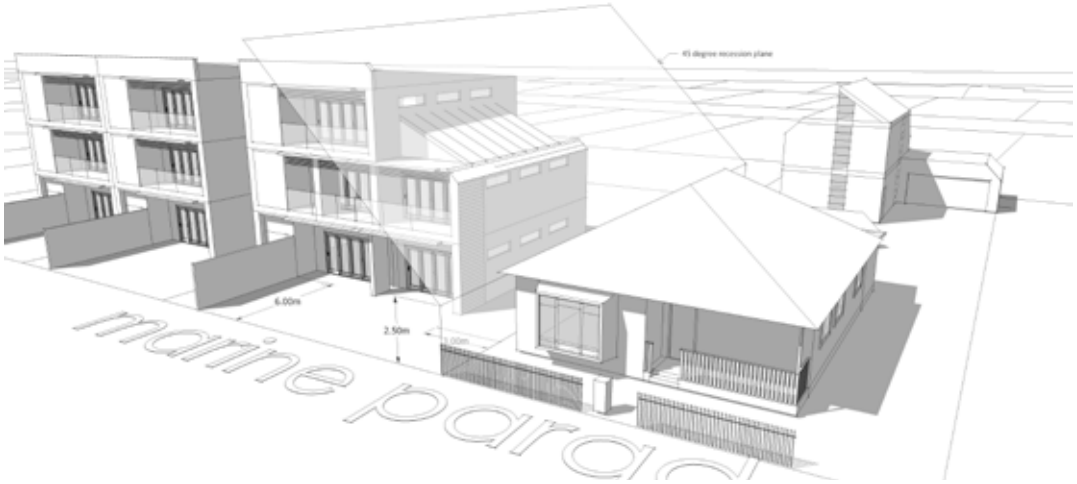


FIGURE 5.1.6 EXISTING RECESSION PLANES AND SIDE YARD CONTROLS

Figure 5.1.7 below shows the potential yield lost by enforcing the shade and setback requirements. Compared with other areas, the loss is not significant and in many cases vehicle access to the rear of the site would be necessary. The accessway can be located in the 3m set back to further minimise any potential loss of yield.

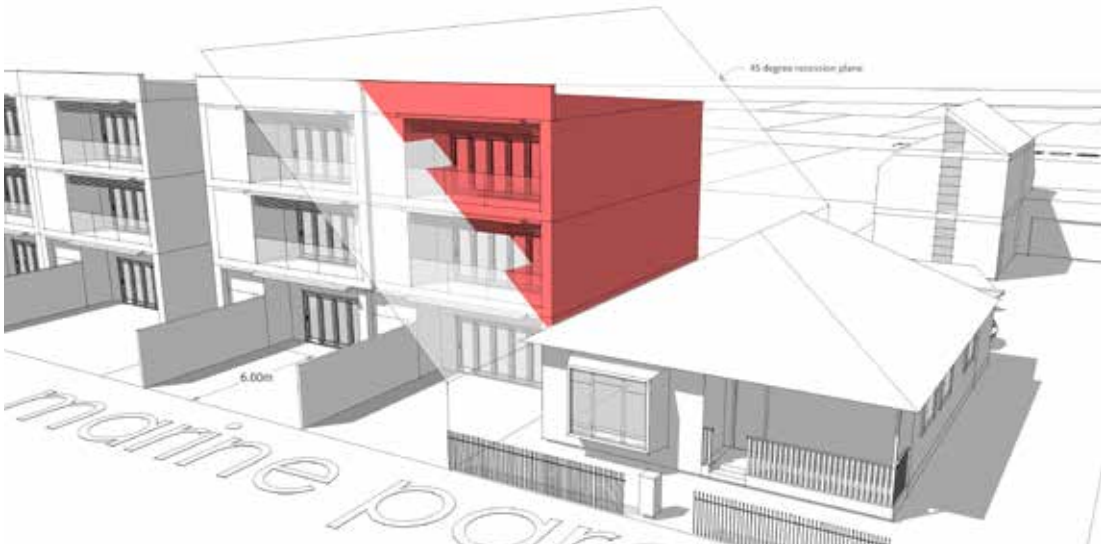


FIGURE 5.1.7 DEVELOPMENT POTENTIAL V RECESSION PLANES ADJOINING 8M RESIDENTIAL ZONE

The recommended approach is for the existing recession plane requirements to be adopted along with a 3m side yard immediately adjacent to the residential zone. It should be noted that a change in 'intensification type' generally does not occur mid block to avoid adverse boundary effects.

5.1.4 INTENSIFICATION TYPE C - COMPREHENSIVE DEVELOPMENT ON A 2,000M² LOT WITHIN THE GENERAL RESIDENTIAL ZONES (CASE STUDY : STOKES VALLEY)

Figure 5.1.8 shows how a 2,000m² lot could be developed comprehensively if internal side yards and recession planes are not required.

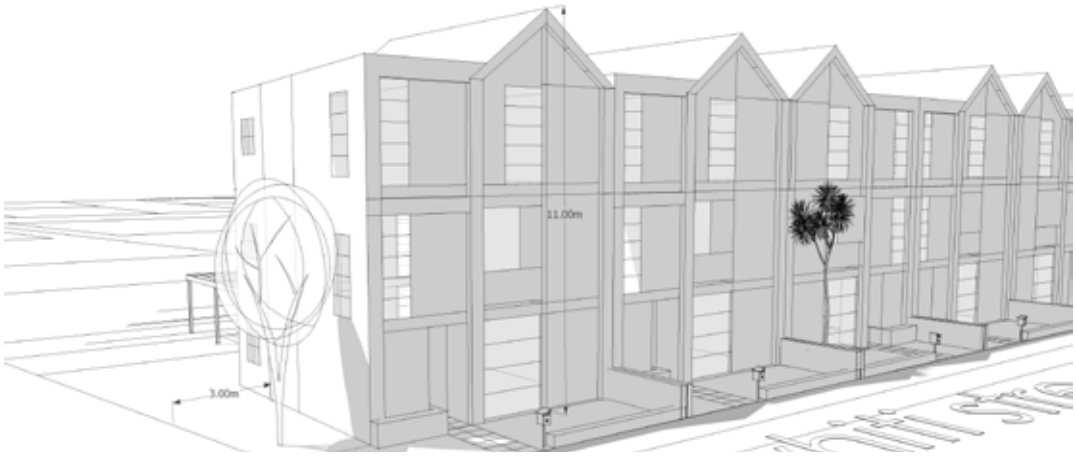


FIGURE 5.1.8 COMPREHENSIVE DEVELOPMENT WITHIN HUTT CITY

Figure 5.1.9 below shows how if the current recession planes were imposed on a comprehensive development of terrace housing and the benefits of removing this requirement. The existing recession planes have been applied to each individual internal lot with the area in red showing where it would not be possible to build. It would largely make terrace housing impossible to build above one storey.

FIGURE 5.1.9 COMPREHENSIVE DEVELOPMENT WITH INTERNAL RECESSION PLANE REQUIREMENTS

The recommended approach is for the existing recession planes and sideyards to be removed from the internal boundaries. This will allow for the construction of two storey terrace houses which are an efficient house typology. There will be no change in the effects experienced by adjoing properties as the existing recession planes and side yard setback requirements will still apply. The shading modelling in the following section will focus on the impacts removing internal recession planes and side yard setbacks will have on outdoor living space.

5.2 TESTING OF DEVELOPMENT PROVISIONS

5.2.1 INTENSIFICATION TYPE A - 12M HIGH MIXED USE DEVELOPMENT (CASE STUDY : WATERLOO)

DEVELOPMENT SCENARIO

In the block immediately adjacent to the railway station and bounded by the Cambridge Terrace, Hardy and Cressy Streets a theoretical simulation was created to allow 12m high mixed and 10m high residential development. The following sketches show how the proposed development could look in a simple bulk and location form and are then tested to show how it compares with shading caused by the current permitted baseline for medium density development.

PROPOSED ZONING

The sketch shows 12m mixed use in red and 10m residential in orange.

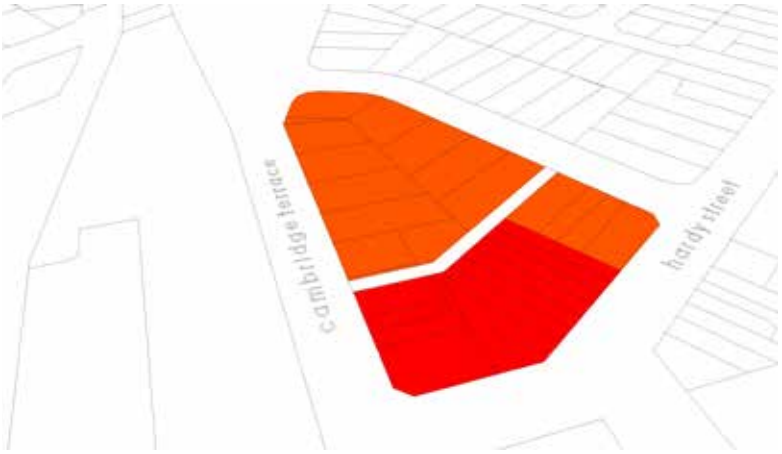


FIGURE 5.2.10 PROPOSED INTENSIFICATION BLOCK

DEVELOPMENT POTENTIAL

The sketch shows how the block could look, purely in bulk and location terms, if it were developed to its full potential. The 12m mixed use is in the foreground with 10m behind. The shading effects are generated to show 12pm, lunchtime, 21 September.

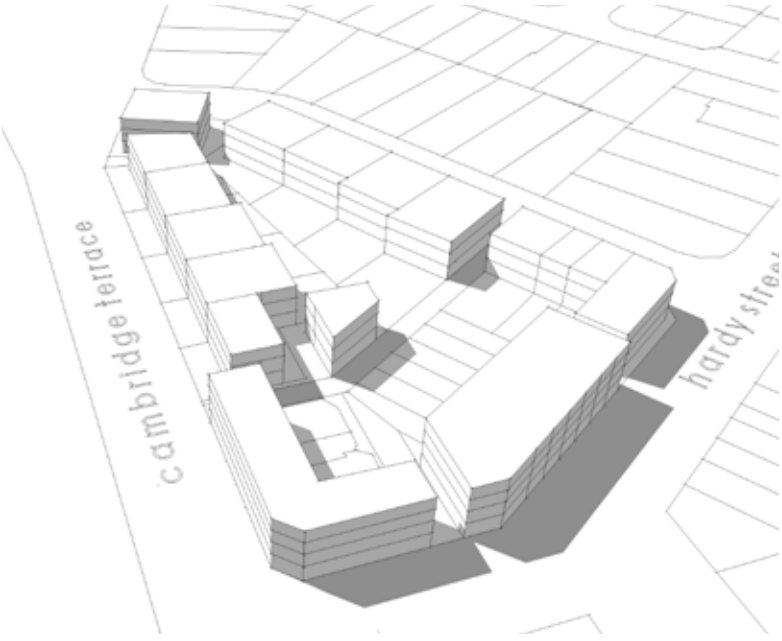
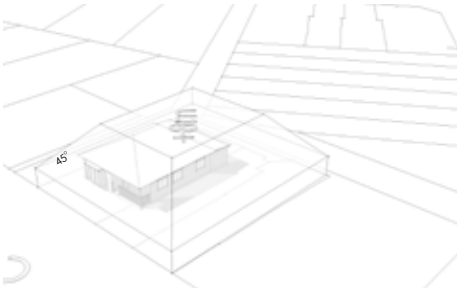
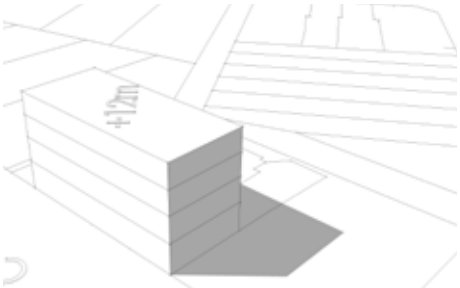


FIGURE 5.2.11 DEVELOPMENT POTENTIAL

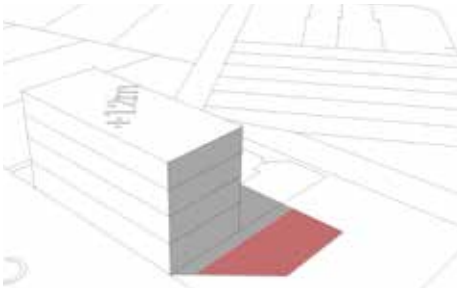
EXISTING MEDIUM DENSITY RECESSION PLANES - PERMITTED BASELINE



EXISTING SCENARIO The above sketch shows the current permitted baseline for medium density housing with an 8m maximum height and 45° shade planes from 2.5m above the ground on all sides

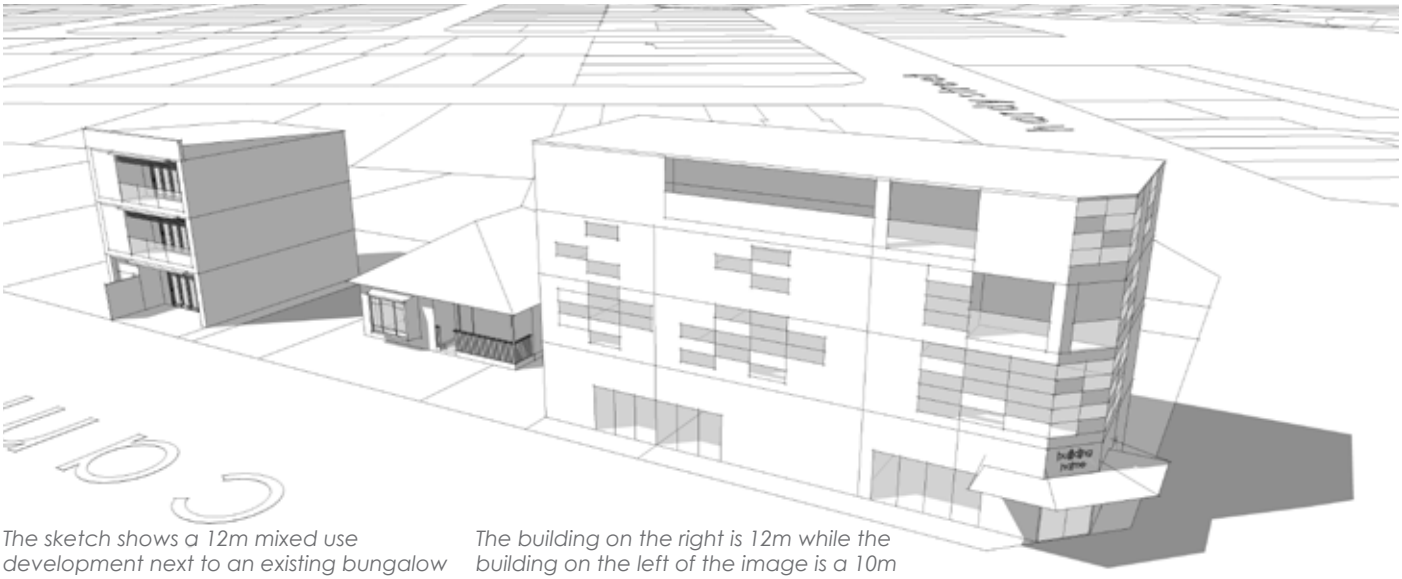


PROPOSED SCENARIO The above sketch shows the proposed scenario for Type A with a 12m maximum height, no side yard requirements and no recession planes



COMPARISON The above sketch shows a comparison between the two scenarios with the difference highlighted in red. This shows 12pm, 21 September.

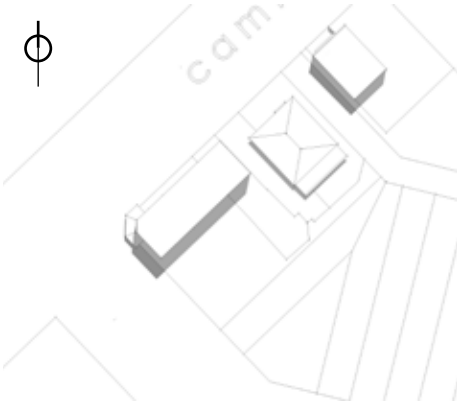
SCENARIO SKETCH



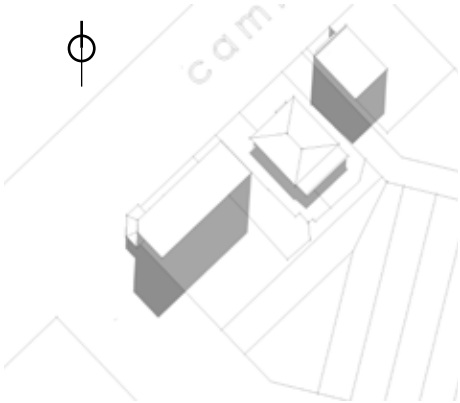
The sketch shows a 12m mixed use development next to an existing bungalow and how it maybe affected during a transistional period as intensification occurs.

The building on the right is 12m while the building on the left of the image is a 10m high residential townhouse or apartment development.

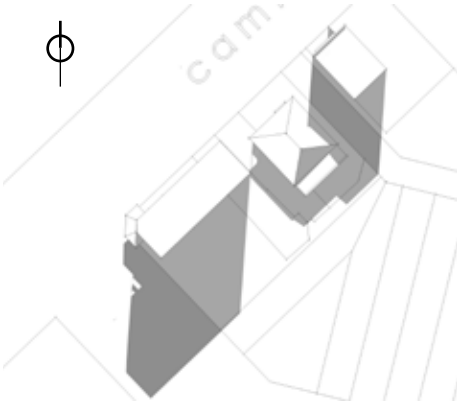
SHADE DIAGRAMS



SUMMER SOLTICE
12pm, 21 December
Times shown will be:
8.00am, 10am, 12pm, 3pm, 5pm, 7pm



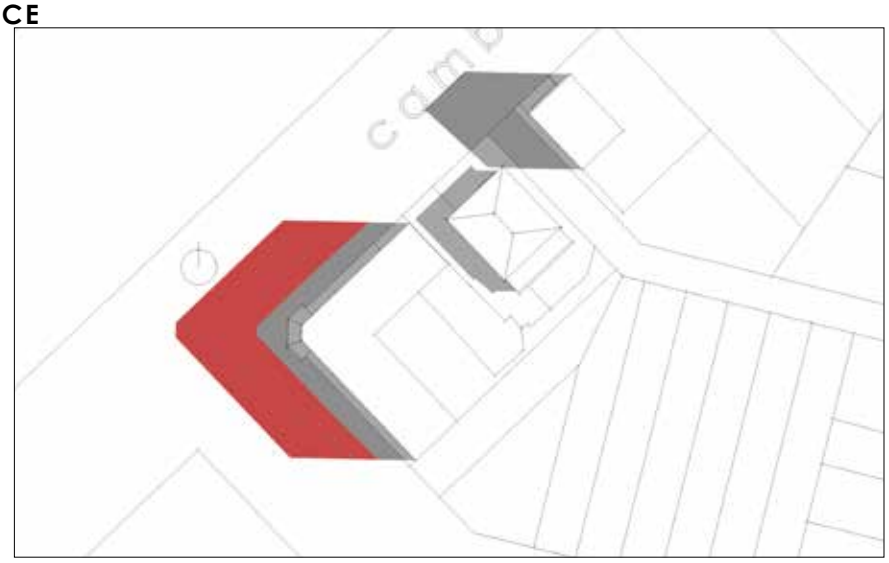
AUTUMN /SPRING EQUINOX
12pm, 21 March / September
Times shown will be:
8.00am, 10am, 12pm, 3pm, 5pm



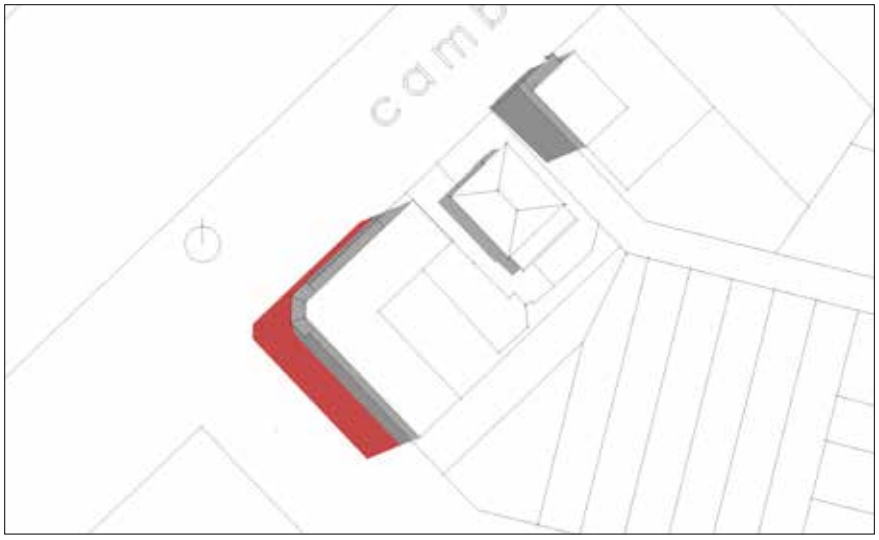
WINTER SOLTICE
12pm, 21 June
Times shown will be:
8.30am, 10am, 12pm, 3pm, 4.30pm

SUMMER SOLTICE

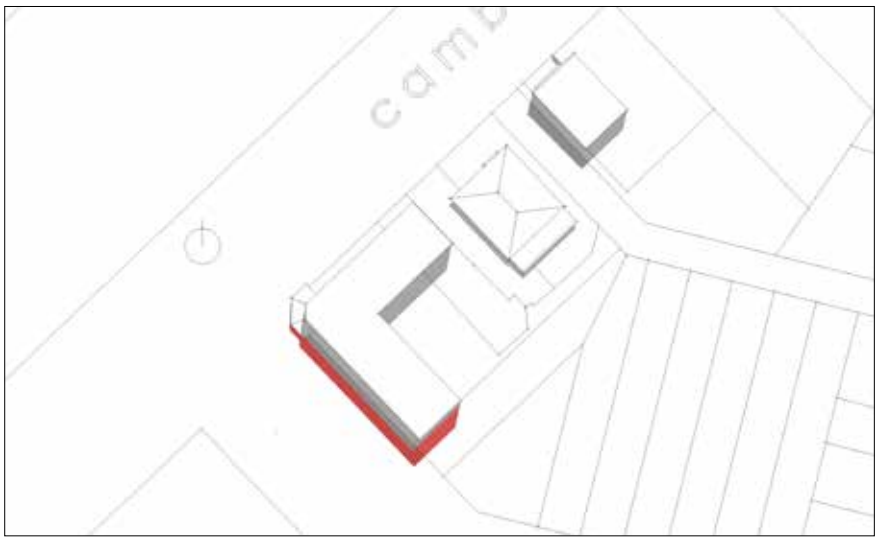
SUMMER SOLTICE
21 December
Time shown: 8.00am



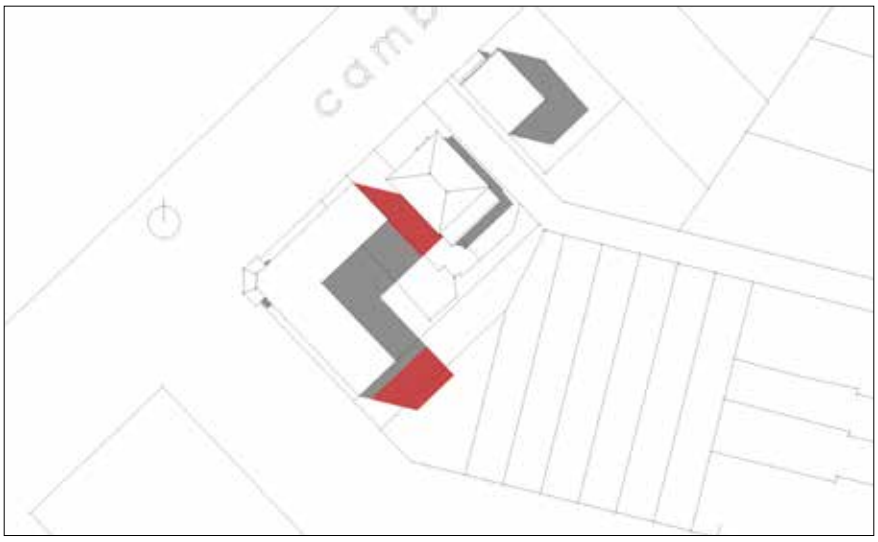
SUMMER SOLTICE
21 December
Time shown: 10.00am



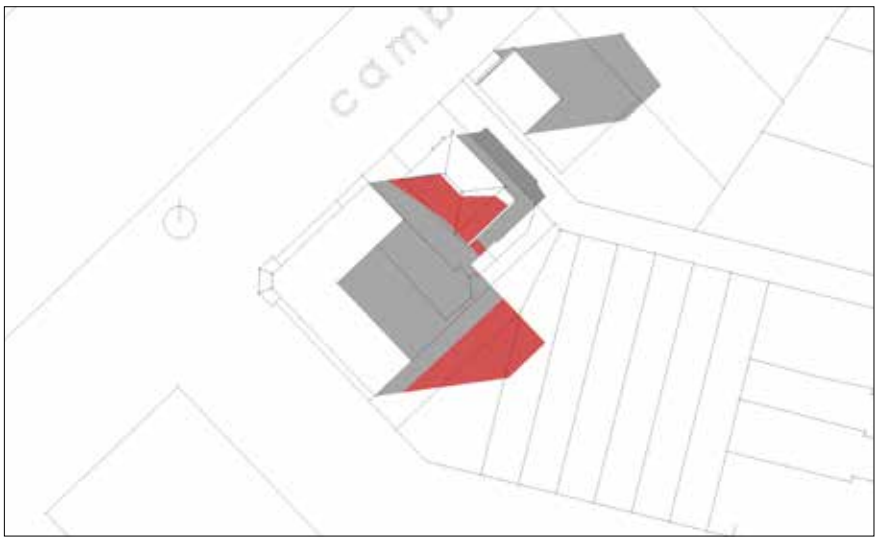
SUMMER SOLTICE
21 December
Time shown: 12.00pm



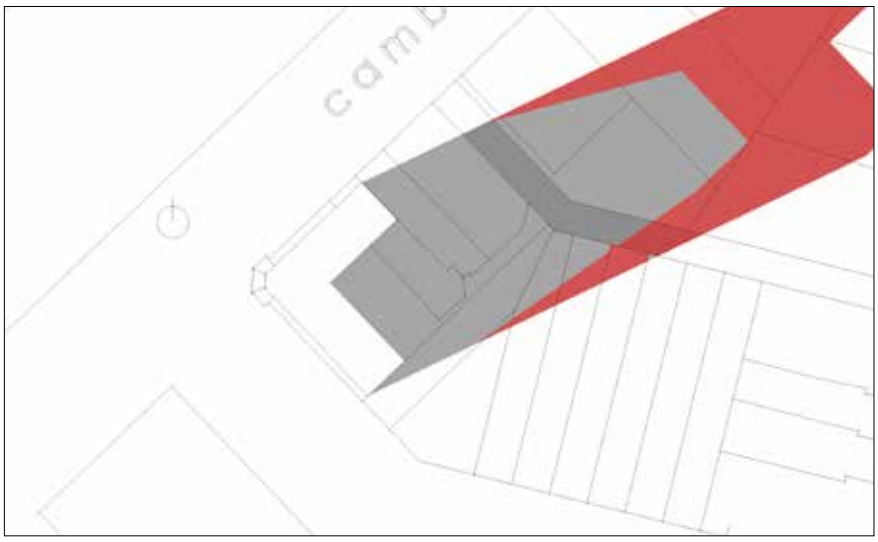
SUMMER SOLTICE
21 December
Time shown: 3.00pm



SUMMER SOLTICE
21 December
Time shown: 5.00pm

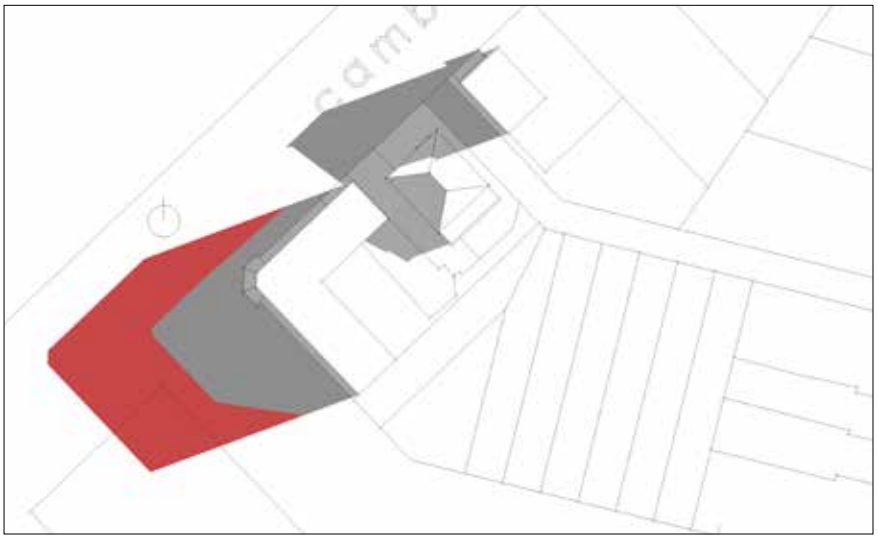


SUMMER SOLTICE
21 December
Time shown: 7.00pm

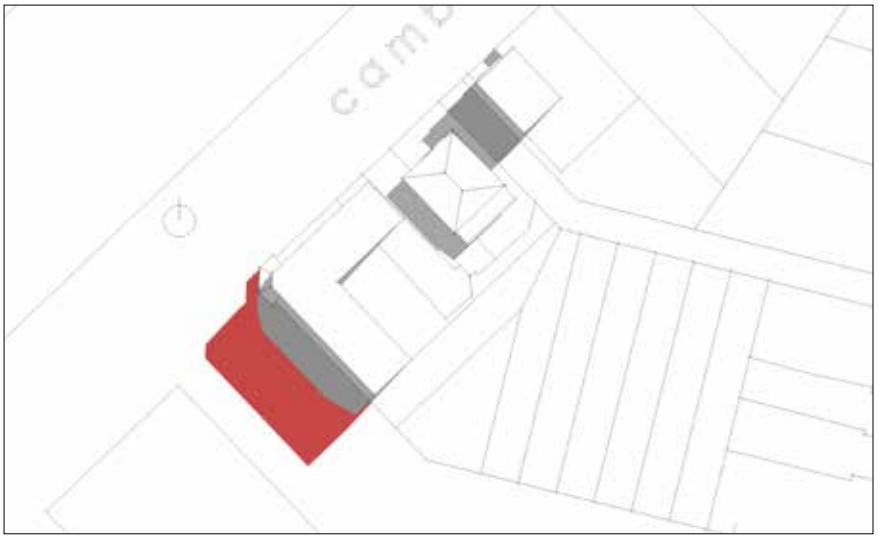


AUTUMN / SPRING EQUINOX

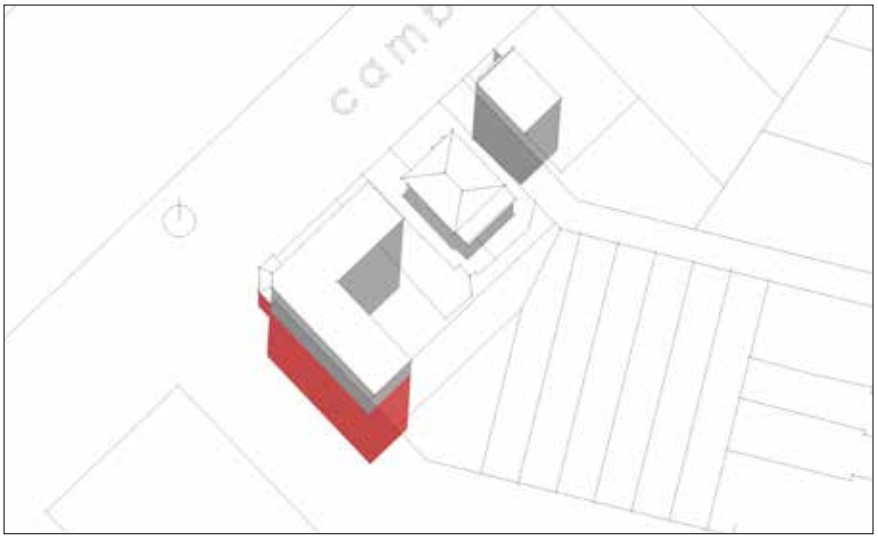
AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 8.00am



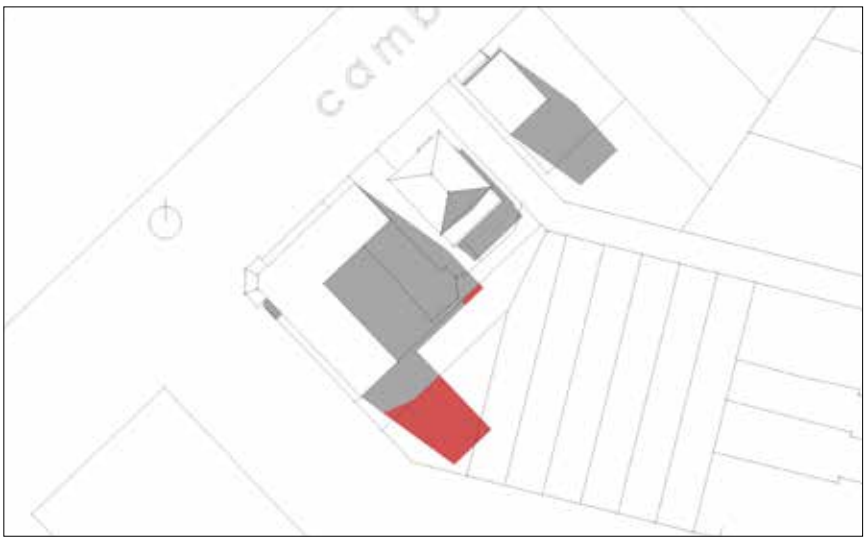
AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 10.00am



AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 12.00pm



AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 3.00pm

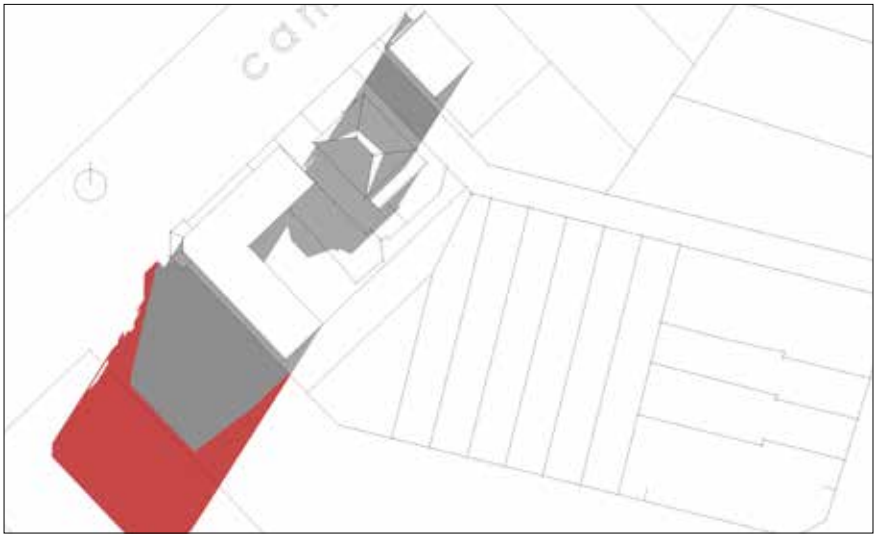


AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 5.00pm

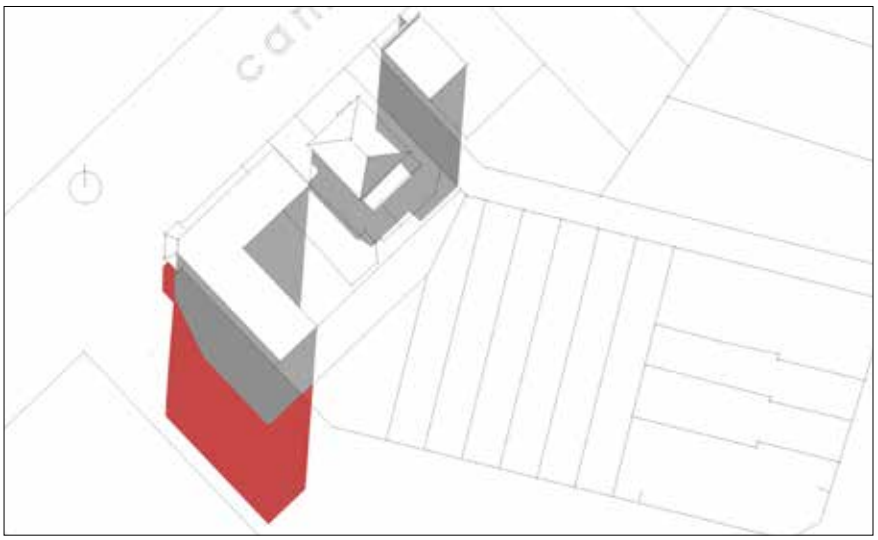
WINTER SOLTICE

WINTER SOLTICE
21 June
Time shown: 8.30am

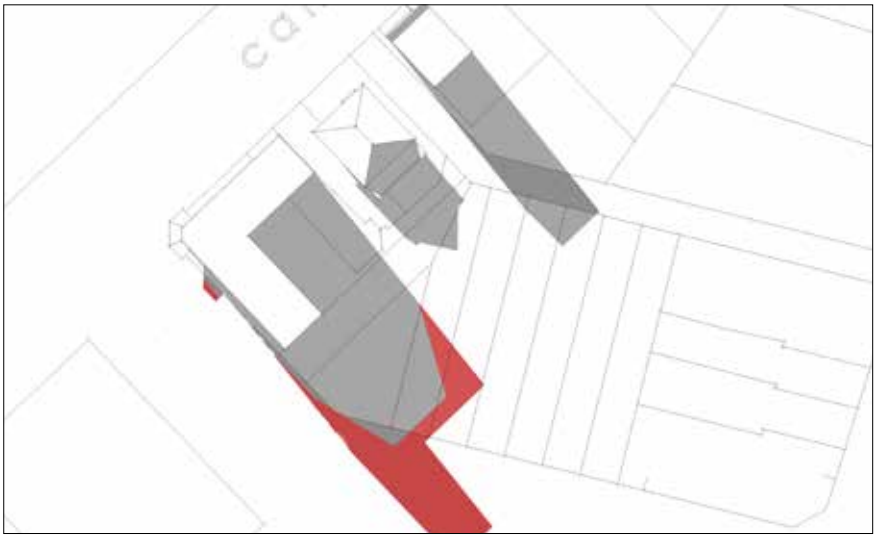
WINTER SOLTICE
21 June
Time shown: 10.00am



WINTER SOLTICE
21 June
Time shown: 12.00pm



WINTER SOLTICE
21 June
Time shown: 3.00pm



WINTER SOLTICE
21 June
Time shown: 4.30pm

ASSESSMENT OF SHADING FOR INTENSIFICATION TYPE A - 12M MIXED USE

The modelling showed there will be a significant adverse effect for adjoining properties from Autumn through to Spring including the winter solstice as the zone transitions from a low rise residential area into a 12m high mixed use area with apartments. The diagrams show a significant increase in the amount of shading. In summer the effects are less noticeable except in the late evening when long shadows are present. It is considered that as the area develops, residual adverse effects will reduce as building typologies change to the new development rules.

5.2.2 INTENSIFICATION TYPE B - 10M HIGH RESIDENTIAL (CASE STUDY : EPUNI)

DEVELOPMENT SCENARIO

In the block a short distance from the Epuni Railway station, and bounded by Copeland Street, Hall Crescent, and Witako Street a scenario to show how 10m high residential development could effect shading effects was created. The following sketches show how the proposed development could look in a simple bulk and location form and are then tested to show how it compares with shading caused by the current permitted baseline for medium density development.

PROPOSED ZONING

The sketch shows 10m residential in orange

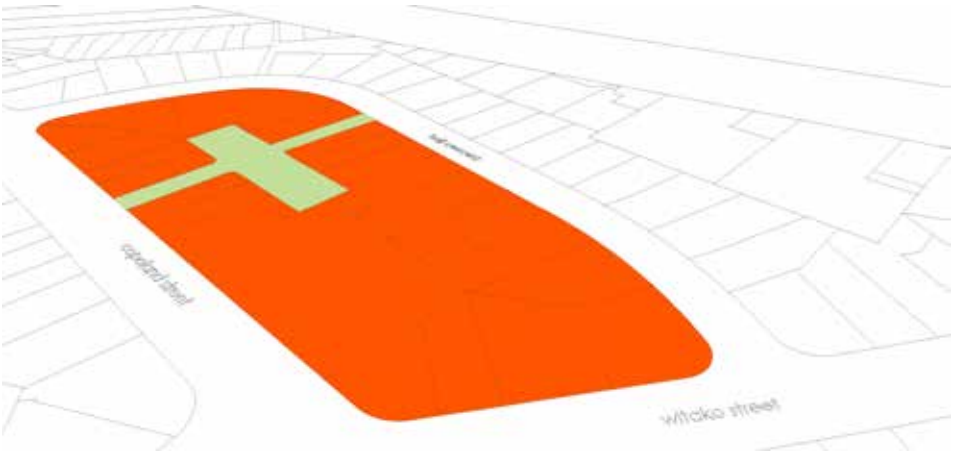


FIGURE 5.12 PROPOSED INTENSIFICATION BLOCK

DEVELOPMENT POTENTIAL

The sketch shows how the block could look, purely in bulk and location terms, if it were developed to its full potential. The shadows are generated to show 12pm,lunchtime, 21 September.

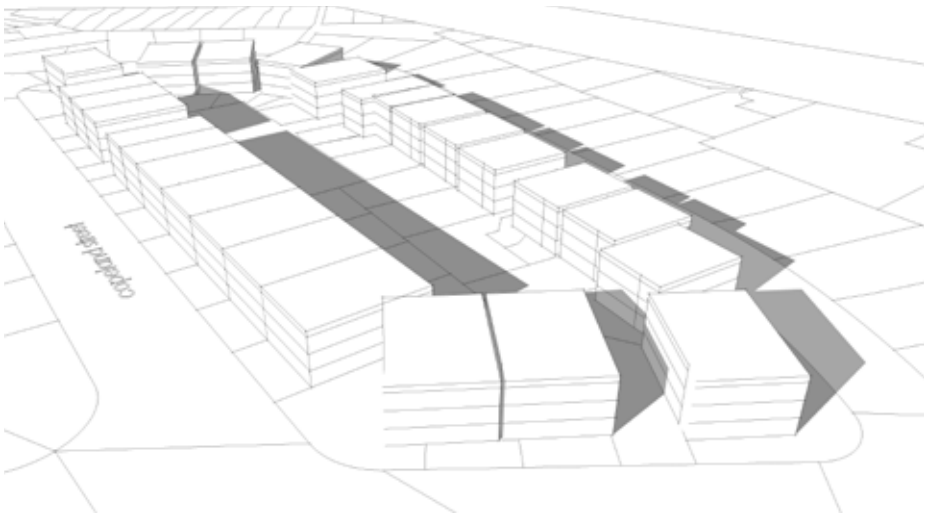
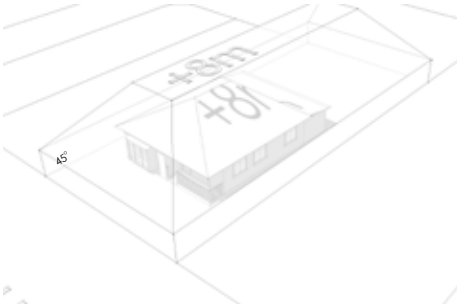
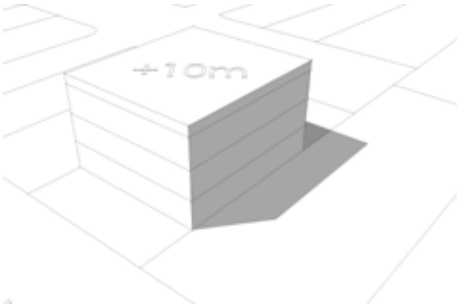


FIGURE 5.13 DEVELOPMENT POTENTIAL

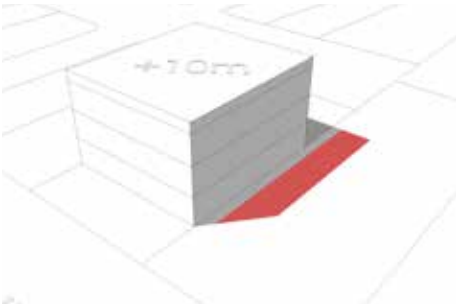
EXISTING MEDIUM DENSITY RECESSION PLANES - PERMITTED BASELINE



EXISTING SCENARIO The above sketch shows the current permitted baseline for medium density housing with an 8m maximum height and 45° shade planes from 2.5m above the ground on all sides



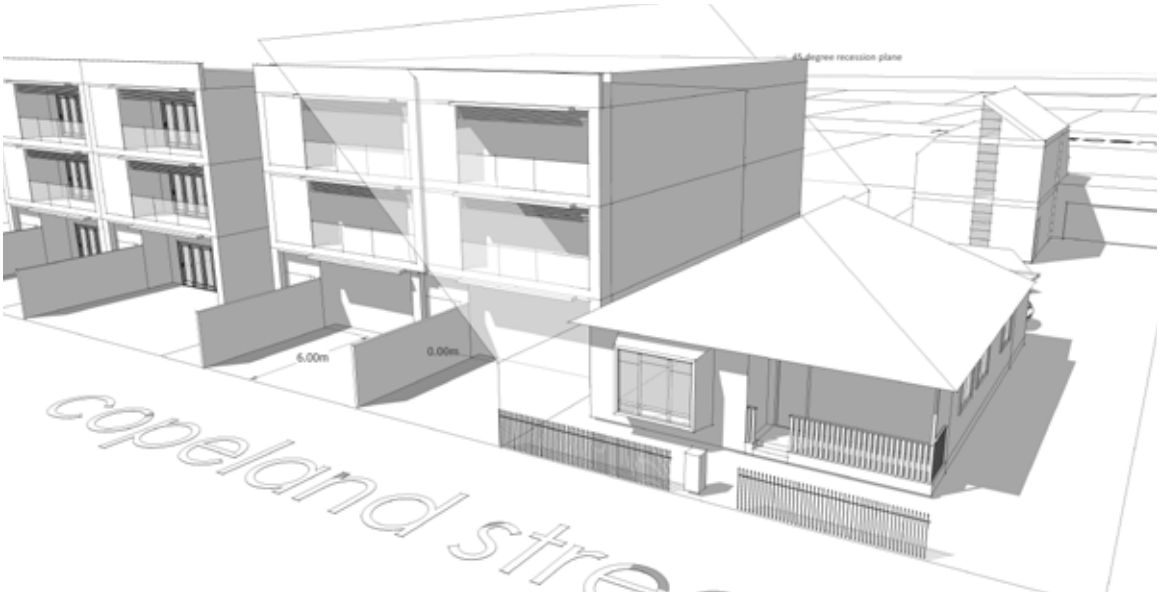
PROPOSED SCENARIO The above sketch shows the proposed scenario for Type B with a 10m maximum height, no side yard requirements and no shade planes, except adjacent to the 8m residential zone



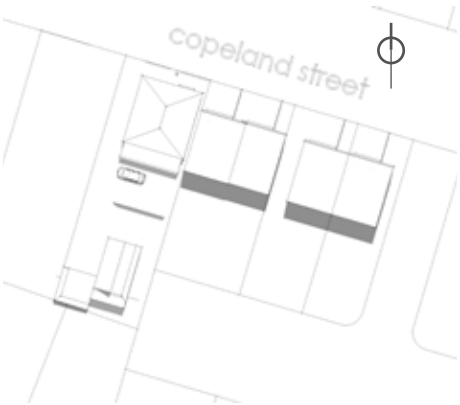
COMPARISON The above sketch shows a comparison between the two scenarios with the difference highlighted in red. This shows 12pm, 21 September.

SCENARIO SKETCH

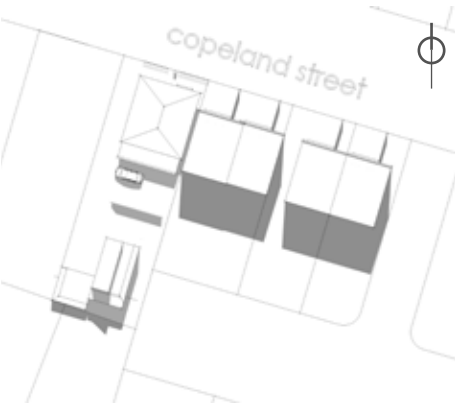
The sketch shows a 10m residential development next to an existing bungalow and how it maybe affected without a 3m side yard setback and a 45° recession plane starting 2.5m above the internal boundary.



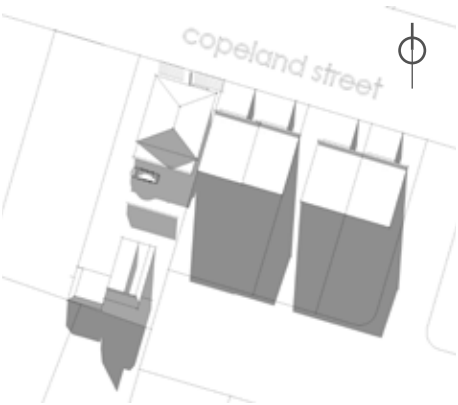
SHADE DIAGRAMS



SUMMER SOLTICE
12pm, 21 December
Times shown will be:
8.00am, 10am, 12pm, 3pm, 5pm, 7pm



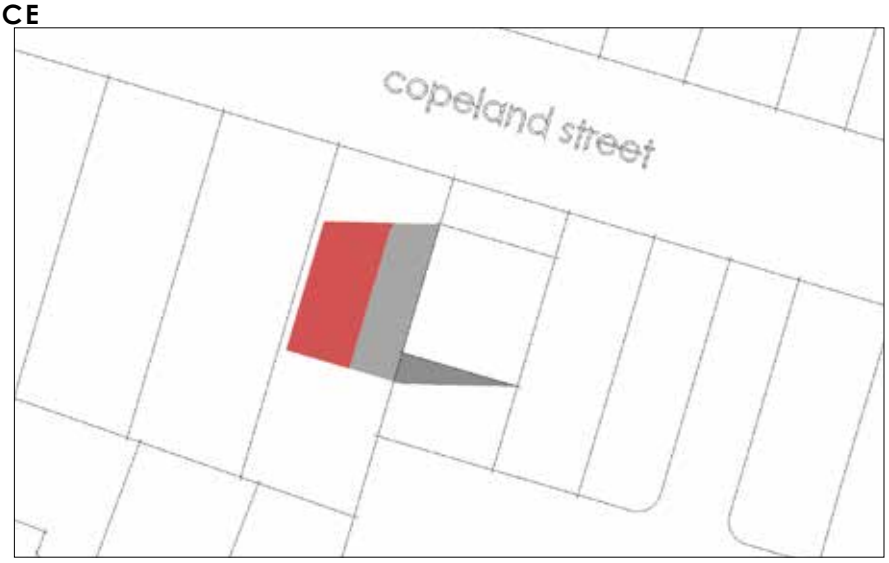
AUTUMN /SPRING EQUINOX
12pm, 21 March / September
Times shown will be:
8.00am, 10am, 12pm, 3pm, 5pm



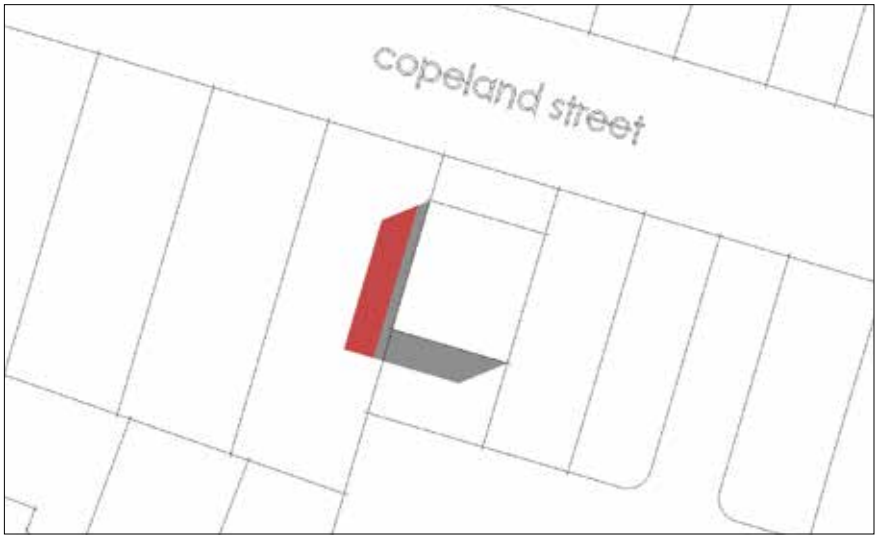
WINTER SOLTICE
12pm, 21 June
Times shown will be:
8.30am, 10am, 12pm, 3pm, 4.30pm

SUMMER SOLTICE

SUMMER SOLTICE
21 December
Time shown: 8.00am

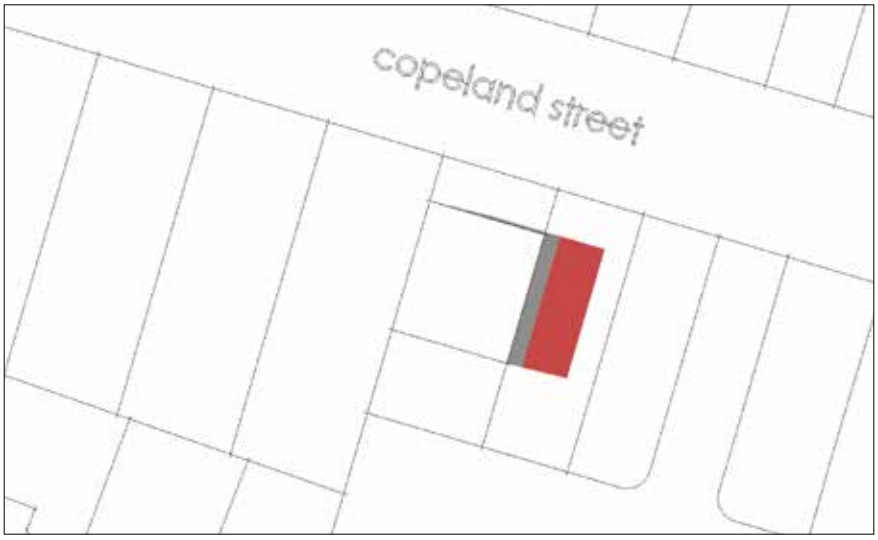


SUMMER SOLTICE
21 December
Time shown: 10.00am

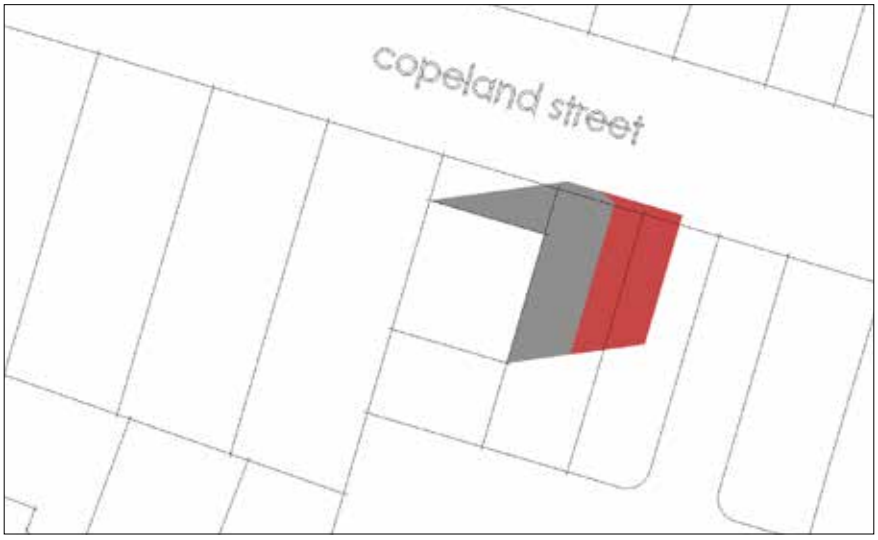


SUMMER SOLTICE
21 December
Time shown: 12.00pm

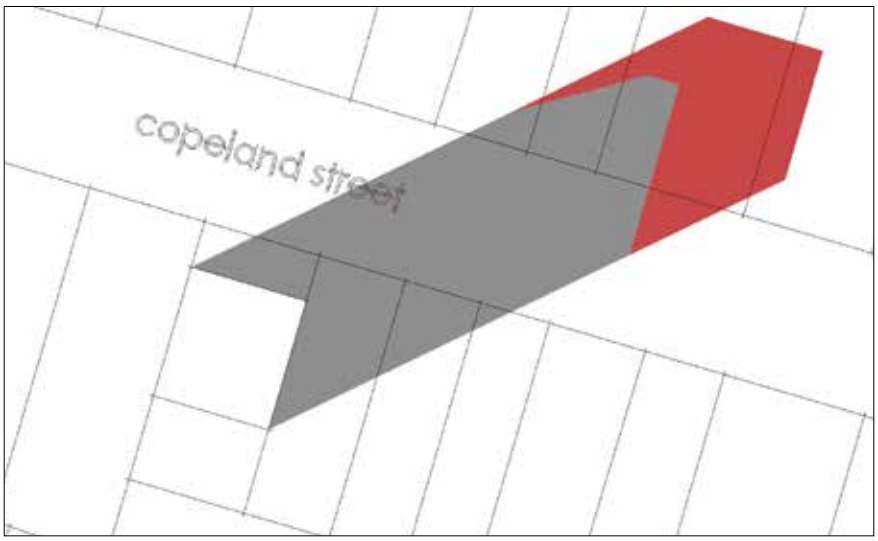
SUMMER SOLTICE
21 December
Time shown: 3.00pm



SUMMER SOLTICE
21 December
Time shown: 5.00pm

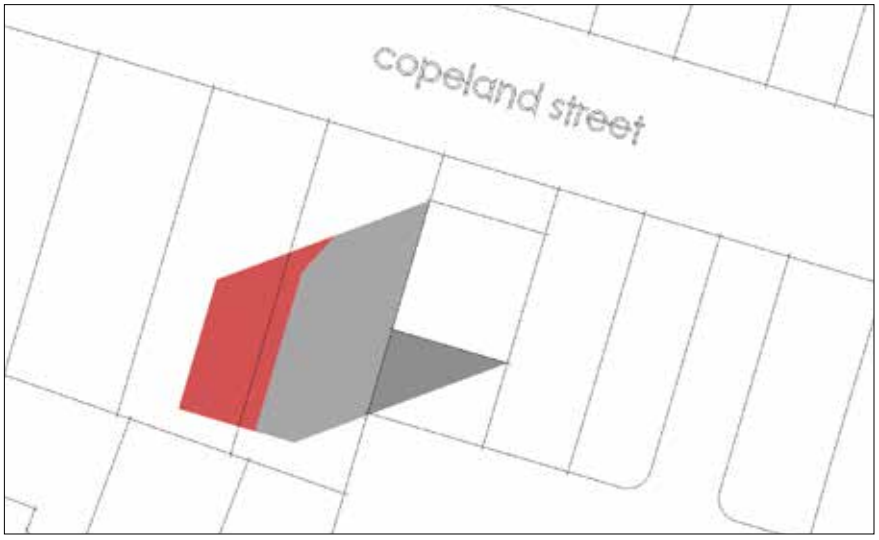


SUMMER SOLTICE
21 December
Time shown: 7.00pm

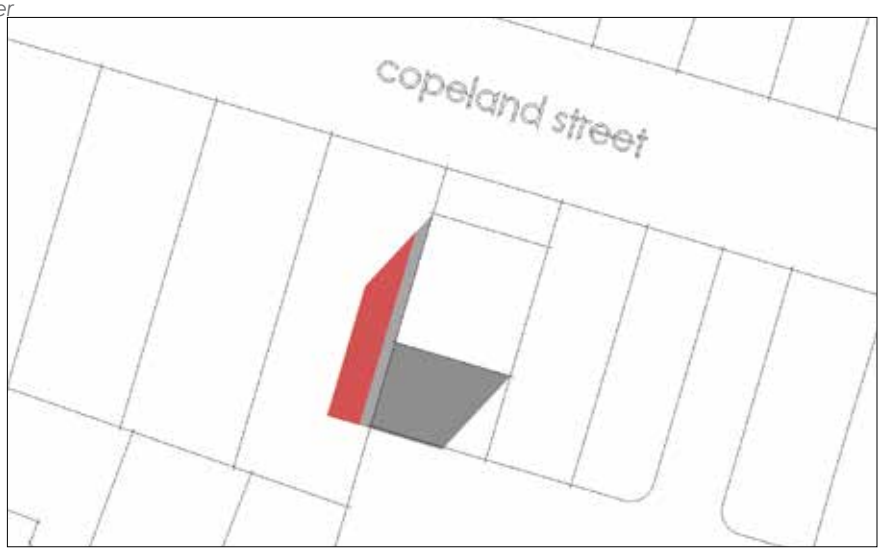


AUTUMN / SPRING EQUINOX

AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 8.00am

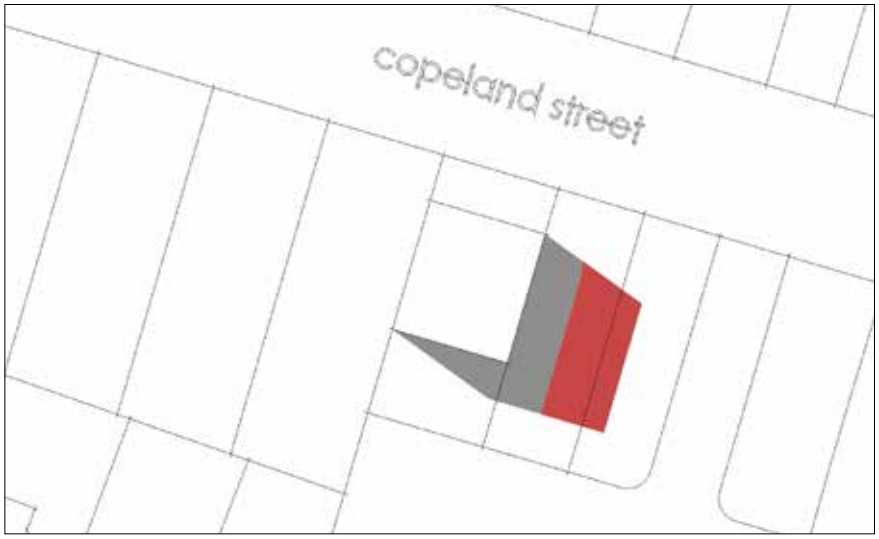


AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 10.00am



AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 12.00pm

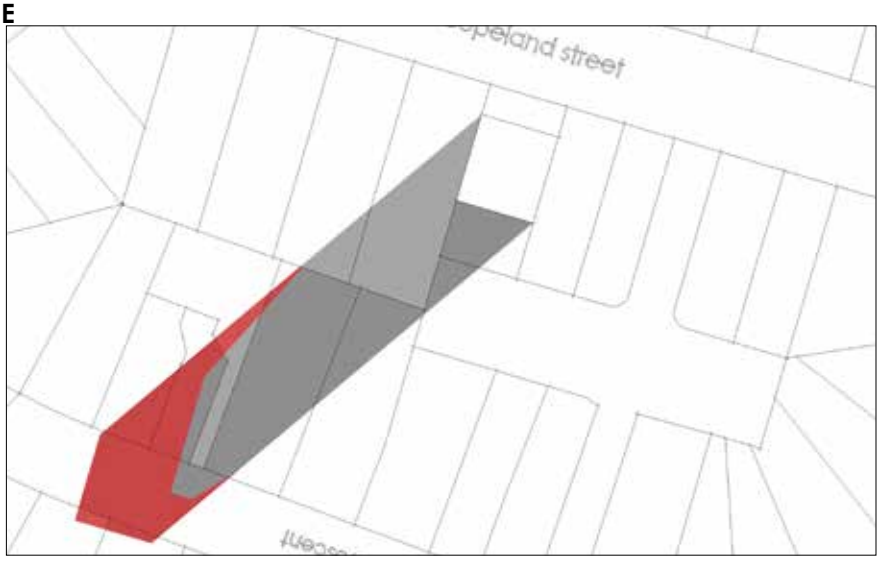
AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 3.00pm



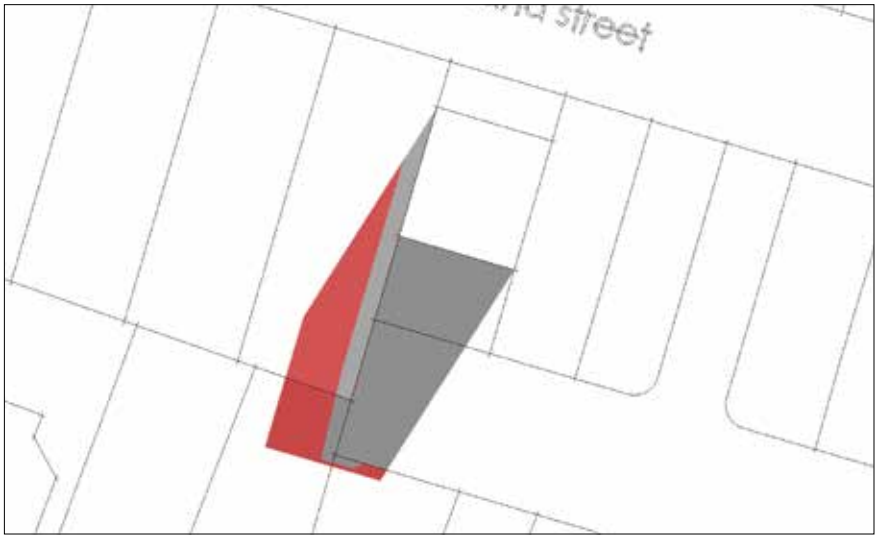
AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 5.00pm

WINTER SOLTICE

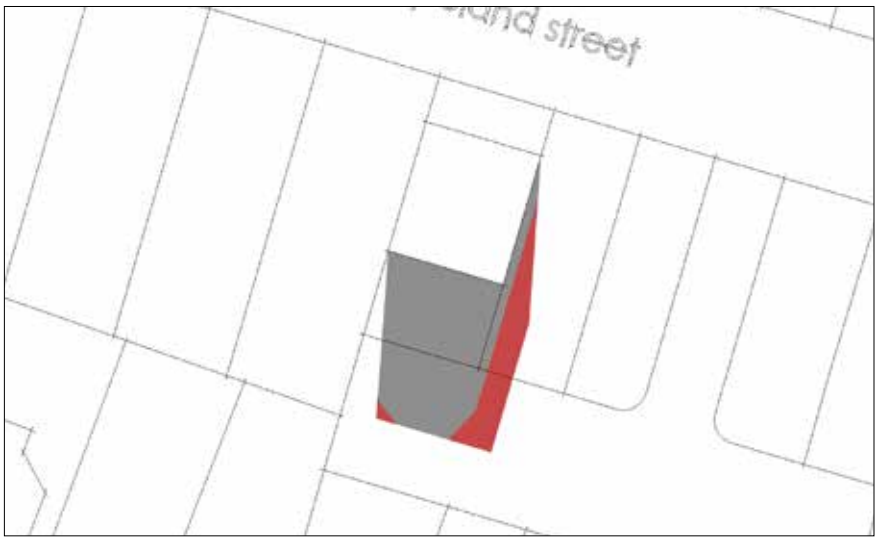
WINTER SOLTICE
21 June
Time shown: 8.30am



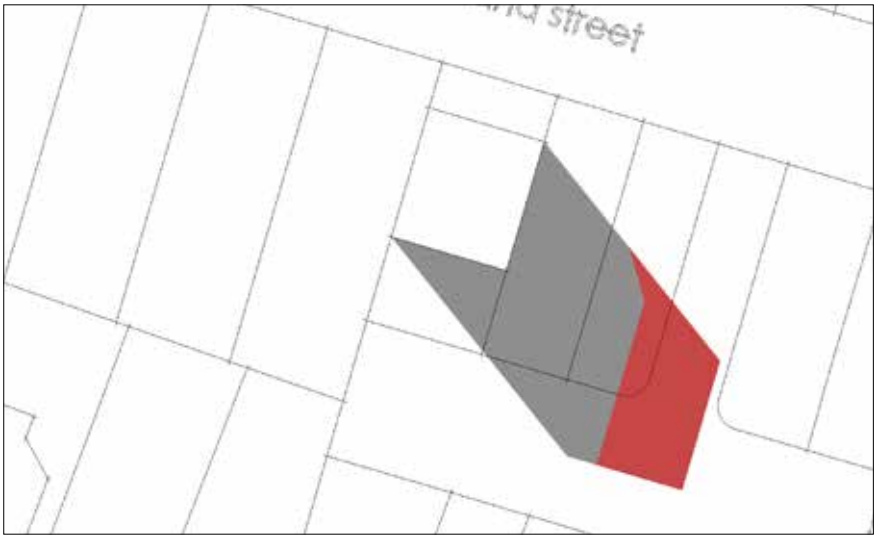
WINTER SOLTICE
21 June
Time shown: 10.00am



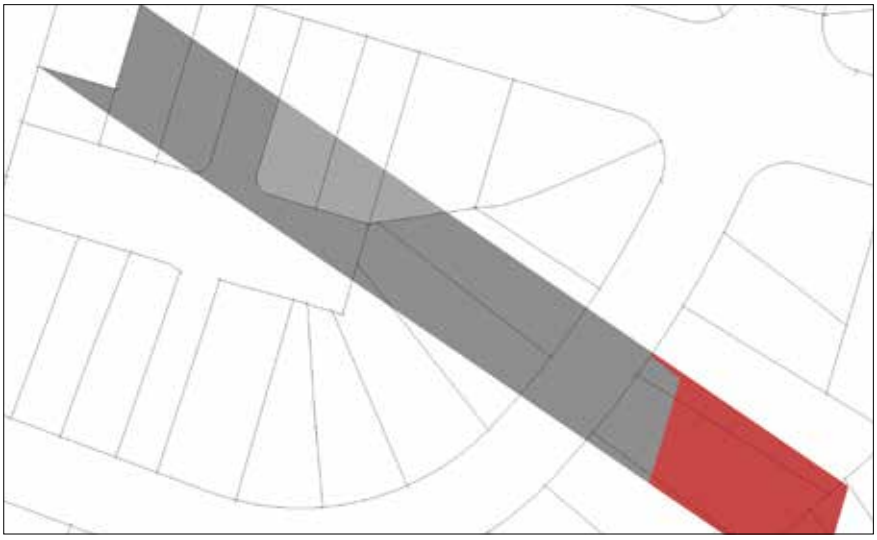
WINTER SOLTICE
21 June
Time shown: 12.00pm



WINTER SOLTICE
21 June
Time shown: 3.00pm



WINTER SOLTICE
21 June
Time shown: 4.30pm



ASSESSMENT OF SHADING FOR INTENSIFICATION TYPE B - 10M RESIDENTIAL

The modelling showed there will be a significant adverse effect for adjoining properties for most of winter as the zone transitions from a low rise residential area into a 10m high residential area with apartments and townhouses. The diagrams show a significant increase in the amount of shading which occurs during winter but lesser degrees of change in Autumn and Spring. In summer the effects are less noticeable except in the late evening when long shadows occurs. It is considered that as the area develops, residual adverse effects will reduce as building typologies change to the new development rules.

5.2.3 INTENSIFICATION TYPE B - 10M HIGH RESIDENTIAL (CASE STUDY : EASTBOURNE)

DEVELOPMENT SCENARIO

This scenario is located on Marine Parade, Eastbourne to show how the existing shade recession planes would influence development which borders a general residential zone. It is positioned on a northwest, habour facing site where it adjoins an area which would remain as a 8m residential zone. The existing shade and side set back requirements are maintained for the boundary adjoining the 8m zone but removed on all others.

PROPOSED ZONING

The sketch shows 12m mixed use in red and 10m residential in orange. The 8m residential area is not coloured.

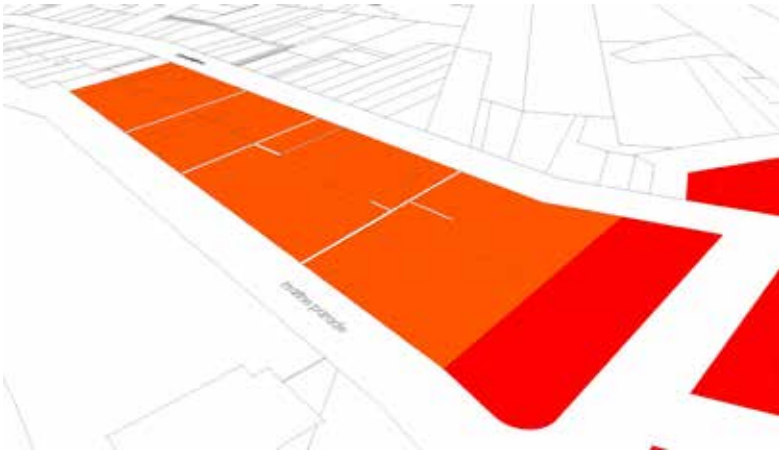


FIGURE 5.2.14 PROPOSED INTENSIFICATION BLOCK

SCENARIO SKETCH

The sketch shows a 10m residential development next to an existing bungalow and how it maybe affected with a 3m side yard setback and a 45° recession plane starting 2.5m above the internal boundary.

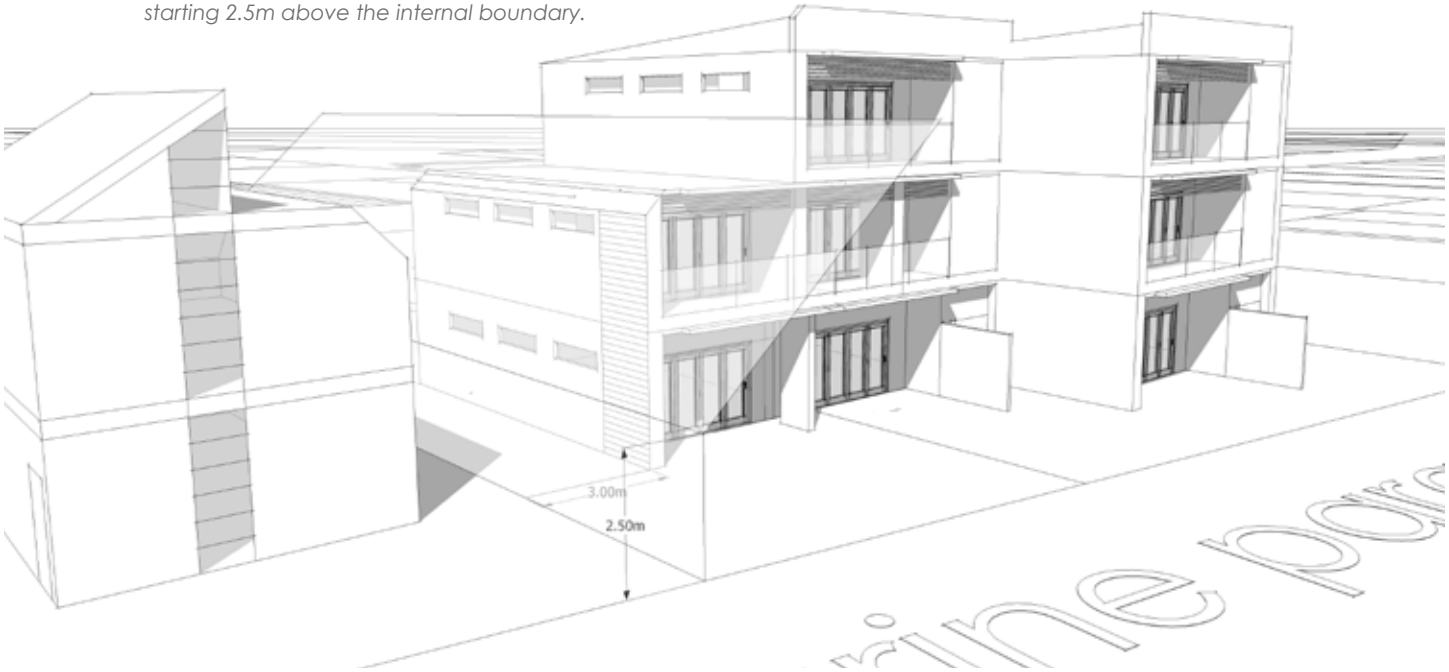
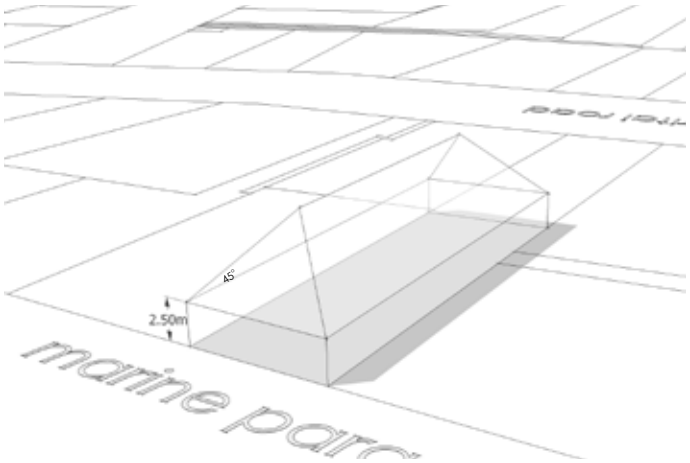


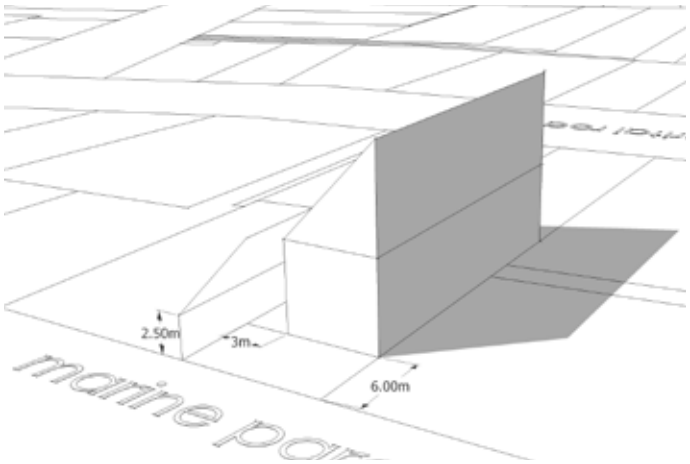
FIGURE 5.15 DEVELOPMENT POTENTIAL

EXISTING MEDIUM DENSITY RECESSION PLANES - PERMITTED BASELINE

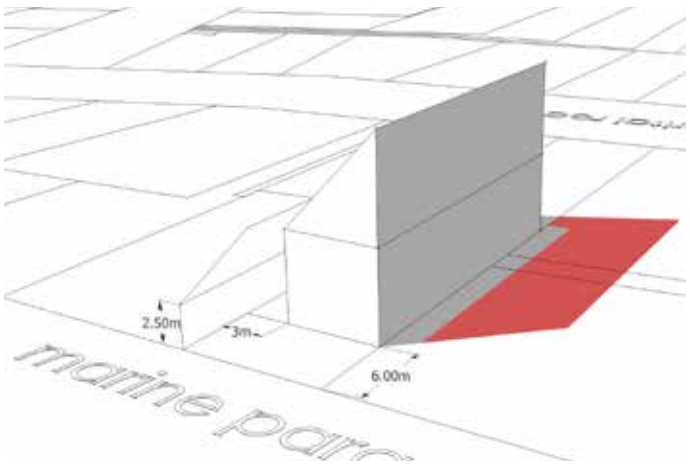
EXISTING SCENARIO The sketch shows the current permitted baseline for medium density housing with an 8m maximum height and 45^{O} shade planes from 2.5m above the ground on all sides



PROPOSED SCENARIO The sketch shows the proposed scenario for Type B with a 10m maximum height, no side yard requirements and no shade planes, except adjacent to the 8m residential zone

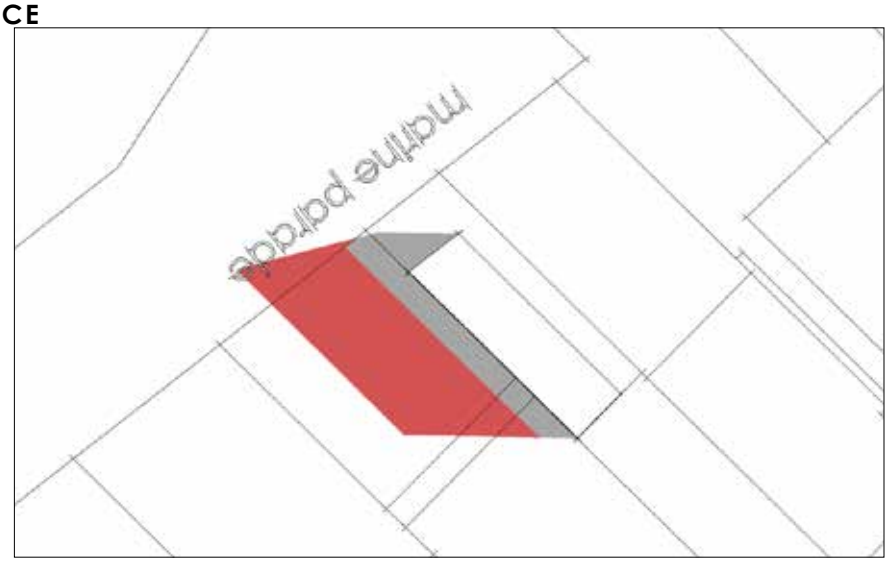


COMPARISON The sketch shows a comparison between the two scenarios with the difference highlighted in red. This shows 12pm, 21 September.

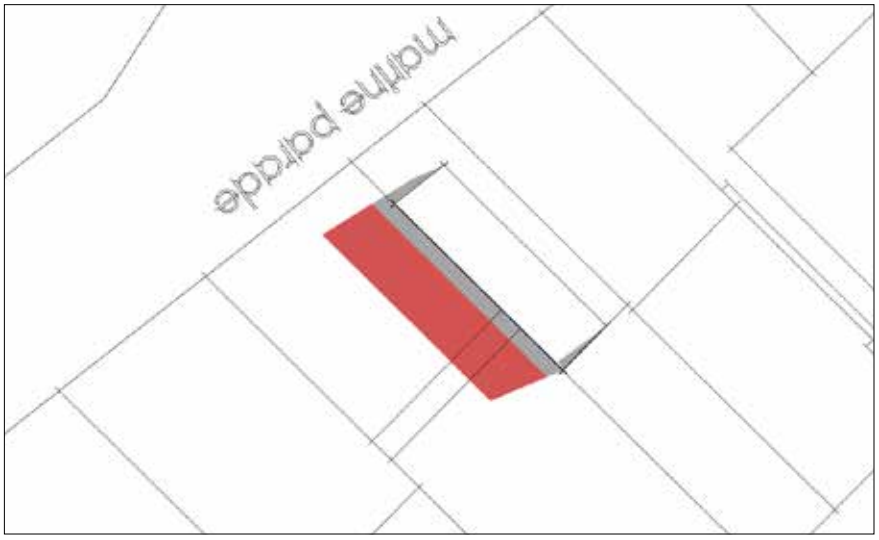


SUMMER SOLTICE

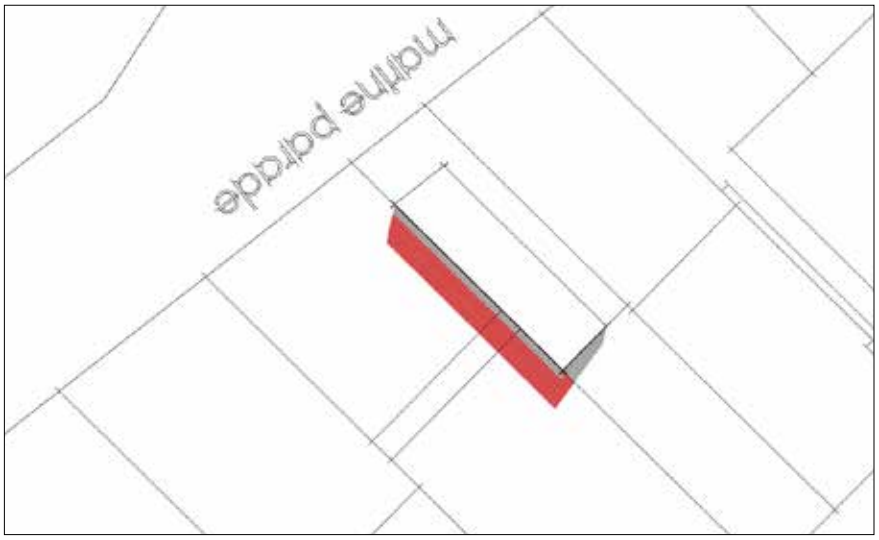
SUMMER SOLTICE
21 December
Time shown: 8.00am



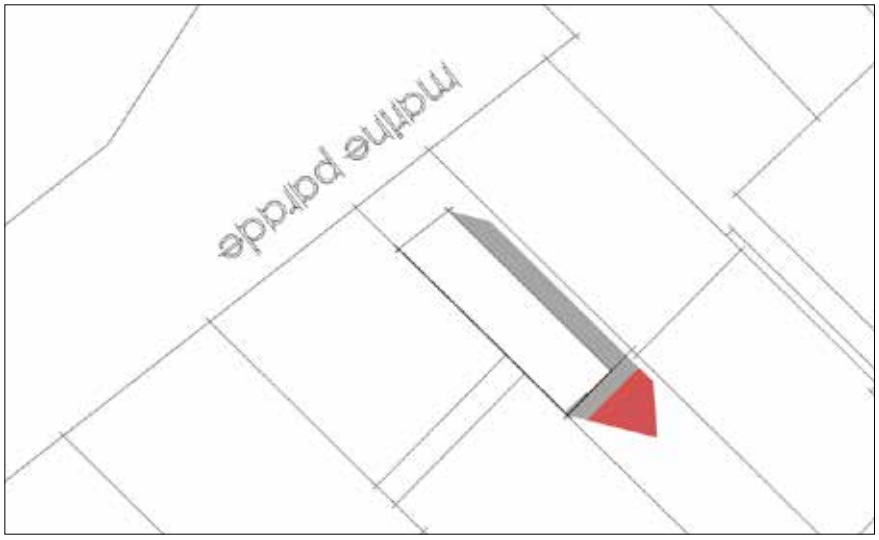
SUMMER SOLTICE
21 December
Time shown: 10.00am



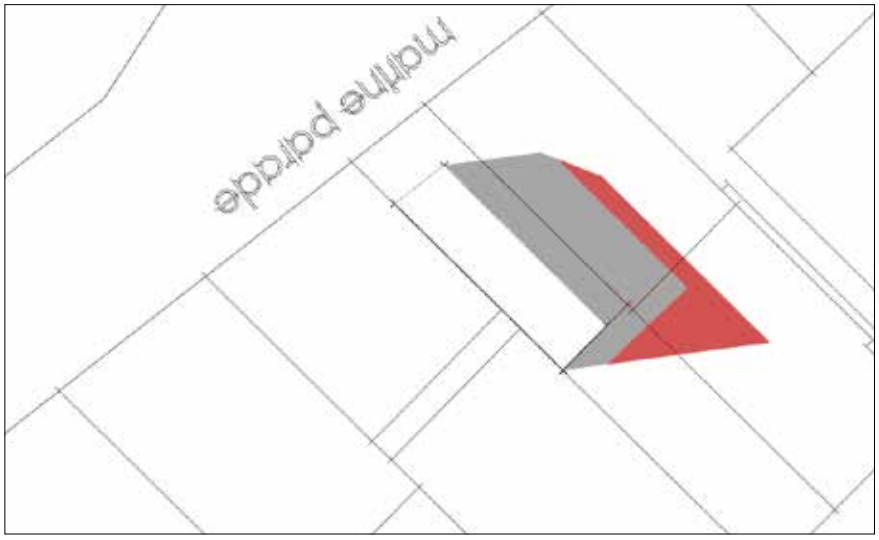
SUMMER SOLTICE
21 December
Time shown: 12.00pm



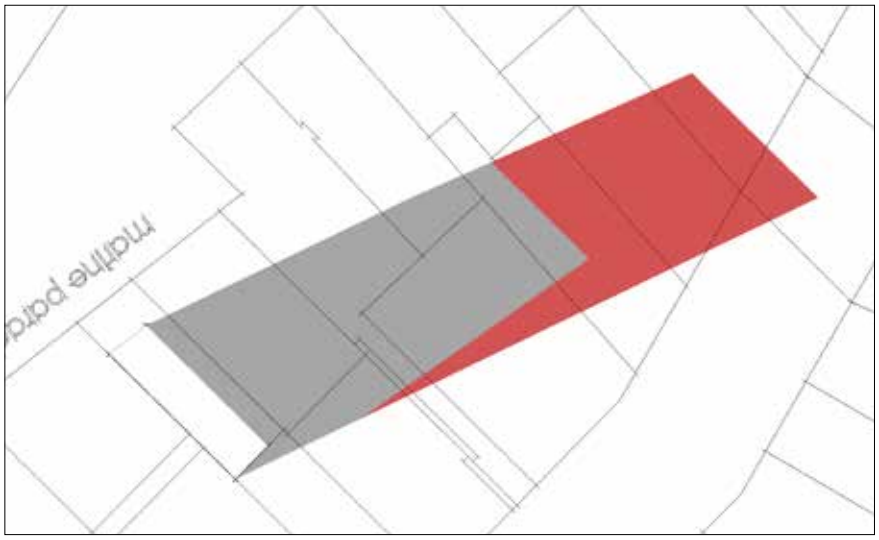
SUMMER SOLTICE
21 December
Time shown: 3.00pm



SUMMER SOLTICE
21 December
Time shown: 5.00pm

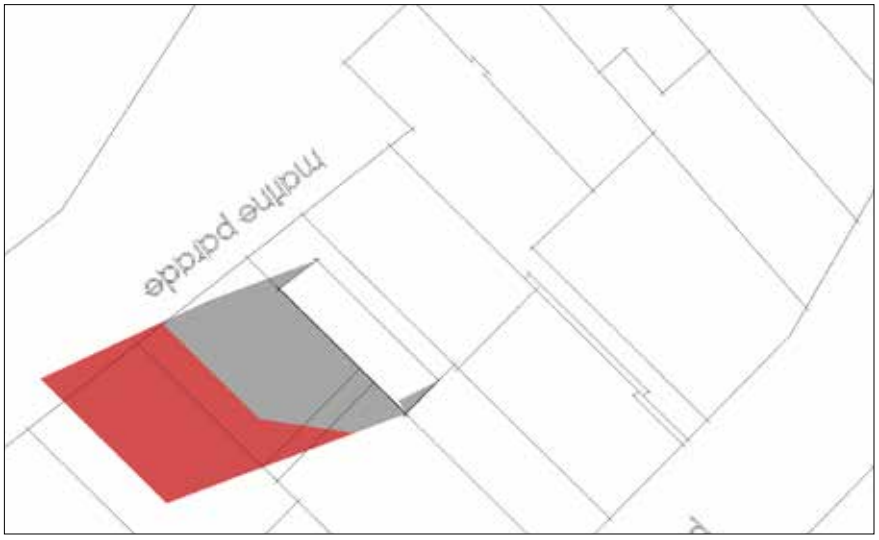


SUMMER SOLTICE
21 December
Time shown: 7.00pm



AUTUMN / SPRING EQUINOX

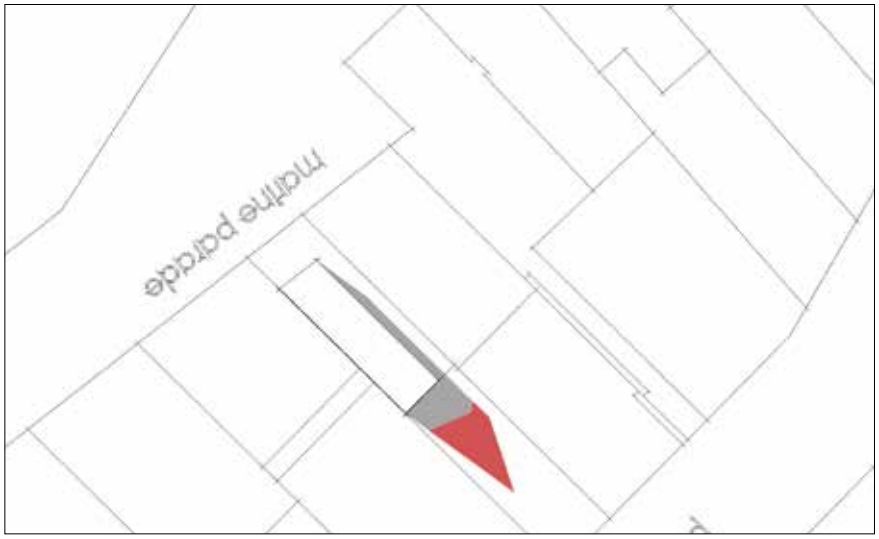
AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 8.00am



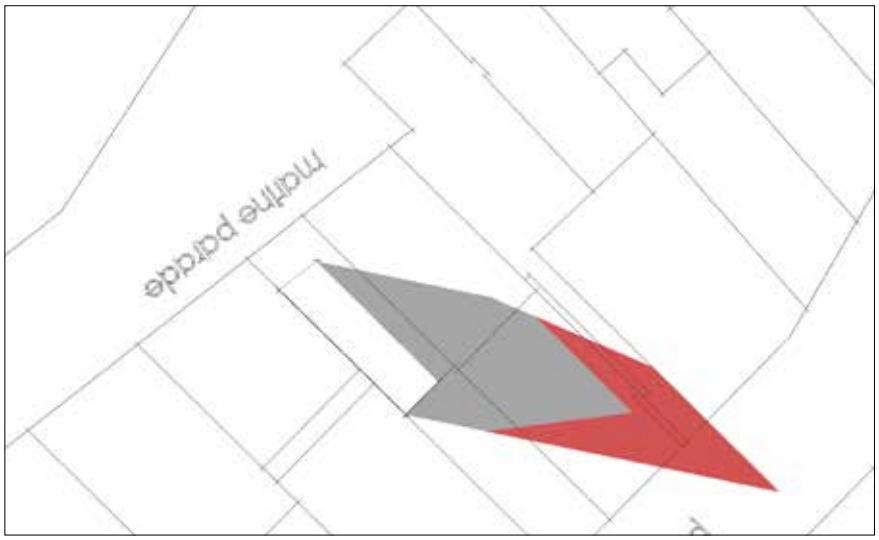
AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 10.00am

AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 12.00pm

AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 3.00pm

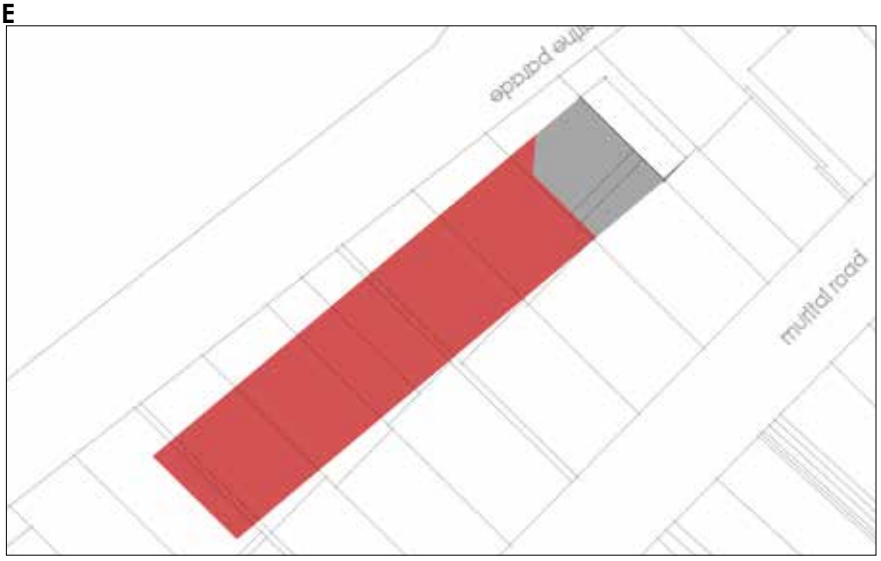


AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 5.00pm

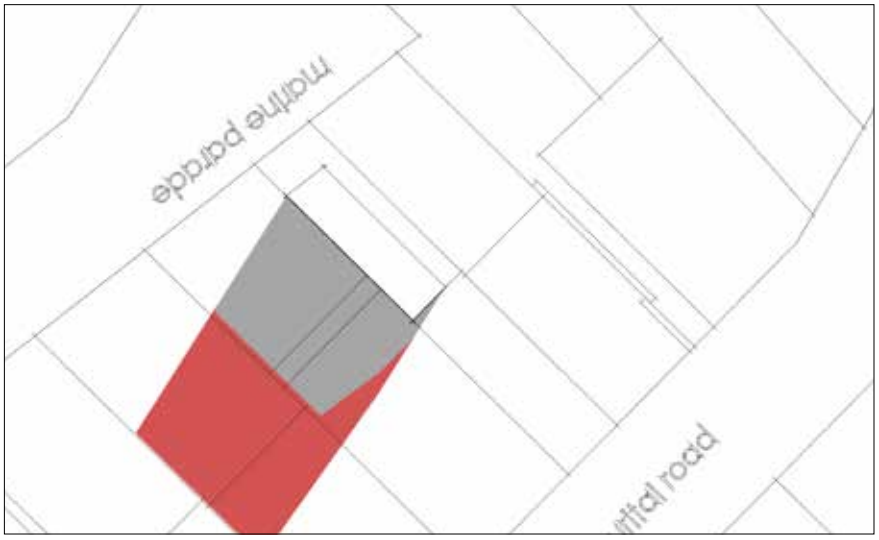


WINTER SOLTICE

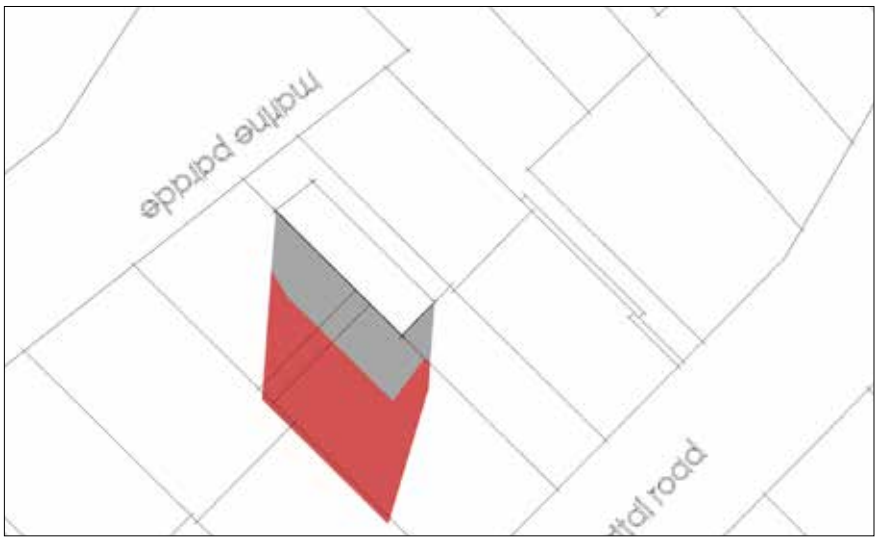
WINTER SOLTICE
21 June
Time shown: 8.30am



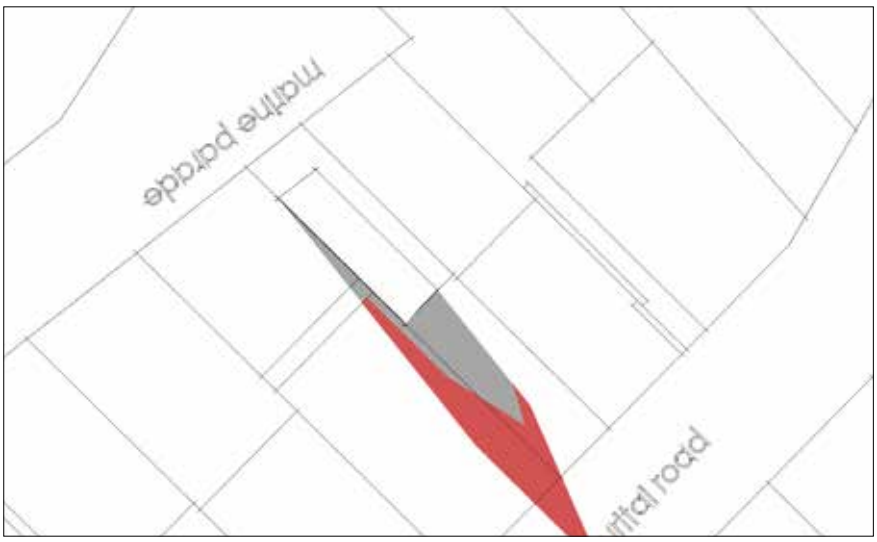
WINTER SOLTICE
21 June
Time shown: 10.00am



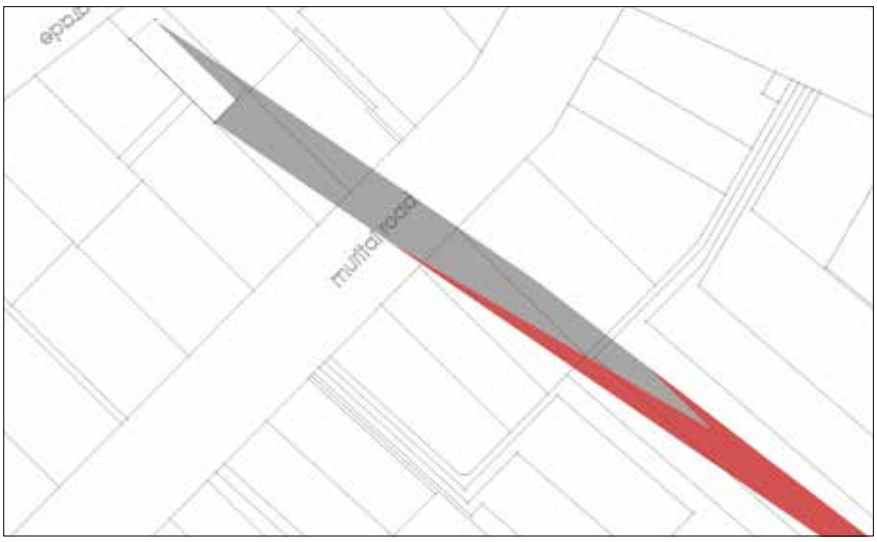
WINTER SOLTICE
21 June
Time shown: 12.00pm



WINTER SOLTICE
21 June
Time shown: 3.00pm



WINTER SOLTICE
21 June
Time shown: 4.30pm



ASSESSMENT OF SHADING FOR INTENSIFICATION TYPE B - 10M RESIDENTIAL ADJACENT TO GENERAL RESIDENTAL

The modelling showed there will be some adverse effects for adjoining properties for most of the year on the zone boundary between 10m and 8m. The 3m side yard set back and the 45 degree recession plane is considered effective in minimising adverse effects caused by the increase height. The results which are most helpful in this situation are the afternoon images where the effects are not too dissimilar from the existing effects. The morning images show the effects of no side yard and no set back, which are significant, but these adjoin a 10m residential property.

5.2.4 INTENSIFICATION TYPE C - COMPREHENSIVE DEVELOPMENT ON A 2,000M² LOT WITHIN THE GENERAL RESIDENTIAL ZONE (CASE STUDY : STOKES VALLEY)

DEVELOPMENT SCENARIO

This scenario is located on Rawhiti Street in Stokes Valley but could be on any lot within the general residential zone which is greater than 2,000m² in area. In this example 2 lots have been combined.

PROPOSED SITE

The sketch shows the proposed site for comprehensive development, being a total area of 2,060m².

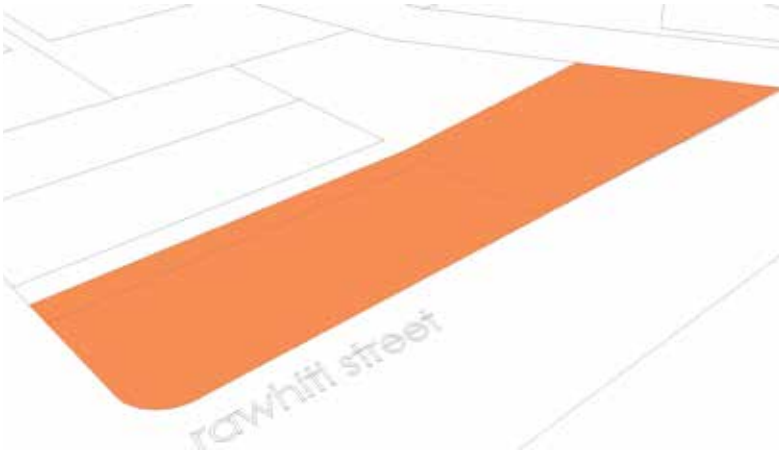


FIGURE 5.2.15 PROPOSED INTENSIFICATION BLOCK

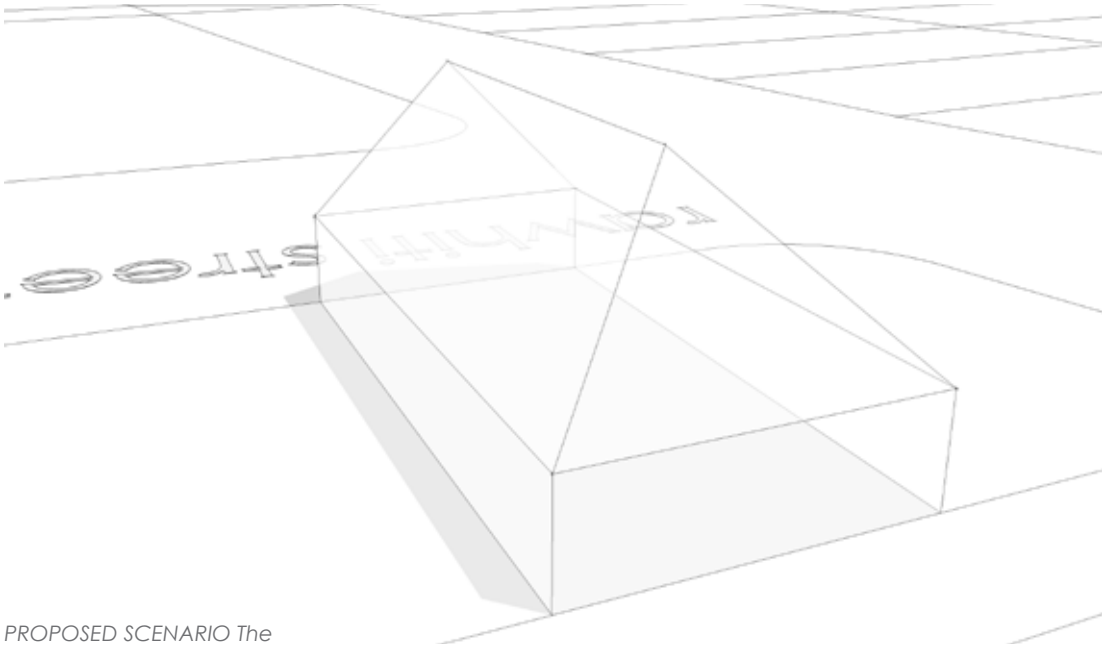
SCENARIO SKETCH

The sketch shows a 10 residential dwellings on a 2,060m² site. A 3m side yard setback and a 45° recession plane starting 2.5m apply on external property boundaries (not street boundaries) but not on internal boundaries

FIGURE 5.2.16 DEVELOPMENT POTENTIAL

EXISTING MEDIUM DENSITY RECESSION PLANES - PERMITTED BASELINE

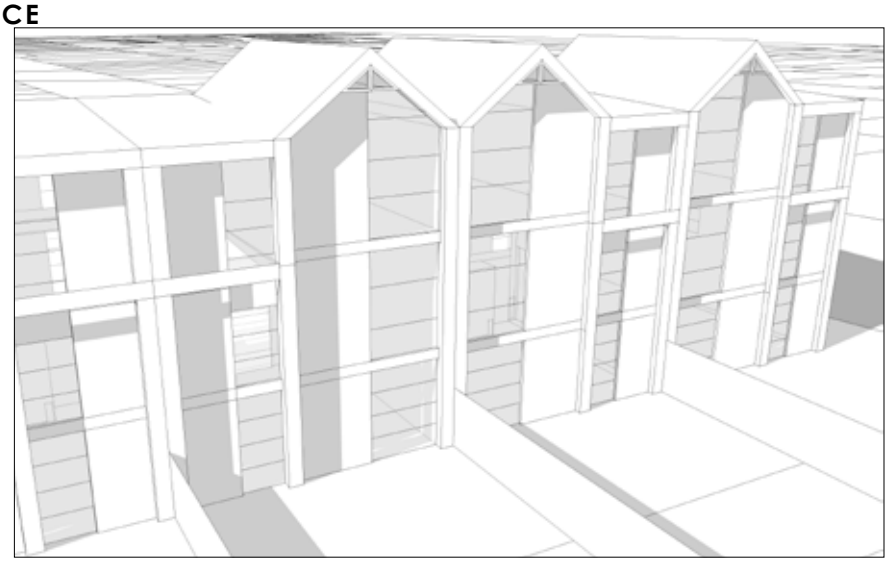
EXISTING SCENARIO The sketch shows the current permitted baseline for medium density housing with an 8m maximum height and 45^{O} shade planes from 2.5m above the ground on all sides



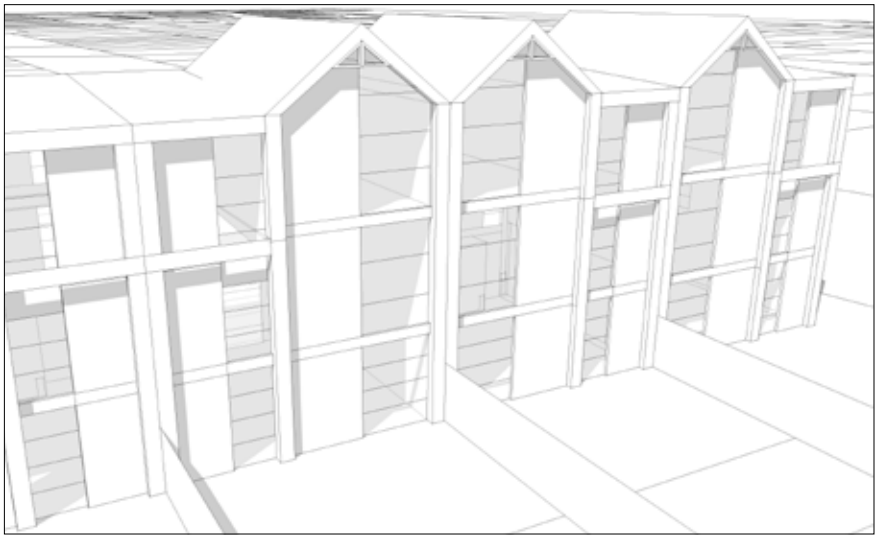
PROPOSED SCENARIO The sketch shows a terrace house, comprehensive development where there are no internal side yards or recession planes

SUMMER SOLTICE

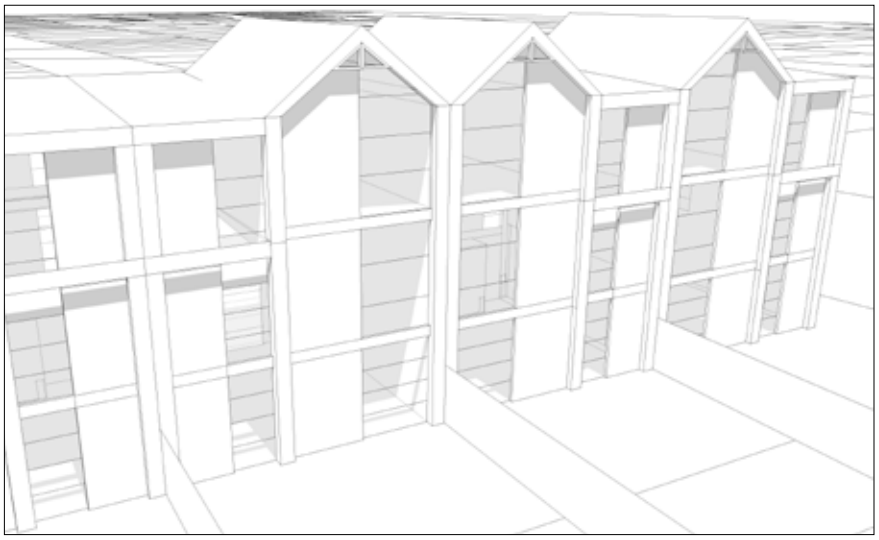
SUMMER SOLTICE
21 December
Time shown: 8.00am



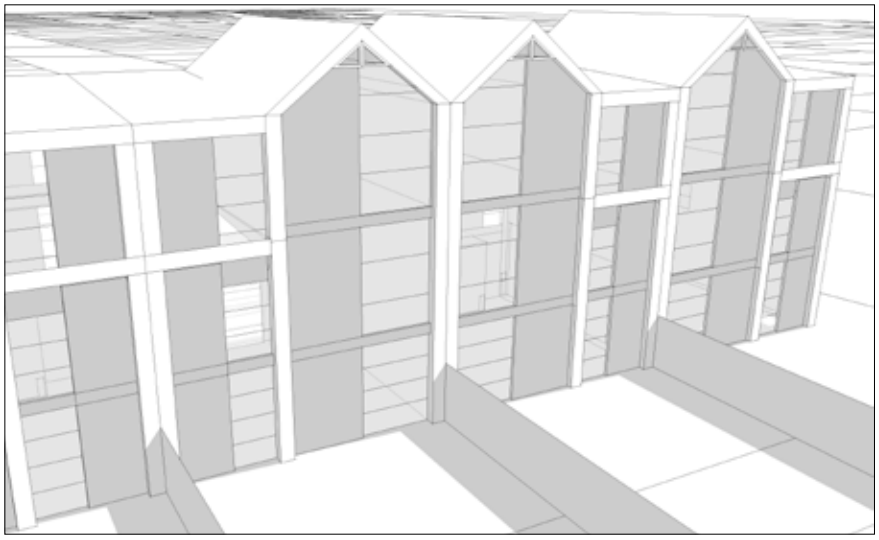
SUMMER SOLTICE
21 December
Time shown: 10.00am



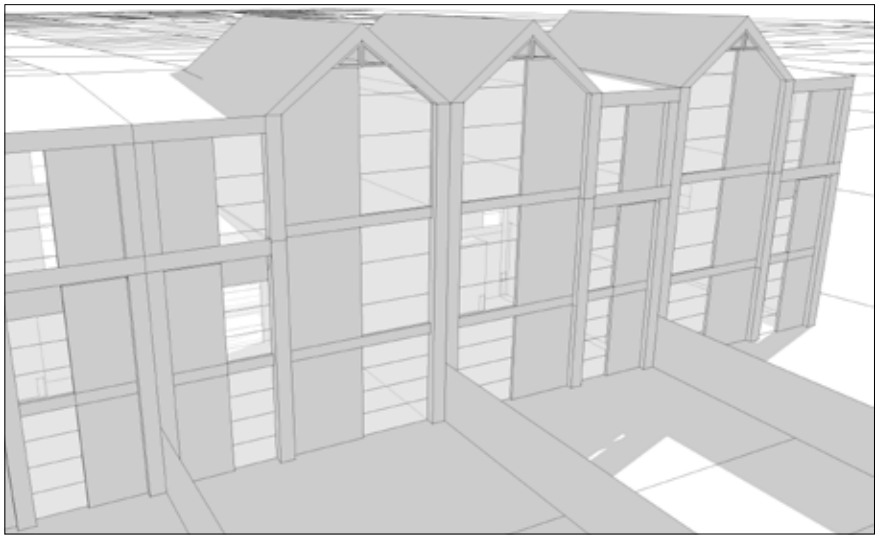
SUMMER SOLTICE
21 December
Time shown: 12.00pm



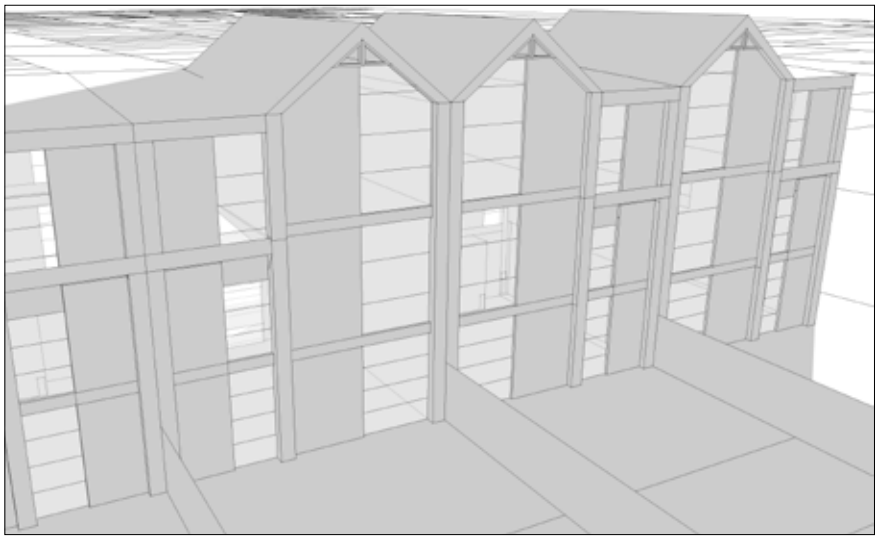
SUMMER SOLTICE
21 December
Time shown: 3.00pm



SUMMER SOLTICE
21 December
Time shown: 5.00pm

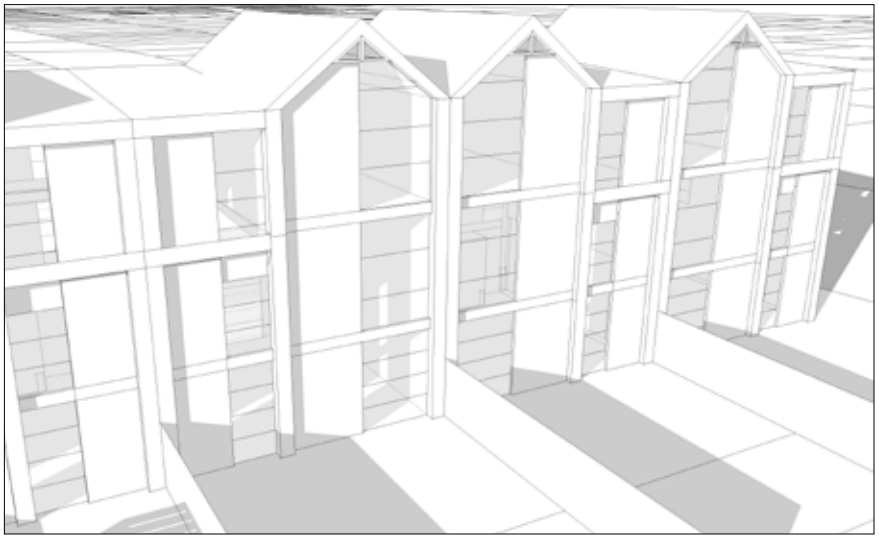


SUMMER SOLTICE
21 December
Time shown: 7.00pm

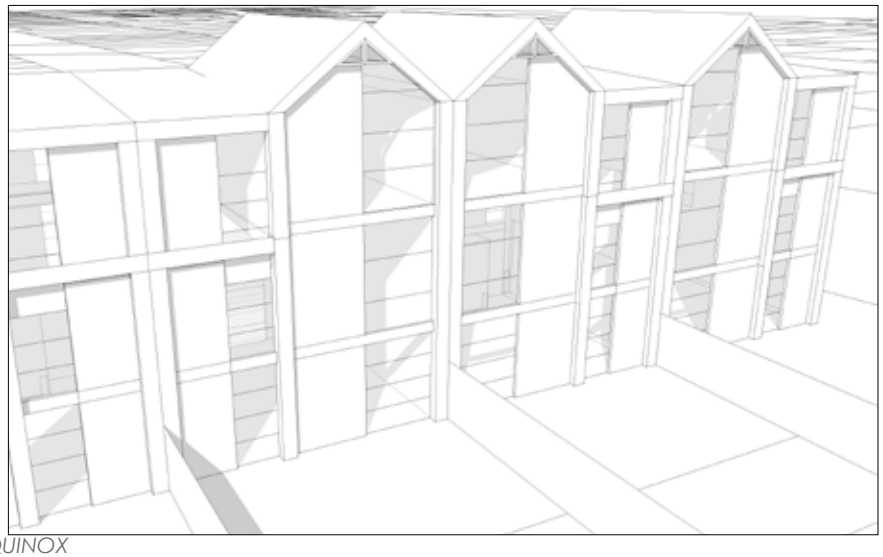


AUTUMN / SPRING EQUINOX

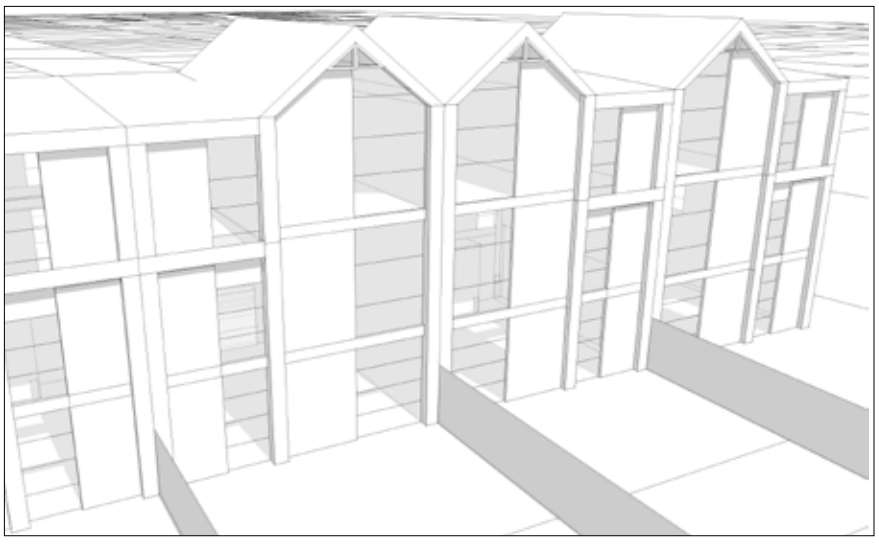
AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 8.00am



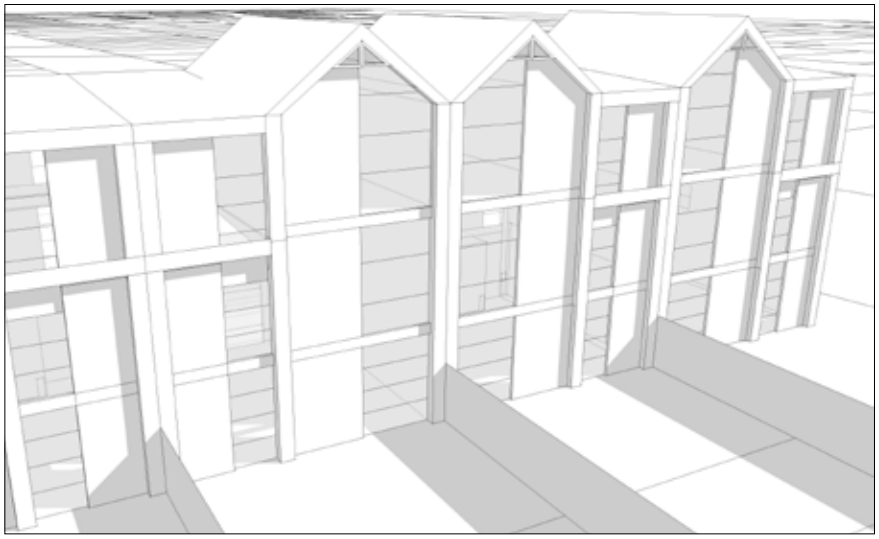
AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 10.00am



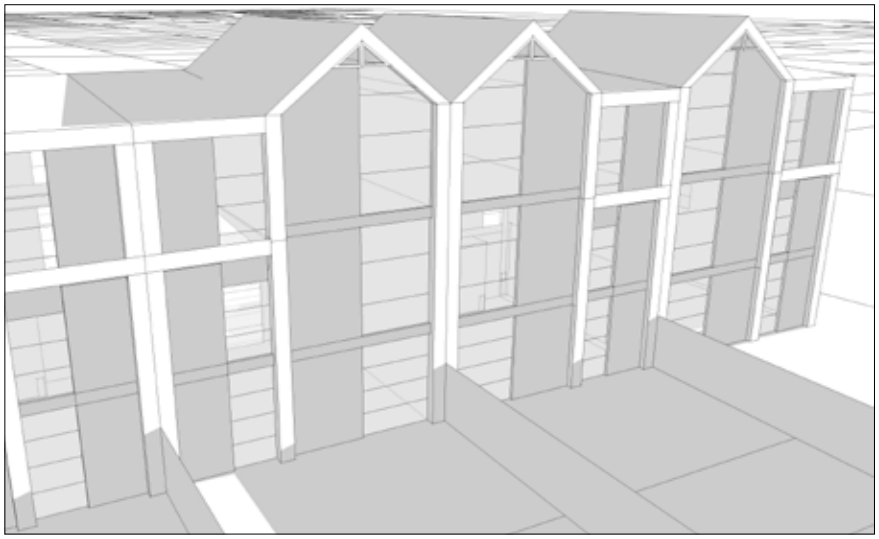
AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 12.00pm



AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 3.00pm

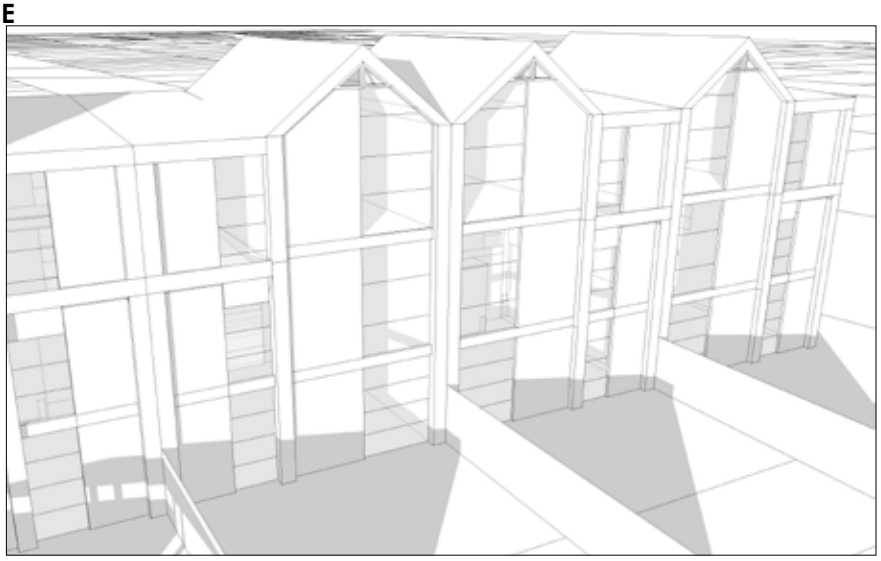


AUTUMN / SPRING EQUINOX
21 March / September
Time shown: 5.00pm

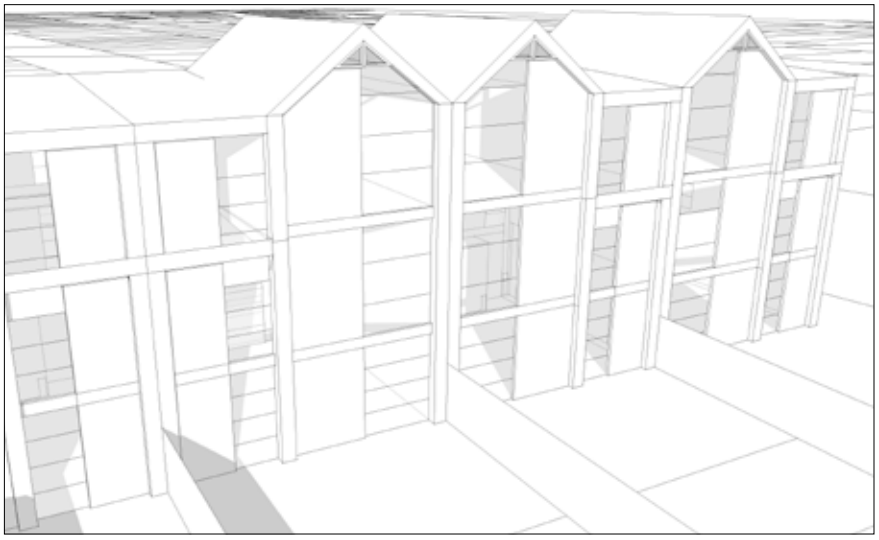


WINTER SOLTICE

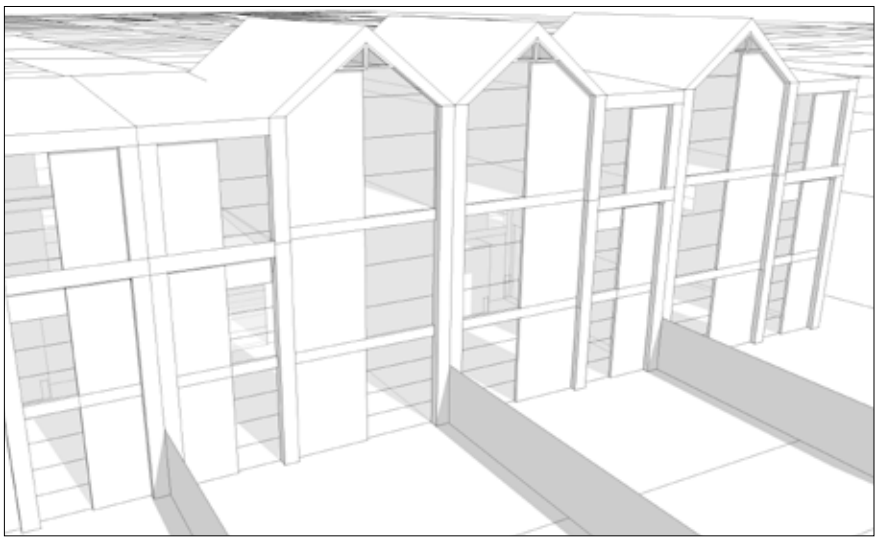
WINTER SOLTICE
21 June
Time shown: 8.30am



WINTER SOLTICE
21 June
Time shown: 10.00am



WINTER SOLTICE
21 June
Time shown: 12.00pm



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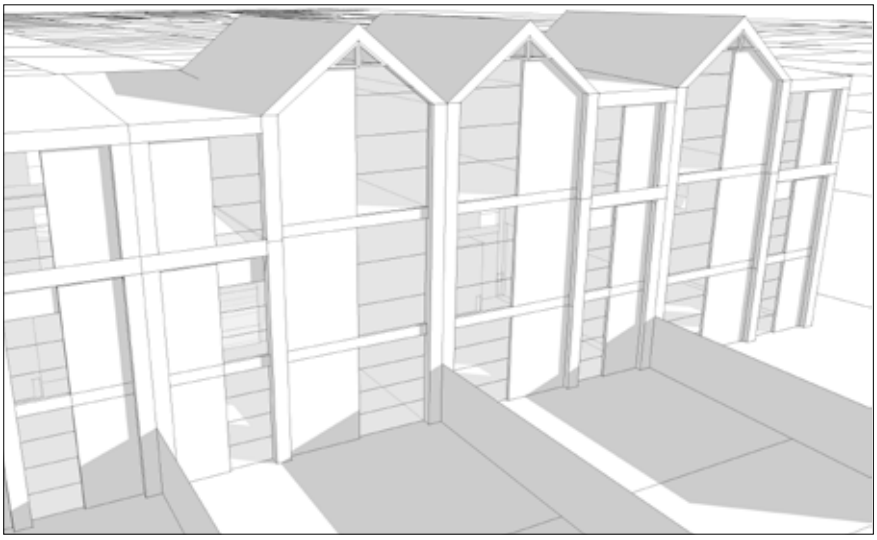
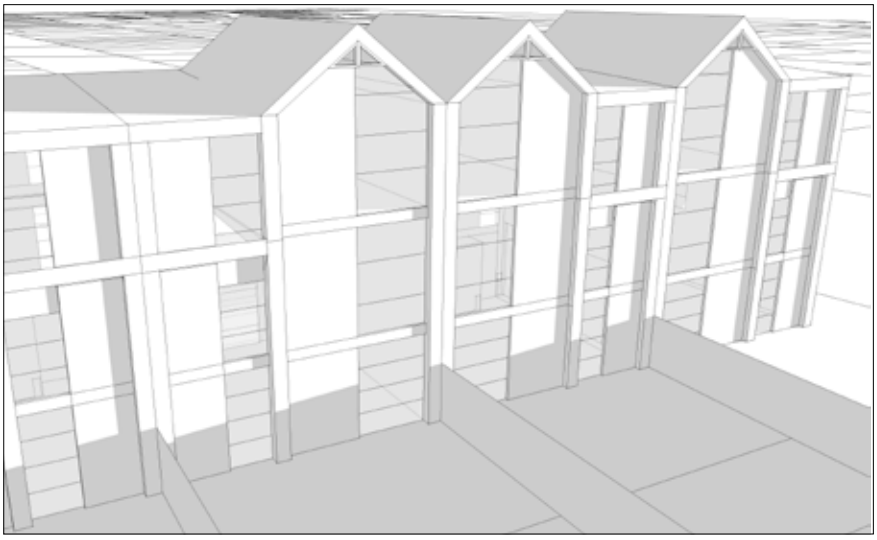
21 June
Time shown: 3.00pm



WINTER SOLTICE
21 June
Time shown: 4.30pm



ASSESSMENT OF SHADING FOR INTENSIFICATION TYPE C

The modelling shows how the removal of side yards and internal recession planes can maximise the amount of developable space while not having an adverse effect on the amount of light a dwelling receives into its main living areas and outdoor courtyards. In all of the images, the private outdoor courtyard receives sunlight throughout the year. If the development were to be located on the southside of the road an option could be to provide the private courtyard on the north facing street front.

5.3 LOW IMPACT DESIGN SOLUTIONS

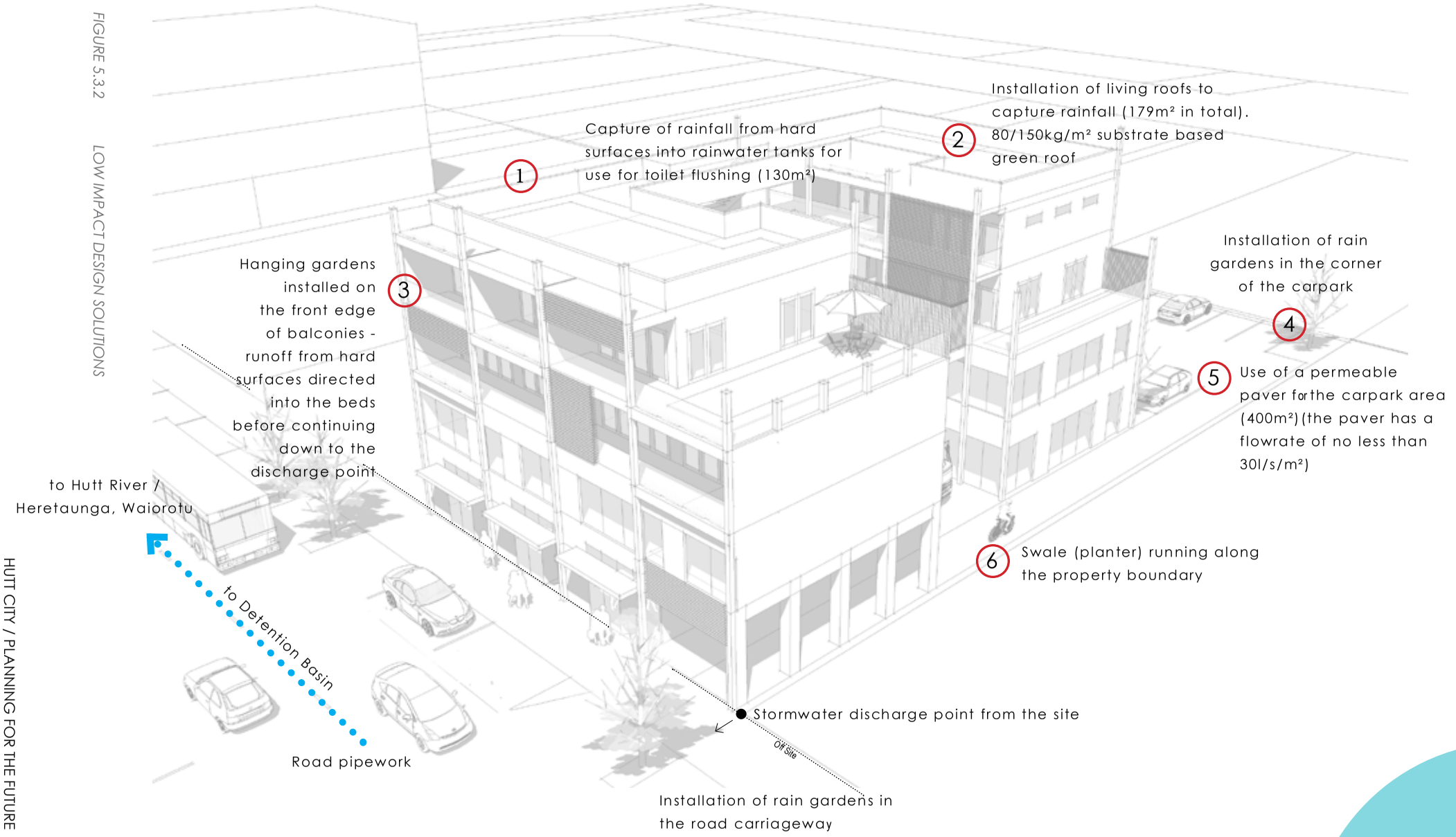
For targeted areas of intensification to be acceptable from an infrastructure and hazards management perspective, a proposed development would also need to confirm that the development could be stormwater neutral. For example, peak stormwater runoff from the site will be no more than the existing situation. In some cases this will mean that some development sites will not be able to be developed until upgrades to existing stormwater infrastructure are in place. In other cases they will just need in addition to stormwater upgrades, to implement low impact design solutions into the development such as those outlined below. To illustrate this an example of the highest hard stand building typology has been used to illustrate the incorporation of low impact design techniques into the development. The following sketch shows a possible 12m high mixed use development and how low impact design solutions could be incorporated into the building design with a view to having a stormwater 'neutral' development.

FIGURE 5.3.1 12m HIGH MIXED USE DEVELOPMENT INCORPORATING LOW IMPACT DESIGN SOLUTIONS

THE BUILDING CONSISTS OF:

1.	6 x 1bedroom studios (35m²+10m² balcony)	270m²
2.	3 x 2 bedroom apartments (70m² + 15m² balcony)	255m²
3.	2 x 3 bedroom apartments (90m² + 20m² balcony)	220m²
4.	Utility space (stairs, lifts, walkways, communal outdoor space)	268m²
5.	Office space	600m²
6.	Retail space (3 units)	165m²

SITE AREA	1,029m²
BUILDING HEIGHT	12m (excluding 1m parapet)
GFA	1,778m²
SITE COVERAGE	50%


1
Capture of rainfall from hard surfaces into rainwater tanks for use for toilet flushing (130m²)
2
Installation of living roofs to capture rainfall (179m² in total). 80/150kg/m² substrate based green roof
3
Hanging gardens installed on the front edge of balconies - runoff from hard surfaces directed into the beds before continuing down to the discharge point
4
Installation of rain gardens in the corner of the carpark
5
Use of a permeable paver for the carpark area (400m²) (the paver has a flowrate of no less than 30l/s/m²)
6
Swale (planter) running along the property boundary
to Hutt River / Heretaunga, Waiorotu
to Detention Basin
Road pipework
Stormwater discharge point from the site
Off Site
Installation of rain gardens in the road carriageway

5.4 SUMMARY OF EFFECTS

To summarise the likely effects of different development scenarios, using the models and illustrations previously shown, the following issues are addressed:

- Privacy Effects
- Shading
- Role of large trees in providing amenity
- Carparking and a well-defined built edge

PRIVACY EFFECTS

Issues relating to a loss of privacy (whether actual or perceived) are often associated with the development of higher intensification projects. Many effects are the result of poorly designed developments where the indoor living areas of one unit look directly into the indoor or outdoor living area or an adjoining unit. It can also result where there is insufficient space between buildings, resulting in windows from adjacent units looking directly into each other. All of these effects can be mitigated either through building design, site layout, landscape elements or a combination of the three. The sketch below is one example of how privacy can be maintained with a terrace house development.

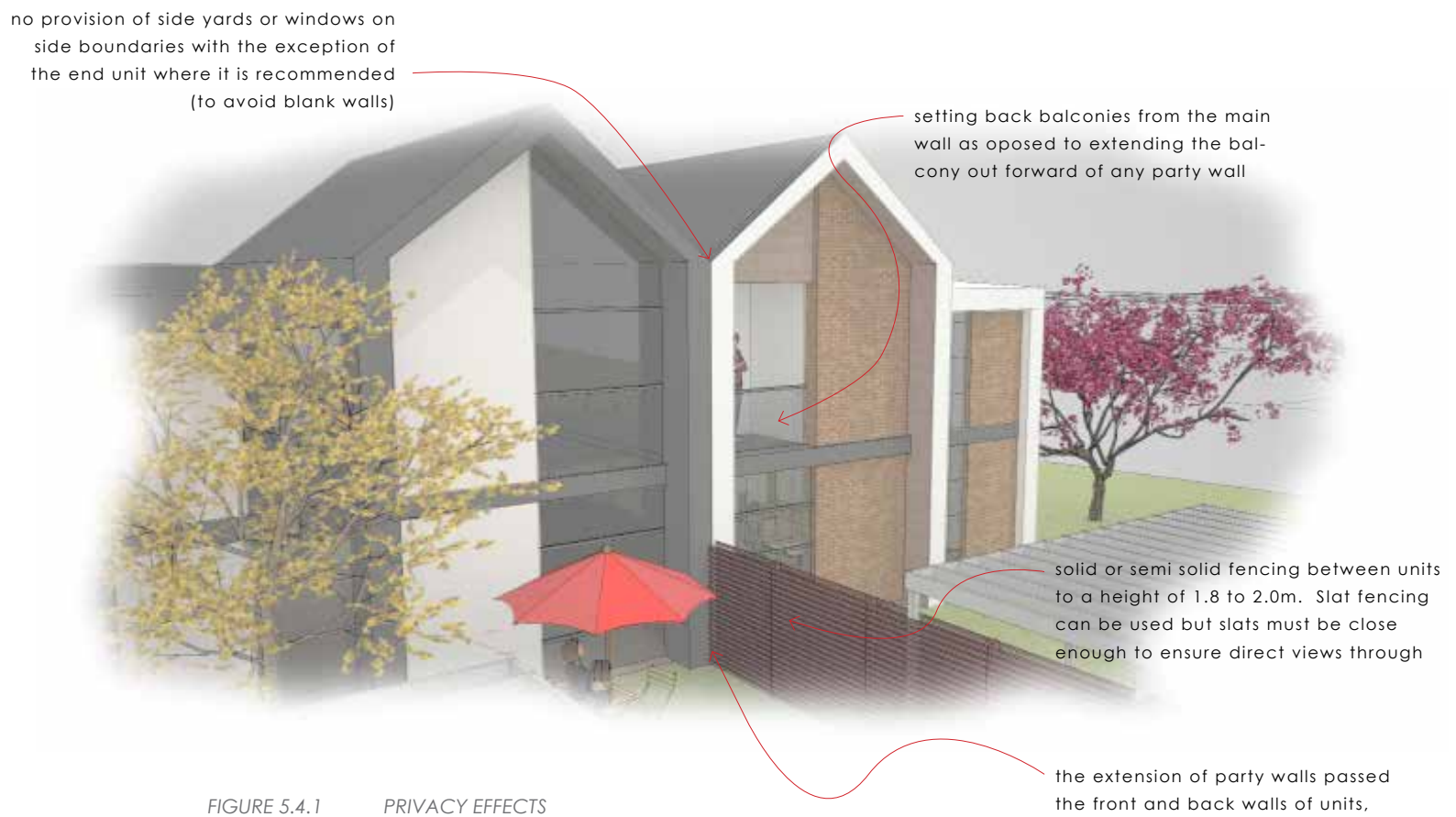


FIGURE 5.4.1 PRIVACY EFFECTS

THIS IS AN EXAMPLE OF INITIAL PRIVACY ISSUES IN BACK YARDS AS SUBURBS TRANSITION FROM LOW TO MEDIUM DENSITY DEVELOPMENTS

SHADING

Shading effects are considered to be the largest (adverse) change to existing amenity levels. It is recognised that there will be a considerable level of change as buildings change from a single storey dwelling on an individual title to up to four storey buildings built right up to the boundary. Significant adverse effects will be experienced for Intensification Types A and B, during the 'transitional' period when there is a mix of house typologies immediately adjacent to each other. Over time these effects will reduce. Intensification Type C is not considered to have adverse shading effects as the existing (current) shade recession planes are maintained at the site boundaries. A description of the change likely from each intensification type is outlined below.

Intensification Type A – 12m Mixed use

For the mixed use areas, which are typically in existing suburban commercial area, the modelling showed there will be a significant adverse effect for adjoining properties from Autumn through to Spring including the winter solstice as the zone transitions from a low rise residential area into a 12m high mixed use area with apartments. The diagrams show a significant increase in the amount of shading which occurs. In Summer the effects are less noticeable except in the late evening when long shadows occurs. It is considered that as the area develops, residual adverse effects will reduce as building typologies change to the new development rules. Shade recession rules will still apply where the development adjoins a residential zone.

Intensification Type B – 10m Residential

For the 10m residential areas the modelling showed there will be a significant

adverse effect for adjoining properties for most of winter as the zone transitions from a low rise residential area into a 10m high residential area with apartments and townhouses. The diagrams show a significant increase in the amount of shading that occurs during winter, but lesser degrees of change in autumn and spring. In summer the effects are less noticeable, except in the late evening when long shadows occurs. It is considered that as the area develops, residual adverse effects will reduce as building typologies change to the new development rules.

Where a Type B development adjoins properties in a Residential Zone with 8m building height limit, the modelling showed there will be some adverse effects for adjoining properties for most of the year. The 3m side yard setback and the 45 degree recession plane is considered effective in minimising adverse effects caused by the increase height. This is evident in the afternoon images, which show the effects are not too dissimilar from the existing shading effects. The morning images show the effects of no side yard and no set back, which are significant, but these relate to development adjoining another Type B residential property.

Intensification Type C - Comprehensive Residential Development

The modelling shows how the removal of side yards and internal recession planes can maximise the amount of developable space, while not having an adverse effect on the amount of light a dwelling receives into its main living areas and outdoor courtyards. In all of the images, the private outdoor courtyard receives sunlight throughout the year. If the development were to be located on the south-side of the road an option could be to provide the private courtyard on the street front. This scenario is considered to have positive effects in terms of amenity.

THE ROLE OF LARGE TREES

Large established trees play a significant role in the amenity and character of a suburb. Numerous studies and reports have been prepared highlighting the benefit large trees can play in the social, economic and environmental aspects of a neighbourhood. In many cases this is a result of trees in the public realm, i.e. road reserve and parks due to them being controlled by Councils who protect and maintain these trees, as opposed to those trees in private ownership. However, there are still levels of control occurring on private property.

The District Plan is a key tool to control tree removal (on private property) where particular trees are listed as significant. This can be added to or amended through the District Plan review or a plan change.
Amendments to the Resource Management Act on trees steer District Plans away from having blanket tree rules. As a result, HCC is removing

FIGURE 5.4.2 PRUNING OF STREET TREES TO ALLOW FOR OVERHEAD INFRASTRUCTURE

protection of trees on private land, but identifying and protecting specific listed trees under proposed plan change 36: Notable Trees and Vegetation Removal. Protected trees on private land are often view as a constraint to development. However through this process protection for notable trees on private property will be recognized. As a result, future residential intensification will also have to balance the amenity and character provided by these trees in future development decisions.

From our observations with developments, the greatest control over tree removal (on private property) comes through the District Plan process and trees being listed as significant. Many Councils also reserve right to define any tree at the time of subdivision application as being significant and is able to register a consent notice against the title. However, this provides no protection to the tree prior to any application being sought and may result in sites being clear felled prior to seeking approval. The alternative is for a larger number of trees to be listed at the time of District Plan review but this is often constrained by resourcing issues, or may result in some sites not be able to be intensified and some landowners being unduly penalized, providing amenity for adjacent higher density dwelling while not being able to develop themselves.

However, as highlighted above the importance of trees in the public realm is of greater significance in terms of amenity. This is particularly so with promoting development to be built up to or close to the street boundary to create well-defined, strong edges to streets, as well as improving the flexibility for the future use of buildings. Street trees have a great impact on the

character of suburb, which is especially important as infill development and high density typologies are constructed.

Hutt City is well provided for in terms of street trees with a number of well established avenues. Unfortunately, pruning by utility providers has had a detrimental effect of the form and habitat of a large number of trees with the centre being cut out. The photo above (figure 5.4.2) shows a typical tree lined street where the centre of all the trees along one side have been removed to allow for electricity and telecommunication lines. While not part of this project, it is suggested that the policy regarding overhead infrastructure Is reviewed as the overhead lines are a significant detractor to an area's amenity.

A similar adverse effect that may arise from the provision of infrastructure relates to the position of vehicle accessways into developments and the location of street trees. The greater number of accessways, the greater likelihood that there will be a clash with existing trees or prevent street trees being planted in the future. A key consideration in any development is the location of accessways with the aim to minimise the number of vehicle crossings. By either consolidating entrances or creating laneways it is possible to create a greater amount of space available for street trees as well as on street car parking. In all of the intensification scenarios it is considered that the loss of vegetation is likely to be 'neutral' in terms of effects and largely dependent on an actual design. As a result, while this assessment is around amenity impacts it is worthwhile considering as part of the ongoing review of the district plan whether accessways, laneways and influence of street parking should be addressed to manage street amenity.

LOW IMPACT DESIGN – STORMWATER

The sketches and systems presented in Section 5.3 show how it is possible for low impact design solutions to be incorporated on-site to minimise runoff and peak flows with a view to achieving stormwater neutrality or at least a reduction. All of the systems are cost effective if incorporated during the design phase (as opposed to being retrofitted) but require maintenance to ensure their effectiveness is retained. By implementing systems such as these they can reduce peak stormwater discharges reducing the impact on Council owner stormwater infrastructure, subject to on-site solutions being well-designed and maintained.

CARPARKING AND A WELL-DEFINED BUILT EDGE

The location of both carparking and entrances can have a significant effect on streetscape amenity. If carparks are positioned at the rear of buildings or placed underneath, it prevents parked cars from dominating the streetscape visually, or inconveniencing pedestrians and cyclists. The best

places for off-street car parking are in secure rear courtyards, where these are well overlooked. An additional benefit is on-street carparking can be increased with the consolidation of accessways and vehicle entrances to laneways and reduction of minimum carparks where you have a higher density development form. Moving carparking to the rear of the site also allows for the development of a strong, well defined built edge which improves legibility and the creation of active frontages to buildings. As such, while the proposed changes can strengthen the design response as land use changes.

CHARACTER ENHANCEMENT

In many of the suburbs evaluated the building stock varied considerably with extensively renovated 1900-1920 villas or bungalows through to houses which have had poor additions or modifications to their frontages, detracting from the quality of an area's/street's character. Landscape treatment also varied greatly and those dwellings which have either a low (less than 1.2m in height) or no fence contributed more positively to the streetscape character than properties with high fences or vegetation. The difficult aspect in determining where intensification should occur is looking past poorly designed/constructed modifications or landscape treatment to look purely at the scale, age and built form of the existing buildings. Generally, where there is a consistent, small, setback combined with an open frontage, it results in a strong relationship between the house and the footpath.

It is recommended that comprehensive mapping, in addition to what has been completed for this project and the recent Petone Spatial Plan, of an area is undertaken where there are character concerns where further intentisfication is proposed. This study can highlight what are the qualities which should be protected. This may be the retention of a consistent setback, the placement of garages and the position of the front door relative to the street as some examples. This would provide greater recognition that existing dwellings may be retained adjacent to higher density developments and potential reinstatement of recession planes for an area (compared to other areas) with the exception of the street recession plane.

SUMMARY

In summary, the proposed Intensification Types A and B will have a significant adverse effect on shading existing dwellings within a zone until housing typologies become more homogeneous in character, setbacks and built form. Other effects such as increased traffic, reduced privacy and the potential for the losts of large trees can all be mitigated through good design principles and district plan rules.

6. POTENTIAL YIELD

To assist with determining whether the proposed development scenarios would allow sufficient capacity for growth in the city, a 'yield potential' table was developed based on the areas presented in Appendix A. Assessing the 'yield potential' is difficult as there are a large number of uncontrollable variables, for which a number of assumptions must be made. A minor change in an assumption threshold/percentage can have a dramatic influence on the number of dwellings which may actually be achieved. As a result these numbers must be interpreted as a guide as opposed to a fixed number. The key outcome demonstrated by these potential yield calculations are that even if not all of these areas are taken up that there is sufficient capacity within the Hutt City urban area to provide for the outcomes sought through the Urban Growth Strategy. The following assumptions have been made:

1. TYPE A – MIXED USE

a. Assumes each building will be 4 storeys in height with 50% site coverage. In calculating the size of the buildings, no account has been made for carparking, service areas, communal stairwells and lifts etc. They are simply Gross Floor Area. A 50% coverage was assumed although some sites may have 100% site coverage - this is to allow for car parking, service areas and outdoor living space.
b. Retail - assumes retail can only be on the ground floor and only occupies 25% of the building, with an average retail unit of 60m²
c. Office - assumes the remainder of the ground floor is office along with 100% of the first floor. Note in many cases there could be potential for residential activities to occur on the first floor as well.
d. Apartment - assumes the remaining two floors are apartments with an average apartment size of 80m² - this is large as a one bedroom apartment can be as small as 30m², two bedroom 70m² and a three bedroom unit 90m². The average size of 80m² is considered a good average to allow for well-sized apartment units. Other factors such as location and market demand will have a greater influence on what is actually constructed.
e. In reality not all buildings will be 4 storeys. A large number will only be 2 or 3 storeys, largely determined by construction costs and whether the additional costs of going higher can be recuperated by higher sale price.

2. TYPE B - 3 STOREY DEVELOPMENT

a. A 3 storey residential building with a 50% site coverage and average townhouse size of 150m² (3-4 bedroom plus stairs, living areas, storage and possibly garaging. The New Zealand average house size is currently 149m². We have assumed that most lots will be about 150m² in area.

3. Type C – Comprehensive Residential Development

a. The table does not account for any growth which may result from Comprehensive Residential Development. There are a number of different permutations of how this maybe achieved, and where it may be achieved so was not included for the purposes of this exercise. In reality it may be where the greatest growth occurs initially as it is the most 'traditional' of the 3 Intensification types, with density increasing by three fold from the current situation.

Suburb	Intensification	Number of Parcels	Sum Area (m^2)	Type A			Type B
				Retail (units)	Office (m^2)	Apartment (no.)	Townhouse (no.)
Alicetown	10m Residential	134	67,070				447
Alicetown	12m Mixed Use	52	30,103	63	26,340	241	
Avalon	10m Residential	495	313,320.1				2089
Avalon	12m Mixed Use	28	21,331	44	18,665	171	
CBD Edge	10m Residential	458	376,282				2,509
Eastbourne	10m Residential	79	28,760				192
Eastbourne	12m Mixed Use	28	9,776	20	8,554	78	
Epuni	10m Residential	447	250,515				1,670
Epuni	12m Mixed Use	37	18,707	39	16,369	150	
Moera	10m Residential	87	63,557				424
Moera	12m Mixed Use	16	8,657	18	7,576	69	
Naenae	10m Residential	179	115,381				769
Naenae	12m Mixed Use	61	16,134	34	14,117	129	
Petone East	10m Residential	724	295,297				1,969
Stokes Valley	10m Residential	53	42,884				286
Stokes Valley	12m Mixed Use	42	8,225	17	7,197	66	
Taita	10m Residential	203	128,459				856
Taita	12m Mixed Use	34	10,996	23	9,622	88	
Wainuiomata	10m Residential	155	91768				612
Wainuiomata	12m Mixed Use	57	54,344.5	113	47,551	435	
Waterloo	10m Residential	236	137,903				919
Waterloo	12m Mixed Use	26	21,900	46	19,163	175	
Woburn	10m Residential	94	63,520				423
Woburn	12m Mixed Use	34	10,035	21	8,781	80	
		2,849		**417**	**183,935**	**1,682**	**13,165**

Note that the Number of parcels assumes 1 house per parcel so 2849 dwellings would be lost with the intensification. In reality they might not be lost, but this number needs to be subtracted from the TYPE A and B totals.

The table highlights that approximately 8,000 residential units could be achieved with the proposed intensification scenarios, accounting for the loss of 2790 existing residential dwellings. Growth is spread throughout Hutt City with the greatest growth areas likely to be CBD edge, Epuni, Naenae, Taita, and Waterloo,

7. CONCLUSIONS

The purpose of this assessment has been to outline how residential intensification can be accommodated within the urban limits of Hutt City. The aim of providing for further intensification is to continue to help achieve its growth objective of being a home of choice for families and innovative enterprise and increasing at least 6000 households into the city by 2032 while still providing for the urban design outcomes sought by the city. This can be achieved by providing a for a range of traditional through to new housing typologies that provide for the needs of the community, while also enabling efficient land use and provide opportunities for place making.

The approach outlined in this assessment is one which is consistent with how other councils in New Zealand and globally are providing for well-designed residential development that provides for housing choice for changing demographic needs and encouraging place making around accessible land use patterns that also contribute to providing amenity and economic development. The approach has taken into account the following spatial criteria for assessing appropriate urban form patterns of providing for people, places and spaces through:

Consolidation of activity

Providing for intensity and interaction with communities around transport orientated development ranging from small suburban centres through to larger suburban centres and the CBD;

Integration and connectivity

With movement networks, building interfaces, providing for a range of streetscapes, encouraging a range of transport choice for connectivity;

Diversity and adaptability

Providing for a mix use uses and flexibility of spaces and buildings which can occur when additional choice is provided within an urban area; and

Environmental responsiveness

Providing for increased activity within the existing urban footprint providing for efficiency of networks and not further impinging on green networks and public open space provision.

The study recognises that in order to provide for future intensification such as this, the community will also have to accept a change in amenity values, in order to provide the benefits that intensification of landuse can provide including:

- New commerce through different office and retail spaces in some neighbourhood centres;
- In some cases more affordable housing through townhouses and apartments;
- Variety in interest of the urban condition, subsequently differentiating suburbs and Hutt City as a whole from other centres; and
- Increased housing choice to provide for the differing needs within the city.

Overall this study, has concluded from a planning and urban and landscape design perspective that the effects of the proposed changes can be managed. Further review and integration of the proposed concepts into the district plan would be required through a plan change and associated section 32 analysis. The options and potential outcomes outlined now needs to be tested further with the community to understand people's perceptions of these proposed changes and whether they are acceptable.

The next steps in the development of a plan change will now be to consider the following:

1. Further testing the costs and benefits of planning for all identified areas to be provided for from an infrastructure capacity perspective. For example, some areas such as the suburbs of Naenae and Wainuiomata has existing infrastructure constraints that need to be budgeted for which are not fully included in annual planning due to the shorter timeframes which development planning horizons work to. Upgrades of infrastructure either can occur as a forward infrastructure spend to provide for intensification and encourage development, or could be developed as development applications are lodged with Council. Alternatively to manage infrastructure upgrade costs some areas be identified in a future plan change as being areas of prioritisation of development first and other areas could be considered post implementation of upgrades either lead by Council or a developer or joint upgrades.
2. Confirm the appropriateness of standards for managing natural hazards where development has been assessed as being appropriate. In particular while Type A and B areas have been located in less susceptible or areas that are appropriate for development subject to standards for managing hazard impacts, the Type C CDR rule is not spatially defined other than it is

in an area where currently the general residential activity area is located. It is likely that hazard overlays as well as other criteria such as landscape or ecological may need to be considered to effectively manage values where these sites may be located. This will need to be further tested through the plan change phase.

3. This report has identified new rules to be implemented. However, the final wording of these and the subsequent changes to design guidance and policy will need to be reviewed to provide a clear outcome. A full review of the residential and suburban centre chapters of the plan will be provided to give effect to the outcomes assessed in this report.
4. Economic viability of residential development and likely demand for residential intensification has not been assessed as part of this report. Demographic trends have been, as well as what building types are coming to market that are producing good design outcomes. In order to be consistent with the draft National Policy Statement on Urban Development Capacity (NPS) this assessment should be undertaken to provide consistency with the NPS. This demand assessment may also influence recommendations under 1 in confirming whether prioritisations of areas for development can occur.
5. Prior to the plan change being developed, the public should be consulted on the outcomes of this work.
6. Regard should be given to character and heritage areas where local communities may value particular elements of their neighbourhood, and seek their protection. A more detailed street by street character assessment of Petone and Alicetown should be undertaken to confirm existing character and heritage values.

FIGURE 6.1 *THE POTENTIAL DESIRED OUTCOME FOR WATERLOO WITH A MIX OF HOUSING TYPOLOGIES, RETAIL AND OFFICE SPACE*

8. BIBLIOGRAPHY

1. 2013 Census – Populations and dwellings, 2013, Statistics New Zealand
2. 30 Years On: Porirua Development Framework, August 2009, Porirua City Council
3. Adelaide Road – Planning for the Future: Adelaide Road Framework, A long-term vision for future growth and development, November 2008, Wellington City Council
4. Bus Transit Oriented Development – Strengths and Challenges Relative to Rail, 2006, Graham Currie
5. Chapter 3 Definitions - District Plan, 1 December 2011, Hutt City Council
6. Chapter 4A General Residential Activity Area - District Plan, 1 December 2011, Hutt City Council
7. GNS Science (May 2016), Hazard Report, Consultancy Report 2016/74
8. Discussion Document: Providing for residential growth in Epuni, Waterloo and the CBD edge, November 2014, Hutt City Council
9. HCC, Draft Suggested Boundary for Residential Growth Zone (from Discussion Document: Providing for residential growth in Epuni, Waterloo and the CBD edge), November 2014
10. Draft Wellington Urban Growth Plan 2014-2043, 2014, Wellington City Council
11. Focus Groups Urban Growth Strategy, March 2013, MMResearch
12. Hastings Urban Issues and Urban Design Framework for Hastings District Council, 5th August 2010, Urbanism Ltd, Patrick Panthers Pty Ltd, Pocock Design Environment Ltd, TTM Consulting Pty Ltd.
13. Hutt City Water Infrastructure Constraints Mapping 3 Waters capacity/ constraints analysis, May 2016, Wellington Water Limited
14. Infrastructure Strategy 2015-2045, 1 July 2015, Hutt City Council
15. Ngauranga Triangle Strategic Study – Technical Report: Urban Design Framework, August 2009, UrbanismPlus Ltd
16. Preliminary Study for a Petone Spatial Plan, 2016, McIndoe Urban Limited.
17. Proposed Auckland Unitary Plan, 2016, Auckland Council
18. Proposed Christchurch City Plan, 2016, Christchurch City Council
19. Proposed Hamilton City Plan, 2016, Hamilton City Council
20. Proposed Hastings District Plan Decision Report – Section 7.2 Hastings Residential Environment, 9th November 2013, Hastings District Council
21. Proposed Hastings District Plan, 2016, Hastings District Council
22. Review of Valley Flood Reserve, June 2013, PAOS Ltd
23. Summary Guide (District Plan Changes 72 and 73) proposed changes to the residential area and suburban centre zones of Wellington's District Plan, September 2009, Wellington City Council
24. Survey of Residents – Overview (For the discussion document on providing for residential growth in Waterloo, Epuni and CBD edge), November 2014, Peter Glen Research Ltd

25. Urban Growth Transport Assessment , Traffic Assessment, May 2016, Harriet Fraser Traffic Engineering & Transportation Planning
26. Urban Growth Strategy 2012-2032, 2012, Hutt City Council
27. Vision Wainuiomata Road map, date unknown, Wainuiomata Development Plan Steering Group
28. Wellington City Housing and Residential Growth Study: Final Planning Assessment and Recommendations, September 2014, The Property Group
29. Wellington Regional Rail Plan 2010-2035 'A Fresh Look at a Better Rail Experience', June 2013, Wellington Regional Council

APPENDIX ONE

SUBURB EVALUATION SHEETS

SUBURB DESCRIPTION AND EVALUATION

ALICETOWN

Approximate age of suburb	1920
Housing Typology:	Primarily made up of single storey bungalows, along with pockets of medium density dwellings. Some infill development is also present.
Quality of Housing Stock:	Varies but a lot of the dwellings have been renovated with extensions.
Typical Lot Size:	Lots typically 500m². Most sites have a single dwelling apart from isolated lots of medium density development.
Commercial Area Attributes:	A mix of shops and offices on the main street with a light industrial feel to some buildings. The busy road creates a different feel to a typical suburban centre. The commercial area to the south by Ava Railway Station is under utilised with car yards and service centres.
Proximity to Public Transport:	The closest train station is Ava, 400m away which is not considered part of this commercial area but is walkable for providing commuter public transport. Bus stops with direct links into the CBD and Wellington are provided in the village centre. For some parts of the Ava, the CBD is also within walking distance.
Streetscape / Street Trees / Amenity:	Tree lined streets with well established pohutukawas on streets set back from the main road on the western side, particularly Tui Street. The main road is busy and creates a potential barrier to pedestrian movement. On the eastern side while there is not street tree amenity the narrow nature of the streets provides an inviting and walkable street network.
Open space	The Hutt River trail is to the east of Alicetown providing for active recreation along the river. The Victoria Street park to the north provides for playground equipment and outdoor meeting space.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Alicetown has the potential to intensify given its close proximity to the CBD, Ava train station and Cuba Street bus network. Some of the streets may have limited development potential due to their existing character and street trees but the main road corridors are well suited to high levels of mixed use development, around the suburban centre . There are also limited opportunities for higher residential development along Cuba Street.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
4	*0*	*3*	*3*	*3*	*2*	
Total Score						***15***

A number of streets have well established street trees which provide a high degree of amenity.

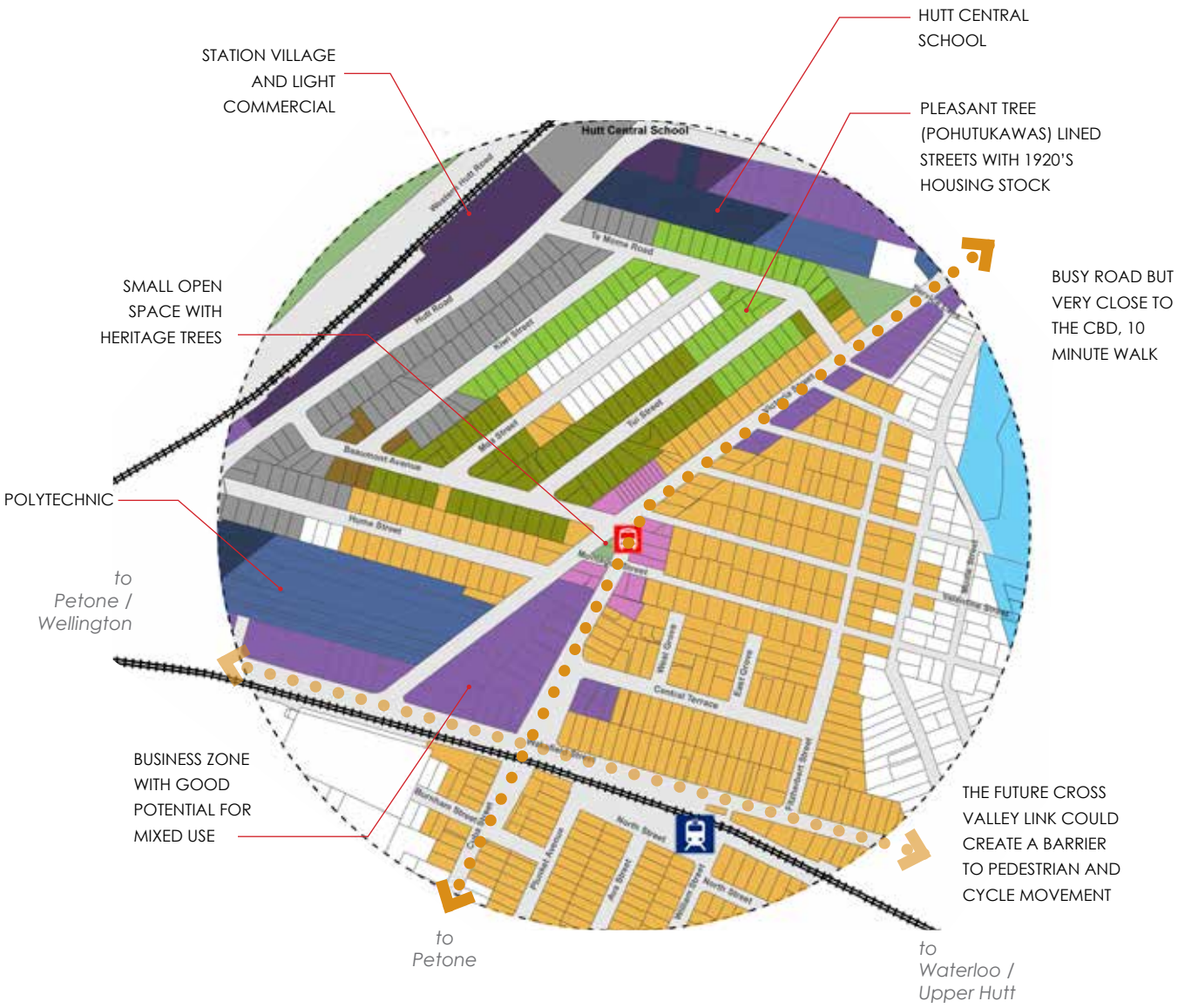
This commercial building has a strong relationship to the corner. This style of building should be replicated to provide a strong street edge and high level of glazing

A variety of different commercial business were observed in Alicetown but little foot traffic was observed. The busy character of the road reduced the amenity for pedestrians.

Existing character houses in close proximity to the railway station

The main road heading towards the CBD is well served by bus routes

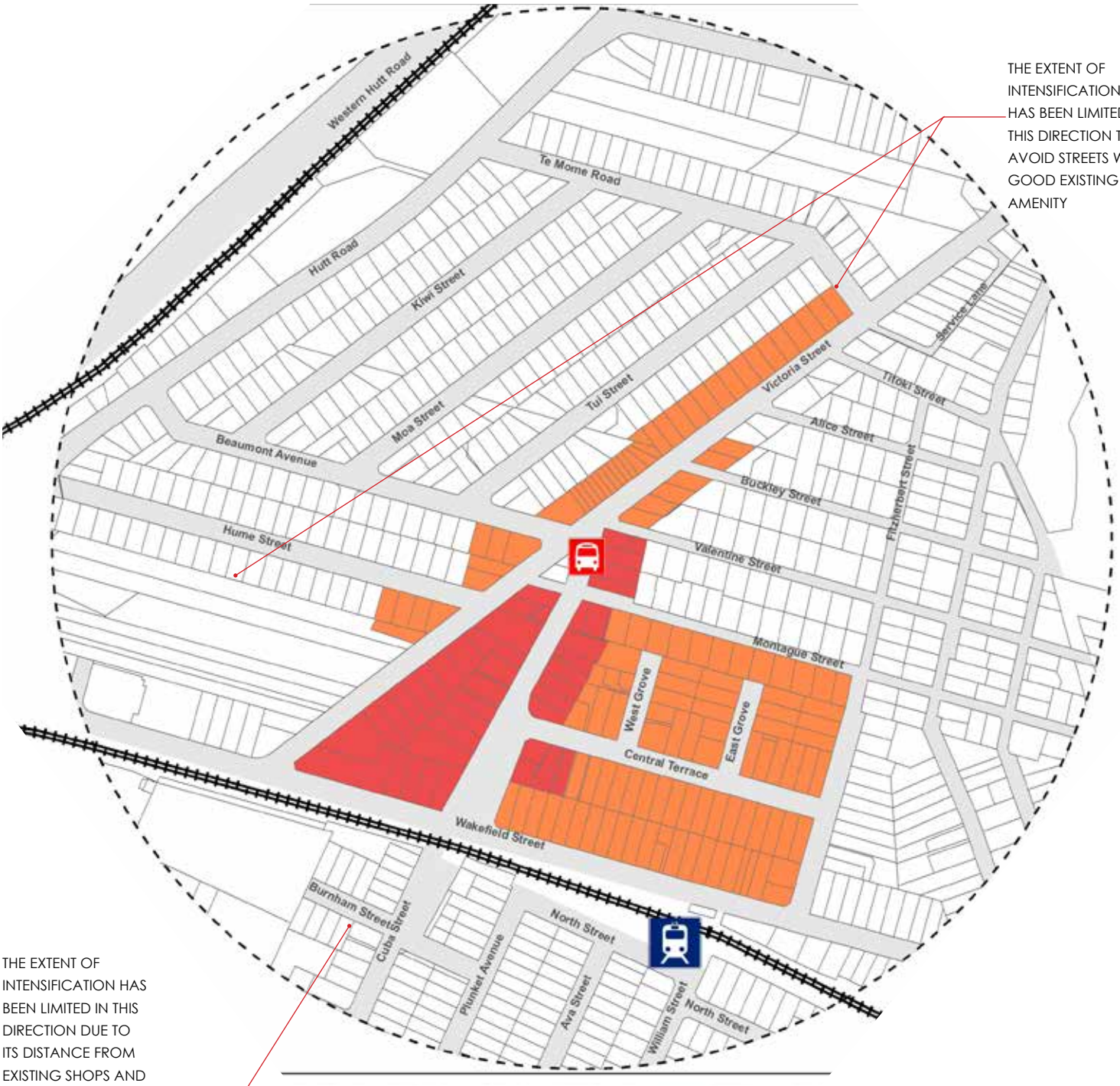
PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP



KEY:

- *EXISTING SUBURBAN COMMERCIAL*
- *EXISTING BUSINESS ZONE*
- *RECREATION ZONE*
- *RESIDENTIAL PARCELS WITHIN 400M WALKING DISTANCE OF THE STATION / BUS STOP*
- *TREE LINED STREETS WITH HERITAGE CHARACTER*
- *SECTIONS AFFECTED BY THE WELLINGTON FAULTINE SPECIAL STUDY AREA*
- *FLOODPLAIN*
- *COMMUNITY / SCHOOLS (DESIGNATED SITES ONLY)*

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD



THE EXTENT OF INTENSIFICATION HAS BEEN LIMITED IN THIS DIRECTION TO AVOID STREETS WITH GOOD EXISTING AMENITY

THE EXTENT OF INTENSIFICATION HAS BEEN LIMITED IN THIS DIRECTION DUE TO ITS DISTANCE FROM EXISTING SHOPS AND BUS STOPS

KEY:

12M HIGH, 4 STOREY MIXED USE

10M HIGH APARTMENT / TOWNHOUSE

AVALON

Approximate age of suburb	1970's
Housing Typology:	Primarily made up of single story housing, however there is a large tower block by the suburban centre and some medium density housing present.
Quality of Housing Stock:	Varies but there is a range of 1970's and above housing stock.
Typical Lot Size:	Range in size from 300-600m²
Commercial Area Attributes:	There is a mix of shops that are occupied and business commercial land and service centre including community facilities. As the centre is close to the CBD there is no supermarket present but fine grain food and retail stores. Overall there is capacity for further development but the land holdings are currently fragmented and do not provide a coherent suburban streetscape.
Proximity to Public Transport:	The suburb is on a major bus route to the Hutt CBD. Parts of the suburb are in walking distance to Epuni Railway station, but not the suburban centre.
Streetscape / Street Trees / Amenity:	Residential streets are tree lined, but with mixed levels of amenity on main street as there is no coherent street scape strategy and an array of land use types.
Open space	Avalon park is to the west of the suburb. This is Hutt City premier park and open space area which is currently being upgraded to provide for further capacity for residents. The area is also well served by public open spaces to the east of the suburban centre.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Avalon has the potential to intensify, around the suburban centre and out to the edge of Daysh Street. The configuration of the arterial road and layout of housing backing away from the arterial road acts as a barrier to further intensification around the suburban centre. However, development around a small mixed use centre can be provided for and supported by public transport routes and open space, schools and facilities in the area. Note, the former Avalon Studios also forms a strong focal point of the built edge and historical identity of the suburb.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
1	*1*	*3*	*2*	*3*	*3*	
Total Score						***13***

Street view looking north from southern end of suburban centre showing mixture of neighbourhood shops and business zoning providing larger scale service land use in the distance (Z service station and take away, medical centre).

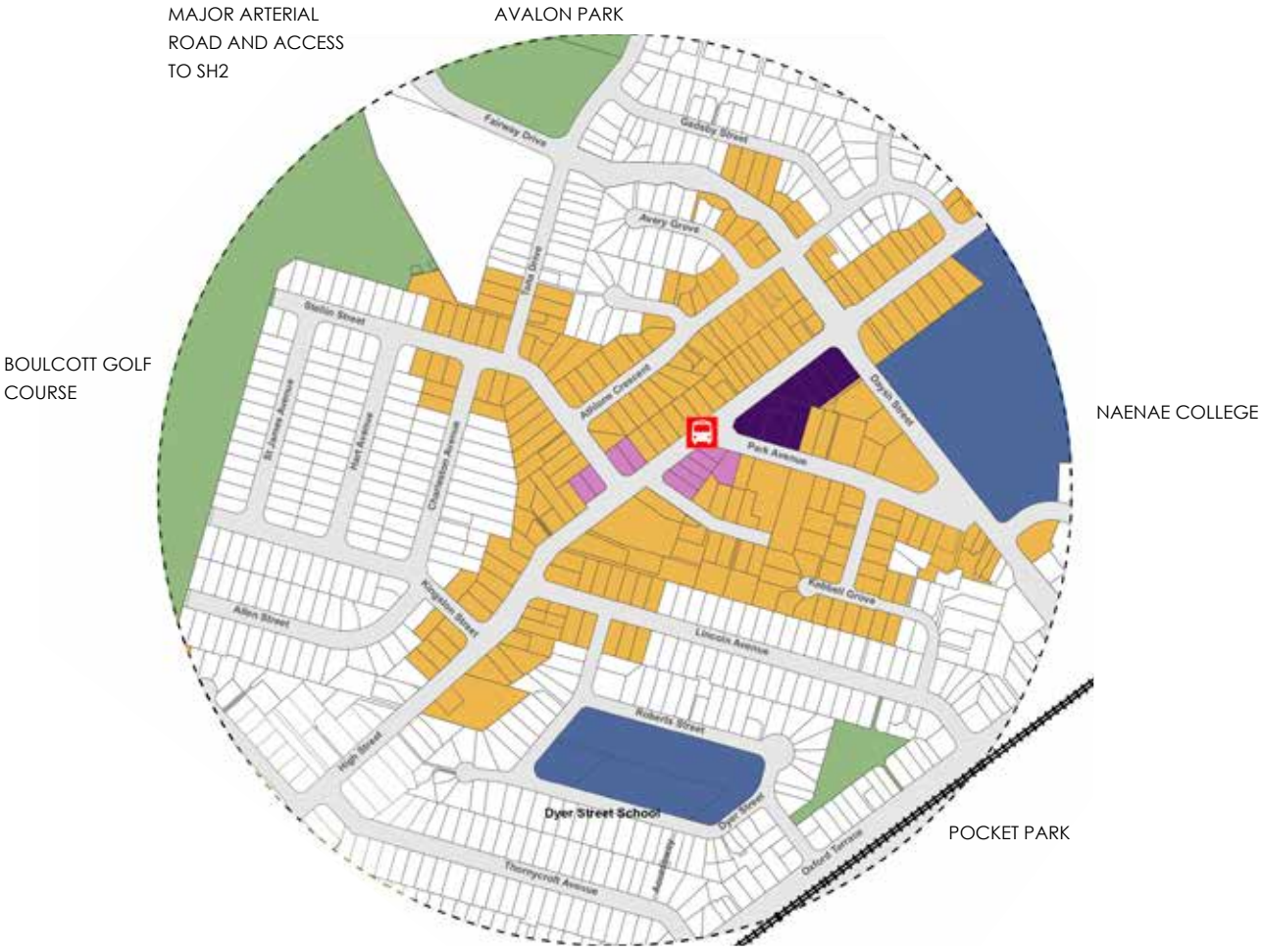
Street view showing existing taller residential building (in proposed mixed use area) which is opposite a recent medium density development.

A medium density development on Park Avenue showing a good level of material variation and modulation. The chimneys provide visual interest but the building's relationship to the street could have been improved by directly fronting the street.

Arterial road view. No houses or vehicle access fronting the road creating a natural barrier to interaction. High volume road as well so it's appropriate for this location with interaction of side streets

The southern end of Avalon Park, looking north. Good open park frontage with a strong relationship to the street

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP



SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

DEVELOPMENT LIMITED TO ARTERIAL ROAD - FUNCTION OR OPPOSING SIDE OF FAIRWAY DRIVE DOES NOT RELATE TO SOUTH AVALON. ROAD TRAFFIC ALSO ACTS AS A BARRIER TO PEDESTRIAN MOVEMENT

MIXED USE ZONE TO REPLACE EXISTING BUSINESS AND RESIDENTIAL ZONES AND TO LINK THE EXISTING FRAGMENTED SUBURBAN CENTRE.

12M HIGH, 4 STOREY MIXED USE

10M HIGH APARTMENT / TOWNHOUSE

CBD EDGE

Approximate age of suburb	1920-30
Housing Typology:	Mixed character with residential dwellings and small offices, medical rooms etc.
Quality of Housing Stock:	Mixed quality of housing with high quality older homes in pockets of the CBD Edge and other older dwellings which have been converted to flats or are used as offices. There is also ongoing infill development occurring.
Typical Lot Size:	Section sizes typically around 500m² with larger lots having been subdivided down to 300-400m².
Commercial Area Attributes:	Adjacent to CBD. There is an ability for residential development to further strengthen the CBD. However future mixed use development should not be encouraged outside of the CBD core.
Proximity to Public Transport:	Close to major bus routes with the closest train station being Melling Station.
Streetscape / Street Trees / Amenity:	Many of the streets have street trees and a high levels of amenity. Some streets have much lower levels, such as by the large format end of the CBD to the north and are more commercial/service centre focused.
Open Space:	Open space and reserves are limited to the north of the CBD edge and is primarily provided through the river corridor, but there are high levels of active and usable open space provided through the civic precinct of the city. For example, Dowse Square, Riddiford Gardens.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

The CBD edge is already showing signs of intensification with infill development present. The area is in walking distance of the main commercial areas and is well served by bus routes. It is less well served by the train network with the closest station being Melling Station and to the east is Waterloo Station. However, the main bus terminal at Queensgate provides a strong public transport focus point. The Civic Precinct also provides the primary civic centre and centre for events. This facility helps support further residential intensification around the provision of upgraded public open space facilities. This area has a high capacity for increased residential development but not mixed use considering it is so close to the existing CBD which is where commercial activity should be focused to reinvigorate the city core.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
2	*0*	*1*	*4*	*3*	*3*	
Total Score						***13***

There are a number of smaller, heritage style shop+dwelling buildings close to the CBD

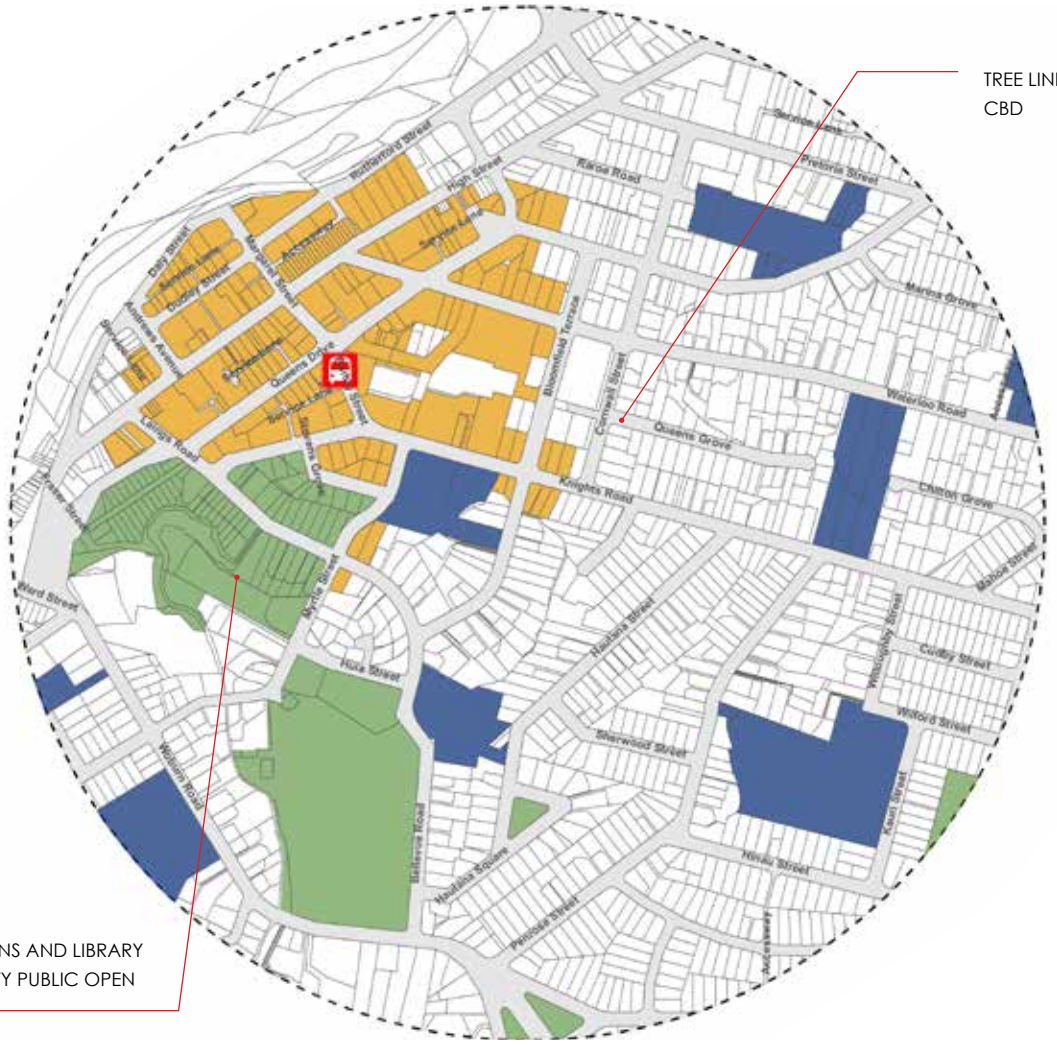
House typology is mixed from large , individual dwellings to multi-unit developments

Some existing houses have been converted into businesses

The age and style of housing varies, more so than other areas of the city with no distinct character type.

Some of the smaller streets are tree lined with well established pohutukawas

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP



SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

INTENSIFICATION AREAS HAVE BEEN EXTENDED FURTHER THAN 400M OUT TO 500-800M DUE TO THE PRESENCE OF COMMERCIAL AMENITIES NEARBY. MELLING RAILWAY STATION IS ALSO WITHIN A 800M WALKING DISTANCE

INTENSIFICATION HAS BEEN EXTENDED TO THE SOUTH BECAUSE OF ACCESS TO THE CIVIC CENTER WHERE THERE IS A HIGH AMOUNT OF OPEN SPACE AND COMMUNITY FACILITIES.

INTENSIFICATION AREAS HAVE BEEN EXTENDED FURTHER THAN 400M OUT TO 500-800M DUE TO THE PRESENCE OF COMMERCIAL AMENITIES NEARBY.

KEY:

10M HIGH APARTMENT / TOWNHOUSE

EASTBOURNE

Approximate age of suburb	1920
Housing Typology:	Varies with larger dwellings positioned along the beach front. There is a large 7 storey residential apartment building which is out of character with the rest of the suburb but three storey dwellings are not uncommon.
Quality of Housing Stock:	Generally high with a number of modern dwellings using high quality materials and finishes
Typical Lot Size:	Range from 100m² upwards with a high level or variety. Some have long narrow section, being only 9m across. There is a large 7 storey residential apartment building which is out of character with the rest of the suburb but three storey dwellings are not uncommon.
Commercial Area Attributes:	Small commercial area on Rimu Street, immediately adjacent to the proposed higher density areas, has a high level of amenity which is compact and walkable. There is potential to increase the height and ability for new uses within this centre to support further growth and place making at the centre.
Proximity to Public Transport:	Bus stops are located on Muritai Road, less than 200m away. Commuter ferry comes into Days Bay, approximately 1.5km away to the north.
Streetscape / Street Trees / Amenity	Most streets running to the north, north of village have limited or no street trees. Marine parade is framed by the coastal dunes and open space or sea, which provides for its high level of street amenity. Streets to the south have higher levels of amenity associated with the street trees and quality of building stock.
Open Space:	The beach front, swimming pool and wharf are immediately adjacent to the area, providing a high level of amenity.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Eastbourne is a standalone destination that with its isolated connections to the city requires it to be more self sufficient than other suburbs. Residential intensification is already occurring, especially on high amenity sites. There is a good mix of house typologies including the large apartment building which is out of character with other developments and not recommended as a future typology in this location. Smaller scale residential developments however are, where there is good open space provision nearby and within walking distance of the suburban centre. The suburban centre is also compact and has capacity for providing for further commercial and mixed use activity within the existing suburban centre over time which could support further growth and activity within this spatially small coastal settlement.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
1	*0*	*3*	*3*	*2*	*4*	
Total Score						***13***

Eastbourne has a well formed commercial area with good connectivity to the beach and surrounding residential areas

The majority of housing is single or two storey except for a 7 storey apartment building which is somewhat out of character with the adjoining properties

There is a high level of landscape detailing on the main commercial street with traffic calming measures

The foreshore provides and beach provides a high level of amenity. Views across the harbour to Wellington are possible.

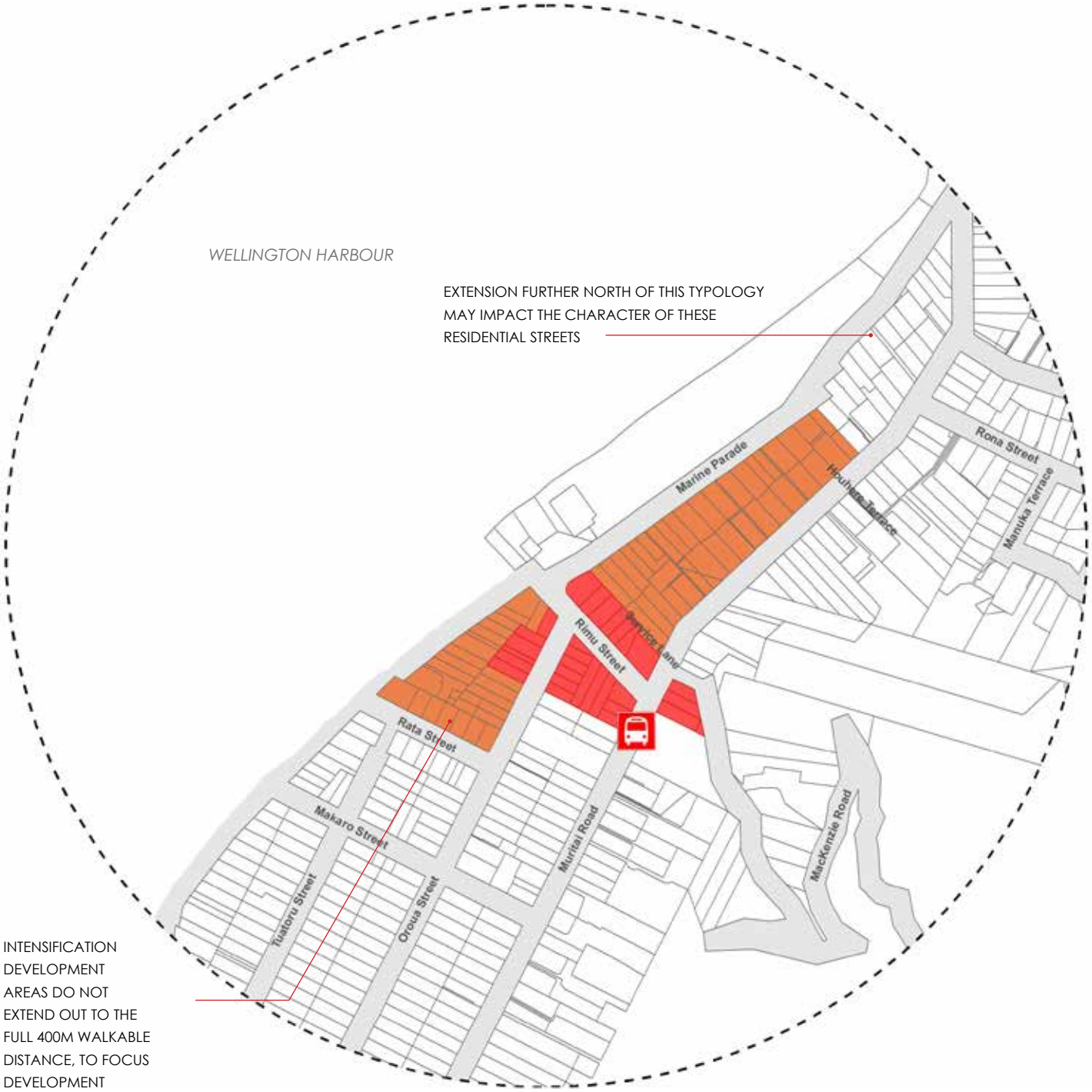
Houses are typically of a high standard and a good relationship to the street

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP

KEY:

- *EXISTING SUBURBAN COMMERCIAL*
- *OPEN SPACE*
- *RESIDENTIAL PARCELS WITHIN 400M WALKING DISTANCE OF THE STATION / BUS STOP*
- *TREE LINED STREETS*
- *COMMUNITY / SCHOOLS*

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD



EPUNI

Approximate age of suburb	1940-50
Housing Typology:	A mix of single and two storey state housing. Many of the houses are terraces or semi-detached. There are some three or more story buildings as well and infill housing is present on rear sections with long driveways.
Quality of Housing Stock:	Generally poor on the eastern side with a number of dwellings having been demolished due to earthquake concerns. Further out towards Fairfield and Boulcott the quality of housing improves.
Typical Lot Size:	Lot sizes range from 300m² upwards with a large variation in size. A lot of lots have been subdivided into smaller lots, following existing building walls. The shape of the lots as a result vary greatly.
Commercial Area Attributes:	A small commercial area is located on the northern side of the Epuni Station which is accessible from the south via a subway.
Proximity to Public Transport:	The train station is at the middle of the area with bus routes using both Oxford Terrace and Waiwhetu Road
Streetscape / Street Trees / Amenity	Many of the trees are tree lined with large, well established pohutukawas. It is also well serviced by small open spaces although these tend to be sited at the rear of sections (as opposed to fronting streets) with long narrow entranceways
Open Space:	Reserves are constrained in this area with limited formal playgrounds. Playgrounds and reserves are more limited to the west of the railway line with only the Epuni community hall area and Mitchell Street Gardens. The Copeland Street reserve has been revoked, but we understand there may be future options from development of this that may provide for some playground provision. However Epuni school provides some open space to the east of the railway tracks.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

There is a large amount of vacant land on the eastern side of the railway line which has the potential to be 'master planned' to create a desirable place to live. The suburb has a local commercial centre which is very accessible and could benefit from more local residents. Epuni is also nearby existing shops at Boulcott to the West, the Hospital Precinct and Fairfield on the eastern side of the railway tracks. In terms of development potential, having large areas of vacant land creates definite opportunities for intensification as there are less boundary issues with existing developments.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
4	*3*	*3*	*2*	*2*	*2*	
Total Score						***16***

Opportunity for intensification due to the number of large empty sections available

Housing demand and population growth may be a constraint to development occurring

Terrace houses and duplexes are a common house typology in Epuni

A number of streets have well established street trees which provide a high degree of amenity. Pruning to provide for overhead lines has a negative visual impact.

The commercial centre is small, with less than 10 shops but provides a variety of services and amenities

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP

KEY:

- EXISTING SUBURBAN COMMERCIAL
- EXISTING BUSINESS ZONE
- RECREATION ZONE
- TREE LINED STREETS
- COMMUNITY / SCHOOLS (DESIGNATED SITES ONLY)
- RESIDENTIAL PARCELS WITHIN 400M WALKING DISTANCE OF THE STATION / BUS STOP

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

MOERA

Approximate age of suburb	1910-20
Housing Typology:	Single and two storey standalone dwellings, with pockets of medium density up to 4 stories present. Infill development present.
Quality of Housing Stock:	A mixture but generally an older building stock. For example there are a large amount of 1910 railway cottages present as well as later 1960/70's housing stock. There are some isolated new housing infill occurring. Some renovation work is being undertaken on early housing stock particularly around the village centre.
Typical Lot Size:	Typically 500-600m² with the ability for intensification
Commercial Area Attributes:	Small to mid sized, well used commercial area, but predominantly providing take away foods. A well used community library and hall is in place but other shopping services outside of food and a pharmacy has to be done out of the area.
Proximity to Public Transport:	The closest train station is Woburn Station being approximately 800m away. However there is a 30minute frequency and 15minute at peak bus services for local commuting across the valley and to Wellington along Randwick road.
Streetscape / Street Trees / Amenity	Occasional street trees are present, but quality of trees and number provides limited additional amenity. Mixture of housing from the street is varied.
Open Space:	Riverside reserves immediately adjacent to the area to the west. This is well used as part of the Hutt River Cycle Trail. Community park provided by the library and is well used as a result of being placed by community services. Hutt Park is immediately to the South and provides for a range of outdoor sports and is the primary indoor sports centre for the Hutt Valley.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Moera is already has a range of medium density dwellings and some infill housing and a busy, albeit small, commercial centre. The distance to the train station is only 800m but it requires crossing over a bridge and a busy intersection which acts as a barrier to easy movement. Conversely the area is well serviced by buses which go to the Hutt CBD and to the south there are connecting buses to the city. The area has the benefits of the riverside reserve but limited vacant land for development by this due to the flood way.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
3	*1*	*3*	*3*	*2*	*4*	
Total Score						***16***

Moera is a narrow strip of land between the rail line on the east and the Hutt River on the west and a major collector road running through the city

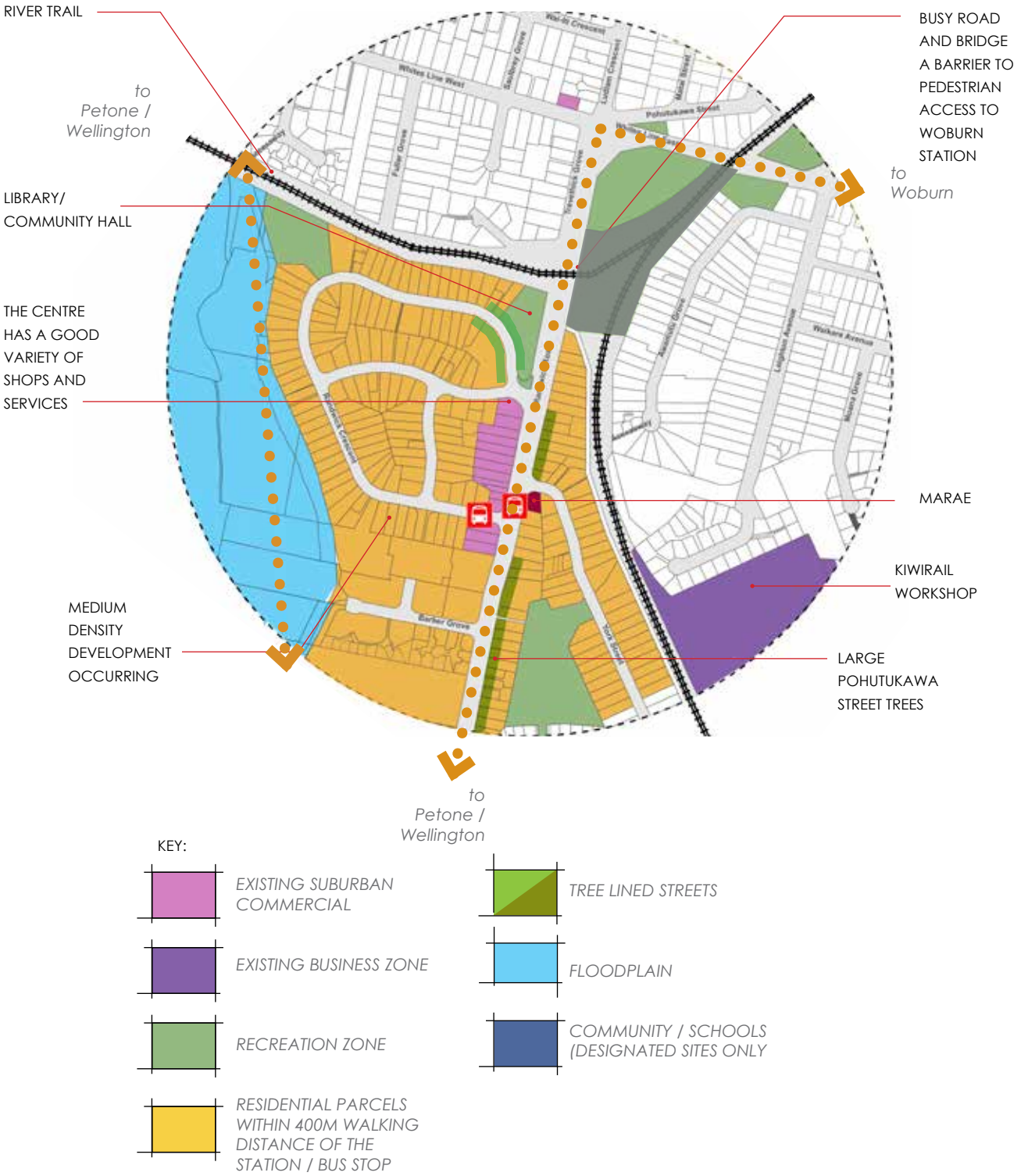
Intensification and infill housing is already occurring in Moera

The strip of shops serves the immediate community while a couple are destinations for people from throughout the city

Small, early 20th century bungalows are common in Moera along with infill development

The main road through Moera is relatively busy with vehicles dominating the space

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP



SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

INTENSIFICATION AREAS HAVE BEEN LIMITED TO THE AREA SHOWN DUE TO THE DISTANCE TO THE TRAIN STATION BUT THE AREA IS WELL SERVED BY THE LOCAL COMMERCIAL CENTRE

KEY:

12M HIGH, 4 STOREY MIXED USE

10M HIGH APARTMENT / TOWNHOUSE

NAENAE

Approximate age of suburb: 1960

Housing Typology: A mix of single and two storey state housing along with some private dwellings. The majority are standalone bungalows on individual titles with some infill development.

Quality of Housing Stock: Varies, but most housing of good quality is renovated state housing stock. Limited new builds occurring. Well kept yards and limited front fencing.

Typical Lot Size: Typically range from 350m² to 600m², with the ability in a large number of sections to provide an additional dwelling at the rear.

Commercial Area Attributes: A large commercial area, with buildings up to four stories, including a pedestrian mall and the Naenae swimming pool complex. A large area of industrial and large format retail buildings to the south of the commercial centre is nearby. The supermarket has recently closed reducing the functionality of the town centre, however there are still a large range of shops present. The supermarket has recently closed reducing the functionality of the town centre

Proximity to Public Transport: Train station immediately adjoining the commercial area and is well serviced by bus routes to the Hutt CBD and Seaview.

Streetscape / Street Trees / Amenity: A mix of tree lined streets, although these tend to be sited at the rear of sections (as opposed to fronting streets) with long narrow entranceways.

Open Space: The area is well serviced by small open spaces outside of the village centre. The Naenae swimming pool and council gym provides a primary community facility for Naenae and the region and there are outdoor park areas surrounding the pool complex. A new regional sports centre will be proposed to the east of the site, which may also be used by some residents.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Naenae has existing examples of multi unit developments which are potentially coming to the end of their design life, creating an opportunity to intensify some residential areas. There appears to be sufficient commercial space available with vacant or lower end retail offices visible. Both suburbs have good transport connectivity and provision of open space which would also support intensification as well as provide a bigger 'consumer' base for the local retail businesses.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
4	*2*	*3*	*3*	*2*	*2*	
Total Score						***16***

The shopping mall is tidy and well kept but the supermarket is no longer located here

There is a good variety of small shops

Housing is typically single storey with limited infill development

Naenae is well served by both train and bus services

There is a large park located immediately to the south of the shopping area and the swimming centre

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP

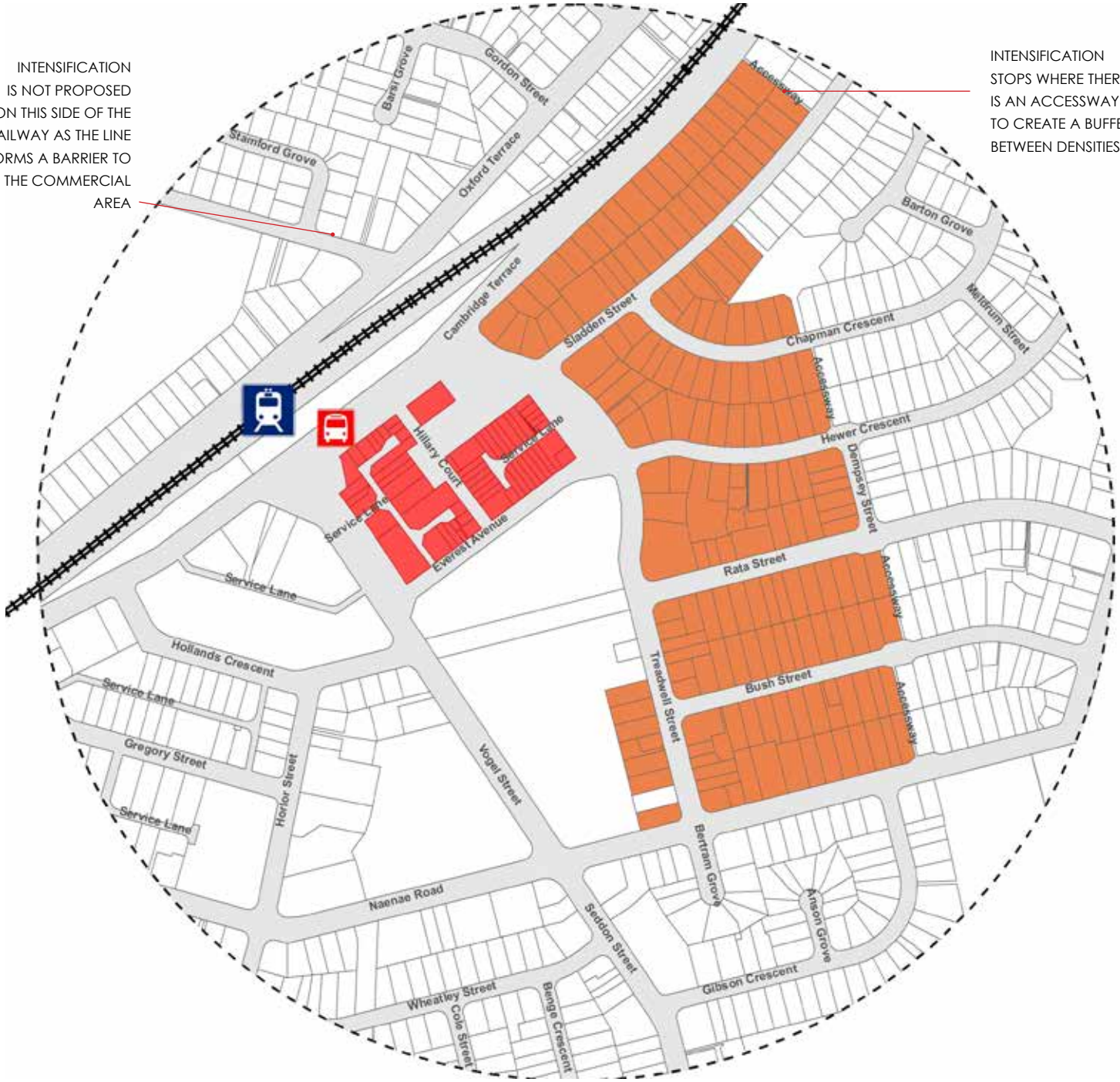
KEY:

- *EXISTING SUBURBAN COMMERCIAL*
- *EXISTING BUSINESS ZONE*
- *RECREATION ZONE*
- *RESIDENTIAL PARCELS WITHIN 400M WALKING DISTANCE OF THE STATION / BUS STOP*
- *COMMUNITY / SCHOOLS (DESIGNATED SITES ONLY)*

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

INTENSIFICATION IS NOT PROPOSED ON THIS SIDE OF THE RAILWAY AS THE LINE FORMS A BARRIER TO THE COMMERCIAL AREA

INTENSIFICATION STOPS WHERE THERE IS AN ACCESSWAY TO CREATE A BUFFER BETWEEN DENSITIES



KEY:

12M HIGH, 4 STOREY MIXED USE

10M HIGH APARTMENT / TOWNHOUSE

PETONE EAST

Approximate age of suburb	1900-20
Housing Typology:	Single storey bungalows with but some larger social housing complexes (three storeys) closer to Waohine Street and the former Unilever site. Some infill development has taken place.
Quality of Housing Stock:	Generally smaller houses, older building stock. Housing closer to Jackson Street and some whole blocks such as Patrick Street have been well renovated, consistent with the heritage precinct. Some housing stock is obviously being land banked to a point when they will be redeveloped or renovated.
Typical Lot Size:	400m² with limited ability for infill development given the width of the lots without demolishing the existing dwelling. Considerable areas of vacant land available at the eastern end.
Commercial Area Attributes:	No retail of note with the closest main shopping area being Jackson Road. Light industrial and commercial/ large format retail is present at Waione Street.
Proximity to Public Transport:	Good bus routes but the closest train station is Ava, being 1-1.4 km away.
Streetscape / Street Trees / Amenity	Streets tend to be open, with minimal street trees present, reflecting the coastal nature of the suburb.
Open Space:	Open space is primarily provided along the esplanade and Petone beach which provides for a passive and active uses. Hikoikoi Reserve is to the south east of Petone and Petone Beach playground provides the primary formal playground in the area. Aurora Street historic reserve provides an open space area for members to picnic in. The final open space area is the park to the east of Adelaide Street, bounded by Schofield Street.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Petone East is at the edge of the Jackson Street precinct where the primary bus public transport routes converge at Jackson Street and Cuba Street. The area is defined as the start of the Jackson Street shopping precinct and has existing apartment development and Weltec behind the precinct. The area also has the Petone foreshore as a primary open space area nearby. There is an opportunity to undertake limited additional intensification supporting the Jackson Street precinct while still maintaining the character of the area.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
2	*1*	*2*	*4*	*1*	*2*	
Total Score						***12***

There is a mix of housing typologies in the area

Many of the houses date from the 1900's to 1930's with Californian bungalows common towards Ava

At the eastern end of the suburb there are a number of terrace houses and duplexes

Many of the houses in the area are single storey

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP

KEY:

- *EXISTING SUBURBAN COMMERCIAL*
- *EXISTING BUSINESS ZONE*
- *RECREATION ZONE*
- *RESIDENTIAL PARCELS WITHIN 400M WALKING DISTANCE OF THE STATION / BUS STOP*
- *TREE LINED CHARACTER STREETS CONSISTENT HOUSE AGE, SET BACK AND FORM (OLDER THAN 1940)*
- *HERITAGE / CHARACTER BULDINGS*
- *FLOOD PROTECTION BANK AND PRIMARY RIVER CORRIDOR*
- *COMMUNITY / SCHOOLS*

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

INTENSIFICATION AREAS HAVE BEEN EXTENDED FURTHER THAN 400M TO ENCOMPASS AN ENTIRE BLOCK TO AVOID ZONE BOUNDARY ISSUES

INTENSIFICATION AREAS HAVE BEEN EXTENDED FURTHER THAN 400M TO ENCOURAGE DEVELOPMENT ALONG THE WATERFRONT (HIGH AMENITY) AND TO ENCOMPASS AN ENTIRE BLOCK TO AVOID ZONE BOUNDARY ISSUES. DEVELOPMENT MAY BE SUBJECT TO DESIGN CONTROLS

KEY:

12M HIGH, 4 STOREY MIXED USE

10M HIGH APARTMENT / TOWNHOUSE

STOKES VALLEY

Approximate age of suburb	1960-70
Housing Typology:	A mix of housing types and styles. Some terrace housing close to the commercial centre is run down. Some infill present and new greenfield sites on the hills, but most of the lots are a single standalone dwellings.
Quality of Housing Stock:	Mixed, primarily 1970's and 80's housing stock,some newer build housing present.
Typical Lot Size:	Typically larger than other areas being 600-800m² in size with little variation or subdivision.
Commercial Area Attributes:	A large commercial area which includes a pedestrian mall and swimming pool. Has a New World supermarket. A new community facilities building incorporating the library and function space is likely to be developed on site.
Proximity to Public Transport:	Bus routes along Stokes Valley Road, which connect to Hutt CBD and a commuter service to Wellington CBD is provided. The closest train station is Pomare Station 3km away.
Streetscape / Street Trees / Amenity	Limited street tree amenity.
Open Space:	There is a large playground and open space area to the south of the suburban centre. There is also a swimming pool complex and views towards the bush clad hills and walking tracks into the hills from the suburb.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Currently there is a high level of capacity for further infill development and possibly Comprehensive Residential Development in the long term. Current medium density housing is provided around parts of the town centre, but is in need of revitalisation. Over time there could be capacity for further medium density development around the town centre to support further growth in the long term.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
1	*1*	*3*	*4*	*2*	*3*	
Total Score						***14***

The commercial centre appeared busy and well used by local residents.

The centre is sheltered with good vehicle accessibility

House quality is mixed with some of the older stock showing signs of disrepair

The channelised nature of the stream lacks amenity

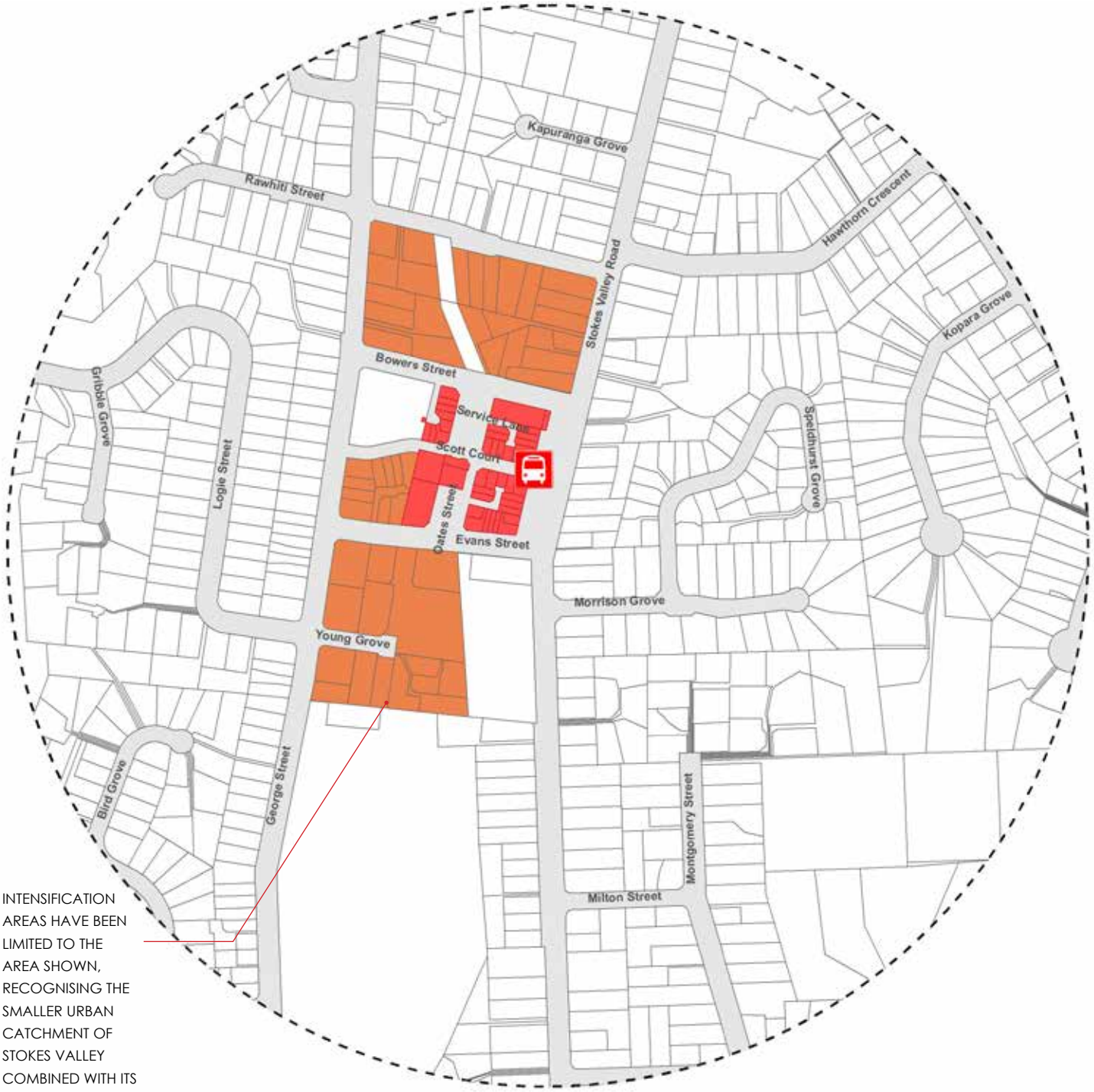
The centre is well laid out with the local swimming pool adjacent to the main shopping area

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP

KEY:

- *EXISTING SUBURBAN COMMERCIAL*
- *EXISTING BUSINESS ZONE*
- *RECREATION ZONE*
- *RESIDENTIAL PARCELS WITHIN 400M WALKING DISTANCE OF THE STATION / BUS STOP*
- *COMMUNITY / SCHOOLS (DESIGNATED SITES ONLY)*

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD



INTENSIFICATION AREAS HAVE BEEN LIMITED TO THE AREA SHOWN, RECOGNISING THE SMALLER URBAN CATCHMENT OF STOKES VALLEY COMBINED WITH ITS DISTANCE FROM RAIL LINES

KEY:

12M HIGH, 4 STOREY MIXED USE

10M HIGH APARTMENT / TOWNHOUSE

SUBURB DESCRIPTION AND EVALUATION

TAITA

Approximate age of suburb	1960
Housing Typology:	Mix of house types including flats but limited infill development. Standalone single storey bungalows are common as well as large multi unit blocks
Quality of Housing Stock:	Varied but with well kept yards. New development occurring at Farmers Crescent in Pomare.
Typical Lot Size	Lots are typically 600m² in size with some variation.
Commercial Area Attributes:	A large commercial area which includes a pedestrian mall and the new Walter Nash recreation complex. A large area of industrial buildings is located on the other side of the rail line. A small supermarket and shops are also present.
Proximity to Public Transport:	Train station immediately adjoining the commercial area. The area is also well connected by bus services to Hutt CBD.
Streetscape / Street Trees / Amenity	Some street trees but not consistent through the area.
Open Space:	The new Walter Nash stadium provides a primary active recreation centre for the community. There are limited parks in the remainder of the area.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

There are existing examples of multi unit developments which are potentially coming to the end of their design life, creating an opportunity to intensify some residential areas. There appears to be sufficient commercial space available with vacant or lower end retail offices visible. There is good transport connectivity, but longer travel times to employment destinations. Open space provision is limited, but there is a new large recreation centre providing for activity and community spirit.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
4	*1*	*3*	*4*	*2*	*2*	
Total Score						***16***

The railway station is easily accessible although the subway could be upgraded to improve CPTED issues

Connectivity to Taita is high with good road and rail links

The town centre is currently being upgraded with large footpaths and seating providing good opportunities for people to gather

The housing stock is generally in good condition, albeit getting old.

The newly established recreation centre is adjacent to the centre providing additional amenity.

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

SUBURB DESCRIPTION AND EVALUATION

WAINUIOMATA

Approximate age of suburb	1960
Housing Typology:	Single storey bungalows with limited in fill development visible. Future retirement accommodation is planned near the town centre.
Quality of Housing Stock:	Mixed standard of quality but largely unmodified from the original dwelling
Typical Lot Size:	Typically 800m² in area with the houses occupying a small percentage of the size
Commercial Area Attributes:	A large commercial area which includes a mall and big box retail. A large area of industrial buildings is located on the other side of the rail line. Has a small supermarket.
Proximity to Public Transport:	Bus routes through to CBD and Petone. No access to train.
Streetscape / Street Trees / Amenity	Well serviced by open space close to the commercial centre.
Open Space:	There is a good array of parks and open space around the town centre and to the periphery of the suburb there is a wide range of walking tracks and outdoor activities.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Wainuiomata is unique from other suburbs in that it is a standalone settlement in its own right and needs to be self-sufficient to minimise trips over the hill for day-to-day needs. There is already sufficient commercial space available and plans for future strengthening of the town centre with the planned retirement village and community facilities, but current lack of development within the mall precinct.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
1	*2*	*3*	*4*	*2*	*3*	
Total Score						***15***

Housing stock varies within Wainuiomata. This house is only 100 m from the town centre and is on a large section

The town centre is easily accessible by car and foot

There is a variety of shops in the centre with a strong street frontage

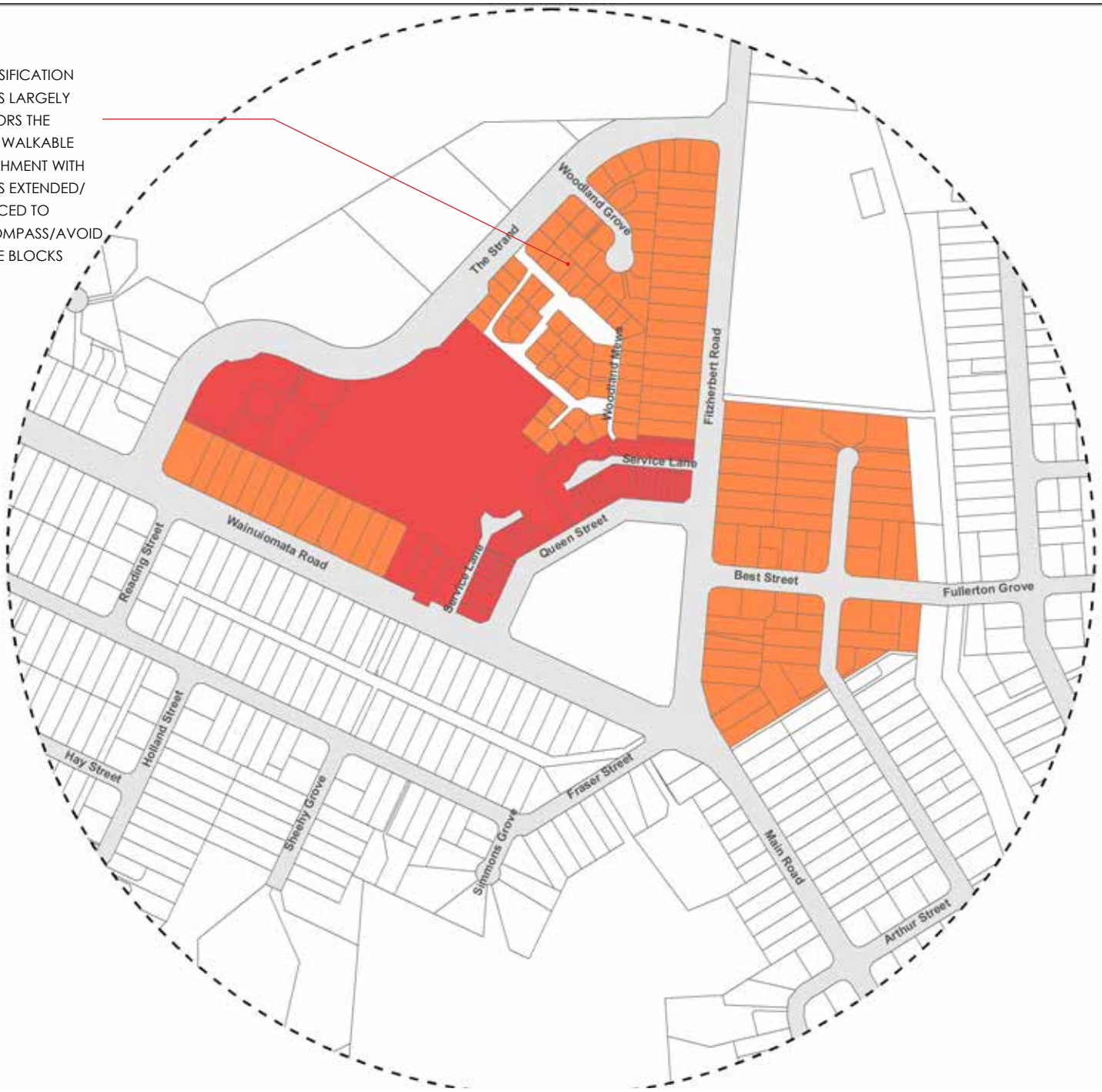
The carpark by the mall is a low amenity area and legibility is not good

Wainuiomata is served by large roads which provide good vehicle connectivity but tend to make pedestrian trips uninteresting

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

INTENSIFICATION AREAS LARGELY MIRRORS THE 400M WALKABLE CATCHMENT WITH AREAS EXTENDED/ REDUCED TO ENCOMPASS/AVOID ENTIRE BLOCKS



KEY:

12M HIGH, 4 STOREY MIXED USE

10M HIGH APARTMENT / TOWNHOUSE

SUBURB DESCRIPTION AND EVALUATION

WATERLOO

Approximate age of suburb	1950
Housing Typology:	Single and two storey standalone dwellings as well as terraces and duplexes. Some infill development has been completed.
Quality of Housing Stock:	Generally of a high quality with houses having undergone renovations and extensions.
Typical Lot Size:	450-750m², infill development occurring with houses being constructed in the rear yard of larger sections.
Commercial Area Attributes:	A small commercial area, including a four square, butcher and all necessary community faculties required for a village, which includes a central town square. Close proximity to the railway station and school. On the western side there is a small offering of convenience store and shops.
Proximity to Public Transport:	Train station immediately adjoining the commercial area, the remaining residential area is well serviced by bus routes along Waiwhetu road with feeder services along riverside drive, along to Waterloo Road. Bus routes link in with railway station timetables.
Streetscape / Street Trees / Amenity	A number of tree lined streets with well established trees, including large pohutukawas. Small town square and the primary school is located immediately behind the commercial area.
Open Space:	Waterloo has limited pocket parks on each side of the railway tracks. However, there are a number of schools in the area which also have playgrounds and fields at the edges of school grounds and are available to the public to use. The primary open space reserve is the stream along Riverside Drive. Te Whiti Park is also nearby the suburb.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Waterloo scores highly in terms of all aspects, being well served by a small commercial centre, schools and train station. Some infill development has occurred but could be incorporated into the existing character without a loss of amenity. The commercial centre could be developed further, supporting the centre with further residential development above retail which is situated here due to good access to community facilities and the commercial centre and also well situated to the Hutt CBD and the rail transport hub in the Hutt Valley.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
4	*1*	*3*	*3*	*3*	*3*	
Total Score						***17***

There is a small set of shops on the western/CBD side of the railway line also

Waterloo is well services by buses with a direct link into the CBD

There is a good mix of shops providing a variety of services

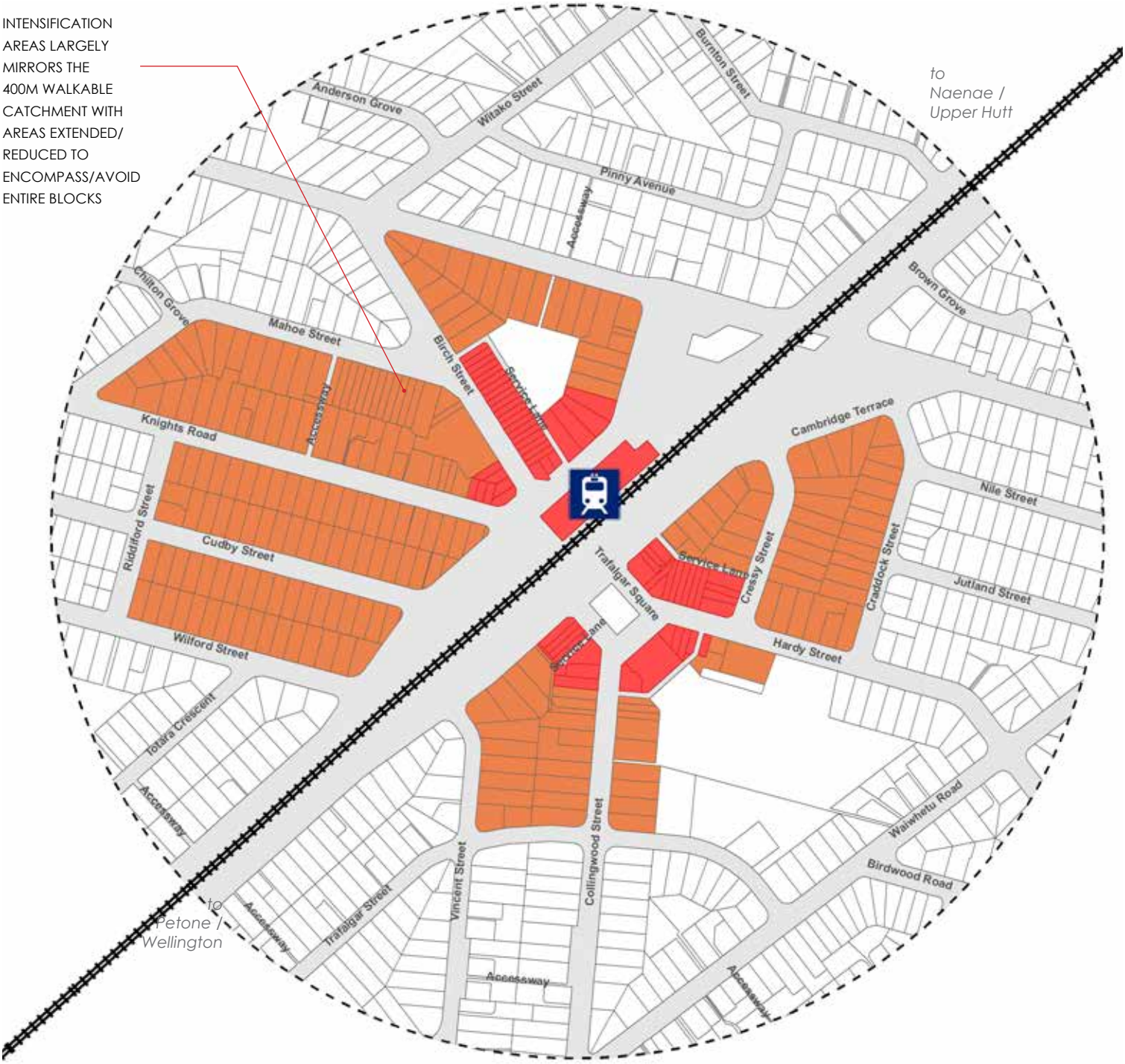
The commercial area has a strong relationship with the railway station and has well positioned public space

the commercial centre is small, but with a full array of shops/services required for the community.

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

INTENSIFICATION AREAS LARGELY MIRRORS THE 400M WALKABLE CATCHMENT WITH AREAS EXTENDED/ REDUCED TO ENCOMPASS/AVOID ENTIRE BLOCKS



KEY:

12M HIGH, 4 STOREY MIXED USE

10M HIGH APARTMENT / TOWNHOUSE

WOBURN / WAIWHETU

Approximate age of suburb	1930-40
Housing Typology:	A mix of single and two storey dwellings. A large number of terrace houses and medium density dwellings present along with infill housing. A large number of new stand alone housing has been built as the Kiwirail repair yard land has been sold off though Leighton Avenue and Mandel Mews. A new greenfield development has also been developed at the former Waiwhetu School site.
Quality of Housing Stock:	A mix of qualities with much of the existing privately held housing being renovated. New development that has not been infill has primarily been traditional new build housing, at single level. The site on Ludlam Crescent is one of the few sites that has recently been developed to 2 storeys, where larger executive homes have been built on small section sizes.
Typical Lot Size:	Varies greatly with a number of the ex-state houses being subdivided off onto their own sections. These lots can be as small as 170m² but 500m² sections are also common.
Commercial Area Attributes:	A small commercial area by the Woburn railway station that extends to Waiwhetu Road. The are has had recent investment of additional commercial activity with a new community supermarket and takeaway store and refurbishment of some shops. Street amenity is limited but provides commercial offering that is suited to passing vehicle traffic and walkable and bike-able for existing Waiwhetu community.
Proximity to Public Transport:	Woburn Station is immediately adjacent to the area and the bus routes to Lower Hutt CBD are on Ludlam Crescent and Waiwhetu road.
Streetscape / Street Trees / Amenity	Street trees and well established pohutukawas are common on neighbourhood streets. Mid-block streets have high levels of amenity, including Ludlam Crescent. Waiwhetu Road and Whitelines East Road has mixed levels of amenity.
Open Space:	Waiwhetu/Woburn has a number of pocket parks around medium density housing already present. There is also a large area of open space on Ludlam Crescent and along Waiwhetu Stream. Te Whiti Park also provides a large area of open space and the schools in the suburb , both private and public have playground equipment and access to fields open to the public.

EVALUATION OF OPPORTUNITIES AND CONSTRAINTS

Woburn/Waiwhetu has the potential for intensification with existing higher density development present, some of which requires repair work. It is well served by a small commercial area and a nearby train station. This can be further enhanced by providing for limited encouragement of mixed use to strengthen the location of this commercial centre and support regeneration of medium density housing that is already present. There are also multiple primary schools within a 15minute walking distance and good access to public parks and high frequency public transport.

Transport Proximity	*Availability of land*	*Character Overlays*	*Commercial Centre*	*School Proximity*	*Amenity / Open space*	
4	*2*	*2*	*3*	*2*	*2*	
Total Score						***15***

Access to the railway station is good with two large bridges at either end of the platform

There is a mix of housing styles including some higher density townhouses

It has a small commercial area including a small supermarket

Higher density housing is not uncommon in Woburn

Streets in the area are generally in a good condition with space available to improve the pedestrian environment

PUBLIC TRANSPORT / OPEN SPACE / CONNECTIVITY / CONSTRAINTS / OPPORTUNITY MAP

KEY:

- EXISTING SUBURBAN COMMERCIAL
- EXISTING BUSINESS ZONE
- RECREATION ZONE
- TREE LINED STREETS
- COMMUNITY / SCHOOLS
- RESIDENTIAL PARCELS WITHIN 400M WALKING DISTANCE OF THE STATION / BUS STOP

SUGGESTED INTENSIFICATION AREA AND POTENTIAL YIELD

THE EXTENT OF INTENSIFICATION HAS BEEN LIMITED IN THIS DIRECTION TO AVOID STREETS WITH GOOD EXISTING AMENITY AND SPECIAL CHARACTER AREAS

INTENSIFICATION AREAS LARGELY MIRRORS THE 400M WALKABLE CATCHMENT WITH AREAS EXTENDED/ REDUCED TO ENCOMPASS/AVOID ENTIRE BLOCKS

KEY:

12M HIGH, 4 STOREY MIXED USE

10M HIGH APARTMENT / TOWNHOUSE