

# Context Analysis

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## PART TWO



## PART TWO



*living communities*



### 2.1 Introduction

Part Two of the Masterplan is a description of the local and regional context. This has been undertaken to inform, identify, and highlight the key themes that the development design responds to.

This analysis has guided and informed decisions within the Masterplan by providing:

- An understanding of the economic capacity of the area, and its ability to support the development proposed;
- An understanding of the local community and their needs;
- An understanding of likely residents housing needs, lifestyles and requirements, informing the housing types needed to accommodate the community;
- An understanding of infrastructure and open space provision, informing appropriate provisions and designs for on-site and elsewhere;
- The identification of both positive and negative elements, informing design strategies; and
- An understanding of the spatial opportunities and constraints on the site, allowing the design to build from strengths and address constraints.

## PART TWO CONTEXT ANALYSIS

### Regional Context

#### 2.2 Regional Context

The Bonnyrigg Masterplan area is located in the suburb of Bonnyrigg, which forms part of the Fairfield Local Government Area (LGA) and is within the existing urban area of Sydney.

The NSW state government has been advocating a policy of urban consolidation since the mid 1990s. Urban consolidation is the process of increasing or maintaining the density of housing in established residential areas. The ultimate aim of consolidation is to reduce development on the fringe areas of the city and its associated resource, infrastructure, and environmental costs. Consolidation has been promoted as having the potential to address some wider urban problems including reducing the use of cars and increasing access to employment.

The NSW Government's *Metropolitan Strategy* was announced in December 2005 and provides a broad framework to facilitate and manage the growth and development of Sydney over the next 25 years. Its goal is to position growth around a metropolis of five regional cities. The two harbour cities of the Sydney CBD and North Sydney and the three river cities of Parramatta, Liverpool and Penrith.

It contains a housing strategy with objectives aimed at providing 60–70% of new housing in existing urban areas, with the remaining 30–40% of new housing to be in land release areas. The biggest challenge in achieving the infill targets is the lack of large consolidated parcels within single ownership. The large concentrated public housing estates built in the 1970s, including Bonnyrigg, offer one source of consolidated land for achieving infill targets.

#### 2.3 West Central Sub Region.

To achieve the target of over two-thirds of new housing being provided within the existing urban footprint of Sydney, the Metropolitan Strategy establishes targets for growth in sub regional plans.

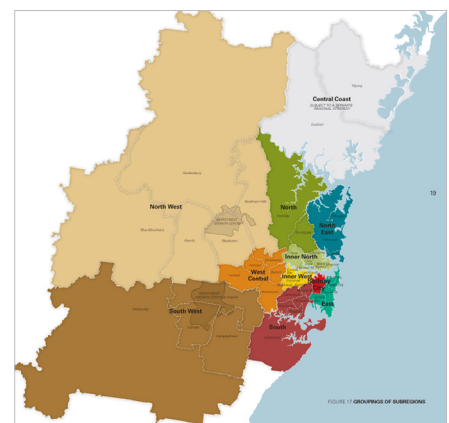
Bonnyrigg sits within the local government area of Fairfield. Fairfield is within the West Central sub region. This sub region covers the LGAs of Auburn, Bankstown, Fairfield, Holroyd and Parramatta. It is described as being

*“rich in cultural diversity. It is a highly urbanised area, lying between the CBD and the centres of Liverpool, Campbelltown, Penrith and Blacktown, and including Sydney's second CBD of Parramatta. The region benefits from significant transport infrastructure, including 10 train lines, 35 train stations, and the opportunities presented by the construction of the M7 Motorway”*

The West Central sub region has a target of 95,500 new dwellings and 35,000 new jobs. The Bonnyrigg Masterplan will provide approximately 1,600 new dwellings within this area.



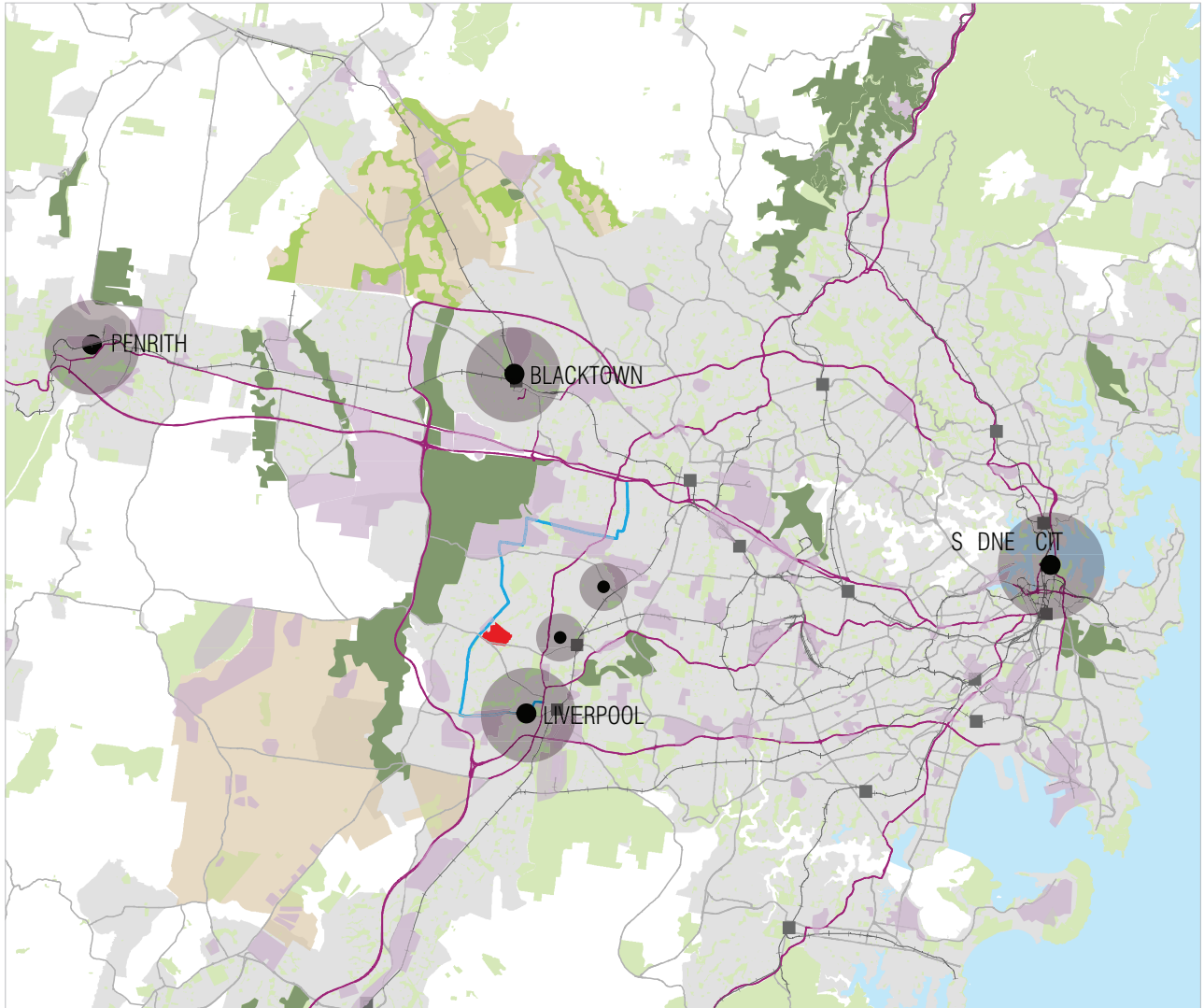
*Metropolitan Strategy, NSW DoP 2006.*



*Sydney Sub Regions from Metropolitan Strategy, NSW DoP 2006.*

## PART TWO CONTEXT ANALYSIS

### Regional Context



## PART TWO CONTEXT ANALYSIS

### Liverpool, Fairfield, Cabramatta, and Bonnyrigg Town Centres

#### 2.4 Liverpool

Bonnyrigg is located approximately 5km to the southwest of Liverpool and has frequent bus services into Liverpool, including a dedicated bus transit way (T-way) that runs from Liverpool to Parramatta and passes on the western side of Bonnyrigg.

Liverpool is one of the three regional cities of the Sydney Metro Strategy. These cities offer a full range of business, government, cultural, entertainment and recreational activities. Liverpool is the focal point for regional transport and jobs in the south west of Sydney. Its train station is serviced by the South Line (Campbelltown to City via Granville), the Bankstown Line (Liverpool to Town Hall via Bankstown), and the Inner West Line (Liverpool to Museum via Regents Park). It has extensive facilities including:

- **Liverpool Hospital** - a tertiary referral centre, major trauma centre and the main teaching hospital currently undergoing a \$390M redevelopment;
- **Various educational and other services** including TAFE, a new large modern library, over 200 companies providing a range of business services including financial, accounting legal and IT;
- **Westfield Liverpool retail complex** with over 200 speciality stores, a 12-screen Greater Union Cinema as well as other major shopping centres of Casula Mall, Carnes Hill Marketplace, Miller Shopping Centre and The Crossroads; and
- **Cultural facilities** including the Liverpool Regional Museum and the Casula Powerhouse Arts Centre. Their guiding philosophy is to pro-actively acquire, conserve, research, display, and interpret the South West Sydney region. The Casula Powerhouse Arts Centre is currently undergoing a major capital redevelopment program. The project will add an international standard exhibition space, a multi-purpose theatre/performance space, artists' studios and artists' residency spaces, an artist's business centre, seven exhibition spaces, and a retail outlet and café.

Liverpool has an increasing provision of services and facilities to cater to the growing community of the southwest of Sydney.

#### 2.5 Fairfield, Cabramatta, and Bonnyrigg Town Centres

Bonnyrigg is located approximately 5km west of Cabramatta and 6km to the southwest of Fairfield. Both are identified as potential major centres under the Metropolitan Strategy. Bonnyrigg has regular bus services to Cabramatta and Fairfield, via a designated T-Way.

Fairfield Town Centre provides a range of retail and commercial activities. It has a heritage listed train station, the oldest in Sydney, and is serviced by both the Cumberland line (Campbelltown to Blacktown) and the South Line (Campbelltown to City via Granville). It contains two major shopping complexes and main street retail, which combined provide more than 160 speciality shops.

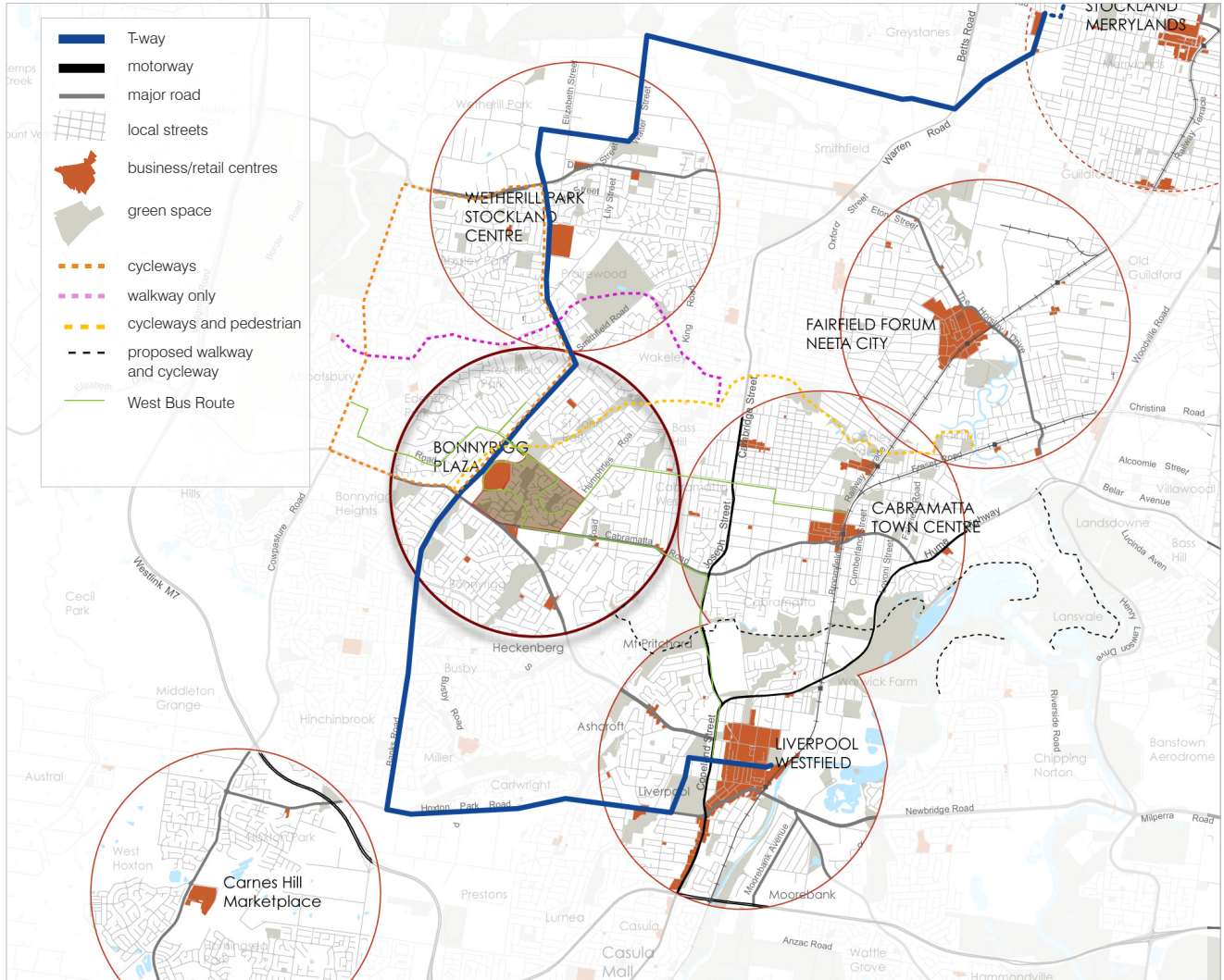
There is a strong presence of medical, financial, and legal organisations in the surrounding area, as well as grocery stores and department stores, including within Bonnyrigg Plaza. Bonnyrigg Plaza is the centre of Bonnyrigg and is a major draw for future residents. The area also has one of the largest ranges of multicultural eateries in Sydney, with cuisines from more than 20 different countries (including Turkey, Laos, Spain, Malaysia, Lebanon, Iraq, Vietnam, Thailand and Italy).

The style of Cabramatta town centre is reflective of the vitality and diversity of Asia's competitive market places. It has a train station that is serviced by South Line (Campbelltown to City via Granville), Cumberland Line (Campbelltown to Blacktown), Bankstown Line (Liverpool to Town Hall via Bankstown), and the Inner West Line (Liverpool to Museum via Regents Park). The area is the marketplace for authentic Asian restaurants across Sydney. It has over 60 eateries, with authentic cuisines from Vietnam, Thailand, Laos, and Cambodia. The market place style of retail and its competitive shopping ethos has made Cabramatta famous throughout Sydney for fabric, tailors, footwear, jewellery, electronics, and home wares. Cabramatta also has a number of professional services and banks. On most Sundays the Cabramatta CBD receives more than 15,000 visitors.



## PART TWO CONTEXT ANALYSIS

### Liverpool, Fairfield, Cabramatta, and Bonnyrigg Town Centres



Sydney's Strategic Centres - Metropolitan Strategy 2007

## PART TWO CONTEXT ANALYSIS

### Local Context

#### 2.6 Local Context

Bonnyrigg Town Centre does not have a train station but is easy to reach by private car or bus, with a transit way (T-way) stop located on Bonnyrigg Avenue. The T-way is the dedicated fast bus service between Liverpool and Parramatta. The Centre itself is surrounded by park lands, and it has a over 15 temples and churches, three primary schools, Bonnyrigg High School and many sporting and recreational clubs in close proximity. Bonnyrigg Plaza the major retail component of the Centre, has a total retail area of 20,100 sqm - with plans for expansion. It currently has three major tenants: Big W, Woolworth's and Franklins and 45 Specialities.

The Town Centre is also home to a NSW Department of Housing tenancy management centre, a neighbourhood and community centre, a youth centre, a childcare centre, and a library. Bonnyrigg residents have ready access to a number of services and facilities (including employment opportunities), through the local centre, and through strong transport links to the sub-regional centres of Fairfield and Cabramatta and the regional city of Liverpool. In addition, the site is well-connected with the M7 and the associated Western Sydney Employment Hub, including light industrial areas located at Wetherill Park and Smithfield to the north.





### Mean Weekly Household Income

Bonnyrigg Estate

\$590

Fairfield LGA

\$1,078

Liverpool LGA

\$1,247

Sydney SD

\$1,417

### 2.7 Cultural and Linguistic Diversity

One of the most significant demographic factors is the degree of cultural and linguistic diversity in Liverpool, Fairfield, Bonnyrigg and the Bonnyrigg Estate. 51.5% Fairfield LGA residents in 2006 were born overseas. The four main languages other than English spoken in Fairfield are Vietnamese, Chinese, Arabic and Spanish languages. Within Bonnyrigg and the Bonnyrigg Estate, Khmer replaces Spanish within the top four languages spoken. Many residents of the estate also speak Lao.

*Selected Demographic Indicators*

**Table 1 – Selected Demographic Indicators 2006**

Characteristic	Sydney SD	Fairfield LGA	Bonnyrigg Estate
Top 4 Main Languages Spoken Other Than English (B12)	Chinese languages (5.7%)	Viet'mese (17.0%)	Viet'mese (29.1%)
	Arabic (3.9%)	Chinese languages (9.9%)	Khmer (7.3%)
	Greek (1.9%)	Arabic (6.4%)	Arabic (6.5%)
	Viet'mese (1.8%)	Spanish (4.3%)	Chinese languages (5.2%)

(Source: ABS Census 2006)

Note 1: occupied private dwellings

Note 2: % of total population, data not available below LGA level

Note 3: Bonnyrigg Estate comprises 4 Census collection districts: 1321608 / 9 / 10 / 11

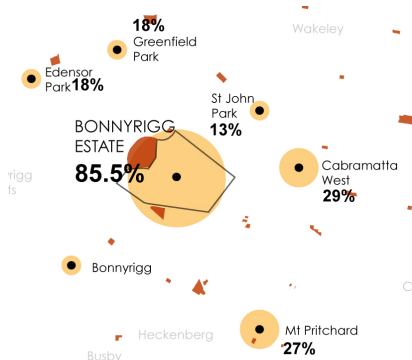
### 2.8 Income and Home Ownership

Due to the concentration of social housing in the area, Bonnyrigg differs significantly from NSW, Fairfield, Liverpool and Sydney SD on a range of socio-economic indicators. The Bonnyrigg Estate has a mean weekly housing income of \$590; this is approximately half that of the Fairfield LGA at \$1078, less than half of Liverpool LGA at \$1,247 and 40% of the Sydney SD at \$1,417. Bonnyrigg also has a much higher documented general unemployment rate, lower household income levels, and a much younger age structure. Levels of formal qualifications were also somewhat lower for the area than for NSW and SD. There were also slightly more people from an Indigenous background living in Bonnyrigg than in other areas. A selection of income and home tenure statistics is shown to the left.

The level of home ownership in the surrounding areas around Bonnyrigg is high, indicating both a strong desire and appropriate mechanisms for the purchase of homes by residents. The proportion of households who owned or were purchasing their homes in 2006 was approximately 70% in Fairfield and Liverpool. The portion in the immediately surrounding suburbs of Bonnyrigg is even higher with rates of approximately 85% in St Johns Park and Bonnyrigg Heights. The rate on Bonnyrigg Estate is, as expected, the opposite with 85.5% of housing rented.

The Bonnyrigg Partnerships development will provide a mix of 30% social and 70% private housing. It is anticipated that this will achieve a shift in income and housing tenure to closer to Fairfield LGA overall.

### Proportion of Households Renting



## PART TWO CONTEXT ANALYSIS

### Local Context

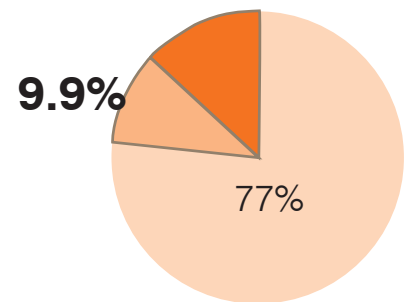
#### 2.9 Housing Type and Characteristics

Fairfield and Liverpool have high proportions of family households, as well as detached housing. Attached housing comprises only approximately 10% of the housing mix within both LGA's. The Masterplan places less emphasis on detached homes, introducing attached housing types that provide high levels of amenity and in order to achieve the density targets set by this project.

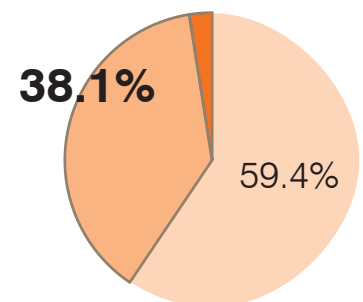
A deeper look at area demographics suggests that a higher percentage of attached housing is appropriate within the site, as well as potentially within the surrounding area. In general, there is growing demand for smaller and more manageable dwellings throughout NSW, especially with the aging of Australia's population. Within Fairfield and Liverpool LGA's, approximately 54-58% of households are couples with children, the remainder being couples without children or single parent households. If it is assumed that attached housing could be appropriate for single-parent households (which may have less disposable income and time to maintain a detached home) as well as a suitable housing solution for two-person households and lone person households, then attached homes could be viewed as appropriate for 42-48% of households living in Fairfield or Liverpool.

The household characteristics of Bonnyrigg estate currently differ considerably from those of Fairfield and Liverpool, with a relatively high rate of one-parent families and a low rate of couples with children present within the estate. The proposed housing mix provides attached housing that is similar in external appearance to detached housing and that is suitable to a range of household sizes and compositions.

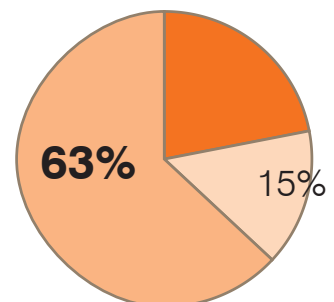
#### Dwelling types



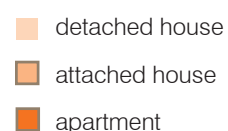
Fairfield LGA



Bonnyrigg Site Area  
(existing mix)



Bonnyrigg Living  
Communities  
(proposed mix)





## PART TWO CONTEXT ANALYSIS

### Open Space and Recreational Facilities

#### 2.10 Open Space and Recreational Facilities

Bonnyrigg is approximately 3 km east of the Western Sydney Park lands. The Western Sydney Regional Park is 5,500 hectares and is one of the largest parks in Australia. The park has picnic and barbecue facilities, a number of walking trails, bush land and district views. There are a number of adjacent parks including St Johns Park to the north, Bonnyrigg Town Park to the west and Mt Pritchard's Community Sports Grounds to the southeast. Bonnyrigg is also sited between regional creek line reserves of Clear Paddock Creek to the west and north and Green Valley Creek to the south and west.

The Bonnyrigg Partnerships is well serviced with access to regional open space and facilities.



## PART TWO **CONTEXT ANALYSIS**

### Ecological Context

#### 2.11 Ecological Context

The Bonnyrigg Masterplan area was almost entirely cleared of all vegetation approximately 30 to 40 years ago. The site and surrounding area is highly disturbed and supports less than 10% crown cover, with the only area above 10% crown cover being within St John Park to the north of the site (see plan opposite).

Recent ecological surveys have concluded that no significant species or habitat are present and no endangered ecological communities or threatened species are likely to occur.

The area would have once represented Cumberland Plain Woodland (most likely Shale Plains Woodland) however the vegetation is no longer representative of any native vegetation community due to its high level of disturbance and simplification. The only remaining overstorey species are generally within the open recreation/parkland and include Grey Box (*Eucalyptus moluccana*) and some Forest Red Gum (*Eucalyptus tereticornis*). These trees have no native understorey and the ground covers under these trees include mown grasses as part of a maintained parkland/recreation area. As there are only few over storey trees remaining, the area has limited ecological habitat value.

An objective of the Masterplan is to provide ecological connectivity, function, and biodiversity and to establish planting schedules that are representative of an appropriate selection of Cumberland Plain Woodland – Shale Plains Woodland and Sydney Coastal River Flat Forest – Alluvial Woodland.

Through a broad understanding of the site in context of drainage and other remnant vegetation communities the Bonnyrigg Masterplan can assist in forming ecological connections using the appropriate plant material.

#### *Objectives*

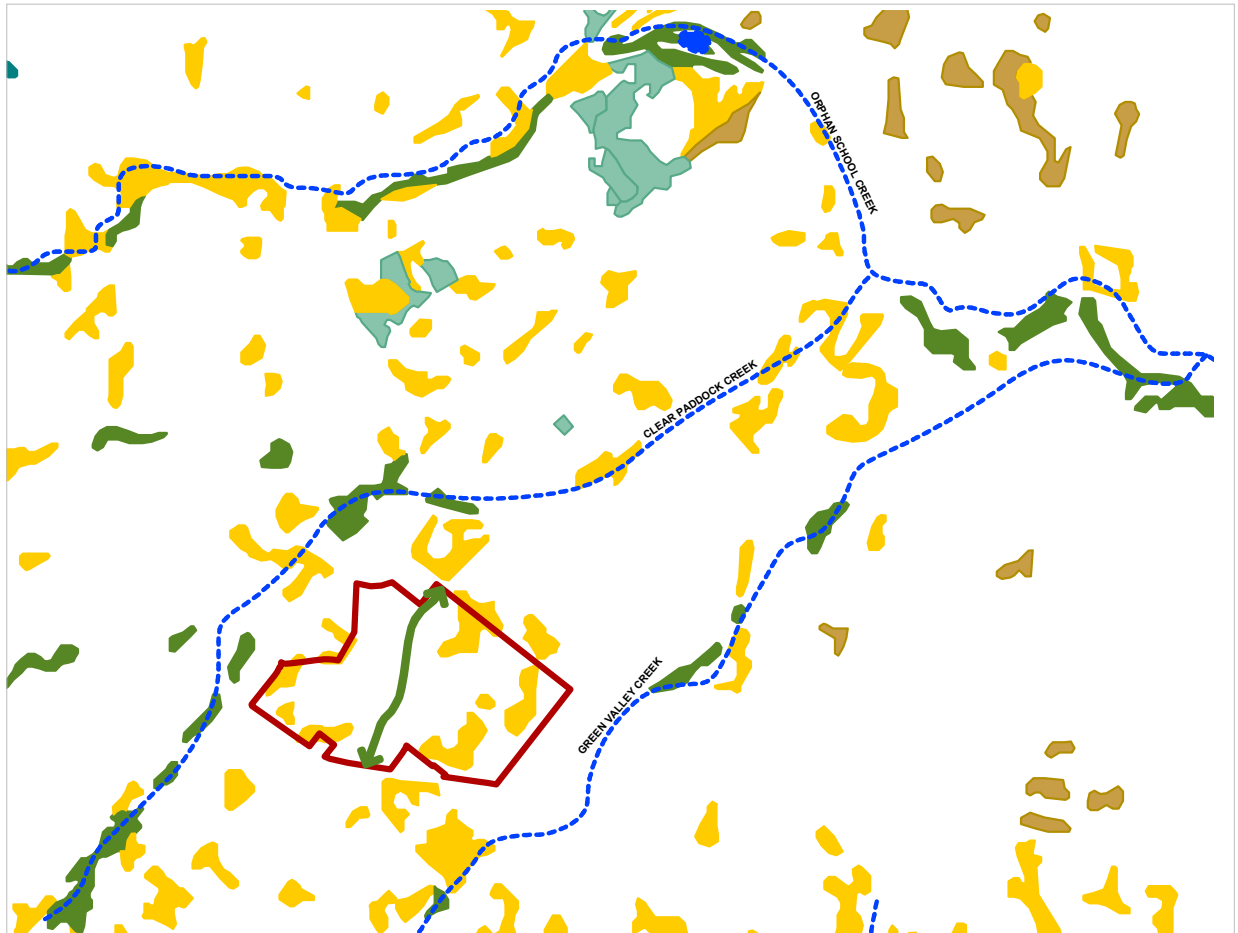
- To provide ecological connectivity, function, and biodiversity;
- To acknowledge vegetation communities remnant to the site and its greater context;
- To establish planting schedules that are representative of an appropriate selection of Cumberland Plain Woodland – Shale Plains Woodland and Sydney Coastal River Flat Forest – Alluvial Woodland;
- To reference remnant ecologies in the formation of landscape characters;
- To procure local provenance plant material;
- To reference contextual drainage patterns with site WSUD initiatives; and
- To establish monitoring and maintenance initiatives that support establishing ecologies.

#### *Principles*

- Proposed planting schedule shall be representative of Cumberland Plain Woodland – Shale Plains Woodland and Sydney Coastal River Flat Forest – Alluvial Woodland;
- Preserve remnant site vegetation, where possible;
- Source and store local provenance material for procurement of plants through site nursery; and
- Monitor and maintain landscapes to establish and enhance ecological health;

## PART TWO CONTEXT ANALYSIS

### Ecological Context



Species List



*Note: No significant species or habitat are present in Bonnyrigg and no endangered ecological communities or threatened species are likely to occur.*

## PART TWO CONTEXT ANALYSIS

### Landform and Vegetation

#### 2.12 Landform and Vegetation

The site has two ridges, with open spaces located on both. The eastern high point is located at the open space area above Bunker Parade and the western high point is located near Wilton Way and Upton Place. The land gently slopes from these high points down into the lowest points on the site, including to the open space known as Tarlington Reserve. Tarlington Reserve has two soccer fields in north of Tarlington Parade and a basketball court to the south. This drainage channel adjoins with Clear Paddock Creek at St Johns Park.

Most of the area was entirely cleared of vegetation approximately 30 to 40 years ago. The site has been utilised for residential purposes since. It is unlikely that any threatened or remnant fauna and flora inhabit the site or that any acid sulphate soils remain undetected. It is unlikely that any significant site contamination affects the site, although if any is found due to previous site filling or construction materials used within the existing housing it will be characterised and disposed in accordance with NSW EPA Environmental Guidelines.

Significant vegetation has grown within the open spaces, street reserves and private realm over this time. Overall the site presents as a leafy suburb with gently sloping topography and a green, spacious place to live. This presents an opportunity to retain much of this vegetation to develop new homes within the amenity of a mature suburb.

The development of Bonnyrigg is not expected to have an impact on any threatened species or fauna and flora.



Tree Canopies and Vegetation



Bunker Reserve



Tarlington Reserve (south)

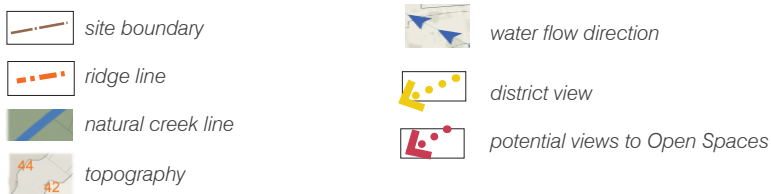
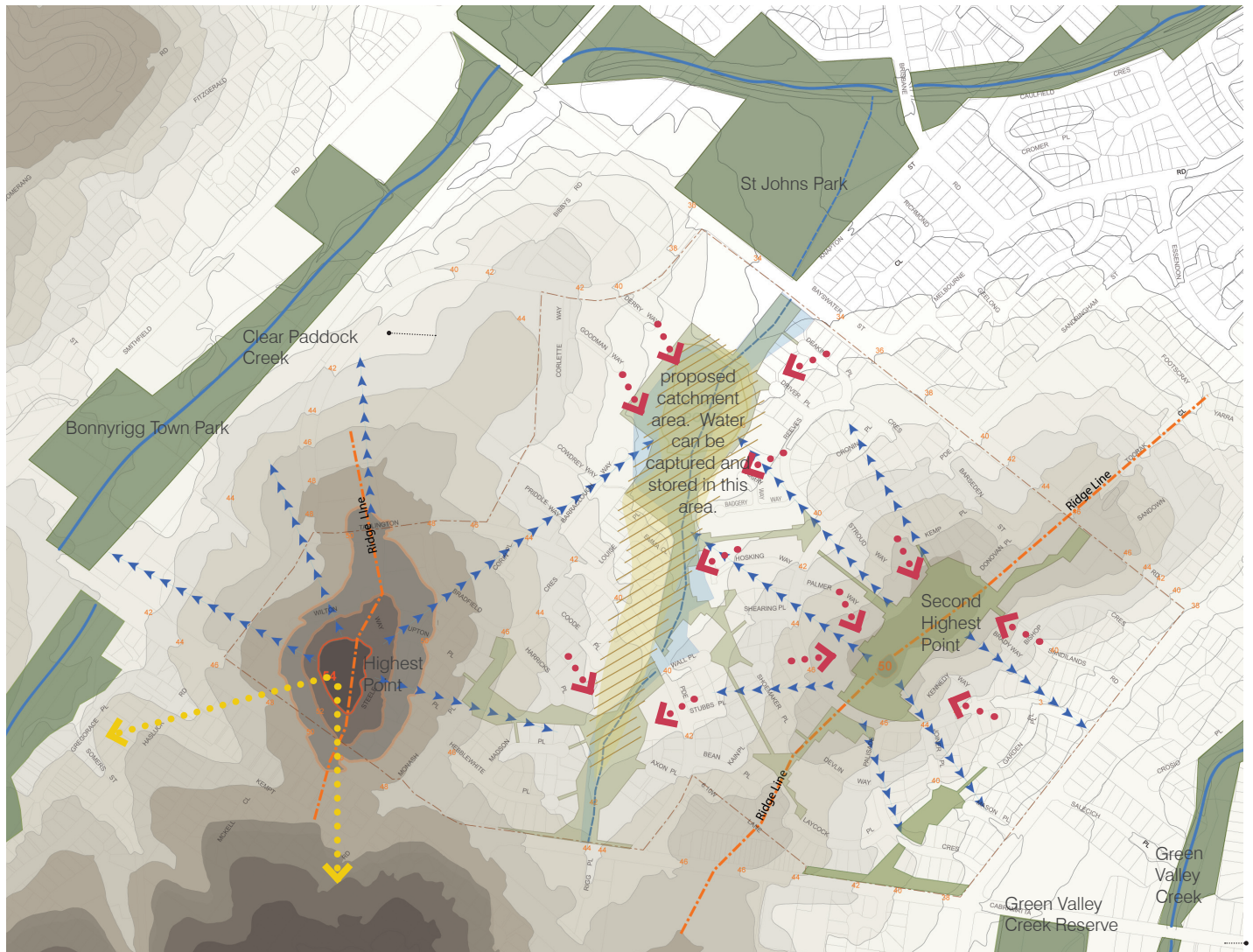


St Johns Park



## PART TWO CONTEXT ANALYSIS

### Landform and Vegetation



Landform and Views

## PART TWO CONTEXT ANALYSIS

### Existing Infrastructure

#### 2.13 Existing Infrastructure

##### **Stormwater**

The existing stormwater infrastructure consists of a piped 'minor' system, generally designed for the 5 year Average Recurrence Interval (ARI) storm event. Further capacity for storms up to and including the 100 year ARI event has generally been provided. A major overland flow path exists in Tarlington Reserve that drains the majority of the site.

##### **Water**

A 450mm diameter trunk main runs through the development from Edensor Road to Elizabeth Drive. This main is located within the central reserve and will not be re-located as part of the renewal works. The water main is located within a 5m wide easement and is of regional importance as it supplies water to the surrounding suburbs.

100mm diameter mains and larger are present across the site and will be retained where possible, however some re-locations will be unavoidable. It is intended to retain all of the mains present in the roads bordering the site; these however may require adjustment, particularly where affected by proposed roads.

##### **Recycled Water**

At present, there is no recycled water supply within the Bonnyrigg estate. Sydney Water has recently confirmed (May 2008) they will make available a recycled water supply for this redevelopment. Plans and designs have been based on recycled water supply rather than water storage.

##### **Sewer**

The main sewer carrier within the development is located within the Central reserve and is 300mm diameter. The majority of the existing sewer reticulation mains throughout the site are 150mm diameter.

##### **Electrical**

The existing low voltage electrical supply servicing the Bonnyrigg estate is reticulated throughout the site via an underground conduit network with several pad mount substations. A high voltage overhead cable traverses the site from the Integral Energy zone substation in Monash Place, north through Tarlington Reserve and up to Edensor Road on the northern boundary of the development.

##### **Telecommunications**

The existing Bonnyrigg estate telecommunications network consists of a below ground reticulated service. There is currently no exchange, major through route or fibre optic provisions on site. However, currently copper cables support ADSL1, and dishes support broadband connections.

##### **Gas**

Existing gas mains are located in isolated areas of the Bonnyrigg estate, generally servicing privately owned dwellings.



## PART TWO CONTEXT ANALYSIS

### Radburn Design



*High Fences to Streets, Paths and Parks*



*Single storey brick cottages*



#### 2.14 Radburn Design

The Bonnyrigg estate was developed during the late 1970s and early 1980s using Radburn design principles, with dwellings connected via a network of open space and parks and walkways separated from the vehicle network.

There are approximately 919 dwellings currently in the Masterplan area, of which 833 are social housing. Housing is a mix of cottage style dwellings with traditional front and back yards and super lot town houses with car access provided by cul-de-sacs from the rear and fronting open spaces. The town houses have high private 'back fences' adjoining both the streets and open spaces. This intense visual separation between the private and public realm has resulted in a poorly cared for streets and open spaces, and a lack of community/neighbourhood 'ownership' of these spaces.

There is a general consensus that Radburn design is unsuitable for social housing. Concentrations of social housing have resulted in a corresponding concentration of disadvantage and adverse social and economic impacts on residents and the wider community. Other examples of areas in western Sydney with concentrations of social housing include Minto (currently being redeveloped) and Macquarie Fields (in plans for redevelopment) in Campbelltown LGA.

Bonnyrigg estate currently has segregated pedestrian and vehicle movement networks. Existing pedestrian connections are through uncared for open spaces and adjacent to the backs of houses, with minimum passive surveillance. The current street network separates Bonnyrigg into two halves (east and west) and is defined by two distinct loops formed by Bunker Parade and Tarlington Parade. The current street network also includes numerous cul-de-sacs and dead-end places and courts.



*Typical single storey brick row houses*



*Example of security issues on site*

## PART TWO CONTEXT ANALYSIS

### Radburn Design

This results in the following:

- It creates a perception that the pedestrian paths are unsafe. This puts emphasis on vehicle movements and access and discourages walking;
- The above results in the facilities surrounding Bonnyrigg Estate turning their address away from the pedestrian paths and towards vehicular entrances. This leaves pedestrians to enter via the back of buildings or through service spaces, lowering pedestrian amenity and also discouraging walking;
- The movement network (pedestrian, cycle, vehicle and public transport) is illegible to someone who is unfamiliar with it; and
- Difficulties for way finding and finding addresses on site causing extra delays and difficulties for visitors and emergency services such as ambulance and police;

The current open spaces of Bonnyrigg estate are concentrated on the central valley area and on the two high points of the site. They have impressive trees and canopies but are generally large areas of turf with low levels of embellishment and limited functions and recreational opportunities.

The separation of vehicular movements away from open space, the high fencing that fronts much of the park areas and poor lighting have resulted in poor passive surveillance and has encouraged anti-social behaviour within the spaces. The result is that the parks are under utilised and exhibit signs of neglect from the community.

The overall result is an environment of seclusion within the open space. People are less inclined to use parks; pedestrian and cycle ways for legitimate activities and inclined to use them for anti-social behaviour.



## PART TWO CONTEXT ANALYSIS

Radburn Design



- ◆ Home in Private Ownership
- Pedestrian Path in Open Space

Existing Dwellings

## PART TWO CONTEXT ANALYSIS

### Built Form and Ownership

#### 2.15 Built Form and Ownership

Along with the 833 social housing units present within the Masterplan area, there is a small grouping of modern villas at 59-61 Tarlington Parade. The Department of Housing has required that these villas be retained. In general, the existing social housing stock will be replaced with modern housing over the 18 development stages of the project.

Private homes are a mix of Department of Housing cottages which have been sold to the private market or new homes built on lands currently occupying such cottages. In addition, there is a pocket of 27 private homes in the centre of the estate that were built in the 1990's.

The site offers the benefit of being a relatively large block of land in consolidated ownership. The major constraint in regards to the renewal of the area is a number of private land owners and homes scattered throughout the site.

Further, the Khmar temple on Tarlington Parade and the basketball court at Bunker Hill have been identified as items of local significance. The preservation and enhancement of these items have been addressed with the Masterplan and incorporated into new design.



*View to temple from roof of Bonnyrigg Plaza*



*View to temple from park*

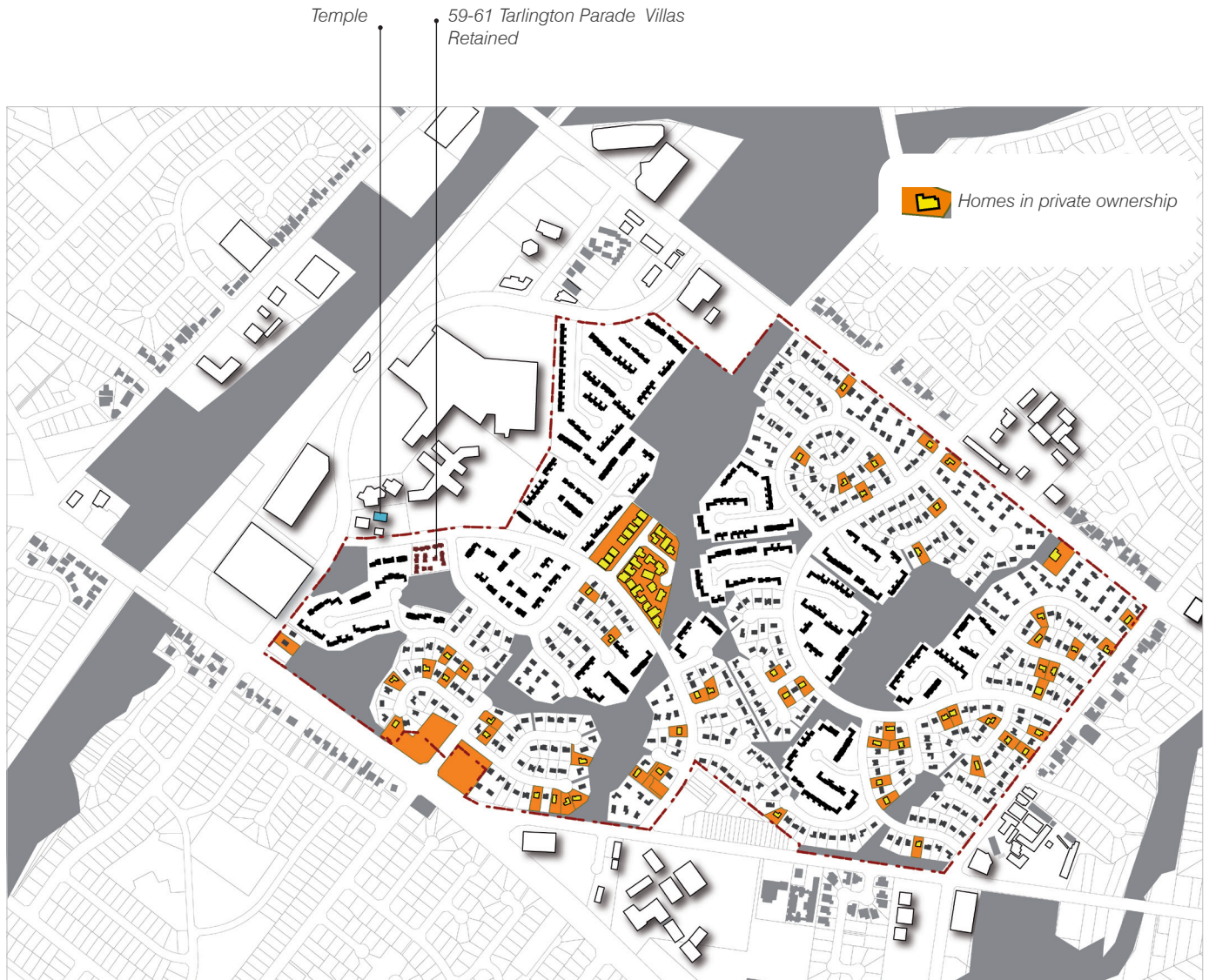


*59-61 Tarlington Parade Villas Retained*



## PART TWO **CONTEXT ANALYSIS**

### Built Form and Ownership



Images of privately owned residences located in centre of Bonnyrigg estate.

## PART TWO CONTEXT ANALYSIS

### Opportunities

#### 2.16 Opportunities

Bonnyrigg currently has a low home-to-land ratio, in comparison to the surrounding suburbs. In general, homes are smaller, and they occupy larger blocks of land than similar dwellings in the surrounding area. There is an opportunity to increase the density of the built form within the Bonnyrigg estate area while echoing the patterns and character of surrounding residential neighbourhoods.

In general, opportunities that exist with the renewal scheme include:

- Reducing the current geographic disadvantage for residents of Bonnyrigg by introducing a new mix of social and private housing (30:70) through the addition of new dwellings and higher density development; and
- Using the capital raised from the potential sale of private homes to fund the revitalisation of Bonnyrigg.

##### Infrastructure

- Retaining existing services and infrastructure. Some existing services can be retained and upgraded to meet the development requirements; and
- Upgrading the existing stormwater system and incorporate Water Sensitive Urban Design (WSUD) principles to make the system more sustainable and improve the quality of stormwater exiting the site.

##### Houses

- Replacing old housing with new higher quality dwellings that accommodate more flexible lifestyles; and
- Providing a more accessible and safer residential environment.

##### Retail

- Providing low order commercial and services in a Bonnyrigg Neighbourhood Centre, and
- Strengthening existing and future retail by increasing residential densities and providing residents better facilities, services and more community gathering points and places to meet.

##### Open Space, Parks, and Vegetation

- Enhancing the existing public open spaces, parks and facilities;
- Improving the safety of parks and making parks more active; and
- Retaining and reinstating native vegetation within parks and open space.

##### Public Facilities

- Providing recreational facilities such as football fields, exercise areas, public toilets, shelters, BBQs, and play equipment to encourage healthy lifestyles; and
- Establishing a new Bonnyrigg Neighbourhood Centre at the heart of the site to provide clean and safe facilities, outreach services, social housing management and maintenance.

##### Transport, Movement, and Access

- Enhancing connections between houses, facilities, cultural sites, transport hubs, retail outlets, and open spaces;
- Providing better access and enhanced movement networks; and
- Connecting the two halves of the Bonnyrigg renewal site.

##### Community

- Building upon the existing community spirit and strengthening community groups;
- Providing housing and services for the aging population; and
- Providing housing and services for young families.

##### Ownership

- The land is primarily owned by Department of Housing, which provides an opportunity for a holistic and sustainable approach to redevelopment; and
- Improving market value of property and land within and around Bonnyrigg Masterplan area.

##### Existing Vegetation

- Retaining the existing mature street trees and existing mature canopy trees located in parks and open spaces.

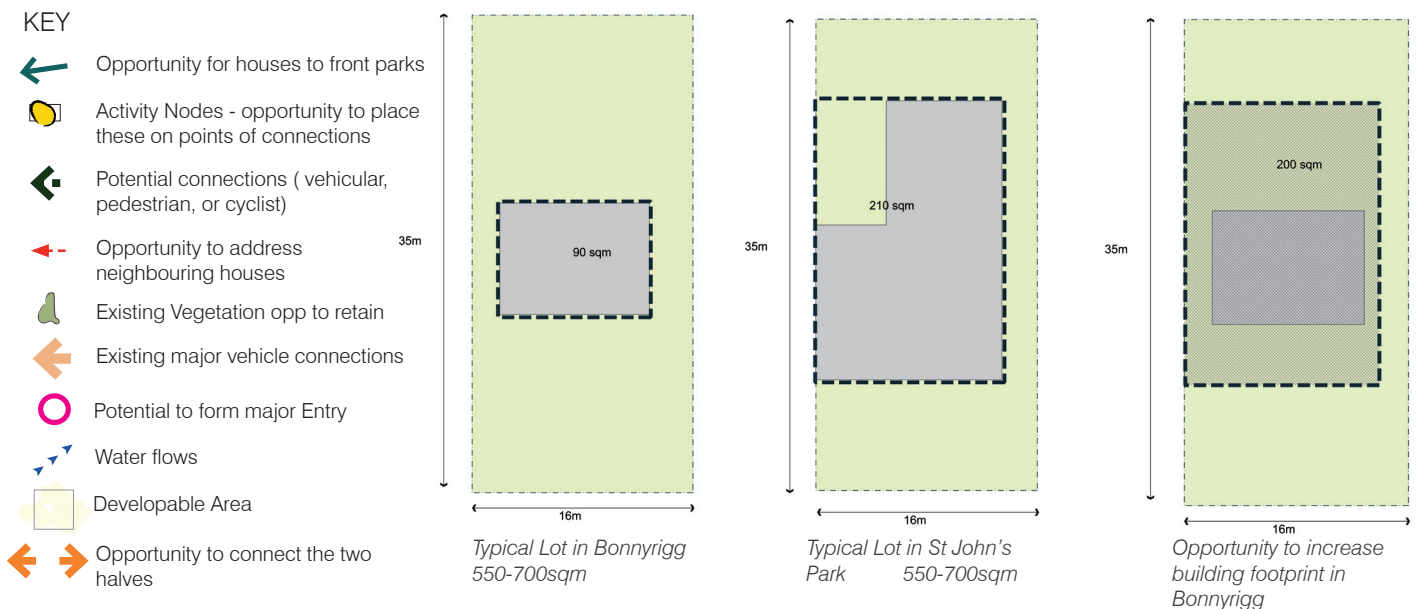


## PART TWO CONTEXT ANALYSIS

### Opportunities



Opportunities and Constraints





## PART TWO CONTEXT ANALYSIS

### Constraints

#### 2.17 Constraints

##### Negative Perception of Bonnyrigg;

Currently, Bonnyrigg is perceived in a negative manner by those living outside the Estate; being viewed as an area dominated by social housing. This is considered to be a constraint in regards to the marketability of the area, to attracting more economic growth and employment opportunities, and to the overall social interaction between neighbouring communities.

In general, the constraints that exist with the renewal scheme include:

##### Roads and Services

- Need to maintain service connections to existing private lots at all stages of construction and the associated requirement to retain approximately 50% of existing roads and design around the existing road pattern;
- Need to integrate and upgrade the existing stormwater system; and
- Requirement for retention of existing private houses, which are not in one location but “salt and peppered” throughout the site.

##### Built Form

- Bonnyrigg plaza and Bonnyrigg Primary School turn their back on the site limiting any opportunities for their integration with the site or through access to the T-way.

##### Flooding

- The 100-year ARI flood zone through middle of the site following Tarlington reserve. New dwellings will require adequate protection from the 100-year ARI flood levels.

##### Traffic Noise

- Heavy traffic flows along Elizabeth Drive and Cabramatta Road. Traffic noise is an important consideration in this area with regard to residential amenity.

##### Cultural Heritage

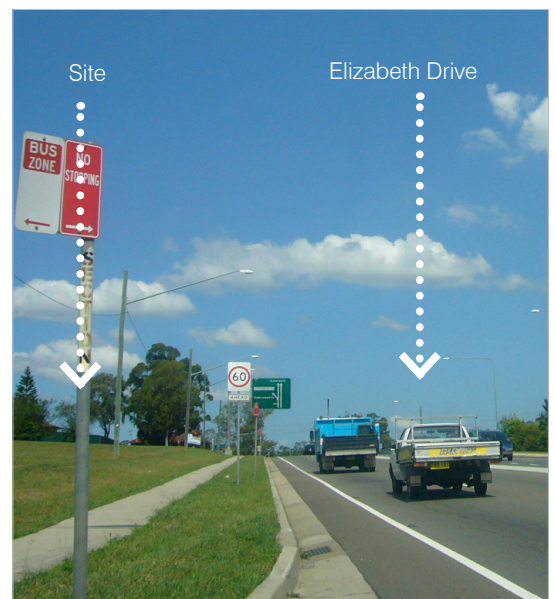
- Need to protect views and heritage significance of the Khmer Temple; and
- Need to preserve the basketball court at Bunker Hill.



Khmer temple



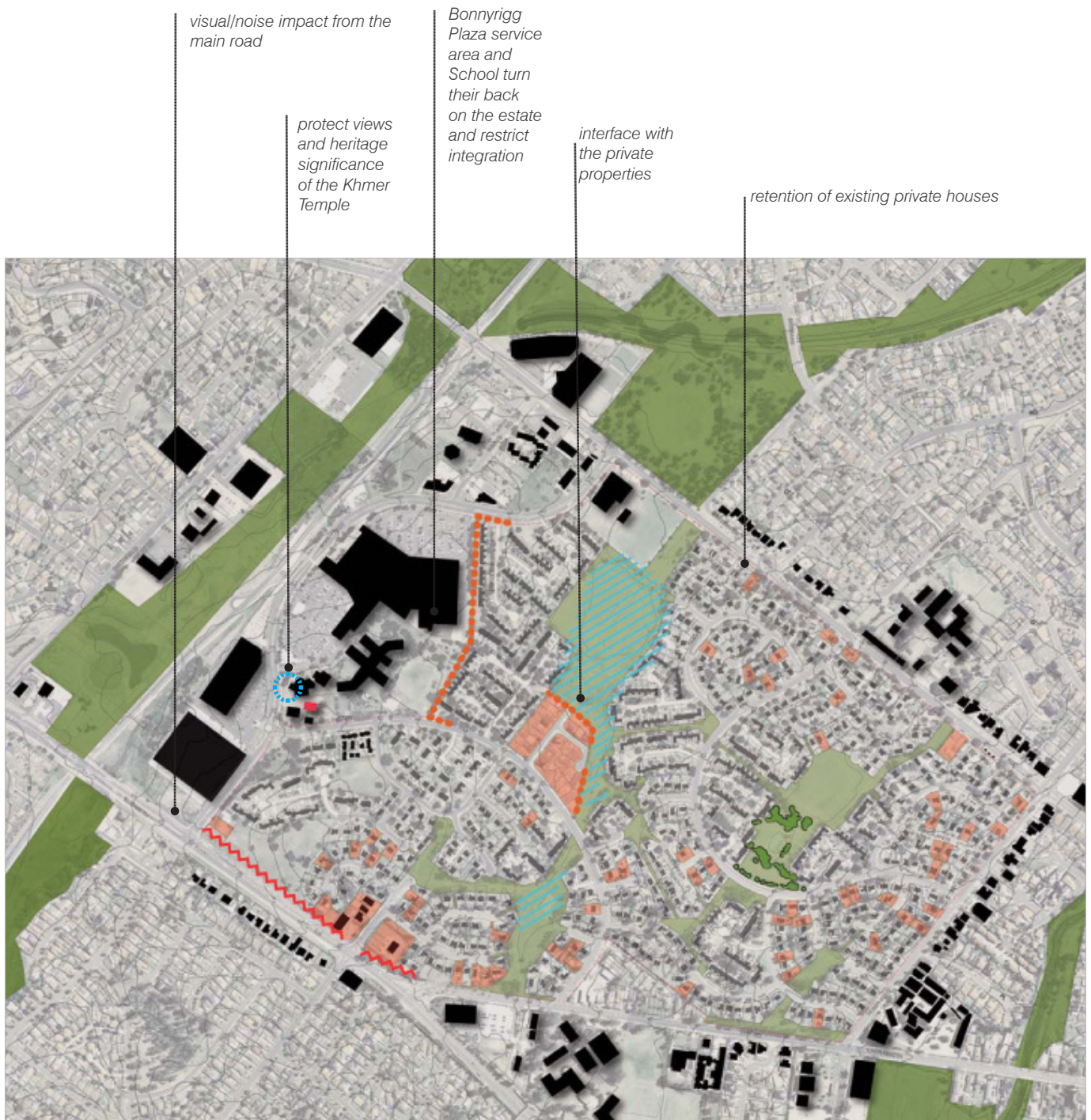
Homes in private Ownership



Elizabeth Drive

## PART TWO CONTEXT ANALYSIS

### Constraints



- ● interface with private ownership
- Private ownership (within the site)
- Khmer Temple
- ▨ Flood zone
- Open space (surrounding)
- Open space (the site)
- Noise/ Visual impact from the main road



## PART TWO CONTEXT ANALYSIS

### Development Alternatives

#### 2.18 Development Alternatives

The project team analysed a number of alternatives for density during the bid process, including more traditional apartment styles. The team undertook at least 30 different layouts before settling on the design to be submitted with the bid process. Feedback from both the existing community on-site and marketing research conducted with potential purchasers of new homes on-site demonstrated a strong desire for traditional suburban-style homes with access to light, air, and private open space.

Many of the existing private home owners scattered throughout the Masterplan area are committed to staying in their homes. The introduction of a mix of detached homes, big house-style attached homes, and two smaller apartment precincts close to the Town Centre will enable Bonnyrigg to be a place where:

- A large number of home owners will have private gardens. The detached homes will have gardens. The ground floor of attached homes will have gardens. The first floor homes in the attached homes will be provided a mix of ground floor yards and upstairs balconies. The ground floor apartments in each of the apartment buildings will have yards with direct entrances from the streets or parks.
- The diversity permitted within the mix of detached homes and attached homes on the majority of the site enables the building forms adjacent to existing private homes to be designed with little impact on the residential amenity of existing homes.



*Images used in marketing research illustrating undesirable housing types*